**Site Registration** Date August 2025 Complete the following fields prior to calculating the Security Deposit. Marulan South Limestone Mine Mine Name: ML 1857, CML16 (part of) Lease(s): Title Holder: Boral Cement Limited Mine Operator: Boral Cement Limited Term of RCE: Estimated total disturbance over SSD7009 approval term until 31/08/2051 \$26,814,013 Date of last Security Deposit review May, 2024 **Current Security:** Mine Contact: Anne-Elisabeth Champon Position: Site Manager Hume Street Marulan South Address: NSW 2576 Phone: 0417 019 358 Email: anneelisabeth.champon@boral.com.au

#### **Site Description** The following site specific information is requested to provide background information in the context of calculating the Security Deposit. **Summary of Mine Activities Environmental Sensitivities** 4,200,000 Total annual production (tonnes): Surrounding land use (tick all that apply): 763.6 Mine lease area (ha): ☐ Cropping 172.2 ✓ Pasture Area of extraction (ha): ▼ Forest Area of disturbance (ha): 521.8 Undisturbed habitat 67.3 Rehabilitation in progress (ha): Urban Rehabilitation complete (ha): 0 Environmental Issues affecting site (tick all that apply) Achieved ecosystem sustainability SSD 7009, 19/08/2021 ▼ Threatened flora Forward Program/MOP Utilised: Reference no. version and date ▼ Threatened fauna ✓ Cultural heritage items 1 Rehab Strat. rev3 30/08/2022 Forward Program/MOP Plan Utilised: ▼ Natural heritage features Reference Plan no. version and date Mine subsidence 2 RMP (draft) ✓ Surface water pollution ☑ Plan(s) attached ▼ Ground water pollution ✓ Hydrocarbon contamination ☐ Methane drainage/venting ☐ Spontaneous combustion Acid Mine Drainage ▼ Within drinking water catchment NOTE: Ensure rehabilitation cost estimation reflects all environmental issues affecting Other (describe below) the lease. Contingencies should be allocated where costs have not been MLs adjoin Bungonia and Morton NPs incorporated elswhere in the estimation. MLarea = ML1857(688.5ha) + CML16(75.1ha) Area of extraction = mine void + mine backfill Area of disturbance includes remnant areas of CML16(23.2ha). Undisturbed (51.9ha) Rehab in progress = Eastern Batters (37.2ha) and WOE (30.1) Rehab previously complete now reclassified and included in rehab in progress



# **Open Cut Summary Rehabilitation Cost Estimation**

Note: Sections of this pag	e are automatically filled in from the registration page		
Mine Name:	Marulan South Limestone Mine		
Lease(s):	ML 1857, CML16 (part of)		
Authorisation Owner	Boral Cement Limited		
Mine Operator:	Boral Cement Limited		
Term of RCE:	Estimated total disturbance over SSD7009 approva	al term until	31/08/2051
Current Security:	\$26,814,013 Date of Last Se	curity Depo	osit Review: May, 2024
Mine Contact:	Anne-Elisabeth Champon		
Position:	Site Manager		
	lu o		
Address:	Hume Street		
	Marulan South		
	NSW 2576		
Phone:	0417 019 358 <b>Email:</b> <u>anneelisabe</u>	ath champe	on@horal.com.au
FIIUIIE.	Email: alineelisabe	<del>ын.ынанірс</del>	mlwpolai.com.au
	Domain		Security Deposit
	Domain		Security Deposit
Domain 1: Infrastructur			\$10,507,614
Domain 2: Tailings & R	Rejects		\$353,488
Domain 3: Overburden	& Waste		\$4,913,020
Domain 4: Active Mine	& Voids		\$3,460,260
Domain 5: Managemer	nt Activities		\$1,382,390
Subtotal (Domains ar	nd Sundry Items)		\$20,616,772
Contingency		10%	\$2,061,677
Post Closure Environm	nental Monitoring	10%	\$2,061,677
Project Management a	nd Surveying	10%	\$2,061,677
<b>Total Security De</b>	posit for the Mining Project (excl. of GS	Γ)	\$26,801,804
☐ Alterations have beer ☐ The proposed rehabil  This Registration Form,  This mine security calcula It is a true and accurate re  Anne-Elisabeth Cha		parate sheet consent for the	providing details of changes). the project. ned as an appendix the AEMR or MOP.  28/08/2025
Company Resprese	entative's Name		Date

#### Domain 1a: Infrastructure

#### **Total Cost for Infrastructure Domain**

\$10,507,614

Refer to Plan 1 - 30 Conceptual Final Landform Plan_231130_v1v and 2019 EIS - Figure 2.1 / SSD7009 - APPENDIX 6	Key Rehabilitation Area Data for Domain	Enter data below manually
Assume 50% of NOE (37.3ha) = 18.6ha added to Infrastructure domain of 18.1ha for a total of 36.7ha	Total Landform Establishment:	36.70
	Total Growth Media Development:	36.70
	Total Ecosystem Establishment:	36.70

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Termination of Services and Demolition Works	Disconnect and terminate all services (Water, electricity, gas etc at point of attachment to site)	Y	1	allow	\$35,000		\$35,000	Covers Electricity water and gas	For disconnection of all services, at building boundaries, physical cut at the point of attachment or distribution location. If infrastructure is not consolidated (i.e., administration, camp and workshops are in separate places), consider multible disconnection fees.
	Disconnect and terminate services at remote areas (i.e. pump stations, remote workshops, sewage treatment plant etc.)	Y	4	allow	\$5,850		\$23,400	Gyrotary, Kiln, Surge bin, Offices	Used for infrastructure remote from primary connection. Can also be used for small mines / quarries that do not have dedicated supplies from supply authorities such as steel lattice power lines.
	Removal of low/medium voltage powerlines including disconnection, rolling up the wires and removing the poles - does not include the removal of substations	Y	2.4	km	\$15,000		\$36,000	primary crusher 0.79 km, to processing plant, offices and store 1.53 Km, sand plant	Applies to power lines on stobie, concrete or similar poles.
	Demolish and/or remove substations (assumes they are in a closed building). Dispose of waste material on-site/locally	Y	140	m2	\$100.00		\$14,000	Primary and sec crushing, surge bin, kiln	Simple structure to demolish mechanically (no labour required), assumes single story building with no asbestos and segregation of contents for scrap as applicable.
	Demolish and remove switchyard. Dispose of waste material on-site/locally	Υ	160	m2	\$75.00		\$12,000	Primary and sec crushing, surge bin, kiln	Includes demolition and removal of all switchgear and transformers etc. and segregation of contents for scrap as applicable.
	Demolish and remove demountable structures on concrete stumps. Assumes not being re-used	Y	220	m2	\$40.00		\$8,800	crusher control room, production cribhut	Crib huts, temporary offices and other 'non permanent' structures. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove small buildings/tanks (admin buildings, single story accommodation etc) and disposal on-site/locally	Y	2474	m2	\$61.00		\$150,914	Hub, Admin Building, security gate house, Managers office, carpark offices, electrical offices, kiln control offices, lime amenities (2025- enviro shed removed)	Simple structure to demolish, assumes no greater than 2 stories high. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove light industrial buildings and disposal on-site/locally	Y	1190	m2/floor	\$90.00		\$107,100	laboratory, store	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m) - does not include transport to regional disposal facility or equivalent. Assumes asbestos free and mechanically
	Demolish and remove industrial buildings (workshops tyre change and servicing area etc not CHPP/process plant) and disposal on-site/locally	Y	2250	m2/floor	\$130.00		\$292,500	Limestone workshop, lime workshop	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Demolish and remove CHPP/process plant (include the area of each floor of the structure) and disposal on-site/locally	Υ	6830	m2/floor	\$225.00		\$1,536,750	Transfer/Screen House, trommels / transfer, tertiary screening, tertiary screening, rotary kiln,hydration/ dispatch,storage, kilnstone handling, sand plant screening, sand plant classifiers	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Collapse, demolish and remove washery, crushers, hoppers, mills, furnaces, agglomeration, electrowinning, floatation, sizing stations, rotary breakers, etc (include the area of each floor of the structure) and disposal on-site/locally	Υ	840	m2/floor	\$225.00		\$189,000	Primary Crusher, Secondary Crusher, tertiary crushing, sand plant crushing building	Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove rail loading bins and disposal on-site/locally	Υ	8	allow	\$65,000		\$520,000	bin 1, 2, 3, 4, 5, 6, 7, 8	Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove onground conveyors, transfer stations & gantries (scrap only – does not include dismantling for reuse at another site) and disposal on-site/locally	Y	720	m	\$185.00		\$133,200	2, 4D, 5, 6, 25, 37, 16, 22	Estimate for on-ground conveyor including anything up to 10 m off the ground. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove overhead conveyors, transfer stations & gantries (scrap only, does not include dismantling for reuse at another site) and disposal on-site/locally.  This may include small scale fixed material stacking infrastructure	Υ	2200	m	\$850		\$1,870,000	1, 3, 4a, 4b, 4c, 7, 27, 10, 11, 12, 13, 14, 17, 19, 21, 26, 27, 28, 29, 30, 34, 38, 39, 50, 51, 52, 53, 54, 55, 56, 57, 58	Estimate for overhead conveyor including conveyors that are >10 m off the ground that require a crane remove. Does not include transport to regional disposal facility or equivalent.
	Remove and demolish conveyor from reclaim tunnel (Does not include excavation and demolition of reclaim tunnel roof)	Y	140	m	\$150.00		\$21,000	Kiln reclaim tunnel, jaw crusher conveyor 1 bottom end	Due to no canopy or infrastructure attached.
	Demolition of reclaim tunnel concrete (Assumes complete removal and dumping in mine pit void)	Υ	140	m	\$950.00		\$133,000	Kiln reclaim tunnel, jaw crusher conveyor 1 bottom end	Assumes this area will be used for another land-use that requires the structure to be dug up and re-buried somewhere else.
	Demolish and remove small tank clean (Thickener etc 3 - 9 m diameter) and disposal on-site/locally	Υ	4	allow	\$10,000		\$40,000	SandPlant, bore tank, site square water tank, site round water tank	Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
	Removal of UG tank <5000 L - including pipes, bunds etc. and disposal on-site/locally	Y	1	allow	\$21,000		\$21,000	Petrol tank decomissioned	Assume tank is clean (contents removed), does not include transport to regional disposal facility or equivalent.
	Remove small underground pipe and disposal on- site/locally	Y	1600	m	\$25.00		\$40,000	air,water and sewerage	For example: 300 mm pipes - 0.5 m deep, does not include transport to regional disposal facility or equivalent.
	Remove medium underground pipe and disposal on- site/locally	Y	290	m	\$60.00		\$17,400	back road storm water drainage, jaw crusher drain, kiln truckwash, kiln drainage to kiln dam, puddy dam, under rail line to kiln dam	For example: 500 mm pipes - 1 m deep, does not include transport to regional disposal facility or equivalent.
	Remove large underground pipe and disposal on- site/locally	Y	170	m	\$165.00		\$28,050	workshop stormwater drain	For example: 1 m pipes - 2 m deep. ~300 mm pipes and assumes pipes are
	Remove above ground pipe (supported) and disposal on-site/locally	Y	4000	m	\$12.00		\$48,000	air and water through conveyors and buildings	~300 mm pipes and assumes pipes are in close proximity to infrastructure areas. Does not include transport to regional disposal facility or equivalent. ~300 mm pipes and assumes pipes are
	Remove surface pipelines (unsupported) and disposal on-site/locally	Y	490	m	\$15		\$7,350	not part of conveyor structure	used for water transfer between pits (or similar) and remotely located. Does not include transport to regional disposal facility or equivalent. Includes equipment for retrieval - boats,
	Remove pump and pontoon from small lake or dam including pipes and electrical supply or diesel tank/s	Y	1	allow	\$20,000.00		\$20,000	kiln dam pontoon	etc. and labour. Does not include transport to regional disposal facility or equivalent.

1									Scalp bitumen and stabilised material.  Generally haulage rates will be \$0.60 -
	Remove bitumen (car park and access roads) and dispose on-site/locally	Y	61300	m2	\$10.00		\$613,000	admin car park, mangers office car park, access roads	\$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
	Remove concrete pads & footings (<300 mm thickness) and disposal on-site/locally	Y	13600	m2	\$36.00		\$489,600	conc hardstand areas around workshops and buildings etc.Including the area carparks (or similar) for quarry, despatchand lime plant, Trommel pad	Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
	Remove concrete pads & footings (>300 mm thickness) and disposal on-site/locally	Y	14500	m2	\$75.00		\$1,087,500	Area under kiln, kiln back road,weighbridge,areas under and in front of workshop, jaw crusher slab	Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
	Crush concrete to make road aggregate - 50 mm	Υ	11488	tonne	\$13.00		\$149,344	allowance for - 2025 added 288t for trommel pad	Does not include haulage of materials - assumes crushing plant is readily available.
	Remove fence (cyclone/wire fence) and disposal on- site/locally	Y	5000	m	\$20.00		\$100,000	Includes allowance for 5,000 metres of general fencing around site or site works	Roll up fence and remove posts.
	Removal of small plastic tanks	Y	14	each	\$1,000.00		\$14,000	allowance for - 2025 added 4 water tanks	Remove small poly tanks used for water storage, etc.
	Demolish and remove galvanised/corrugated light weight tanks	Y	2	each	\$500.00		\$1,000	allowance for bore water tanks	Demolish and remove small lightweight metal tanks. No costs included for managing liquids, etc. Cost includes demolition and removal of
	Demolish and remove communication towers	Y	1	each	\$5,000.00		\$5,000	allowance for	tower only; separate costs required for disconnection of services, demolition of footings, etc.
	Removal of UG services (power within main gate areas, etc.)	Y	1	allow	\$50,000.00		\$50,000	Covers Electricity water and gas	Assume service disconnection at the mine boundary is at surface level. This cost covers all fees and charges
	Waste disposal to Council landfill (general waste) - haulage >25 km but <50 km	Y	500	tonne	\$12.50		\$6,250	allowance for	Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste type.
	Waste disposal to Council landfill (industrial demolition / concrete / scrap metal) - haulage >25 km but <50 km	Y	200	allow	Use alternate rate cell	\$40.00	\$8,000	allowance for 200tonne @ \$40/tonne	Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste type.
	Waste disposal to Council landfill - fees (general waste)	Y	500	tonne	\$193.00		\$96,500	allowance for	Fee for waste disposal of general waste to local Council landfill; transport rates separate. Please note that this is not applicable to operations with approval for building and demolition waste disposal on site. Fee for waste disposal of industrial
									Fee for waste disposal of industrial demolition / concrete / scrap metal waste to local Council landfill; transport rates separate. Rate does not assume
	Waste disposal to Council landfill - fees (industrial demolition / concrete / scrap metal)	Y	200	tonne	\$174.00		\$34,800	allowance for	material is recyclable. Please note that this is not applicable to operations with approval for building and demolition
					\$174.00	rks Subtotal	\$34,800 \$7,959,458	allowance for	material is recyclable. Please note that this is not applicable to operations with approval for building and demolition waste disposal on site
Rail Infrastructure						rks Subtotal		allowance for allowance for rail not retained	material is recyclable. Please note that this is not applicable to operations with approval for building and demolition waster disensed on sitle. Remove all materials to allow area to be reshaped and rehabilitated - does not include transport to regional disposal facility or equivalent.
Rail Infrastructure	demolition / concrete / scrap metal)  Remove rail loop and spur, ballast etc. and disposal	Tern	nination of Se	ervices and D	emolition Wo	rks Subtotal	\$7,959,458	allowance for rail not	material is recyclable. Please note that this is not applicable to operations with approval for building and demolition waste disonsal on side.  Remove all materials to allow area to be reshaped and rehabilitated - does not include transport to regional disposal facility or equivalent. Remove rall load point infrastructure including gantries and control structures. Does not include transport to
Rail Infrastructure	demolition / concrete / scrap metal)  Remove rail loop and spur, ballast etc. and disposal on-site/locally  Remove train loading facilities and disposal on-site/locally  Reshape rail spur and load out areas. Does not	Tern Y	nination of Se	ervices and D	emolition Wo	rks Subtotal	\$7,959,458 \$90,000	allowance for rail not retained	material is recyclable. Please note that this is not applicable to operations with approval for building and demolition waste disonsal on site.  Remove all materials to allow area to be reshaped and rehabilitated - does not include transport to regional disposal facility or equivalent.  Remove rail load point infrastructure including gantries and contries and
	Remove rail loop and spur, ballast etc. and disposal on-site/locally  Remove train loading facilities and disposal on-site/locally	Y Y	1500 2000	m m2	emolition Wo \$60.00 \$185.00		\$7,959,458 \$90,000 \$370,000	allowance for rail not retained allwance for rail facilities not retained	material is recyclable. Please note that this is not applicable to operations with approval for building and demolition waste disnosal on site.  Remove all materials to allow area to be reshaped and rehabilitated - does not include transport to regional disposal facility or equivalent. Remove rail load point infrastructure including gantries and control structures. Does not include transport to resional disposal facility or equivalent. Does not include transport to resional disposal facility or equivalent. D10 Dozer and 16 H Grader (50%
Rail Infrastructure  Contaminated Materials	demolition / concrete / scrap metal)  Remove rail loop and spur, ballast etc. and disposal on-site/locally  Remove train loading facilities and disposal on-site/locally  Reshape rail spur and load out areas. Does not	Y Y Y	1500 2000	m m2	\$60.00 \$185.00 \$2,860		\$7,959,458 \$90,000 \$370,000 \$14,300	allowance for rail not retained allwance for rail facilities not retained	material is recyclable. Please note that this is not applicable to operations with approval for building and demolition waster disnosal on sitle.  Remove all materials to allow area to be reshaped and rehabilitated - does not include transport to regional disposal facility or equivalent.  Remove rall load point infrastructure including gantries and control structures. Does not include transport to recional disposal facility or equivalent.  DID Dozer and 16 H Grader (50% utilisation).

	Undertake an intrusive site investigation on sites with large footprints to investigate e.g. >15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	Υ	1	Cluster	\$106,000		\$106,000	Processing Plant Area	The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (ivi)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contaminated has pocurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oillwater separators etc.) and further field work is required involving intrusive investigation. Assume site has a history of contamination and/or a large area >15 ha requires investigation and testing (test pits, boreholes, etc.) based on Sampling and Analysis Quality Planilinguides SAQP, fleddowrk, sampling and findudes SAQP, fleddowrk, sampling and
	Develop a Remediation Action Plan on sites with small footprints based on outcomes of intrusive investigation including strategies to address contamination exceedances	Y	1	allow	\$35,000		\$35,000	allowance for	Develop remediation plan for approval including designs and detailed costs. Costs may increase if detailed designs required for construction. Cost for recent sump clean-up from
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	Y	40000	L	\$0.35		\$14,000	sump, secondary screening sump, weigh bridge sump, lime plant sump > 1km but < = 2km	resource activity - requires specialists to treat.
	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (haul distance >1 km but <2 km)	Y	1000	m3	\$5.63		\$5,630	allowance for plant spillage	Assumes 1 Excavator, 3 Trucks 16 M Grader (50% utilisation) and 1 D10 Dozer
	Load, cart and dispose of Hazardous classified contaminated material off site to a licensed landfill. Assumes cartage to a licensed landfill.	Y	100	m3	\$800.00		\$80,000	allowance for	Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Restricted classified contaminated material off site to a licensed landfill. Add \$50/m3 for cartage from regional areas	Υ	100	m4	\$660.00		\$66,000	allowance for	Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add \$50/m3 for cartage to regional landfill	Y	100	m3	\$220.00		\$22,000	allowance for	Includes load, haul and dump fees to a licensed facility.
	Remove and dispose of asbestos (>750 m2)	Y	2100	m2	\$40		\$84,000	Estimate based on site asbestos register	Where an assessment/estimation has been made to confirm the volume of asbestos to be removed.
	Waste disposal to Council landfill - fees (asbestos)	Y	30	tonne	\$290		\$8,700	Estimate assuming 70m2 of asbestos sheet approx 1 tonne	Landfill fees to regional landfill.
Vents, Shafts and Boreholes	Boreholes – grout (with concrete) cap and seal bore	Y	3	Contan	s35,000	rials Subtotal	\$495,330 \$105,000	Allowance for water bores	Includes multi skin sleaves to prevent aquifer mixing.
	holes (i.e. where sealing aquifers) Option 5 - Mineral reverse circulation drill holes Rehabilitation of reverse circulation drill holes and pad including sealing drill holes for mineral exploration	Υ	50	Item	\$1,340		\$67,000	Allowance for RC exploration drill holes	Sealing required, but not complete filling with concrete/grout
Roads and Tracks	Unsealed roads / haul roads / vehicle park-up areas	ĺ	I	Vents, Shaft	s and Boreho	oles Subtotal	\$172,000	Allowance for rehab of roads	D10 Depart @ \$400 per hour and 16 H
	with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/qrass)	Y	10	ha	\$7,025		\$70,250	not retained within infrestructure domain	D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
Earthworks / Structural Works				R	oads and Tra	icks Subtotal	\$70,250	> 50m - 100m < push	
(Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – 50 m-75 m push length	Y	200000	m3	\$1.19		\$238,000	Allowance for bulk shaping in 18.1ha Infra. domain and 50% or 18.6ha of NOE	Assumes D11 dozer push @ 375 bcm/hr.
	Minor reshaping and pushing	Y	36.7	ha	\$3,900		\$143,130	Infra domain - 18.1ha and NOE 18.6 ha	D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation).
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	Y	36.7	ha	\$1,600		\$58,720	Infra domain - 18.1ha and NOE 18.6 ha	Combination of dozer and excavator work plus grader for ~4 hours each per ha.
	Fill dams, voids etc Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (haul distance <1 km)	Y	5000	m3	\$3.90		\$19,488	<=1km minor allowance	Undertaken using a 623 scraper and D10 Dozer.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	Y	36.7	ha	\$1,130.00		\$41,471	Infra domain - 18.1ha and NOE 18.6 ha	Undertaken using D10 dozer and 16M grader.
	Deep rip hard stand / lay down areas	Y	36.7	ha	\$960.00		\$35,232	Infra domain - 18.1ha and NOE 18.6 ha	D10 deep ripping. Installation of on-site rock material (rip-
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y	5000	m2	\$27.00		\$135,000	allowance for	rap) where managing water run-off from disturbed land and/or upon entry to water courses - prevents erosion of gully head (assumes competent material is locally available). If required to be sourced off site assume an additional
Land Preparation and	T E	arthworks / S	tructural Wor	rks (Landforn	t Establishm	ent) Subtotal	\$671,041	> 5km	
Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media - haul distance >5 km	Y	36700	m3	\$7.91		\$290,297	assume 10cm over 37.7ha	Undertaken with D10 dozer, excavator and trucks.
	Planting tube stock (<15 cm)  Direct seeding / fertiliser (tree or native grass	Y	12000 18	allow	\$6.60 \$4,135		\$79,200 \$74,430	Allow tube stock over 50%  Allow direct seeding over	4 m centres.  Includes treating, weighing, mixing with factilizer + enreading by treater or
	species)		10	ha	φ4,135		\$74,430	50%	fertiliser + spreading by tractor or helicopter (aerial seeding). These rates have fluctuated over the last
	Single application of fertiliser (trees)	Υ	36.7	ha	\$140.00		\$5,138	Allowance for	few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Construct standard stock fence around rehabilitated areas	Y	2500	m	\$13.00		\$32,500	Allowance for	Standard rate for standard stock fencing.  Compliance with AS 1319-1994 - Safety
	Purchase and erect warning signs	Y	100	allow	\$250.00		\$25,000	Allowance for	signs for the occupational environment - installed every 25 m.
	Growth media supplementation with manure  Land Preparation and Revegetation (Grov	Y wth Media De	36.7	ha nd Ecosysten	\$747.50	ent) Subtotal	\$27,433 \$533,998	Allowance for	Addition of manure to improve soil quality.
Water Management	Clean water dams to be retained after decommissioning – make safe and minor	Y Y	2	allow	\$2,500	only Subtotal	\$5,000	Kiln Dam and Eastern Gully	Provisional sum for earthworks and revegetation required to rehabilitate dam batters etc suitable for re-use by an alternate land-user - D6 Dozer (or

	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Y	2	allow	\$10,500		\$21,000	Dam Dam	Provisional sum for earthworks and revegetation required to rehabilitate dam batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (haul distance >1km but <2km)	Υ	2000	m3	\$4.45		\$8,900	> 1km but < = 2km  Allowance for	Undertaken with excavator, trucks, 16 M grader and D10 Dozer
				Wa	iter Managem	nent Subtotal	\$34,900		
Maintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y	36.7	ha	\$925		\$33,948	Allowance for	Rehabilitation maintenance might include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include major repair works.
	Existing rehabilitation repair - moderate	Υ	36.7	ha	\$1,700		\$62,390		Areas requiring moderate repair - rills, significant growth media replacement.
		·	Mainte	enance of Rel	habilitated Ar	reas Subtotal	\$96,338		
					Additional Ite	ems Subtotal	\$0		
	Total Cost fo	r Infras	tructur	e Doma	in			\$10,507,6	514

#### Domain 2a: Tailings & Rejects

#### Total Cost for Tailings & Rejects Domain

\$353,488

Refer to Plan 1 - 30 Conceptual Final Landform Plan_231130_v1v and 2019 EIS - Figure 2.1 / SSD7009 - APPENDIX 6	Key Rehabilitation Area Data for Domain	Enter data below manually
Allow additional investigation and treatment as required for up to 2ha of waste lime emplacement within overburden emplacement areas	Total Landform Establishment:	2.00
	Total Growth Media Development:	2.00
	Total Ecosystem Establishment:	2.00

		Applicable (Y			Default Unit	Alternative		Basis for Costs Estimation	
Management Precinct	Activity / Description	or N)	Quantity	Unit	Rate	Unit Rate	Total Cost	and Additional Relevant Information	Description / Notes:
Contaminated Materials	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	Y	1	Cluster	\$15,000		\$15,000	Lime waste emplacement	include at minimum a deskto histo inicidude, at minimum a deskto histo inicidute, at minimum a deskto histo inicidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Pha 1 assessment (EP Act Section 389 (2 (Nessessment method. A cluster may include:  - Mine infrastructure (i.e., fuel / chemi store, workshop, vehicle wash-down, sewage treatment etc.)  - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.)  - Remote pit-top facilities (i.e., evhicle fuel, sewage treatment, secondary
	Develop a Remediation Action Plan on sites with small footprints based on outcomes of intrusive investigation including strategies to address contamination exceedances	Y	1	allow	\$35,000		\$35,000	Allowance for Lime waste emplacement if required	Develop remediation plan for approva including designs and detailed costs. Costs may increase if detailed design required for construction.
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	Y	5000	L	\$0.35		\$1,750	Allowance for lime plant sump cleanup	Cost for recent sump clean-up from resource activity - requires specialists treat.
	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (haul distance >1 km but <2 km)	Y	5000	m3	\$5.63		\$28,150	> 1km but < = 2km  Allowance for lime plant spillage clean up	Assumes 1 Excavator, 3 Trucks 16 N Grader (50% utilisation) and 1 D10 Dozer
		arthuarka / C	tructural Wo		ninated Mater		\$79,900 \$0		
Earthworks / Structural Works	E:	artnworks / 5	tructurai vvo	rks (Landiorn	n Establishme	ent) Subtotal	\$0	< 50m push	
(Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – 50 m push length	Y	60000	m3	\$0.80		\$47,888	Allowance for bulk fill of 2ha active waste lime emplacement area	Assumes D11 dozer push @ 400 bcm/hr.
	Minor reshaping and pushing	Y	2	ha	\$3,900		\$7,800	Allowance for 2ha active waste lime emplacement area	D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utilisation).
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	Y	2	ha	\$1,600		\$3,200	Allowance for 2ha active waste lime emplacement area	Combination of dozer and excavator work plus grader for ~4 hours each plus.
Mine Waste	E	arthworks / S	tructural Wo	rks (Landforn	n Establishme	ent) Subtotal	\$58,888		rnis includes sourcing, carting, spreading, moisture conditioning an
	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propension spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no artificial strengthening required)	٧	2	ha	\$82,000		\$164,000	Allowance for capping 2ha active waste lime emplacement area	compaction of a suitable volume material with the appropriate chemic and physical properties. This rate assumes suitable capping material is available on site within 10 km, and a average cap thickness of approximation 0.5 m to 1 mand 0.15 m - 0.2 m gro media (assume at least 1 m thick correquired for carbonaceous material covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km rot trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for taillings cap material included in rate if additional material to make up landform, provide buttress or other works aside from taillings cap, use refrom 9.02 for relevant haulage and spreading in additional to any long
					Mine Wa	ste Subtotal	\$164,000		
	Source, cart and spread growth media - haul distance >1 km but <2 km	у	2000	m3	\$4.32		\$8,640	> 1km but < = 2km  Allowance for 2ha active waste lime emplacement area	Undertaken with scraper and D10 do
	Direct seeding / fertiliser (tree or native grass species)	Y	1	ha	\$4,135		\$4,135	Allowance for direct seeding 50% of active waste lime emplacement area (1 ha)	fertiliser + spreading by tractor or helicopter (aerial seeding).
	Hydro-seeding with straw mulching and bitumen tack with native seed	Υ	10000	m2	\$1.90		\$19,000	Allowance for 50% hydroseeding active waste lime emplacement area (1 ha)	Process to be used on flat well prep- surfaces under irrigation e.g. sewag treatment irrigation areas. Ranges t \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00.
	Single application of fertiliser (trees)	Υ	2	ha	\$140.00		\$280	Allowance for 2ha active waste lime emplacement area	These rates have fluctuated over the few years however in light of current conditions (lower fuel prices, reduce demand etc) this is a suitable stand rate.
	Construct standard stock fence around rehabilitated areas	Υ	600	m	\$13.00		\$7,800	Allowance for 2ha active waste lime emplacement area	Standard rate for standard stock fencing.
	Purchase and erect warning signs	Y	10	allow	\$250.00		\$2,500	Allowance for 2ha active waste lime emplacement area  Allowance for 2ha active	Compliance with AS 1319-1994 - Sa signs for the occupational environm- installed every 25 m.
	Growth media supplementation with manure	Y	2	ha	\$747.50		\$1,495 <b>\$43,850</b>	waste lime emplacement area	Addition of manure to improve soil quality.
	Land Preparation and Revegetation (Grov	vth Media De	velopment a		n Establishme ater Managem		\$0		

	Existin	ng rehabilitation repair - major	Υ	2	ha	\$2,500		\$5,000	waste lime emplacement	Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management.		
ı			\$6,850									
ı			\$0									
	Total Cost for Tailings & Rejects Domain								\$353,488			

#### Domain 3a: Overburden & Waste

#### Total Cost for Overburden & Waste Domain

\$4,913,020

Refer to Plan 1 - 30 Conceptual Final Landform Plan_231130_v1v and 2019 EIS - Figure 2.1 / SSD7009 - APPENDIX 6	Key Rehabilitation Area Data for Domain	Enter data below manually
Areas for overburden domain comprise SOE (61.8ha), WOE (147ha), NOE (18.7ha) = 227.5ha. Assume 1/3rd of area active for final rehab = 75ha	Total Landform Establishment:	75.00
	Total Growth Media Development:	75.00
	Total Ecosystem Establishment:	75.00

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate ninated Mater	Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Roads and Tracks	Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim	Y	1.5	ha	\$1,500		\$2,250	Allowance for overburden contractor site laydown	D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - no seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	Y	1.5	ha	\$7,025		\$10,538	Allowance for overburden contractor site laydown	D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (haul distance < 1km)	Y	7500	m3	\$4.45		\$33,367	<=1km  Allowance for overburden contractor site laydown	Assumes 1 excavator, 3 trucks, 2 x 16 M grader (50% utilisation) and 1 D10 Dozer @ \$400
				R	loads and Tra	cks Subtotal	\$46,154		
Earthworks / Structural Works (Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – 50 m push length	Υ	295000	m3	\$0.80		\$235,447	< 50m push 29.5ha need final shaping	Assumes D11 dozer push @ 400 bcm/hr.
(Landonn Establishment)	Minor reshaping and pushing	Y	75	ha	\$3,900		\$292,500	Assume 1/3rd of total emplacement area of approx 227ha active	D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation).
	Fill dams, voids etc Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit ( haul distance >1 km but <2 km)	Y	25000	m3	\$5.22		\$130,495	> 1km but <= 2km  Allowance for minor sediment dams to be decommissioned	Undertaken using 623 scraper and D10 Dozer.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	Y	75	ha	\$1,130.00		\$84,750	Assume 1/3rd of total emplacement area of approx 227ha active	Undertaken using D10 dozer and 16M grader.
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	Y	75	ha	\$1,600		\$120,000	Assume 1/3rd of total emplacement area of approx 227ha active	Combination of dozer and excavator work plus grader for ~4 hours each per ha.
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y	7500	m2	\$27.00		\$202,500	Allow for 1% of active area requiring additional rock lined drainage	Installation of on-site rock material (rip- rap) where managing water run-off from disturbed land and/or upon entry to water courses - prevents erosion of gull head (assumes competent material is locally available). If required to be sourced off site, assume an additional
	E	arthworks / S	tructural Wor	rks (Landforr	n Establishm		\$1,065,692		osarosa on ono. assamo an adamona
				_	Mine Wa	aste Subtotal	\$0		
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media - haul distance >2 km but <5 km	Y	75000	m3	\$6.00		\$450,000	> 2km but < = 5km Assume 1/3rd of total OB emplacement area (approx 227ha) active requiring 0.1m	Undertaken with D10 dozer, excavator and trucks.
	Planting tube stock (<15 cm)	Y	25000	allow	\$6.60		\$165,000	50% of 75ha	4 m centres. Includes treating, weighing, mixing with
	Direct seeding / fertiliser (tree or native grass species)	Y	37.5	ha	\$4,135		\$155,063	Assume 50% direct seeded	fertiliser + spreading by tractor or helicopter (aerial seeding). Process to be used on flat well prepared
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y	187500	m2	\$1.90		\$356,250	Assume 50% of 37.5ha for additional hydroseeding	surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00 Assumes use on extreme slopes where
	Hydromulch - high performance flexible growth medium grade	Y	372000	m2	\$2.50		\$930,000	Allowance for steep areas on Eastern Batter legacy emplacement areas	stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover cro only, additional seeding required.
	Single application of fertiliser (pasture)	Y	37.2	ha	\$420.00		\$15,624	Allowance for steep areas on Eastern Batter legacy emplacement areas	Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Single application of fertiliser (trees)	Y	75	ha	\$140.00		\$10,500	Assume 1/3rd of total emplacement area of approx 227ha active	These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Construct no-climb stock fence around rehabilitated areas	Υ	10000	m	\$22.00		\$220,000	Allowance for	Standard rate for no-climb stock fencing.
	Construct standard stock fence around rehabilitated	Y	10000	m	\$13.00		\$130.000	Allowance for	Standard rate for standard stock
	areas  Purchase and erect warning signs	Y	800	allow	\$250.00		\$200,000	20,000m /25m = 800 signs	fencing.  Compliance with AS 1319-1994 - Safety signs for the occupational environment installed every 25 m.
	Growth media supplementation with manure	Y	75	ha	\$747.50		\$56,063	Assume 1/3rd of total emplacement area of approx 227ha active	Addition of manure to improve soil quality.
	Land Preparation and Revegetation (Gro	wth Media De	velopment ar	nd Ecosyster	n Establishm	ent) Subtotal	\$2,688,499		Provisional sum for corthworks and
Water Management	Land Preparation and Revegetation (Gro Clean water dams to be retained after decommissioning – make safe and minor earthworks	wth Media De	velopment ar	allow	*2,500	ent) Subtotal	\$5,000		batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~\$200 per hour and pasture grass.
Water Management	Clean water dams to be retained after decommissioning – make safe and minor					ent) Subtotal			revegetation required to rehabilitate dar batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~\$200 per hour and pasture grass. Provisional sum for earthworks and
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks  Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor	Y	2	allow	\$2,500	ent) Subtotal	\$5,000	> 1km but <= 2km	revegetation required to rehabilitate databetes ets outlable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and pasture orgass. Provisional sum for earthworks and revegetation required to rehabilitate darbatters ets suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture orass.
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks  Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks  Remove sediments from the floor of the dam to enable it to be converted into clean water structure	Y	2	allow allow m3	\$2,500 \$10,500		\$5,000 \$21,000	> 1km but < = 2km	revegetation required to rehabilitate data batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and pasture grass. Provisional sum for earthworks and revegetation required to rehabilitate dar batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass. Undertaken with excavator, trucks, 16 N
Water Management  Maintenance of Rehabilitated  Areas	Clean water dams to be retained after decommissioning – make safe and minor earthworks  Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks  Remove sediments from the floor of the dam to enable it to be converted into clean water structure	Y	2	allow allow m3	\$2,500 \$10,500 \$4.45		\$5,000 \$21,000 \$44,500	Assume 1/3rd of total emplacement area of approx 227ha active	revegetation required to rehabilitate data batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and pasture grass. Provisional sum for earthworks and revegetation required to rehabilitate dar batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass. Undertaken with excavator, trucks, 16 N
Maintenance of Rehabilitated	Clean water dams to be retained after decommissioning – make safe and minor earthworks  Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks  Remove sediments from the floor of the dam to enable it to be converted into clean water structure (haul distance >1km but <2km)	Y	2 2 10000	allow allow m3	\$2,500 \$10,500 \$4.45 ater Manager		\$5,000 \$21,000 \$44,500 \$70,500	Assume 1/3rd of total emplacement area of approx	revegetation required to rehabilitate danaters ets outlable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and pasture of ass. Provisional sum for earthworks and revegetation required to rehabilitate dan batters ets suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.  Undertaken with excavator, trucks, 16 M grader and D10 Dozer  Rehabilitation maintenance might include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include

Total Cost for O		\$4,913,0	020					
				Additional Ite	ems Subtotal	\$0		
•	_	Mainte	enance of Rel	habilitated Ar	eas Subtotal	\$1,042,175		
Existing rehabilitation repair - total failure of landform	Υ	21	ha	\$40,000		\$840,000	Barbers Creek	Areas that require extensive rehabilitation repair - re-design and re- construction of landform.
Existing rehabilitation repair - major	Y	11	ha	\$2,500		\$27,500	Bryces Gully	Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management.

#### Domain 4a: Active Mine & Voids

#### Total Cost for Active Mine & Voids Domain

\$3,460,260

Refer to Plan 1 - 30 Conceptual Final Landform Plan_231130_v1v and 2019 EIS - Figure 2.1 / SSD7009 - APPENDIX 6	Key Rehabilitation Area Data for Domain	Enter data below manually
Final mine void comprises void (155.4ha) + mine backfill (16.8ha) = 172.2ha	Total Landform Establishment:	60.00
Assumed accessible bench area for visual screen planting of 60ha	Total Growth Media Development:	60.00
	Total Ecosystem Establishment:	60.00

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant	Description / Notes:
Open Cut	Active pit area – benches blasted and doze to acceptable grade	Υ	7000	Lm	\$1.93		\$13,510	Information Estimated perimeter of 155 ha final mine void plus backfill area	Blasting in a 8x9 pattern of bench heigh 25 m with D11 push of 50-75 m.
	Drill & blast faces to make safe	Υ	400000	m3	\$0.95		\$380,000	Allowance for top of highwall treatment to make safe (trim shot)	Bulk Drilling say 8*9 pattern, assuming a stem height of 6 m, charge length of 19 m, explosive density of 0.9, diamete of 229 mm, explosives at 665.3 kg/hole with a powder factor of 0.37 with an approximate bench height of 25 m.
	High wall treatment – (trench and safety berm)	Υ	7200	m	\$90.00		\$648,000	Estimated "fenced" perimeter of 155 ha final mine void plus backfill area	D10 dozer, 16H Grader and revegetation with pasture grass.
				1	Open	Cut Subtotal	\$1,041,510		
Earthworks / Structural Works (Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – 50 m-75 m push length	Y	700000	m3	\$1.19		\$833,000	> 50m - 100m < push estimate of material pushed into berms to enhance revegetation	Assumes D11 dozer push @ 375 bcm/hr.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	Υ	60	ha	\$1,130.00		\$67,800	Allowance (40%) for accessable bench areas	Undertaken using D10 dozer and 16M grader.
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	Y	30	ha	\$1,600		\$48,000	Allowance (20%) for accessable bench areas, North and South pits	Combination of dozer and excavator work plus grader for ~4 hours each per ha.
	E	arthworks / S	tructural Wo	rks (Landforn	n Establishme	ent) Subtotal	\$948,800		
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media - haul distance >1 km but <2 km	Y	60000	m3	\$4.32		\$259,200	> 1km but < = 2km 0.1m of select overburden materials to top dress accessible benches	Undertaken with scraper and D10 doze
· · · · · · · · · · · · · · · · · · ·	Direct seeding / fertiliser (tree or native grass species)	Υ	60	ha	\$4,135		\$248,100	Allowance (40%) for accessable bench areas	Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding).
	Hydro-seeding with straw mulching and bitumen tack with native seed	Υ	150000	m2	\$1.90		\$285,000	Additional 15ha allowance for hydroseeding as needed	Process to be used on flat well prepare surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges froi \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00
	Single application of fertiliser (trees)	Y	60	ha	\$140.00		\$8,400	Allowance (40%) for accessable bench areas	These rates have fluctuated over the la few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Security fence around steep section of high wall	Υ	7200	m	\$64.00		\$460,800	security fence around the open void	1800mm x 3 barb chain-link mesh security fence and gate standard 2.5mm mesh & 32 mm post not concreted
	Purchase and erect warning signs	Y	300	allow	\$250.00		\$75,000	7200m / 25m = 288 signs	Compliance with AS 1319-1994 - Safe signs for the occupational environmen installed every 25 m.
	Growth media supplementation with manure  Land Preparation and Revegetation (Grov	Y wth Modia Do	60	ha nd Ecosyston	\$747.50	ont) Subtotal	\$44,850 \$1.381.350	Allowance (40%) for accessable bench areas	Addition of manure to improve soil quality.
Water Management	Land Freparation and Nevegetation (Gro	Will Media De	velopilielit ai	iu Ecosysten	LStabilishing	ont) Subtotai	<b>V</b> 1,001,000		Provisional sum for earthworks and
water management	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Υ	2	allow	\$2,500		\$5,000		revegetation required to rehabilitate da batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~\$200 per hour and pasture grass.
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Y	2	allow	\$10,500		\$21,000		Provisional sum for earthworks and revegetation required to rehabilitate da batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (haul distance <1km)	Y	2000	m3	\$3.55		\$7,100	< =1km	Undertaken with excavator, trucks, 16 l grader and D10 Dozer
				Wa	ater Managem	ent Subtotal	\$33,100		
Maintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y	60 <b>Maint</b>	ha	\$925	Cultural	\$55,500 \$55,500	Allowance (40%) for accessable bench areas	Rehabilitation maintenance might include re-seeding, watering, fertilising minor re-shaping, erosion control, inspections/audits - does not include major repair works.
			mainte		habilitated Ar Additional Ite		\$55,500		
	Total Cost for A					ins Subtotal	Ų	<b>A</b> -	•
								\$3,460,2	

### Domain 5a: Management Activities

## **Total Cost for Management Activities**

\$1,382,390

Refer to Plan 1 - 30 Conceptual Final Landform Plan_231130_v1v and 2019 EIS - Figure 2.1 / SSD7009 - APPENDIX 6	Key Rehabilitation Area Data for Domain	Enter data below manually
Total area under MLs = 763.6ha. Estimated total disturbance = 521.8ha therefore undisturbed = 241.8ha. Assume 250ha	Total Landform Establishment:	NA
CML 16 remnant is 75.1ha of which an estimated 51.9 is undisturbed.	Total Growth Media Development:	NA
	Total Ecosystem Establishment:	maintenance of undisturbed

								Basis for Costs Estimation	
Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	and Additional Relevant Information	Description / Notes:
Water Management	On-site treatment of contaminated water due to high salt (includes removal of metals etc, brine disposal and cost of mobile water treatment unit)	N		ML	\$3,600				Rate can fluctuate depending on treatment type however this is a suitable standard rate for current programs at mining operations.
	On-site treatment of contaminated water due to low								Rate can fluctuate depending on treatment type however this is a suitable
	pH (incudes removal of metals etc, neutralisation treatments and cost of mobile water treatment unit	N		ML	\$1,500				standard rate for current programs at mining operations.
Creek Diversions		1		Wa	ater Managem	ent Subtotal	\$0		Assumes material is suitable for
Cleek Diversions	Repairs and/or stabilisation of new or compromised water course diversion	N		m	\$2,500				revegetating and has a reasonable chance of stabilising.
	Long term maintenance of water course diversion – Channel constructed through backfilled material	N		m	\$1,500				Assumes maintenance has been kept u and significant works are not required.
	Long term maintenance of water course diversion – Channel constructed through competent material	N		m	\$750.00				Assumes maintenance has been kept u and significant works are not required.
	Installation of rock armouring	N		m2	\$6.00				Assumes competent material is locally available - multiply costs by 2 for
					Creek Diversi	one Subtotal	\$0		sourcing and transporting from offsite
Maintenance of Rehabilitated	Pest management on buffer lands, non-disturbed,	Y	050			ons Subtotal		Allowance for undisturbed	Feral animal baiting programs if
Areas	and rehabilitated areas  Land management of undisturbed areas	Y	250	ha	\$150.00		\$37,500	area of ML 1857 and CML16	required and waste materials required to be removed. Undisturbed areas within the lease
	(rehabilitation, weeds, ferals, erosion and sediment control works)	Υ	250	ha	\$400.00		\$100,000	Allowance for undisturbed area of ML 1857 and CML16	boundary that require land manageme activities.
	(control works)		Maint	enance of Re	habilitated Ar	eas Subtotal	\$137,500		
Heritage Items	The restoration and care and maintenance of items	Y	2	allow	Use alternate	\$25,000	\$50,000	Allowance for both Aboriginal and European	Item for the redistribution of Aboriginal artefacts, preservation of European
	that have heritage significance	·		allow	rate cell			heritage items	heritage items or a combination of activities.
Sundry Items	1				Heritage Ite	ems Subtotal	\$50,000		Provisional sum to be used to refine the
	Development of an 'Unplanned' Project Closure Plan - State Significant Development with closure planning well progressed i.e. preferred cover design, closure environment modelled e.g. groundwater /subsidence / plt lakes, preliminary seal designs, etc. and only finalisation of detailed engineering deigns required	N		allow	\$100,000				conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Assumes outcomes of studies readily available including modelling, landform design, geochemistry, demolition, etc. Costs to finalise options by domain an finalise designs for construction. Assume a simple site e.g. single open cut, no legacy operations historic in the area, little social dependence, etc. Depending on site size, complexity, fin land use requirements and knowledge base investigations can range from ~575k to ~51 M.
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with at least ±2 of the following aspects requiring closure planning, but no significant issues realised at this time: previous subsidence, medium or higher geochemistry risk and/or spontaneous combustion propensity, known/ likely contamination, tailings / rejects, final void	N		allow	\$90,000				Provisional sum to be used to refine the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Estimated cost for developing closure plan including studies - basic to satisfyrisks and decisions - includer risk assessment, options analysis, Closure Plan.  Sites with more than 1 pit to add
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with no EPL and/or only one of the following relevant aspects: previous subsidence, low to medium geochemistry risk and/or spontaneous combustion propensity, known limited contamination, small approved final world.	N		allow	\$15,000				SSO 000 to rate Assumes sediment control is the key concern for rehabilitation e.g. small mines, exploration operations. Include risk assessment, sampling and analyst on <5 samples, one study and Closure Plan.
	Development of an 'Unplanned' Project Closure Plan - State Significant Development with only preliminary to conceptual closure planning in place	Y	1	allow	\$300,000		\$300,000	Refer SSD7009 and Rehabilitation Strategy rev 3 30/08/2022	includes costs in Key investigations and studies including designs e.g. geochemistry. Contamination Remediation Action Plan, subsidence risk, cover/capping and final landform, site wide surface water, etc. Provisions um to be used to refine the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Assume at least 15 types of studies required ranging from geotechnical to ecology and social, development of a closure plan including address of obligations. Assume a simple site e.g. single open cut, no legacy operations historic in the area, little social dependence, etc. Depending on site size, complexity, fin. land use requirements and knowledge base investigations can range to >\$3 \text{ MSI its}. Sites with more than 1 pit to add
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with at least ±2 of the following aspects resulting in significant issues requiring remediation; previous subsidence, medium or higher geochemistry risk and/or spontaneous combustion propensity, known/ likely contamination, tailings / rejects, final void	N		allow	\$125,000				Includes costs for key investigations ar studies including economic treatments and designs e.g. geochemistry. Contamination Remediation Action Plan, subsidence risk, cover(capping and final landform, site wide surface water, etc. Provisional sum to be used to refine the conceptual closure plan in a detailed closure plan with execution strategies for republilitation activities. Based on experience for a REF after completion of a detailed closure study
	Develop a Review of Environmental Factors (REF) to facilitate rehabilitation including contamination works.	N		allow	\$27,950				(e.g. contamination investigation) cost could range from \$10,000 to \$100,000 ex GST. Note this does not apply to a Statement of Environmental Effects or Environmental Impact Statement.

	- Tool Nilly		Mo	bilisation an	d Demobilisat	tion Subtotal	\$100,000		execute bulk earthworks as required.
	>1000 km)	N		item	\$500,000				equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site >500 km but <1000 km)  Mobilisation & Demobilisation (Distance to site	N		item	\$300,000				equipment and/or suitable plant to execute bulk earthworks as required. May include specialist demolition
	Mobilisation & Demobilisation (Distance to site >150 km but <500 km)	N		item	\$150,000				May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required. May include specialist demolition
	Mobilisation & Demobilisation (Distance to site <150 km)	Υ	1	item	\$100,000		\$100,000	Estimate earth moving equipment required is considered readily available and site access is not considered diffilcult	May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation for small mine or quarry - medium to large fleet	N		Item	\$35,000				May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
obilisation and Demobilisation	Mobilisation & Demobilisation for small mine or quarry - small fleet	N		Item	\$12,000				equipment and/or suitable plant to execute bulk earthworks as required.
Mobilisation and Demobilisation			1	1	Sundry Ite	ems Subtotal	\$1,094,890		May include specialist demolition
	Additional fees for accessing State, Crown or other public lands for rehabilitation/remediation activities	Y	1	allow	Use alternate rate cell	\$50,000	\$50,000	Allowance for Crown Lands access	Provisional sum.
	Removal and disposal of radiation devices	Υ	3	each	\$31,630		\$94,890	2 online analyser scanners and a XRF unit in the laboratory	Provisional sum for removal and disposal of monitoring devices on conveyors using a radiation source (I. Americium – 241, Plutonium – 238, Caesium - 137 etc).  Source Isotope type, quantity, strengt weight, source holder type, source holder type, source
	Large HAZMAT Clean-up - cleaning and decontaminating plant and equipment, chemical storage locations, oil and grease traps, tanks, vessels, and pipe work etc	Y	1	allow	\$650,000		\$650,000	Large	Very labour intensive and previous experience in similar mine sites suggrithis is a better more realistic rate to u for larger size contam clean-ups.
	Site security during closure	N		yr.	\$75,000				Provisional sum for site security measures required during closure. T includes nightly patrols and first response in the event of an out of ho

#### Domain 1b: Infrastructure

#### **Total Cost for Infrastructure Domain**

\$0

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

								Basis for Costs Estimation	
Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Termination of Services and Demolition Works	Disconnect and terminate all services (Water, electricity, gas etc at point of attachment to site)	Υ		allow	\$35,000		\$0		For disconnection of all services, at building boundaries, physical cut at the point of attachment or distribution location. If infrastructure is not consolidated (i.e., administration, camp and workshops are in separate places), consider multible disconnection fees.
	Disconnect and terminate services at remote areas (i.e. pump stations, remote workshops, sewage treatment plant etc.)	Y		allow	\$5,850		\$0		Used for infrastructure remote from primary connection Can also be used for small mines / quarries that do not have dedicated supplies from supply authorities such as steel lattice power lines.
	Removal of low/medium voltage powerlines including disconnection, rolling up the wires and removing the poles - does not include the removal of	Y		km	\$15,000		\$0		Applies to power lines on stobie, concrete or similar poles.
	Removal of power lines on tower or lattice structures (this includes disconnection, rolling up the wires and removing the structures) - does not include the removal of substations	Υ		km	\$100,000		\$0		Applies to power lines on steel tower and steel lattice structures assuming 3 towers / km.
	Remove small rail, road, water course overpass - manage potential interruptions and demolish and remove bridge supports/pylons/bridge structure etc. and dispose of waste material on-site/locally	Y		Item	\$350,000		\$0		Smaller structures - minimal civil works to demolish (constructed for the purposes of mining related works - does not include transport to regional disposal facility or equivalent).
	Remove medium rail, road, water course overpass - manage potential interruptions and demolish and remove bridge supports/pylons/bridge structure etc. and dispose of waste material on-site/locally	Y		Item	\$500,000		\$0		Medium structures - minimal civil works to demolish (constructed for the purposes of mining related works - does not include transport to regional disposal facility or equivalent).
	Remove large / significant rail, road, water course overpass - manage potential interruptions and demolish and remove bridge supports/pylons/bridge structure etc. and dispose of waste material onsite/locally	Υ		Item	\$1,300,000		\$0		Large structures - includes significant water management e.g. watercourse diversion and civil works to demolish (constructed for the purposes of mining related works - does not include transport to regional disposal facility or equivalent).
	Demolish and/or remove substations (assumes they are in a closed building). Dispose of waste material on-site/locally	Y		m2	\$100.00		\$0		Simple structure to demolish mechanically (no labour required), assumes single story building with no asbestos and segregation of contents for scrap as applicable.
	Demolish and remove switchyard. Dispose of waste material on-site/locally	Y		m2	\$75.00		\$0		Includes demolition and removal of all switchgear and transformers etc. and segregation of contents for scrap as applicable.
	Demolish and remove demountable structures on concrete stumps. Assumes not being re-used	Υ		m2	\$40.00		\$0		Crib huts, temporary offices and other 'non permanent' structures. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove small buildings/tanks (admin buildings, single story accommodation etc) and disposal on-site/locally	Υ		m2	\$61.00		\$0		Simple structure to demolish, assumes no greater than 2 stories high. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove light industrial buildings and disposal on-site/locally	Υ		m2/floor	\$90.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m) - does not include transport to regional disposal facility or equivalent. Assumes asbestos free and mechanically
	Demolish and remove industrial buildings (workshops tyre change and servicing area etc not CHPP/process plant) and disposal on-site/locally	Y		m2/floor	\$130.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Demolish and remove CHPP/process plant (include the area of each floor of the structure) and disposal on-site/locally	Υ		m2/floor	\$225.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Collapse, demolish and remove washery, crushers, hoppers, mills, furnaces, agglomeration, electrowinning, floatation, sizing stations, rotary breakers, etc (include the area of each floor of the structure) and disposal on-site/locally	Y		m2/floor	\$225.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Collapse, demolish and remove stacker OR reclaimer (radial or luffing etc. with maneuverability for stockpile control) and disposal on-site/locally	Y		allow	\$750,000		\$0		Cost for removal of stacker or reclaim unit only. Does not include terminate services, remove rails and ballast etc. Does not include transport to regional disposal facility or equivalent.
	Collapse, demolish and remove bucket wheel stacker/reclaimer and disposal on-site/locally	Y		allow	\$2,000,000		\$0		Cost for just removal of the bucket wheel stacker/reclaim units. Does not include terminate services, remove rails and ballast etc. Does not include transport to regional disposal facility or
	Remove stacker/reclaimer rails and ballast and demolish and remove concrete footings etc and disposal on-site/locally	Y		m	\$75.00		\$0		Includes both rails, does not include the conveyor system. Does not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove 5000T coal silo and disposal on-site/locally	Υ		allow	\$92,500		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove 3000 T coal silo and disposal on-site/locally	Y		allow	\$77,500		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove 1250 T coal silo and disposal on-site/locally	Y		allow	\$62,500		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove rail loading bins and disposal on-site/locally	Υ		allow	\$65,000		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Demolish and Remove large concrete rail loading bin - and disposal on-site/locally	Υ		allow	\$460,000		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove onground conveyors, transfer stations & gantries (scrap only – does not include dismantling for reuse at another site) and disposal on-site/locally	Y		m	\$185.00		\$0		Estimate for on-ground conveyor including anything up to 10 m off the ground. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove elevated conveyors, transfer stations & gantries (scrap only, does not include dismantling for reuse at another site) and disposal on-site/locally	Y		m	\$295.00		\$0		Estimate for elevated conveyor up to ~10 m off the ground. Does not include transport to regional disposal facility or equivalent.

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Demolish and remove overhead conveyors, transfer stations & gantries (scrap only, does not include dismantling for reuse at another site) and disposal on-site/locally.	Y	m	\$850	\$0		Estimate for overhead conveyor including conveyors that are >10 m off the ground that require a crane to remove. Does not include transport to
This may include small scale fixed material stacking infrastructure  Remove and demolish conveyor from reclaim tunnel						regional disposal facility or equivalent.  Due to no canopy or infrastructure
(Does not include excavation and demolition of reclaim tunnel roof)	Y	m	\$150.00	\$0		attached.  Assumes this area will be used for
Demolition of reclaim tunnel concrete (Assumes complete removal and dumping in mine pit void)	Υ	m	\$950.00	\$0		another land-use that requires the structure to be dug up and re-buried somewhere else. Does not include filling and capping the
Demolition and removal of vent raise fans, electrical substation and winch and disposal on-site/locally	Υ	allov	\$25,000	\$0		shaft. Does not include transport to regional disposal facility or equivalent.
Demolish and remove small tank clean (Thickener etc 3 - 9 m diameter) and disposal on-site/locally	Y	allov	\$10,000	\$0		Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to
Demolish and remove medium tank clean (Thickener etc 10 - 15 m diameter) and disposal on- site/locally	Υ	allov	\$30,000	\$0		regional disposal facility or equivalent. Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
Demolish and remove large tank clean (Thickener etc 15 - 30 m diameter) and disposal on-site/locally	Y	allov	\$45,000	\$0		Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
Demolish and remove extra large tank clean (Thickener etc >30 m diameter) and disposal on- site/locally	Y	allov	\$100,000	\$0		Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
Demolish and remove tank clean (Thickener etc) >50 m diameter and disposal on-site/locally	Y	allov	\$100,000	\$0		Estimate only - may require a detailed assessment from demolition expert due to specialised equipment required for removal. Does not include transport to regional disposal facility or equivalent.
Removal of UG tank <5000 L - including pipes, bunds etc. and disposal on-site/locally	Υ	allov	\$21,000	\$0		Assume tank is clean (contents removed), does not include transport to regional disposal facility or equivalent.
Removal of UG tank 5000 L - 15000 L - including pipes, bunds etc. and disposal on-site/locally	Υ	allov	\$30,000.00	\$0		Assume tank is clean (contents removed), does not include transport to regional disposal facility or equivalent.
Remove small underground pipe and disposal on- site/locally	Υ	m	\$25.00	\$0		For example: 300 mm pipes - 0.5 m deep, does not include transport to
Remove medium underground pipe and disposal on-	Y	m	\$60.00	\$0		regional disposal facility or equivalent.  For example: 500 mm pipes - 1 m deep, does not include transport to regional
site/locally  Remove large underground pipe and disposal on-	Y	m	\$165.00	\$0		disposal facility or equivalent.  For example: 1 m pipes - 2 m deep.
site/locally  Remove above ground pipe (supported) and disposal on-site/locally	Y	m	\$12.00	\$0		~300 mm pipes and assumes pipes are in close proximity to infrastructure areas. Does not include transport to
Remove surface pipelines (unsupported) and disposal on-site/locally	Y	m	\$15	\$0		regional disposal facility or equivalent.  -300 mm pipes and assumes pipes are used for water transfer between pits (or similar) and remotely located. Does not include transport to regional disposal
Remove pump and pontoon from small lake or dam including pipes and electrical supply or diesel tank/s	Y	allov	\$20,000.00	\$0		facility or equivalent. Includes equipment for retrieval - boats, etc. and labour. Does not include transport to regional disposal facility or equivalent.
Remove bitumen (car park and access roads) and dispose on-site/locally	Y	m2	\$10.00	\$0		Scalp bitumen and stabilised material. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport
Remove bitumen (airstrip) and dispose on- site/locally	Y	m2	\$20.00	\$0		Scalp bitumen and stabilised material. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
Remove concrete pads & footings (<300 mm thickness) and disposal on-site/locally	Y	m2	\$36.00	\$0		Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
Remove concrete pads & footings (>300 mm thickness) and disposal on-site/locally	Y	m2	\$75.00	\$0		Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
Crush concrete to make road aggregate - 75 mm	Y	tonne	\$10.00	\$0		Does not include haulage of materials - assumes crushing plant is readily available.
Crush concrete to make road aggregate - 50 mm	Υ	tonne	\$13.00	\$0		Does not include haulage of materials - assumes crushing plant is readily
Crush concrete to make road aggregate - 30 mm	Υ	tonne	\$15.00	\$0		available.  Does not include haulage of materials - assumes crushing plant is readily available.
Remove fence (cyclone/wire fence) and disposal on- site/locally	Υ	m	\$20.00	\$0		Roll up fence and remove posts.
Removal of small plastic tanks	Y	each	\$1,000.00	\$0		Remove small poly tanks used for water storage, etc.  Demolish and remove small lightweight
Demolish and remove galvanised/corrugated light weight tanks	Y	each	\$500.00	\$0		metal tanks. No costs included for managing liquids, etc.
Demolish and remove communication towers	Y	each	\$5,000.00	\$0		Cost includes demolition and removal of tower only; separate costs required for disconnection of services, demolition of footings, etc.
Removal of UG services (power within main gate areas, etc.)	Υ	allov	\$50,000.00	\$0		Assume service disconnection at the mine boundary is at surface level. This cost covers all fees and charges
Waste disposal to Council landfill (general waste) - haulage >10 km but <15 km	Y	tonne	\$7.00	\$0		Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
Waste disposal to Council landfill (general waste) - haulage >15 km but <25 km	Y	tonne	\$9.00	\$0		type. Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste type.
Waste disposal to Council landfill (general waste) - haulage >25 km but <50 km	Y	tonne	\$12.50	\$0		Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
		·			i	RVDC.

	Waste disposal to Council landfill (industrial demolition / concrete / scrap metal) - haulage >10 km but <15 km	Y		tonne	\$32.00		\$0		Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
	Waste disposal to Council landfill (industrial demolition / concrete / scrap metal) - haulage >15 km but <25 km	Y		tonne	\$36.00		\$0		type.  Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste type.
	Waste disposal to Council landfill (industrial demolition / concrete / scrap metal) - haulage >25 km but <50 km	Y		allow	Use alternate rate cell		\$0		Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste type.
	Waste disposal to Council landfill - fees (general waste)	Y		tonne	\$193.00		\$0		Fee for waste disposal of general waste to local Council landfill; transport rates separate. Please note that this is not applicable to operations with approval for building and demolition waste disposal on site.
	Waste disposal to Council landfill - fees (industrial demolition / concrete / scrap metal)	Y		tonne	\$174.00		\$0		Fee for waste disposal of industrial demolition / concrete / scrap metal waste to local Council landfill; transport rates separate. Rate does not assume material is recyclable. Please note that this is not applicable to operations with approval for building and demolition
		Terr	nination of Se	ervices and D	emolition Wo	rks Subtotal	\$0		waste disposal on site.
Rail Infrastructure	Remove rail loop and spur, ballast etc. and disposal								Remove all materials to allow area to be reshaped and rehabilitated - does not
	on-site/locally  Remove train loading facilities and disposal on-	Y		m	\$60.00		\$0		include transport to regional disposal facility or equivalent.  Remove rail load point infrastructure including gantries and control
	site/locally  Reshape rail spur and load out areas. Does not include growth media and revegetation	Y		m2 ha	\$185.00 \$2,860		\$0 \$0		structures. Does not include transport to regional disposal facility or equivalent.  D10 Dozer and 16 H Grader (50% utilisation).
	include growth media and revegetation		1	R	ail Infrastruct	ture Subtotal	\$0		The preiminary investigation would
Contaminated Materials	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	Y		Cluster	\$15,000		\$0		include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. A cluster may include:  - Mine infrastructure (i.e., fuel / chemical store, workshop, vehicle wash-down, sewage freatment etc.)  - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.)  - Remote pit-top facilities (i.e., vehicle refuel, sewage treatment, secondary)
	Undertake an intrusive site investigation on sites with small footprints to investigate e.g. £15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	٧		Cluster	\$44,000		\$0		The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contamination has occurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around inreflective oliwater separators etc.) and further field work is required involving intrusive investigation. Assumes site is easily accessible and a small area e.g10-15 ha requires investigation and testing (test pils, boreholes, etc.) based on Sampling and Analysis Quality Plan. Includes SAQP.
	Undertake an intrusive site investigation on sites with large footprints to investigate e.g. > 15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.  Develop a Remediation Action Plan on sites with small footprints based on outcomes of intrusive small footprints based on outcomes of intrusive	Y		Cluster	\$106,000 \$35,000		\$0 \$0		The intrusive investigation would include at minimum a site walkower and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contamination has occurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oil/water separators etc.) and further field work is required involving intrusive investigation. Assume site has a history of contamination and/or a large area >15 ha requires investigation and lesting (test pits, boreholes, etc.) based on Sampling and Analysis Quality Plan. Includes SAQP, fieldwork; sampling and Develop remediation plan for approval including designs and detailed costs.
	investigation including strategies to address contamination exceedances			allow	<b>\$30,000</b>		φυ		Costs may increase if detailed designs required for construction.
	Develop a Remediation Action Plan on sites with large footprints based on outcomes of intrusive investigation including strategies to address contamination exceedances	Υ		allow	Use alternate rate cell		\$0		Assumes complex site; detailed design drawings required for cover.
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	Y		L	\$0.35		\$0	Select Haul Distance Here	Cost for recent sump clean-up from resource activity - requires specialists to treat.
	/ A. H.E.							-	and the state of t

	Ixemove material (carponaceous / metalliterous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (Select Haul Distance from list)	Y		m3	Select from List				Inis item includes scraping and removal of the volume of carbonaceous material using dozer, grader etc. to make safe an area and enable the establishment of rehabilitation.
	Load, cart and dispose of Hazardous classified contaminated material off site to a licensed landfill. Assumes cartage to a licensed landfill.	Υ		m3	\$800.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Restricted classified contaminated material off site to a licensed landfill. Add \$50/m3 for cartage from regional areas	Y		m4	\$660.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add \$50/m3 for cartage to regional landfill	Υ		m3	\$220.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	Υ		m3	Select from List			Select Volume Here	Spreading of contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up to 24 months.
	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc.) contaminated soil treatment	Υ		Item	\$150,000		\$0		Required if treatment of hydrocarbon contamination is required to be fast tracked.
	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	Υ		m3	\$165.00		\$0		Additional cost as the treatment process is fast tracked.
	Remove and dispose of asbestos (<750 m2)	Υ		m2	\$50.00		\$0		Where an assessment/estimation has been made to confirm the volume of asbestos to be removed.
	Remove and dispose of asbestos (>750 m2)	Υ		m2	\$40		\$0		Where an assessment/estimation has been made to confirm the volume of asbestos to be removed.
	Waste disposal to Council landfill - fees (asbestos)	Υ		tonne	\$290		\$0		Landfill fees to regional landfill.  Assumes ASS is treatable via
	Treatment of known Acid Sulfate Soils	Y		ha	\$2,580		\$0		neutralisation and does not require capping and isolation. Assumes 1% by weight lime addition and treatment to 100 mm depth only.
	Removal and disposal of plastic liner (i.e. dam, leach pad, sump etc.) Long haulage brine/salt for disposal (Select Haul	Y		m2	\$1 Select from		\$0		Provisional sum for cutting using ripping tynes and on-site disposal of the liner. Costs for haulage to location for
	Distance from list)	Y		tonne	List			Select Haul Distance Here	authorised disposal. Rate for trackable liquid levy of \$78.20
	Brine disposal to landfill - fees only  Long haulage water (clean or contaminated) (Select	Y		tonne	\$288 Select from		\$0		per tonne and authorised disposal to landfill.  Assumes transport in a 20,000 L tanker.
	Haul Distance from list)	Υ		tonne	List ninated Mater	rials Subtotal	\$0	Select Haul Distance Here	Add disposal costs to additional items
Vents, Shafts and Boreholes	Option 1 - Coal bore hole Exploration boreholes – rehabilitate coal boreholes and drill pads as required	Υ		depth (m)	\$44.55		\$0		Cost to grout and cap an open exploration borehole. Assume a 20 m x 20 m drill pad requires rehabilitation - push cover of nearby growth media, rip and seed.
	Option 3 - Mineral RAB and aircore drill holes Exploration boreholes – backfill open Rotary Airblast (RAB) or aircore drill holes with cuttings	Y		allow	\$43		\$0		May include cutting of casing, installation of a casing cap, and/or manually backfilling the hole with drill cuttings. Does not include reshaping / ripping the drill pad, amelioration /
	Option 2 - Mineral drill hole requiring grouting Exploration boreholes – grout and cap open bore holes	Υ		allow	\$5,700		\$0		Includes grouting and capping 100 - 200 m exploration boreholes to meet the requirements of Departmental Guidelines.
	Boreholes – cap and seal open bore holes with steel casing (i.e., goaf drainage etc.)	Y		allow	\$6,960		\$0		Holes deeper than 100 m - includes cutting steel collar 6 m below surface, grouting and capping.
	Boreholes – cap and seal open bore holes - surface- to-in-seam gas drainage Boreholes – cap and seal open bore holes - vertical	Y		allow	\$17,890		\$0		Surface-to-in-seam gas drainage boreholes.
	gas drainage Boreholes – grout (with concrete) cap and seal bore	Y		allow	\$16,000		\$0		Vertical gas drainage boreholes.  Includes multi skin sleaves to prevent
	holes (i.e. where sealing aquifers)  Boreholes – cap and seal service boreholes for UG	Y		allow	\$35,000 \$45,000		\$0 \$0		aquifer mixing. Includes large diameter boreholes used for supplying electricity (66kV),
	coal operations  Option 4 - Mineral diamond drill hole Rehabilitation of diamond drill holes and pad including sealing drill holes for mineral exploration	Y		Item	\$2,070		\$0		compressed air, water, solsenic etc. Bog out cuttings, remove fencing, remove rubbish, push sumps in, rehabilitate pads and tracks, cut and plug collars. Includes labour and equipment, disposal of rubbish locally
	Option 5 - Mineral reverse circulation drill holes Rehabilitation of reverse circulation drill holes and pad including sealing drill holes for mineral exploration	Υ		Item	\$1,340		\$0		on site  Sealing required, but not complete filling with concrete/grout
	Option 6 - Rehabilitation of drill hole collars Rehabilitation of drill hole collars (mineral exploration)	Y		each	\$415		\$0		Cut collar, remove, cap, backfill capped collar and cover with nearby organic or growth material
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor				ts and Boreho	oles Subtotal			Assumes ~6 m road width - 16H
	works including deep rip and trim Unsealed roads / access tracks / vehicle park-up	Y		ha	\$1,040.00		\$0		Grader. D10 Dozer @ \$400 per hour and 16 H
	areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim Unsealed roads / vehicle park-up areas – Minor	Y		ha	\$1,500		\$0		grader @ \$230 per hour (50% utilisation) - no seed D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip and seed (pasture grass) Unsealed roads / vehicle park-up areas – Minor	Y		ha	\$3,700		\$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass) Unsealed roads / haul roads / vehicle park-up areas	Y		ha	\$4,485		\$0		grader @ \$230 per hour (50% utilisation) - native tree/shrub seed D10 Dozer @ \$400 per hour and 16 H
	with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (pasture grass) Unsealed roads / haul roads / vehicle park-up areas	Y		ha	\$4,870		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 H
	with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	Y		ha	\$7,025		\$0	Select Haul Distance Here	grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	Υ		m3	Select from List				This item includes the scraping and removal of the volume of stabilised material from the road, laydown or other surface using an excavator, dozer and grader to enable the establishment of rehabilitation.
Earthworks / Structural Works	L.,		1	R	oads and Tra	cks Subtotal	\$0	Select Push Length Here	Major bulk pushing to achieve grades
(Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length	Y		m3	Select from List				nominated in the approval/permit
	Minor reshaping and pushing Structural works, banks, waterways - contour banks,	Y		ha	\$3,900		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation). Combination of dozer and excavator
	drainage channels and other soil conservation measures	Υ		ha	\$1,600		\$0		work plus grader for ~4 hours each per ha.
	Fill dame voide atc - Source local material cart							Select Haul Distance Here	This item includes the volume of

Maintenance of Rehabilitated Areas	transfer and management infrastructure	Y		allow Wa	\$25,000 ater Managem	nent Subtotal	\$0 <b>\$0</b>		management infrastructure.  Rehabilitation maintenance might include re-seeding, watering, fertilising,
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)  Removal of evaporation fans and/or other water	Y		m3	Select from List			Select Haul Distance Here	This Item includes the volume of contaminated sediment requiring removal using an excavator, truck and dozer to clean out the dam.  Provisional sum for removal of water
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Υ		allow	\$10,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate dan batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Y		allow	\$2,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate dan batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and pasture grass.
	Land Preparation and Revegetation (Grov		velopment ar			ent) Subtotal	\$0		hydromulching.
	Growth media supplementation with manure  Utilise biotic soil media - organic topsoil alternative	Y		ha m2	\$747.50 \$2.50		\$0 \$0		Addition of manure to improve soil quality.  Material that can be applied as an alternative to spreading topsoil prior to
	Topsoil stripping	Y		m3	\$4.86		\$0		Stripping or topsoil at an approximate depth of 0.2 m into stockpiles; load and haul to final rehabilitation location required or respreading where necessary.
	etc. Clearing and grubbing of trees and vegetation	Y		ha	\$4,730.00		\$0		nominal rate of \$60/m3 for imported fill Clearing and grubbing of light vegetatio growth e.g. regrowth
	Supply from external sources a combination of virgin excavated natural material (VENM) and spoil from large excavation for filing voids and/or capping	Y		m3	\$72.50		\$0		nominal rate of \$70/m3 for imported fill material. D10 push into void at \$270/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - allor
	Supply from external sources virgin excavated natural material (VENM) for growth media.	Y		m3	\$80.80		\$0		installed every 25 m. D7 to spread material at \$205/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - allov
	areas  Purchase and erect warning signs	Υ		allow	\$250.00		\$0		fencing.  Compliance with AS 1319-1994 - Safet signs for the occupational environment
	areas Construct standard stock fence around rehabilitated	Y		m m	\$13.00		\$0 \$0		fencing. Standard rate for standard stock
	growth media amelioration with biosolids  Construct no-climb stock fence around rehabilitated	Y		ha m	\$1,015 \$22.00		\$0 \$0		projects. Standard rate for no-climb stock
	Spoil amelioration (adding lime / gypsum etc.)	Y		ha	\$1,000.00		\$0		Assumes 2.5 t / ha as an average application rate.  Recent experience with agronomy
	Single application of fertiliser (trees)	Y		ha	\$140.00		\$0		few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Single application of fertiliser (pasture)	Y		ha	\$420.00		\$0		Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc this is a suitable standard rate. These rates have fluctuated over the la
	Hydromulch - high performance flexible growth medium grade	Υ		m2	\$2.50		\$0		Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/h minimum. This cost includes cover cro- only, additional seeding required. Assumes 250 kg / ha. These rates have
	Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months	Y		m2	\$1.80		\$0		Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha This cost includes cover crop only, additional seeding required.
	Hydromulch - base grade or standard for flat areas that can be irrigated by water cart	Y		m2	\$0.80		\$0		Assumes use on list areas with a gradient of less than 4.1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP fo stability. This cost includes cover crop only additional seedion required
	Hydro-seeding with straw mulching and bitumen tack with pasture seed	Υ		m2	\$0.43		\$0		Process to be used on flat well prepare surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges fro \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y		m2	\$1.90		\$0		Process to be used on flat well prepare surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges froi \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00
	Direct seeding / fertiliser (tree or native grass species)	Y		ha	\$4,135		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding).
	Direct seeding / fertiliser (pasture grass species)	Y		ha	\$1,875		\$0		Includes treating, weighing, mixing wit fertiliser + spreading by tractor or helicopter (aerial seeding).
	Planting mature trees (>15 cm) Planting tube stock (<15 cm)	Y		allow	\$15.00 \$6.60		\$0 \$0		4 m centres.
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	Y		m3	Select from List			Select Haul Distance Here	If topsoil is not available on-site, then Virgin Excavated Natural Material (VENM) may need to be externally sourced.
	E	arthworks / S	Structural Wor	ks (Landforn	n Establishm	ent) Subtotal	\$0		locally available). If required to be sourced off site, assume an additional
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0		Installation of on-site rock material (rip rap) where managing water run-off fro disturbed land and/or upon entry to water courses - prevents erosion of gu head (assumes competent material is
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)  Deep rip hard stand / lay down areas	Y		ha ha	\$1,130.00 \$960.00		\$0 \$0		Undertaken using D10 dozer and 16M grader. D10 deep ripping.
	Shotcrete application on cuttings and steep slopes	Y		m2	\$185.00		\$0		slopes of weathered rock, roadway cuttings, etc that cannot be cut back a stabilised.
	and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	Υ		m3	Select from List				excavator and scraper to fill the void a enable the establishment of rehabilitation.  This rate is used to rehabilitate steep

Total Cost for Infrastructure Domain								
				Additional Ite	ms Subtotal	\$0		
		Mainte	enance of Rel	nabilitated Ar	eas Subtotal	\$0		
Existing rehabilitation repair - total failure of landform	Υ		ha	\$40,000		\$0	ļ	Areas that require extensive rehabilitation repair - re-design and re- construction of landform.
Existing rehabilitation repair - major	Y		ha	\$2,500		\$0		Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management.
Existing rehabilitation repair - moderate	Y		ha	\$1,700		\$0		Areas requiring moderate repair - rills, significant growth media replacement.

#### Domain 2b: Tailings & Rejects

#### Total Cost for Tailings & Rejects Domain

\$0

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	
	•

Management Precinct	Activity / Description	Applicable (Y	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Contaminated Materials	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	Υ		Cluster	\$15,000		\$0	mornatori	inle preminiary investigation would include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. A cluster may include:  - Mine infrastructure (i.e., fuel / chemical store, workshop, vehicle wash-down, sewage treatment etc.)  - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.)  - Remote pit-top facilities (i.e., vehicle refuel, sewage treatment, secondary
	Undertake an intrusive site investigation on sites with small footprints to investigate e.g. <15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	Υ		Cluster	\$44,000		\$0		The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc.  A cluster area where it is highly anticipated that contamination has occurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oil/water separators etc.) and further field work is required involving intrusive investigation.  Assumes site is easily accessible and a small area e.g. ~10-15 ha requires investigation and testing (test pits, boreholes, etc.) based on Sampling and
	Undertake an intrusive site investigation on sites with large footprints to investigate e.g. >15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	Y		Cluster	\$106,000		\$0		Analvsis Quality Plan. Includes SAQP_ The intrusive investigation would include at minimum a site walkover and field at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc.  A cluster area where it is highly anticipated that contamination has occurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oil/water separators etc.) and further field work is required involving intrusive investigation.  Assume site has a history of contamination and/or a large area >15 ha requires investigation and testing (test pits, boreholes, etc.) based on Sampling and Analysis Quality Plan. Includes SAQP, fieldlowft, sampling and Incl
	Develop a Remediation Action Plan on sites with small footprints based on outcomes of intrusive investigation including strategies to address contamination exceedances Develop a Remediation Action Plan on sites with	Υ		allow	\$35,000		\$0		Develop remediation plan for approval including designs and detailed costs. Costs may increase if detailed designs required for construction.
	Develop a Remediation Action Plan on sites with large footprints based on outcomes of intrusive investigation including strategies to address contamination exceedances	Y		allow	Use alternate rate cell		\$0		Assumes complex site; detailed design drawings required for cover.
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	Y		L	\$0.35		\$0		Cost for recent sump clean-up from resource activity - requires specialists to treat. This item includes scraping and removal
	spillage or otherwise) from footprint of the process facility (leach pads) / stocknile area (ROM product) / Load, cart and dispose of Hazardous classified	Y		m3	Select from List			Select Haul Distance Here	of the volume of carbonaceous material using dozer grader etc. to make safe an
	contaminated material off site to a licensed landfill.  Assumes cartage to a licensed landfill.  Load, cart and disposal of Restricted classified	Y		m3	\$800.00		\$0		Includes load, haul and dump fees to a licensed facility.
	contaminated material off site to a licensed landfill.  Add \$50/m3 for cartage from regional areas	Y		m4	\$660.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add \$50/m3 for cartage to regional landfill	Υ		m3	\$220.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	у		m3	Select from List			Select Volume Here	Spreading of contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up to 24 months.
	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc.) contaminated soil treatment	Υ		Item	\$150,000		\$0	_	Required if treatment of hydrocarbon contamination is required to be fast tracked.
	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	Υ		m3	\$165.00		\$0		Additional cost as the treatment process is fast tracked.

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	Remove and dispose of asbestos (<750 m2)	Υ		m2	\$50.00		\$0		Where an assessment/estimation has been made to confirm the volume of
									asbestos to be removed. Where an assessment/estimation has
	Remove and dispose of asbestos (>750 m2)	Y		m2	\$40.00		\$0		been made to confirm the volume of asbestos to be removed.
	Waste disposal to Council landfill - fees (asbestos)	Y		tonne	\$290		\$0 <b>\$0</b>		Landfill fees to regional landfill.
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor	Y	l	ha	inated Mater \$1,040.00	iais Subtotai	\$0 \$0		Assumes ~6 m road width - 16H
	works including deep rip and trim Unsealed roads / access tracks / vehicle park-up			IId	\$1,040.00		<b>\$</b> 0		Grader. D10 Dozer @ \$400 per hour and 16 H
	areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim	Y		ha	\$1,500		\$0		grader @ \$230 per hour (50% utilisation) - no seed
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip and seed	Υ		ha	\$3,700		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50%
	(pasture grass) Unsealed roads / vehicle park-up areas – Minor				72,133		+-		utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	Y		ha	\$4,485		\$0		grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor								D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip, ameliorate and	Y		ha	\$4,870		\$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed
	seed (pasture grass) Unsealed roads / haul roads / vehicle park-up areas								D10 Dozer @ \$400 per hour and 16 H
	with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and	Y		ha	\$7,025		\$0		grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	seed (native tree/shrub/grass)							Select Haul Distance Here	This item includes the scraping and
	Remove stabilised material (blue metal, aggregate			_	Select from				removal of the volume of stabilised material from the road, laydown or other
	etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	Y		m3	List				surface using an excavator, dozer and grader to enable the establishment of
									rehabilitation.
Earthworks / Structural Works	E	arthworks / S	tructural Wor	ks (Landform	Establishme	ent) Subtotal	\$0	Onlant Bursh Lawath Have	Major bulk pushing to achieve grades
(Landform Establishment)	Major bulk pushing to achieve grades nominated in	Y		m3	Select from			Select Push Length Here	nominated in the approval/permit
	the approval/permit – Select Push Length	•		0	List				
	Minor reshaping and pushing	Y		ha	\$3,900		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50%
				iid.	\$5,500		<b>4</b> 0	Onland Hard Bladers as Harr	utilisation). This item includes the volume of
	Fill dams, voids etc Source local material, cart and spread to cap or backfill, cap thickness			0	Select from			Select Haul Distance Here	material requiring backfill using an
	determined by approval / permit (Select Haul Distance from List)	У		m3	List				excavator and scraper to fill the void and enable the establishment of
	Trim, rock rake & deep rip (includes levelling /	.,			** ***				rehabilitation. Undertaken using D10 dozer and 16M
	landscaping and rip in 1 direction) Structural works, banks, waterways - contour banks,	Y		ha	\$1,130.00		\$0		grader. Combination of dozer and excavator
	drainage channels and other soil conservation measures	Y		ha	\$1,600		\$0		work plus grader for ~4 hours each per
	ineasures								Installation of on-site rock material (rip- rap) where managing water run-off from
	Construction of spine drains / drop structures and/or			_					disturbed land and/or upon entry to
	stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0		water courses - prevents erosion of gully head (assumes competent material is
									locally available). If required to be sourced off site, assume an additional
Mine Waste	E	arthworks / S	tructural Wor	ks (Landform	Establishme	ent) Subtotal	\$0		spreading, moisture conditioning and
	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no artificial strengthening required)	Y		ha	\$82,000		\$0		material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximately 0.5 m to 1 mand 0.15 m - 0.2 m growth media (assume at least 1 m thick cover required for carbonaceous material covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and spreading in additional to any long
	Additional materials required for reshaping, capping								Include additional cost to import
	/ sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific	Υ		allow	Use alternate rate cell		\$0		materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric /
	environment water quality values.								additional requirements (i.e., geofabric / composite lining etc.). Include additional cost to import
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Υ		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.). This item includes sourcing, carting,
	Efficient Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (low to medium risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and moderate physical properties (not significantly hydrophilic, shear strength limits equipment choice somewhat, no artificial strengthening required)	Y		ha	\$146,500		\$0		Inis item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities where the tailings or rejects base is at a strength that enables economically efficient construction methods with small plant. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness ranging from >1 m to 2 m thickness constructed in 1 m layers + growth media up to 0.2 m depth. This may require additional materials (such as capillary breaks, geofabric, etc.) - use alternate rate cells below, specific material types (e.g. acid cutvities (i.e., load / haul / place / crush / screen / borrow etc.). Costs for haulage of specialised/additional materials must be added separately if required. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material include in rate.) If additional material to make up landform, provide buttress or other

	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric /
	Adverse Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (medium to high risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or moderate to high propensity for spontaneous combustion) and moderate physical properties (not significantly) hydrophilic, shear strength limits equipment choice somewhat, no artificial strengthening required)	Y	ha	\$313,000		\$0		composite lining etc.). This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities of high geochemical risk, and / or low shear strength that prohibits economically efficient construction methods. This rate assumes suitable capping material/s are available on site within 10 km, and an average cap thickness of approximately >2 m + growth media up to 0.2 m depth. This may require additional materials (i.e., capillary breaks, geofabric, etc.), specific material types (e.g., acid neutralising / consuming materials, competent rock etc.), and associated activities (i.e., load / haul / place / crush / screen / borrow etc.). Costs for haulage of specialised materials must be added separately if required. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for taillings cap material included in rate). If additional material in londed in rate) if additional material in londed in rate) and form 9.02 for relevant haulage and
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.)
	Difficult Tailings Capping- reshaping, capping / sealing of weak or soft surfaced tailings facility with poor physical properties (significantly hydrophilic) low shear strength limits equipment choice greatly, artificial strengthening required) OR visible adverse impacts on legacy sites from chemical readivity over lengthy exposure prior to rehabilitation	Y	ha	\$843,000		so		constraints and/or when tailings properties significantly restrict adequate desiccation, resulting in a tailings shear strength that is very weak excluding access by conventional small plant. Small equipment used for rehabilitation. This excludes any additional material required to form the final landform profile in addition to this cap. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and spreading in additional to any long spreading in additional to any long
	Additional materials required for reshaping, capping y sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values. Long naulage soil / weathered rock / sediment e.g.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.). Capping/cover material available within
	capping/covers_removal of contamination_etc	Y	m3	List	ste Subtotal	\$0	Select Haul Distance Here	50 km round trip e.g. waste / overburden
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	у	m3	Select from List			Select Haul Distance Here	If topsoil is not available on-site, then Virgin Excavated Natural Material (VENM) may need to be externally sourced.
	Direct seeding / fertiliser (pasture grass species)	Y	ha	\$1,875		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding).  Includes treating, weighing, mixing with
	Direct seeding / fertiliser (tree or native grass species)	Y	ha	\$4,135		\$0		fertiliser + spreading by tractor or helicopter (aerial seeding).
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y	m2	\$1.90		\$0		Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00 Process to be used on flat well prepared
	Hydro-seeding with straw mulching and bitumen tack with pasture seed	Y	m2	\$0.43		\$0		surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a
	Hydromulch - base grade or standard for flat areas that can be irrigated by water cart	Y	m2	\$0.80		\$0		Assumes use on late areas win a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only additional seeding required Assumes use on steep areas where
	Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months	Y	m2	\$1.80		\$0		Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha. This cost includes cover crop only, additional seeding required, Assumes use on extreme slopes where
	Hydromulch - high performance flexible growth medium grade	Y	m2	\$2.50		\$0		Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only, additional seeding required. Assumes 250 kg / ha. These rates have
	Single application of fertiliser (pasture)	Υ	ha	\$420.00		\$0		Assumes 250 kg / 161. These fales have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.

	Total Cost for		\$0						
					Additional Ite	ems Subtotal	ψU		
			Mainte		habilitated Ar		\$0 \$0		
	Existing rehabilitation repair - total failure of landform	Y		ha	\$40,000		\$0		Areas that require extensive rehabilitation repair - re-design and re- construction of landform.
	Existing rehabilitation repair - major	Y		ha	\$2,500		\$0		Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management.
	Existing rehabilitation repair - moderate	Y		ha	\$1,700		\$0		Areas requiring moderate repair - rills, significant growth media replacement.
	Existing rehabilitation repair - minor	Y		ha	\$1,200		\$0		Areas requiring minor repair - rills, minor growth media replacement.
Maintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y		ha	\$925		\$0		Rehabilitation maintenance might include re-seeding, watering, fertilisin minor re-shaping, erosion control, inspections/audits - does not include major repair works.
				Wa	ter Managem	ent Subtotal	\$0		18
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	Y		m3	Select from List			Ociect riadi Distance riore	contaminated sediment requiring removal using an excavator, truck ar dozer to clean out the dam.
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Υ		allow	\$10,500		\$0	Select Haul Distance Here	revegetation required to rehabilitate d batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass. This item includes the volume of
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Y		allow	\$2,500		\$0		revegetation required to rehabilitate d batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~\$200 per hour and pastu grass. Provisional sum for earthworks and
Mater Management	Land Freparation and Revegetation (Gro	Will Media De	velopilient ai	iu Ecosysteii	ESTADIISIIIII	ent) Subtotal	<b>QU</b>		Provisional sum for earthworks and
	Utilise biotic soil media - organic topsoil alternative  Land Preparation and Revegetation (Grov	Y		m2	\$2.50	ant) Subtatal	\$0 <b>\$0</b>		alternative to spreading topsoil prior thydromulching.
	Growth media supplementation with manure	Y		ha	\$747.50		\$0		quality.  Material that can be applied as an
	Topsoil stripping	Υ		m3	\$4.86		\$0		depth of 0.2 m into stockpiles; load a haul to final rehabilitation location required or respreading where necessary. Addition of manure to improve soil
	Clearing and grubbing of trees and vegetation	Y		ha	\$4,730.00		\$0		Clearing and grubbing of light vegeta growth e.g. regrowth Stripping or topsoil at an approximate
	Supply from external sources a combination of virgin excavated natural material (VENM) and spoil from large excavation for filing voids and/or capping etc.	Υ		m3	\$72.50		\$0		D10 push into void at \$270/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - al nominal rate of \$60/m3 for imported
	Supply from external sources virgin excavated natural material (VENM) for growth media.	Y		m3	\$80.80		\$0		D7 to spread material at \$205/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - al nominal rate of \$70/m3 for imported material.
	Purchase and erect warning signs	Y		allow	\$250.00		\$0		Compliance with AS 1319-1994 - Sal signs for the occupational environme installed every 25 m.
	Construct standard stock fence around rehabilitated areas	Y		m	\$13.00		\$0		Standard rate for standard stock fencing.
	Construct no-climb stock fence around rehabilitated areas	Y		m	\$22.00		\$0		Standard rate for no-climb stock fencing.
	growth media amelioration with biosolids	Y		ha	\$1,015		\$0		Recent experience with agronomy projects.
	Spoil amelioration (adding lime / gypsum etc.)	Υ		ha	\$1,000.00		\$0		Assumes 2.5 t / ha as an average application rate.
	Single application of fertiliser (trees)	Υ		ha	\$140.00		\$0		These rates have fluctuated over the few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standa rate.

#### **Total Cost for Overburden & Waste Domain**

\$0

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant	Description / Notes:
Contaminated Materials	Treatment of known Acid Sulfate Soils	Υ		ha	\$2,580		\$0	Information	Assumes ASS is treatable via neutralisation and does not require capping and isolation. Assumes 1% by weight lime addition and treatment to
	Removal and disposal of plastic liner (i.e. dam,	Y		m2	\$1		\$0		100 mm depth only.  Provisional sum for cutting using rippin
	leach pad, sump etc.) Long haulage brine/salt for disposal (Select Haul Distance from list)	Y		tonne	Select from List		Ψ0	Select Haul Distance Here	tynes and on-site disposal of the liner. Costs for haulage to location for authorised disposal.
	Brine disposal to landfill - fees only	Υ		tonne	\$288		\$0		Rate for trackable liquid levy of \$78.20 per tonne and authorised disposal to
	Long haulage water (clean or contaminated) (Select Haul Distance from list)	Y		tonne	Select from List			Select Haul Distance Here	landfill. Assumes transport in a 20,000 L tanke Add disposal costs to additional items
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor		I	1	ninated Mater	ials Subtotal	\$0		Assumes ~6 m road width - 16H
Rodds and Tracks	works including deep rip and trim Unsealed roads / access tracks / vehicle park-up	Y		ha	\$1,040.00		\$0		Grader. D10 Dozer @ \$400 per hour and 16 H
	areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim Unsealed roads / vehicle park-up areas – Minor	Y		ha	\$1,500		\$0		grader @ \$230 per hour (50% utilisation) - no seed
	earthworks, final trim and deep rip and seed (pasture grass)	Y		ha	\$3,700		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - pasture grass seed
	Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	Y		ha	\$4,485		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (pasture grass)	Y		ha	\$4,870		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - pasture grass seed
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	Y		ha	\$7,025		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	Υ		m3	Select from List			Select Haul Distance Here	This item includes the scraping and removal of the volume of stabilised material from the road, laydown or oth surface using an excavator, dozer and grader to enable the establishment of
				R	loads and Tra	cks Subtotal	\$0		rehabilitation.
Earthworks / Structural Works (Landform Establishment)								Select Push Length Here	
(Earlierin Zotazilorinont)	Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length	Y		m3	Select from List				Major bulk pushing to achieve grades nominated in the approval/permit
	Minor reshaping and pushing	Υ		ha	\$3,900		\$0		D10 Dozer @ \$400 per hour and 16 li grader @ \$230 per hour (50% utilisation).
	Fill dams, voids etc Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	Y		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring backfill using an excavator and scraper to fill the void a enable the establishment of rehabilitation.
	Shotcrete application on cuttings and steep slopes	Υ		m2	\$185.00		\$0		This rate is used to rehabilitate steep slopes of weathered rock, roadway cuttings, etc that cannot be cut back a stabilised.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	Υ		ha	\$1,130.00		\$0		Undertaken using D10 dozer and 16M grader.
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	Υ		ha	\$1,600		\$0		Combination of dozer and excavator work plus grader for ~4 hours each pe ha.
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0 <b>\$0</b>		Installation of on-site rock material (r rap) where managing water run-off fr disturbed land and/or upon entry to water courses - prevents erosion of g head (assumes competent material is locally available). If required to be sourced off site, assume an additional
Mine Waste	<u>=</u>	artnworks / 5	tructurai vvo	rks (Landiori	n Establishm	ent) Subtotal	<del>\$0</del>		spreading, moisture conditioning and
	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no artificial strengthening required)	Y		ha	\$82,000		\$0		compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximate 0.5 m to 1 mand 0.15 m - 0.2 m graw media (assume at least 1 m thick cov required for carbonaceous material covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km rour trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap use rat from 9.02 for relevant haulage and spreading in additional to any long spreading in additional to any long
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Υ		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competen drainage materials etc.) and / or additional requirements (i.e., geofabric composite lining etc.). Include additional cost to import
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competen drainage materials etc.) and / or additional requirements (i.e., geofabri composite lining etc.).

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	Efficient Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (low to medium risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion and moderate physical properties (not significantly hydrophilic, shear strength limits equipment choice somewhat, no artificial strengthening required)	Y	ha	\$146,500		SO		This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities where the tailings or rejects base is at a strength that enables economically efficient construction methods with small plant. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness constructed in 1 m layers + growth media up to 0.2 m depth. This may require additional materials (such as capillary breaks, geofabric, etc.) - use alternate rate cells below, specific material types (e.g. acid neutralising / consuming materials, competent rock etc.), and associated activities (i.e., load / haul / place / crush / screen / borrow etc.). Costs for haulage of specialised/additional materials must be added separately if required. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate), if additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		snreading in additional to any long Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Υ	allow	Use alternate rate cell		\$0		composite imin act., I include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Adverse Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (medium to high risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) Saline Mine Drainage (SMD) and/or moderate to high propensity for spontaneous combustion) and moderate physical properties (not significantly hydrophilic, shear strength limits equipment choice somewhat, no artificial strengthening required)	Y	ha	\$313,000		\$0		This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap i cover facilities of high geochemical risk, and / or low shear strength that prohibits economically efficient construction methods. This rate assumes suitable capping materials are available on site within 10 km, and an average cap thickness of approximately > 2 m + growth media up to 0.2 m depth.  This may require additional materials (i.e., capillary breaks, geofabric, etc.), specific material types (e.g. acid neutralising) consuming materials, competent rock etc.), and associated activities (i.e., i.oad / haul / place / crush / screen / borrow etc.).  Costs for haulage of specialised materials must be added separately if required. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material in cluded in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and include additional cost to import
	/ sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.). Include additional cost to import
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Difficult Tailings Capping- reshaping, capping / sealing of weak or soft surfaced tailings facility with poor physical properties (significantly hydrophilic, low shear strength limits equipment choice greatly, artificial strengthening required) OR visible adverse impacts on legacy sites from chemical reactivity over lengthy exposure prior to rehabilitation	Y	ha	\$843,000		\$0		constraints and/or when tailings properties significantly restrict adequate desiscation, resulting in a tailings shear strength that is very weak excluding access by conventional small plant. Small equipment used for rehabilitation. This excludes any additional material required to form the final landform profile in addition to this cap. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate), If additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and spreading in additional of any long
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values. Long haulage soil / weathered rock / sediment e.g.	Υ	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	capping/covers, removal of contamination, etc.	Y	m3	List	aste Subtotal	\$0	Select Haul Distance Here	50 km round trip e.g. waste / overburden
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	Υ	m3	Select from List	aste Suptotal	·	Select Haul Distance Here	If topsoil is not available on-site, then Virgin Excavated Natural Material (VENM) may need to be externally sourced.
	Planting mature trees (>15 cm) Planting tube stock (<15 cm)	Y	allow allow	\$15.00 \$6.60		\$0 \$0		4 m centres.
	Direct seeding / fertiliser (pasture grass species)	Y	ha	\$1,875		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding).

	Direct seeding / fertiliser (tree or native grass	Y		ha	\$4,135		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or
	species)								helicopter (aerial seeding). Process to be used on flat well prepared
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y		m2	\$1.90		\$0		surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00
	Hydro-seeding with straw mulching and bitumen tack with pasture seed	Y		m2	\$0.43		\$0		Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10
	Hydromulch - base grade or standard for flat areas that can be irrigated by water cart	Y		m2	\$0.80		\$0		Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only, additional seeding required
	Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months	Y		m2	\$1.80		\$0		Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha. This cost includes cover crop only, additional seeding required.
	Hydromulch - high performance flexible growth medium grade	Y		m2	\$2.50		\$0		Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only, additional seeding required.
	Single application of fertiliser (pasture)	Y		ha	\$420.00		\$0		Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Single application of fertiliser (trees)	Y		ha	\$140.00		\$0		These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Spoil amelioration (adding lime / gypsum etc.)	Υ		ha	\$1,000		\$0		Assumes 2.5 t / ha as an average application rate.
	growth media amelioration with biosolids	Υ		ha	\$1,015		\$0		Recent experience with agronomy projects.
	Construct no-climb stock fence around rehabilitated areas	Υ		m	\$22.00		\$0		Standard rate for no-climb stock fencing.
	Construct standard stock fence around rehabilitated areas	Υ		m	\$13.00		\$0		Standard rate for standard stock fencing.
	Purchase and erect warning signs	Y		allow	\$250.00		\$0		Compliance with AS 1319-1994 - Safety signs for the occupational environment installed every 25 m.
	Supply from external sources virgin excavated natural material (VENM) for growth media.	Y		m3	\$80.80		\$0		D7 to spread material at \$205/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - allow nominal rate of \$70/m3 for imported fill material.
	Supply from external sources a combination of virgin excavated natural material (VENM) and spoil from large excavation for filing voids and/or capping etc.	Y		m3	\$72.50		\$0		D10 push into void at \$270/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - allow nominal rate of \$60/m3 for imported fill
	Clearing and grubbing of trees and vegetation	Υ		ha	\$4,730.00		\$0		Clearing and grubbing of light vegetatio growth e.g. regrowth
	Topsoil stripping	Y		m3	\$4.86		\$0		Stripping or topsoil at an approximate depth of 0.2 m into stockpiles; load and haul to final rehabilitation location required or respreading where necessary.
	Growth media supplementation with manure	Υ		ha	\$747.50		\$0		Addition of manure to improve soil quality.
	Utilise biotic soil media - organic topsoil alternative	Υ		m2	\$2.50		\$0		Material that can be applied as an alternative to spreading topsoil prior to
	Land Preparation and Revegetation (Grov	wth Media De	evelopment ar	nd Ecosysten	n Establishme	ent) Subtotal	\$0		hydromulching.
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Y		allow	\$2,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate dan batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and pasture grass.
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Y		allow	\$10,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate dam batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	Y		m3	Select from List			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring removal using an excavator, truck and dozer to clean out the dam.
Maintenance of Rehabilitated	T			Wa	ater Managem	ent Subtotal	\$0		Rehabilitation maintenance might
Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y		ha	\$925		\$0		include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include maior repair works. Areas requiring minor repair - rills,
	Existing rehabilitation repair - minor	Y		ha	\$1,200		\$0		minor growth media replacement.  Areas requiring moderate repair - rills,
	Existing rehabilitation repair - moderate  Existing rehabilitation repair - major	Y		ha ha	\$1,700 \$2,500		\$0 \$0		Areas requiring moderate repair - rills, significant growth media replacement. Areas requiring major repair - rills, gullies, growth media replacement,
	Existing rehabilitation repair - major  Existing rehabilitation repair - total failure of						·		some level of additional surface water management. Areas that require extensive
	landform	Y		ha	\$40,000		\$0		rehabilitation repair - re-design and re- construction of landform.
			Mainte		habilitated Are Additional Ite		\$0 \$0		
						ams Subtotail	, şu		
	Total Cost for O	verburg	len & W			ems Subtotal	<b>30</b>	\$0	

#### Domain 4b: Active Mine & Voids

#### Total Cost for Active Mine & Voids Domain

\$0

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Open Cut	Active pit area – benches blasted and doze to acceptable grade	Y		Lm	\$1.93		\$0		Blasting in a 8x9 pattern of bench heigh 25 m with D11 push of 50-75 m.
	Drill & blast faces to make safe	Υ		m3	\$0.95		\$0		Bulk Drilling say 8°9 pattern, assuming a stem height of 6 m, charge length of 19 m, explosive density of 0.9, diameter of 229 mm, explosives at 665.3 kg/hole with a powder factor of 0.37 with an approximate bench height of 25 m.
	High wall treatment – (trench and safety berm)	Υ		m	\$90.00		\$0		D10 dozer, 16H Grader and revegetation with pasture grass.
Earthworks / Structural Works	ı	ı		ı	Open	Cut Subtotal	\$0	Select Push Length Here	
(Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length	Υ		m3	Select from List				Major bulk pushing to achieve grades nominated in the approval/permit
	Minor reshaping and pushing	Y		ha	\$3,900		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation).
	Fill dams, voids etc Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	Y		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring backfill using an excavator and scraper to fill the void an enable the establishment of rehabilitation.  This rate is used to rehabilitate steep
	Shotcrete application on cuttings and steep slopes	Y		m2	\$185.00		\$0		This rate is used to renabilitate steep slopes of weathered rock, roadway cuttings, etc that cannot be cut back an stabilised.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction) Structural works, banks, waterways - contour banks,	Y		ha	\$1,130.00		\$0		Undertaken using D10 dozer and 16M grader. Combination of dozer and excavator
	drainage channels and other soil conservation measures	Y		ha	\$1,600		\$0		work plus grader for ~4 hours each per ha. Installation of on-site rock material (rip-
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0		rap) where managing water run-off fron disturbed land and/or upon entry to water courses - prevents erosion of gull head (assumes competent material is locally available). If required to be sourced off site. assume an additional
	E	arthworks / S	tructural Wo	rks (Landforr	n Establishme	ent) Subtotal	\$0		
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	Y		m3	Select from List			Select Haul Distance Here	If topsoil is not available on-site, then Virgin Excavated Natural Material (VENM) may need to be externally sourced.
	Planting mature trees (>15 cm)	Y		allow	\$15.00		\$0		4 m centres.
	Planting tube stock (<15 cm)			allow	\$6.60		\$0		4 m centres. Includes treating, weighing, mixing with
	Direct seeding / fertiliser (pasture grass species)	Y		ha	\$1,875		\$0		fertiliser + spreading by tractor or helicopter (aerial seeding).
	Direct seeding / fertiliser (tree or native grass species)	Y		ha	\$4,135		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding). Process to be used on flat well prepare
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y		m2	\$1.90		\$0		surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00
	Hydro-seeding with straw mulching and bitumen tack with pasture seed	Y		m2	\$0.43		\$0		Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges fron \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10
	Hydromulch - base grade or standard for flat areas that can be irrigated by water cart	Y		m2	\$0.80		\$0		Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last
					****				short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only, additional seeding required.
	Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months	Y		m2	\$1.80		\$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only, additional seartino required. Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of "3500kg/he This cost includes cover crop only, additional seedino required."
		Y		m2 m2					short term (less than 3 months) and vegetation is required to grow ASAP fo stability. This cost includes cover crop only additional seedina required Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/hs. This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/h minimum. This cost includes cover croply, additional seeding required.
	areas to stabilise up to 12 months  Hydromulch - high performance flexible growth				\$1.80		\$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only additional seeding required Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of 3500kg/hs This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of 4,000kg/h minimum. This cost includes cover crop only, additional seeding required. Assumes use only, additional seeding required. Assumes 250 kg / hs. These rates have fluctued over the last few years however in light of current conditions (lower fuel prices, reduced demand etc' this is a suitable standard rate.)
	areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade	Y		m2	\$1.80 \$2.50		\$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only, additional seedina required Assumes use on steep areas of the stabilisation is required for up to 12 months. Application rate of "35000kg/hs This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of "4,000kg/h minimum. This cost includes cover cro only, additional seeding required. Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last countries of the conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)	Y		m2 ha	\$1.80 \$2.50 \$420.00		\$0 \$0 \$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop colv additional seedina required Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of "3500kg/lha This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/lhminimum. This cost includes cover only, additional seeding required. Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)  Single application of fertiliser (trees)	Y		m2 ha	\$1.80 \$2.50 \$420.00 \$140.00		\$0 \$0 \$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop colv additional seedina renuired Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of "35000kg/lhs This cost includes cover crop only, additional seeding required, Assumes use on extreme slopes when stabilisation is required for up to 18 months. Application rate of ~4,000kg/lh minimum. This cost includes cover only, additional seeding required. Assumes 250 kg / ha. These rates have fuculated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc this is a suitable standard rate. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)  Single application of fertiliser (trees)	Y		m2 ha ha	\$1.80 \$2.50 \$420.00 \$1,000.00		\$0 \$0 \$0 \$0 \$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only, additional seedina renutred. Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ht. This cost includes cover crop only, additional seedina required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/h minimum. This cost includes cover cronly, additional seeding required. Assumes 250 kg/ ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand and etc) this is a suitable standard rate. Assumes 2.5 t / ha as an average application rate. Assumes 2.5 t / ha as an average application rate. Recent experience with agronomy projects.
	areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)  Single application of fertiliser (trees)  Spoil amelioration (adding lime / gypsum etc.) growth media amelioration with biosolids  Security fence around steep section of high wall  Purchase and erect warning signs	Y Y Y Y Y		m2 ha ha ha ha	\$1.80 \$2.50 \$420.00 \$1,000.00 \$1,015		\$0 \$0 \$0 \$0 \$0 \$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop colou additional asealion required. Assumes use on sleep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/hm inimum. This cost includes cover cro only, additional seeding required. Assumes 250 kg/ ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last gaplication rate. Recent experience with agronomy projects.  1800mm x 3 barb chain-link mesh security fence and gate standard 2.5mm mesh & 32 mm post not concreted Compliance with AS 1319-1949. Safet signs for the occupational environment installed every 25 m.
	areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)  Single application of fertiliser (trees)  Spoil amelioration (adding lime / gypsum etc.) growth media amelioration with biosolids  Security fence around steep section of high wall	Y Y Y Y Y Y		m2 ha ha ha m	\$1.80 \$2.50 \$420.00 \$1,000.00 \$1,015 \$64.00		\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0		short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only, additional seedina required to grow on the stabilisation is required for up to 12 months. Application rate of "5000kg/ha This cost includes cover crop only, additional seedina required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of "4,000kg/ha minimum. This cost includes cover cro only, additional seeding required. Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. Assumes 25 t / ha as suitable standard rate. Assumes 2.5 t / ha as an average application rate. Recent experience with agronomy projects.  1800mm x 3 barb chain-link mesh security fence and gate standard 2.5mm mesh 8.32 mm post not concept safet with a S1319-1994 - S31919 for the forms of the security fence and gate standard 2.5mm mesh 8.32 mm post not concept.

	Total Cost for A	ctive M	ine & V	oids Do	main			\$0	
			ullite		Additional Ite		\$0		
	Existing rehabilitation repair - total failure of landform	Y	Mainte	ha	\$40,000 habilitated Ar	eas Subtotal	\$0 <b>\$0</b>		Areas that require extensive rehabilitation repair - re-design and re construction of landform.
	Existing rehabilitation repair - major	Y		ha	\$2,500		\$0		Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface wate management.
	Existing rehabilitation repair - moderate	Υ		ha	\$1,700		\$0		Areas requiring moderate repair - rills significant growth media replacement
	Existing rehabilitation repair - minor	Υ		ha	\$1,200		\$0		Areas requiring minor repair - rills, minor growth media replacement.
Maintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y		ha	\$925		\$0		Rehabilitation maintenance might include re-seeding, watering, fertilisir minor re-shaping, erosion control, inspections/audits - does not include major repair works.
				Wa	ter Managem	ent Subtotal	\$0		
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	Y		m3	Select from List			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring removal using an excavator, truck an dozer to clean out the dam.
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Y		allow	\$10,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate d batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Y		allow	\$2,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate c batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~\$200 per hour and pasturass.
	Land Preparation and Revegetation (Grov	vth Media De	evelopment ar	nd Ecosysten	n Establishme	ent) Subtotal	\$0		
	Utilise biotic soil media - organic topsoil alternative	Υ		m2	\$2.50		\$0		Material that can be applied as an alternative to spreading topsoil prior hydromulching.
	Growth media supplementation with manure	Y		ha	\$747.50		\$0		Addition of manure to improve soil quality.
	Topsoil stripping	Y		m3	\$4.86		\$0		Stripping or topsoil at an approximate depth of 0.2 m into stockpiles; load a haul to final rehabilitation location required or respreading where necessary.

#### Domain 5b: Management Activities

#### **Total Cost for Management Activities**

\$0

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant	Description / Notes:
Water Management	On-site treatment of contaminated water due to high salt (includes removal of metals etc, brine disposal and cost of mobile water treatment unit)	Y		ML	\$3,600		\$0	Information	Rate can fluctuate depending on treatment type however this is a suitable standard rate for current programs at mining operations.
	On-site treatment of contaminated water due to low pH (incudes removal of metals etc, neutralisation treatments and cost of mobile water treatment unit	Υ		ML	\$1,500		\$0		Rate can fluctuate depending on treatment type however this is a suitable standard rate for current programs at mining operations.
			l.	Wa	ater Managen	nent Subtotal	\$0		
Creek Diversions	Repairs and/or stabilisation of new or compromised water course diversion	Y		m	\$2,500		\$0		Assumes material is suitable for revegetating and has a reasonable chance of stabilising.
	Long term maintenance of water course diversion – Channel constructed through backfilled material Long term maintenance of water course diversion –	Y		m	\$1,500		\$0		Assumes maintenance has been kept u and significant works are not required. Assumes maintenance has been kept u
	Channel constructed through competent material	Y		m	\$750.00		\$0		and significant works are not required. Assumes competent material is locally
	Installation of rock armouring	Y		m2	\$6.00 Creek Diversi	ons Subtotal	\$0 \$0		available - multiply costs by 2 for sourcing and transporting from offsite
Maintenance of Rehabilitated Areas	Pest management on buffer lands, non-disturbed, and rehabilitated areas	Υ		ha	\$150.00		\$0		Feral animal baiting programs if required and waste materials required
	Land management of undisturbed areas (rehabilitation, weeds, ferals, erosion and sediment	Y		ha	\$400.00		\$0		to be removed.  Undisturbed areas within the lease boundary that require land managemer
	control works)		Mainte	enance of Re	habilitated Ar	reas Subtotal	\$0		activities.
Heritage Items									Item for the redistribution of Aboriginal
	The restoration and care and maintenance of items that have heritage significance	Y		allow	Use alternate rate cell		\$0		artefacts, preservation of European heritage items or a combination of activities.
Sundry Items					Heritage It	ems Subtotal	\$0		Provisional sum to be used to refine the
	Development of an 'Unplanned' Project Closure Plan - State Significant Development with closure planning well progressed i.e. preferred cover design, closure environment modelled e.g. groundwater /subsidence / pit lakes, preliminary seal designs, etc. and only finalisation of detailed engineering deigns required	Y		allow	\$100,000		\$0		conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Assumes outcomes of studies readily available including modelling, landform design, geochemistry, demolition, etc. Costs to finalise options by domain and finalise designs for construction. Assume a simple site e.g. single open cut, no legacy operations historic in the area, little social dependence, etc. Depending on site size, complexity, fina land use requirements and knowledge base investigations can range from ~375k to ~51 M.
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with at least 22 of the following aspects requiring closure planning, but no significant lissues realised at this time; previous subsidence, medium or higher geochemistry risk and/or spontaneous combustion propensity, known/ likely contamination, tailings / rejects, final void	Υ		allow	\$90,000		\$0		Provisional sum to be used to rellme the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Estimated cost for developing closure plan including studies - basic to satisfy risks and decisions - includer risk assessment, options analysis, Closure Plan. Sites with more than 1 pit to add \$50,000 nore the
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with no EPL and/or only one of the following relevant aspects: previous subsidence, low to medium geochemistry risk and/or spontaneous combustion propensity, known limited contamination, small approved final void	Y		allow	\$15,000		\$0		Assumes sediment control is the key concern for rehabilitation e.g. small mines, exploration operations. Includer risk assessment, sampling and analyse on <5 samples, one study and Closure Plan.
	Development of an 'Unplanned' Project Closure Plan - State Significant Development with only preliminary to conceptual closure planning in place	Y		allow	\$300,000		\$0		studies including designs e.g., geochemistry, Contamination Remediation Action Plan, subsidence risk, cover/capping and final landform, site wide surface water, etc. Provisions sum to be used to refine the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Assume at least 15 types of studies required ranging from geotechnical to ecology and social, development of a closure plan including address of obligations. Assume a simple site e.g. single open cut, no legacy operations historic in the area, little social dependence, etc. Depending on site size, complexity, fine land use requirements and knowledge base investigations can range to >33 M Sites with more than 1 pit to add
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with at least ±2 of the following aspects resulting in significant issues requiring remediation: previous subsidence, medium or higher geochemistry risk and/or spontaneous combustion propensity, known/ likely contamination, tallings / rejects, final void	Y		allow	\$125,000		\$0		ifficial costs for key investigations an studies including economic treatments and designs e.g. geochemistry. Contamination Remediation Action Plan, subsidence risk, cover(capping and final landform, site wide surface water, etc. Provisional sum to be used to refine the conceptual dosure plan init a detailed closure plan with execution strategies for rehabilitation activities Based on experience for a REF after
	Develop a Review of Environmental Factors (REF) to facilitate rehabilitation including contamination works.	Υ		allow	\$27,950		\$0		Based on experience for a REF after completion of a detailed closure study (e.g. contamination investigation) costs could range from \$10,000 to \$100,000 ex GST. Note this does not apply to a Statement of Environmental Effects or Environmental Impact Statement.

	Total Cost for	Manag	gement	<b>Activiti</b>	es			\$0	
					Additional Ite	ms Subtotal	\$0		
	Other 3 <insert></insert>	N			left blank				the operator>>
	Other 2 <insert></insert>	N			deliberately				the operator>> This item includes < <to added="" be="" by<="" td=""></to>
	Other Order costs				de libered i				the operator>> This item includes < <to added="" be="" by<="" td=""></to>
Additional Items	Other 1 <insert></insert>	N			This is				This item includes < <to added="" be="" by<="" td=""></to>
			Mo	bilisation and	d Demobilisat	ion Subtotal	\$0		
	Mobilisation & Demobilisation (Distance to site >1000 km)	Υ		item	\$500,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site >500 km but <1000 km)	Υ		item	\$300,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site >150 km but <500 km)	Y		item	\$150,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site <150 km)	Y		item	\$100,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation for small mine or quarry - medium to large fleet	Υ		Item	\$35,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
Mobilisation and Demobilisation	Mobilisation & Demobilisation for small mine or quarry - small fleet	Υ		Item	\$12,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
					Sundry Ite	ms Subtotal	\$0		
	Additional fees for accessing State, Crown or other public lands for rehabilitation/remediation activities	Υ		allow	Use alternate rate cell		\$0		Provisional sum.
	Removal and disposal of radiation devices	Y		each	\$31,630		\$0		conveyors using a radiation source (i. Americium – 241, Plutonium – 238, Caesium - 137 etc). Source Isotope type, quantity, strength weight, source holder type, source holder weight, pick-up location (amon
									Provisional sum for removal and disposal of monitoring devices on
	Choose type of HAZMAT Clean-up required - cleaning and decontaminating plant and equipment, chemical storage locations, oil and grease traps, tanks, vessels, and pipe work etc	Y		allow	\$0		\$0	Select type of HAZMAT Clean-up Required	Type of HAZMAT Clean-up required - cleaning and decontaminating plant a equipment, chemical storage location: oil and grease traps, tanks, vessels, a pipe work etc
	Site security during closure	Υ		yr.	\$75,000		\$0		Provisional sum for site security measures required during closure. The includes nightly patrols and first response in the event of an out of hou

#### Domain 1c: Infrastructure

#### **Total Cost for Infrastructure Domain**

\$0

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y	Quantity	Unit	Default Unit	Alternative	Total Cost	Basis for Costs Estimation and Additional Relevant	Description / Notes:
Termination of Services and	Activity / Decemption	or N)	quantity	O.I.I.C	Rate	Unit Rate	rotal Goot	Information	For disconnection of all services, at
Demolition Works	Disconnect and terminate all services (Water, electricity, gas etc at point of attachment to site)	Υ		allow	\$35,000		\$0		building boundaries, physical cut at the point of attachment or distribution location. If infrastructure is not consolidated (i.e., administration, camp and workshops are in separate places), consider multiple disconnection fees.
	Disconnect and terminate services at remote areas (i.e. pump stations, remote workshops, sewage treatment plant etc.)	Υ		allow	\$5,850		\$0		Used for infrastructure remote from primary connection. Can also be used for small mines / quarries that do not have dedicated supplies from supply authorities such as steel lattice power lines.
	Removal of low/medium voltage powerlines including disconnection, rolling up the wires and removing the poles - does not include the removal of	Υ		km	\$15,000		\$0		Applies to power lines on stobie, concrete or similar poles.
	Removal of power lines on tower or lattice structures (this includes disconnection, rolling up the wires and removing the structures) - does not include the removal of substations	Υ		km	\$100,000		\$0		Applies to power lines on steel tower and steel lattice structures assuming 3 towers / km.
	Remove small rail, road, water course overpass - manage potential interruptions and demolish and remove bridge supports/pylons/bridge structure etc. and dispose of waste material on-site/locally	Y		Item	\$350,000		\$0		Smaller structures - minimal civil works to demolish (constructed for the purposes of mining related works - does not include transport to regional disposal facility or equivalent).
	Remove medium rail, road, water course overpass - manage potential interruptions and demolish and remove bridge supports/pylons/bridge structure etc. and dispose of waste material on-site/locally	Y		Item	\$500,000		\$0		Medium structures - minimal civil works to demolish (constructed for the purposes of mining related works - does not include transport to regional disposal facility or equivalent).
	Remove large / significant rail, road, water course overpass - manage potential interruptions and demolish and remove bridge supports/pylons/bridge structure etc. and dispose of waste material onsite/locally	Y		Item	\$1,300,000		\$0		Large structures - includes significant water management e.g. watercourse diversion and civil works to demolish (constructed for the purposes of mining related works - does not include transport to regional disposal facility or
	Demolish and/or remove substations (assumes they are in a closed building). Dispose of waste material on-site/locally	Y		m2	\$100.00		\$0		Simple structure to demolish mechanically (no labour required), assumes single story building with no asbestos and segregation of contents for scrap as applicable.
	Demolish and remove switchyard. Dispose of waste material on-site/locally	Υ		m2	\$75.00		\$0		Includes demolition and removal of all switchgear and transformers etc. and segregation of contents for scrap as applicable.
	Demolish and remove demountable structures on concrete stumps. Assumes not being re-used	Y		m2	\$40.00		\$0		Crib huts, temporary offices and other 'non permanent' structures. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove small buildings/tanks (admin buildings, single story accommodation etc) and disposal on-site/locally	Y		m2	\$61.00		\$0		Simple structure to demolish, assumes no greater than 2 stories high. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove light industrial buildings and disposal on-site/locally	Υ		m2/floor	\$90.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m) - does not include transport to regional disposal facility or equivalent. Assumes asbestos free and mechanically
	Demolish and remove industrial buildings (workshops tyre change and servicing area etc not CHPP/process plant) and disposal on-site/locally	Y		m2/floor	\$130.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Demolish and remove CHPP/process plant (include the area of each floor of the structure) and disposal on-site/locally	Y		m2/floor	\$225.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Collapse, demolish and remove washery, crushers, hoppers, mills, furnaces, agglomeration, electrowinning, floatation, sizing stations, rotary breakers, etc (include the area of each floor of the structure) and disposal on-site/locally	Υ		m2/floor	\$225.00		\$0		Needs to be calculated per floor/level (Assume 1 floor/level = 3-4 m). Does not include transport to regional disposal facility or equivalent.
	Collapse, demolish and remove stacker OR reclaimer (radial or luffing etc. with maneuverability for stockpile control) and disposal on-site/locally	Y		allow	\$750,000		\$0		Cost for removal of stacker or reclaim unit only. Does not include terminate services, remove rails and ballast etc. Does not include transport to regional disposal facility or equivalent.
	Collapse, demolish and remove bucket wheel stacker/reclaimer and disposal on-site/locally	Y		allow	\$2,000,000		\$0		Cost for just removal of the bucket wheel stacker/reclaim units. Does not include terminate services, remove rails and ballast etc. Does not include transport to regional disposal facility or
	Remove stacker/reclaimer rails and ballast and demolish and remove concrete footings etc and disposal on-site/locally	Y		m	\$75.00		\$0		Includes both rails, does not include the conveyor system. Does not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove 5000T coal silo and disposal on-site/locally	Y		allow	\$92,500		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove 3000 T coal silo and disposal on-site/locally	Y		allow	\$77,500		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent. Collapse structure and remove. Does
	Collapse, Cut and Remove 1250 T coal silo and disposal on-site/locally	Y		allow	\$62,500		\$0		not include transport to regional disposal facility or equivalent.
	Collapse, Cut and Remove rail loading bins and disposal on-site/locally	Y		allow	\$65,000		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Demolish and Remove large concrete rail loading bin - and disposal on-site/locally	Y		allow	\$460,000		\$0		Collapse structure and remove. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove onground conveyors, transfer stations & gantries (scrap only – does not include dismantling for reuse at another site) and disposal on-site/locally	Y		m	\$185.00		\$0		Estimate for on-ground conveyor including anything up to 10 m off the ground. Does not include transport to regional disposal facility or equivalent.
	Demolish and remove elevated conveyors, transfer stations & gantries (scrap only, does not include dismantling for reuse at another site) and disposal on-site/locally	Υ		m	\$295.00		\$0		Estimate for elevated conveyor up to ~10 m off the ground. Does not include transport to regional disposal facility or equivalent.

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Demolish and remove overhead conveyors, transfer stations & gantries (scrap only, does not include dismantling for reuse at another site) and disposal on-site/locally.	Y	m	\$850	\$0		Estimate for overhead conveyor including conveyors that are >10 m off the ground that require a crane to remove. Does not include transport to
This may include small scale fixed material stacking infrastructure  Remove and demolish conveyor from reclaim tunnel						regional disposal facility or equivalent.  Due to no canopy or infrastructure
(Does not include excavation and demolition of reclaim tunnel roof)	Y	m	\$150.00	\$0		attached.  Assumes this area will be used for
Demolition of reclaim tunnel concrete (Assumes complete removal and dumping in mine pit void)	Υ	m	\$950.00	\$0		another land-use that requires the structure to be dug up and re-buried somewhere else.  Does not include filling and capping the
Demolition and removal of vent raise fans, electrical substation and winch and disposal on-site/locally	Υ	allov	\$25,000	\$0		shaft. Does not include transport to regional disposal facility or equivalent.
Demolish and remove small tank clean (Thickener etc 3 - 9 m diameter) and disposal on-site/locally	Y	allov	\$10,000	\$0		Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to
Demolish and remove medium tank clean (Thickener etc 10 - 15 m diameter) and disposal on- site/locally	Υ	allov	\$30,000	\$0		regional disposal facility or equivalent. Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
Demolish and remove large tank clean (Thickener etc 15 - 30 m diameter) and disposal on-site/locally	Y	allov	\$45,000	\$0		Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
Demolish and remove extra large tank clean (Thickener etc >30 m diameter) and disposal on- site/locally	Y	allov	\$100,000	\$0		Assume tank is clean - contents removed. If tank is full allow extra 30% for excavator and 2 men to dig out and dispose. Does not include transport to regional disposal facility or equivalent.
Demolish and remove tank clean (Thickener etc) >50 m diameter and disposal on-site/locally	Y	allov	\$100,000	\$0		Estimate only - may require a detailed assessment from demolition expert due to specialised equipment required for removal. Does not include transport to regional disposal facility or equivalent.
Removal of UG tank <5000 L - including pipes, bunds etc. and disposal on-site/locally	Υ	allov	\$21,000	\$0		Assume tank is clean (contents removed), does not include transport to regional disposal facility or equivalent.
Removal of UG tank 5000 L - 15000 L - including pipes, bunds etc. and disposal on-site/locally	Υ	allov	\$30,000.00	\$0		Assume tank is clean (contents removed), does not include transport to regional disposal facility or equivalent.
Remove small underground pipe and disposal on- site/locally	Υ	m	\$25.00	\$0		For example: 300 mm pipes - 0.5 m deep, does not include transport to
Remove medium underground pipe and disposal on-	Y	m	\$60.00	\$0		regional disposal facility or equivalent.  For example: 500 mm pipes - 1 m deep, does not include transport to regional
site/locally  Remove large underground pipe and disposal on-	Y	m	\$165.00	\$0		disposal facility or equivalent.  For example: 1 m pipes - 2 m deep.
site/locally  Remove above ground pipe (supported) and disposal on-site/locally	Y	m	\$12.00	\$0		~300 mm pipes and assumes pipes are in close proximity to infrastructure areas. Does not include transport to
Remove surface pipelines (unsupported) and disposal on-site/locally	Y	m	\$15	\$0		regional disposal facility or equivalent.  -300 mm pipes and assumes pipes are used for water transfer between pits (or similar) and remotely located. Does not include transport to regional disposal
Remove pump and pontoon from small lake or dam including pipes and electrical supply or diesel tank/s	Y	allov	\$20,000.00	\$0		facility or equivalent. Includes equipment for retrieval - boats, etc. and labour. Does not include transport to regional disposal facility or equivalent.
Remove bitumen (car park and access roads) and dispose on-site/locally	Y	m2	\$10.00	\$0		Scalp bitumen and stabilised material. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport
Remove bitumen (airstrip) and dispose on- site/locally	Y	m2	\$20.00	\$0		Scalp bitumen and stabilised material. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
Remove concrete pads & footings (<300 mm thickness) and disposal on-site/locally	Y	m2	\$36.00	\$0		Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
Remove concrete pads & footings (>300 mm thickness) and disposal on-site/locally	Y	m2	\$75.00	\$0		Breaking up slab and disposal or for conversion to aggregate. Generally haulage rates will be \$0.60 - \$1.20 / km, depending on truck fleet, loaders etc. For off-site disposal use alternate rate option and add \$0.90 / km for transport.
Crush concrete to make road aggregate - 75 mm	Y	tonne	\$10.00	\$0		Does not include haulage of materials - assumes crushing plant is readily available.
Crush concrete to make road aggregate - 50 mm	Υ	tonne	\$13.00	\$0		Does not include haulage of materials - assumes crushing plant is readily
Crush concrete to make road aggregate - 30 mm	Υ	tonne	\$15.00	\$0		available.  Does not include haulage of materials - assumes crushing plant is readily available.
Remove fence (cyclone/wire fence) and disposal on- site/locally	Υ	m	\$20.00	\$0		Roll up fence and remove posts.
Removal of small plastic tanks	Y	each	\$1,000.00	\$0		Remove small poly tanks used for water storage, etc. Demolish and remove small lightweight
Demolish and remove galvanised/corrugated light weight tanks	Y	each	\$500.00	\$0		metal tanks. No costs included for managing liquids, etc.
Demolish and remove communication towers	Y	each	\$5,000.00	\$0		Cost includes demolition and removal of tower only; separate costs required for disconnection of services, demolition of footings, etc.
Removal of UG services (power within main gate areas, etc.)	Υ	allov	\$50,000.00	\$0		Assume service disconnection at the mine boundary is at surface level. This cost covers all fees and charges
Waste disposal to Council landfill (general waste) - haulage >10 km but <15 km	Y	tonne	\$7.00	\$0		Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
Waste disposal to Council landfill (general waste) - haulage >15 km but <25 km	Y	tonne	\$9.00	\$0		type. Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste type.
Waste disposal to Council landfill (general waste) - haulage >25 km but <50 km	Y	tonne	\$12.50	\$0		Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
		·			·	HVDC.

	Waste disposal to Council landfill (industrial demolition / concrete / scrap metal) - haulage >10 km but <15 km	Υ		tonne	\$32.00		\$0		Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
	Waste disposal to Council landfill (industrial demolition / concrete / scrap metal) - haulage >15 km but <25 km	Y		tonne	\$36.00		\$0		type. Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
	Waste disposal to Council landfill (industrial demolition / concrete / scrap metal) - haulage >25 km but <50 km	Υ		allow	Use alternate rate cell		\$0		type. Rate accounts for round trip haulage to Council landfill but excludes landfill fees. Input quantity against Waste disposal to Council landfill - fees for relevant waste
	Waste disposal to Council landfill - fees (general waste)	Y		tonne	\$193.00		\$0		IVDE.  Fee for waste disposal of general waste to local Council landfill; transport rates separate. Please note that this is not applicable to operations with approval for building and demolition waste disposal on site.
	Waste disposal to Council landfill - fees (industrial demolition / concrete / scrap metal)	Y		tonne	\$174.00		\$0		Fee for waste disposal of industrial demolition / concrete / scrap metal waste to local Council landfill; transport rates separate. Rate does not assume material is recyclable. Please note that this is not applicable to operations with approval for building and demolition
		Tern	nination of Se	ervices and D	emolition Wo	orks Subtotal	\$0		waste disposal on site.
Rail Infrastructure	Remove rail loop and spur, ballast etc. and disposal on-site/locally	Y		m	\$60.00		\$0		Remove all materials to allow area to be reshaped and rehabilitated - does not include transport to regional disposal facility or equivalent.
	Remove train loading facilities and disposal on- site/locally	Y		m2	\$185.00		\$0		Remove rail load point infrastructure including gantries and control structures. Does not include transport to regional disposal facility or equivalent.
	Reshape rail spur and load out areas. Does not include growth media and revegetation	Υ		ha	\$2,860		\$0		D10 Dozer and 16 H Grader (50% utilisation).
Contaminated Materials				R	ail Infrastruct	ture Subtotal	\$0		The preliminary investigation would
	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	Υ		Cluster	\$15,000		\$0		include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (w)) or similar approved and recognised assessment method. A cluster may include:  - Milne infrastructure (i.e., fuel / chemica store, workshop, vehicle wash-down, sewage treatment etc.)  - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.)  - Remote pit-Lop facilities (i.e., vehicle refuel, sewage treatment, secondary understanded and sevended the service of the sewage treatment, secondary workshop, whence the sewage treatment, secondary westerbase developed (sexended the sewage treatment, secondary)
	Undertake an intrusive site investigation on sites with small footprints to investigate e.g. <pre>s15</pre> ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	Y		Cluster	\$44,000		\$0		The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (vii) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contamination has occurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oil/water separators etc.) and further field work is required involving intrusive investigation. Assumes site is easily accessible and a small area e.g. "10-15 ha requires investigation and testing (test pits, boreholes, etc.) based on Sampling and Analysis Quality Plan. Includes SAQP.
	Undertake an intrusive site investigation on sites with large footprints to investigate e.g. >15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.  Develop a Remediation Action Plan on sites with small footprints based on outcomes of intrusive investigation including strategies to address	Y		Cluster	\$106,000 \$35,000		\$0 \$0		The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (vi)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contamination has occurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oil/water separators etc.) and further field work is required involving intrusive investigation. Assume site has a history of contamination and/or a large area >15 ha requires investigation and testing (test pits, boreholes, etc.) based on Sampling and Analysis Quality Plan. Develop remediation plan for approval including designs and detailed costs.
	contamination exceedances Develop a Remediation Action Plan on sites with large footprints based on outcomes of intrusive investigation including strategies to address	Y		allow	Use alternate rate cell		\$0		required for construction.  Assumes complex site; detailed design drawings required for cover.
	contamination exceedances  Removal and disposal of contaminated water from tanks, bunded areas and sumps	Y		L	\$0.35		\$0		Cost for recent sump clean-up from resource activity - requires specialists to
	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (Select Haul Distance from list)	Y		m3	Select from List			Select Haul Distance Here	treat.  This item includes scraping and remova of the volume of carbonaceous material using dozer, grader etc. to make safe ar area and enable the establishment of rehabilitation.

	Load, cart and dispose of Hazardous classified	1	1	ı					)
	contaminated material off site to a licensed landfill.  Assumes cartage to a licensed landfill.	Y		m3	\$800.00		\$0		Includes load, haul and dump fees to licensed facility.
	Load, cart and disposal of Restricted classified contaminated material off site to a licensed landfill. Add \$50/m3 for cartage from regional areas	Y		m4	\$660.00		\$0		Includes load, haul and dump fees to licensed facility.
	Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add \$50/m3 for cartage to regional landfill	Υ		m3	\$220.00		\$0		Includes load, haul and dump fees to licensed facility.
	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	Y		m3	Select from List			Select Volume Here	Spreading of contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the su through aeration and/or the addition minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up 24 months.
	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc.) contaminated soil treatment	Y		Item	\$150,000		\$0		Required if treatment of hydrocarbon contamination is required to be fast tracked.
	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	Y		m3	\$165.00		\$0		Additional cost as the treatment proc is fast tracked. Where an assessment/estimation ha
	Remove and dispose of asbestos (<750 m2)	Y		m2	\$50.00		\$0		been made to confirm the volume of asbestos to be removed. Where an assessment/estimation ha
	Remove and dispose of asbestos (>750 m2)  Waste disposal to Council landfill - fees (asbestos)	Y		m2 tonne	\$40 \$290		\$0 \$0		been made to confirm the volume of asbestos to be removed. Landfill fees to regional landfill.
	Treatment of known Acid Sulfate Soils	Y		ha	\$2,580		\$0		Assumes ASS is treatable via neutralisation and does not require capping and isolation. Assumes 1% weight lime addition and treatment to 100 mm depth only.
	Removal and disposal of plastic liner (i.e. dam, leach pad, sump etc.)	Y		m2	\$1		\$0		Provisional sum for cutting using rip tynes and on-site disposal of the line
	Long haulage brine/salt for disposal (Select Haul Distance from list)	Y		tonne	Select from List			Select Haul Distance Here	Costs for haulage to location for authorised disposal.  Rate for trackable liquid levy of \$78.
	Brine disposal to landfill - fees only  Long haulage water (clean or contaminated) (Select	Y		tonne	\$288 Select from		\$0		per tonne and authorised disposal to landfill.
	Haul Distance from list)	Y		tonne	List	rials Subtotal	\$0	Select Haul Distance Here	Add disposal costs to additional item where warranted
Vents, Shafts and Boreholes	Option 1 - Coal bore hole Exploration boreholes - rehabilitate coal boreholes and drill pads as required	Y		depth (m)	\$44.55		\$0		Cost to grout and cap an open exploration borehole. Assume a 20 t 20 m drill pad requires rehabilitation push cover of nearby growth media, and seed.
	Option 3 - Mineral RAB and aircore drill holes Exploration boreholes – backfill open Rotary Airblast (RAB) or aircore drill holes with cuttings	Y		allow	\$43		\$0		May include cutting of casing, installation of a casing cap, and/or manually backfilling the hole with dricuttings. Does not include reshaping ripping the drill pad, amelioration /
	Option 2 - Mineral drill hole requiring grouting Exploration boreholes – grout and cap open bore holes	Y		allow	\$5,700		\$0		Includes grouting and capping 100 - m exploration boreholes to meet the requirements of Departmental Guidelines. Holes deeper than 100 m - includes
	Boreholes – cap and seal open bore holes with steel casing (i.e., goaf drainage etc.)	Υ		allow	\$6,960		\$0		cutting steel collar 6 m below surfact grouting and capping.
	Boreholes – cap and seal open bore holes - surface- to-in-seam gas drainage Boreholes – cap and seal open bore holes - vertical	Y		allow	\$17,890		\$0		Surface-to-in-seam gas drainage boreholes.
	gas drainage Boreholes – grout (with concrete) cap and seal bore	Y		allow	\$16,000 \$35,000		\$0 \$0		Vertical gas drainage boreholes.  Includes multi skin sleaves to preven
	holes (i.e. where sealing aquifers)  Boreholes – cap and seal service boreholes for UG coal operations	Y		allow	\$45,000		\$0		aquifer mixing. Includes large diameter boreholes us for supplying electricity (66kV), compressed air, water, solsenic etc.
	Option 4 - Mineral diamond drill hole Rehabilitation of diamond drill holes and pad including sealing drill holes for mineral exploration	Y		Item	\$2,070		\$0		Bog out cuttlings, remove fencing, remove rubbish, push sumps in, rehabilitate pads and tracks, cut and plug collars. Includes labour and equipment, disposal of rubbish local
	Option 5 - Mineral reverse circulation drill holes Rehabilitation of reverse circulation drill holes and pad including sealing drill holes for mineral exploration	Y		Item	\$1,340		\$0		Sealing required, but not complete fi with concrete/grout
	Option 6 - Rehabilitation of drill hole collars Rehabilitation of drill hole collars (mineral exploration)	Y		each	\$415		\$0		Cut collar, remove, cap, backfill capp collar and cover with nearby organic growth material
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor				s and Boreho	oles Subtotal	\$0		Assumes ~6 m road width - 16H
	works including deep rip and trim Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds –	Y		ha ha	\$1,040.00 \$1,500		\$0 \$0		Grader. D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50%
	areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip and seed	Y		na ha	\$1,500		\$0 \$0		utilisation) - no seed D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50%
	(pasture grass) Unsealed roads / vehicle park-up areas – Minor earthworks, final trim and deep rip, ameliorate and	Y					\$0		utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50%
				ha	\$4,485				utilisation) - native tree/shrub seed
	seed (native tree/shrub/qrass) Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor								
	Unsealed roads / haul roads / vehicle park-up areas	Y		ha ha ha	\$4,485 \$4,870 \$7,025		\$0 \$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed  D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50%
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (nasture orass) Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/drass) Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally	Y		ha	\$4,870		\$0	Select Haul Distance Here	grader @ \$230 per hour (50% utllisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utllisation) - native tree/shrub seed This item includes the scraping and removal of the volume of stabilised material from the road, laydown or c
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (nasture grass) Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (naftive tree/shrub/drass) Remove stabilised material (blue metal, aggregate	Y		ha ha m3	\$4,870 \$7,025 Select from List	cke Suhtotal	\$0	Select Haul Distance Here	grader @ \$230 per hour (50% utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utilisation) - native tree/shrub seed This item includes the scraping and removal of the volume of stabilised material from the road, laydown or surface using an excavator, dozer a
Earthworks / Structural Works (Landform Establishment)	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (nasture orass) Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/drass) Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally	Y		ha ha m3	\$4,870 \$7,025	cks Subtotal	\$0	Select Haul Distance Here  Select Push Length Here	utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utilisation) - native tree/shrub seed This item includes the scraping and removal of the volume of stabilised material from the road, laydown or o surface using an excavator, dozer ar grader to enable the establishment of Major bulk pushing to achieve grade nominated in the approval/permit
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (nasture crass) Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/drass) Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)  Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length  Minor reshaping and pushing	Y		ha ha m3	\$4,870 \$7,025  Select from List  oads and Tra	cks Subtotal	\$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utilisation) - native tree/shrub seed This item includes the scraping and removal of the volume of stabilised material from the road, laydown or surface using an excavator, dozer a grader to enable the establishment of the properties of the provided of the provided provided in the approval/permit D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utilisation).
	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (nasture orass) Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/drass) Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)  Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length	Y Y		ha ha m3 m3	\$4,870 \$7,025 Select from List oads and Tra Select from List	icks Subtotal	\$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utilisation) - native tree/shrub seed This item includes the scraping and removal of the volume of stabilised material from the road, laydown or surface using an excavator, dozer a grader to enable the establishment of the properties of the properti
Earthworks / Structural Works (Landform Establishment)	Unsealed roads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (nasture crass) Unsealed troads / haul roads / vehicle park-up areas with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/crass) Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)  Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length  Minor reshaping and pushing  Structural works, banks, waterways - contour banks drainage channels and other soil conservation	Y Y Y		ha ha m3 m3 ha	\$4,870 \$7,025  Select from List oads and Tra Select from List	icks Subtotal	\$0 \$0 \$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed  10 Dozer @ \$400 per hour and 16 grader @ \$230 per hour (50% utilisation) - native tree/shrub seed  This item includes the scraping and removal of the volume of stabilised material from the road, laydown or surface using an excavator, dozer a grader to enable the establishment of the properties of the propert

	Trim, rock rake & deep rip (includes levelling /		1						Undertaken using D10 dozer and 16M
	landscaping and rip in 1 direction)	Y		ha	\$1,130.00		\$0		grader.
	Deep rip hard stand / lay down areas	Y		ha	\$960.00		\$0		D10 deep ripping. Installation of on-site rock material (rip-
	Construction of spine drains / drop structures and/or								rap) where managing water run-off fron disturbed land and/or upon entry to
	stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0		water courses - prevents erosion of gul head (assumes competent material is
	large catorinents								locally available). If required to be
	E	arthworks / S	Structural Wor	ks (Landforn	n Establishm	ent) Subtotal	\$0		sourced off site, assume an additional
Land Preparation and Revegetation (Growth Media	Source, cart and spread growth media (Select Haul				Select from			Select Haul Distance Here	If topsoil is not available on-site, then Virgin Excavated Natural Material
Development and Ecosystem	Distance from List)	Y		m3	List				(VENM) may need to be externally sourced.
Establishment)	Planting mature trees (>15 cm)	Υ		allow	\$15.00		\$0		4 m centres.
	Planting tube stock (<15 cm)	Υ		allow	\$6.60		\$0		4 m centres.
	Direct seeding / fertiliser (pasture grass species)	Υ		ha	\$1,875		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or
	Direct seeding / fertiliser (tree or native grass								helicopter (aerial seeding). Includes treating, weighing, mixing with
	species)	Y		ha	\$4,135		\$0		fertiliser + spreading by tractor or helicopter (aerial seeding).
	Lludge cooding with atroug mulahing and hituman								Process to be used on flat well prepare surfaces under irrigation e.g. sewage
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y		m2	\$1.90		\$0		treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and
									input variables. Native seed +\$1.00 Process to be used on flat well prepare
	Hydro-seeding with straw mulching and bitumen	.,		2	60.40		**		surfaces under irrigation e.g. sewage
	tack with pasture seed	Y		m2	\$0.43		\$0		treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and
									input variables. Pasture seed +\$0.10 Assumes use on flat areas with a
									gradient of less than 4:1, and where irrigation from water cart may be
	Hydromulch - base grade or standard for flat areas	Υ		m2	\$0.80		\$0		possible. Industry standard application rate of 2500kg/ha. Product will last
	that can be irrigated by water cart								short term (less than 3 months) and vegetation is required to grow ASAP fo
									stability. This cost includes cover crop
									Assumes use on steep areas where
	Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months	Υ		m2	\$1.80		\$0		stabilisation is required for up to 12 months. Application rate of ~3500kg/ha
									This cost includes cover crop only, additional seeding required.
	Hydromulch - high performance flexible growth								Assumes use on extreme slopes where stabilisation is required for up to 18
	medium grade	Y		m2	\$2.50		\$0		months. Application rate of ~4,000kg/h; minimum. This cost includes cover cro
									only, additional seeding required. Assumes 250 kg / ha. These rates have
	Single application of fartilizer (pasture)	Υ		ha	\$420.00		\$0		fluctuated over the last few years however in light of current conditions
	Single application of fertiliser (pasture)	'		IId	φ420.00		\$0		(lower fuel prices, reduced demand etc
									this is a suitable standard rate.  These rates have fluctuated over the la
	Single application of fertiliser (trees)	Υ		ha	\$140.00		\$0		few years however in light of current conditions (lower fuel prices, reduced
									demand etc) this is a suitable standard rate.
	Spoil amelioration (adding lime / gypsum etc.)	Υ		ha	\$1,000.00		\$0		Assumes 2.5 t / ha as an average application rate.
	growth media amelioration with biosolids	Υ		ha	\$1,015		\$0		Recent experience with agronomy projects.
	Construct no-climb stock fence around rehabilitated areas	Υ		m	\$22.00		\$0		Standard rate for no-climb stock fencing.
	Construct standard stock fence around rehabilitated areas	Υ		m	\$13.00		\$0		Standard rate for standard stock fencing.
	Purchase and erect warning signs	Υ		allow	\$250.00		\$0		Compliance with AS 1319-1994 - Safet signs for the occupational environment
	and creek warning signs			allow	\$250.00		40		installed every 25 m. D7 to spread material at \$205/hr,
	Supply from external sources virgin excavated	· ·		0	600.00		**		Excavator (\$220/hr) load Artic Trucks
	natural material (VENM) for growth media.	Y		m3	\$80.80		\$0		(90c/km) from imported stockpile - allor nominal rate of \$70/m3 for imported fill
	Supply from external sources a combination of								material. D10 push into void at \$270/hr,
	virgin excavated natural material (VENM) and spoil from large excavation for filing voids and/or capping	Y		m3	\$72.50		\$0		Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - allo
	etc.								nominal rate of \$60/m3 for imported fill Clearing and grubbing of light vegetation
	Clearing and grubbing of trees and vegetation	Y		ha	\$4,730.00		\$0		growth e.g. regrowth Stripping or topsoil at an approximate
	Topsoil stripping	Y		m3	\$4.86		\$0		depth of 0.2 m into stockpiles; load and haul to final rehabilitation location
	Topson surpping	'		1113	φ <b>4.00</b>		\$0		required or respreading where
	Growth media supplementation with manure	Υ	<u> </u>	ha	\$747.50		\$0		necessary. Addition of manure to improve soil
			<del>                                     </del>	IIG			·		quality. Material that can be applied as an
	Utilise biotic soil media - organic topsoil alternative	Υ	<u>L</u>	m2	\$2.50		\$0		alternative to spreading topsoil prior to hydromulching.
W 4 . M	Land Preparation and Revegetation (Gro	wth Media De	evelopment ar	nd Ecosysten	n Establishm	ent) Subtotal	\$0		
Water Management	Clean water dams to be retained after								Provisional sum for earthworks and revegetation required to rehabilitate dar
	decommissioning – make safe and minor	Υ		allow	\$2,500		\$0		batters etc suitable for re-use by an alternate land-user - D6 Dozer (or
	earthworks								similar) @ ~\$200 per hour and pasture grass.
	Large clean water dams (i.e. ≥ 2 ha) to be retained								Provisional sum for earthworks and revegetation required to rehabilitate date
	after mine closure – make safe and minor earthworks	Y		allow	\$10,500		\$0		batters etc suitable for re-use by an
	earthworks								alternate land-user - D6 Dozer (or similar) + pasture grass.
	Remove sediments from the floor of the dam to			_	Select from			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring
	enable it to be converted into clean water structure (Select Haul Distance from list)	Y		m3	List				removal using an excavator, truck and dozer to clean out the dam.
	Removal of evaporation fans and/or other water	Y		allow	\$25,000		\$0		Provisional sum for removal of water
	transfer and management infrastructure					nent Subtotal	\$0		management infrastructure.
Maintenance of Rehabilitated									Rehabilitation maintenance might
Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y		ha	\$925		\$0		include re-seeding, watering, fertilising, minor re-shaping, erosion control,
	g-tation riad boott successful								inspections/audits - does not include major repair works.
	Existing rehabilitation repair - minor	Y		ha	\$1,200		\$0		Areas requiring minor repair - rills, minor growth media replacement.
	Existing rehabilitation repair - moderate	Υ		ha	\$1,700		\$0		Areas requiring moderate repair - rills, significant growth media replacement.
	1 · · · · · · · · · · · · · · · · · · ·								Areas requiring major repair - rills,
									gullies, growth media replacement
	Existing rehabilitation repair - major	Y		ha	\$2,500		\$0		gullies, growth media replacement, some level of additional surface water management
		Y		ha ha	\$2,500 \$40,000		\$0 \$0		

Maintenance of Rehabilitated Areas Subtotal	\$0	
Additional Items Subtotal	\$0	
Total Cost for Infrastructure Domain		\$0

# **Open Cut Operations**

#### Domain 2c: Tailings & Rejects

# Total Cost for Tailings & Rejects Domain

\$0

Additional Assumptions: Record any relevant assumptions to this domain below:

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Contaminated Materials	Undertake a preliminary site investigation (Phase 1). This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple studies may be required.	Υ		Cluster	\$15,000		\$0	on on mateon	Interpeliminary investigation would include at minimum a desktop assessment of the area and site history, incidents, etc. as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 1 assessment (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. A cluster may include:  - Mine infrastructure (i.e., fuel / chemical store, workshop, vehicle wash-down, sewage treatment etc.)  - Processing plants (i.e., ore and product storage, mine waste storage and disposal, rail load-out etc.)  - Remote pit-top facilities (i.e., vehicle refuel, sewage treatment, secondary
	Undertake an intrusive site investigation on sites with small footprints to investigate e.g. £15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	Y		Cluster	\$44,000		\$0		The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contamination has poccurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around inreffective oil/water separators etc.) and further field work is required involving intrusive investigation.  Assumes site is easily accessible and a small area e.g. ~10-15 ha requires investigation and testing (test pits, boreholes, etc.) based on Sampling and Analysis Quality Plan. Includes SAQP.
	Undertake an intrusive site investigation on sites with large footprints to investigate e.g. >15 ha. This accounts for current and historical locations where areas of disturbance are clustered. If there are multiple cluster areas on site, multiple intrusive investigations should be included.	Y		Cluster	\$106,000		\$0		The intrusive investigation would include at minimum a site walkover and field sampling as per the National Environmental Protection (Site Contamination) Measure (NEPM) Phase 2 intrusive investigation (EP Act Section 389 (2) (iv)) or similar approved and recognised assessment method. Note: An intrusive investigation is not required for all contaminated areas and should be applied considering the rehabilitation program, site history, location, etc. A cluster area where it is highly anticipated that contamination has cocurred (i.e., underground tanks / pipes that are known to have leaked, chemical stores with earthen bunds, around ineffective oil/water separators etc.) and further field work is required involving intrusive investigation.  Assume site has a history of contamination and/or a large area >15 ha requires investigation and testing (test pits, boreholes, etc.) based on
	Develop a Remediation Action Plan on sites with small footprints based on outcomes of intrusive investigation including strategies to address contamination exceedances	Y		allow	\$35,000		\$0		Sampling and Analysis Quality Plan. Develop remediation plan for approval including designs and detailed costs. Costs may increase if detailed designs required for construction.
	Develop a Remediation Action Plan on sites with large footprints based on outcomes of intrusive investigation including strategies to address contamination exceedances	Υ		allow	Use alternate rate cell		\$0		Assumes complex site; detailed design drawings required for cover.
	Removal and disposal of contaminated water from tanks, bunded areas and sumps	Y		L	\$0.35		\$0		Cost for recent sump clean-up from resource activity - requires specialists to treat.
	Remove material (carbonaceous / metalliferous spillage or otherwise) from footprint of the process facility (leach pads) / stockpile area (ROM product) / roads and dump in a void on-site (Select Haul Distance from list)	Y		m3	Select from List			Select Haul Distance Here	This item includes scraping and removal of the volume of carbonaceous material using dozer, grader etc. to make safe an area and enable the establishment of rehabilitation.
	Load, cart and dispose of Hazardous classified contaminated material off site to a licensed landfill. Assumes cartage to a licensed landfill.	Y		m3	\$800.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Load, cart and disposal of Restricted classified contaminated material off site to a licensed landfill.	Y		m4	\$660.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Add \$50/m3 for cartage from regional areas Load, cart and disposal of Low Level contaminated material off site to a licensed landfill. Add \$50/m3 for cartage to regional landfill	Y		m3	\$220.00		\$0		Includes load, haul and dump fees to a licensed facility.
	Onsite remediation of hydrocarbon contaminated soils manual land farming (Select Volume from List)	у		m3	Select from List			Select Volume Here	spreading or contaminated soils on a prepared surface and stimulation of aerobic microbial activity within the soils through aeration and/or the addition of minerals, nutrients and moisture to promote the aerobic degradation of organic chemicals - time frame of up to Required if treatment of hydrocarbon
	Mobilisation of cement stabilisation plant and equipment for hydrocarbon (i.e., PAH, long chain hydrocarbons, etc.) contaminated soil treatment	Υ		Item	\$150,000		\$0		contamination is required to be fast tracked
	On-site remediation of hydrocarbon contaminated soils - using a mobile treatment unit	Υ		m3	\$165.00		\$0		Additional cost as the treatment process is fast tracked.

ı			1	1			Ī		Where an assessment/estimation has
	Remove and dispose of asbestos (<750 m2)	Y		m2	\$50.00		\$0		been made to confirm the volume of asbestos to be removed.
	Remove and dispose of asbestos (>750 m2)	Y		m2	\$40.00		\$0		Where an assessment/estimation has been made to confirm the volume of
	Waste disposal to Council landfill - fees (asbestos)	Y		tonne	\$290		\$0		asbestos to be removed.  Landfill fees to regional landfill.
						rials Subtotal	\$0		_
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor works including deep rip and trim	Y		ha	\$1,040.00		\$0		Assumes ~6 m road width - 16H Grader.
	Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds – minor earthworks and deep rip and trim Unsealed roads / vehicle park-up areas – Minor	Y		ha	\$1,500		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - no seed D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip and seed (pasture grass) Unsealed roads / vehicle park-up areas – Minor	Y		ha	\$3,700		\$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass) Unsealed roads / haul roads / vehicle park-up areas	Y		ha	\$4,485		\$0		grader @ \$230 per hour (50% utilisation) - native tree/shrub seed D10 Dozer @ \$400 per hour and 16 H
	with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (pasture grass) Unsealed roads / haul roads / vehicle park-up areas	Y		ha	\$4,870		\$0		grader @ \$230 per hour (50% utilisation) - pasture grass seed
	with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	Y		ha	\$7,025		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	Remove stabilised material (blue metal, aggregate etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	Y		m3	Select from List			Select Haul Distance Here	removal of the volume of stabilised material from the road, laydown or other surface using an excavator, dozer and grader to enable the establishment of rehabilitation
	E	arthworks / S	tructural Wor	ks (Landforn	Establishme	ent) Subtotal	\$0		Trenabilitation.
Earthworks / Structural Works (Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length	Υ		m3	Select from List			Select Push Length Here	Major bulk pushing to achieve grades nominated in the approval/permit
	Minor reshaping and pushing	Y		ha	\$3,900		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation).
	Fill dams, voids etc Source local material, cart and spread to cap or backfill, cap thickness				Select from			Select Haul Distance Here	This item includes the volume of material requiring backfill using an
	determined by approval / permit (Select Haul Distance from List)	У		m3	List				excavator and scraper to fill the void and enable the establishment of rehabilitation.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	Υ		ha	\$1,130.00		\$0		Undertaken using D10 dozer and 16M grader.
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation	Y		ha	\$1,600		\$0		Combination of dozer and excavator work plus grader for ~4 hours each per
	measures								ha. Installation of on-site rock material (rip- rap) where managing water run-off from
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0		disturbed land and/or upon entry to water courses - prevents erosion of gully head (assumes competent material is locally available). If required to be sourced off site assume an additional
Mine Waste	E	arthworks / S	tructural Wor	ks (Landforn	Establishme	ent) Subtotal	\$0		TOIS INCOMES SOME AND ADDRESS.
	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forniming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no artificial strengthening required)	Y		ha	\$82,000		\$0		and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximately 0.5 m to 1 mand 0.15 m - 0.2 m growth media (assume at least 1 m thick over required for carbonaceous material covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tallings cap material included in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and spreading in additional to any long spreading in additional to any long spreading in additional to any long
	Additional materials required for reshaping, capping I sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Υ		allow	Use alternate rate cell		\$0		include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric /
	Efficient Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (low to medium risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and moderate physical properties (not significantly hydrophilic, shear strength limits equipment choice somewhat, no artificial strengthening required)	Y		ha	\$146,500		\$0		composite lining etc.). This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities where the tailings or rejects base is at a strength that enables economically efficient construction methods with small plant. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness ranging from >1 m to 2 m thickness constructed in 1 m layers + growth media up to 0.2 m depth. This may require additional materials (such as capillary breaks, geofabric, etc.) use alternate rate cells below, specific material types (e.g. acid neutralising / consuming materials, competent rock etc.). Costs for haulage of specialised/additional materials must be added separately if required. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material lo make up landform, provide buttress or other works aside from 1allings cap, use rate from 9.02 for relevant haulage and

	Additional materials required for reshaping, capping								
	/ sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Adverse Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (medium to high risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Sailine Mine Drainage (SMD) and/or moderate to high propensity for spontaneous combustion) and moderate physical properties (not significantly hydrophilic, shear strength limits equipment choice somewhat, no artificial strengthening required)	γ		ha	\$313,000		\$0		This Item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities of high geochemical risk, and / or low shear strength that prohibits economically efficient construction methods. This rate assumes suitable capping materials are available on site within 10 km, and an average cap thickness of approximately >2 m + growth media up to 0.2 m depth.  This may require additional materials (i.e., capillary breaks, geofabric, etc.), specific material types (e.g. acid neutralising / consuming materials, competent rock etc.), and associated activities (i.e., load / haul / place / crush / screen / borrow etc.).  Costs for haulage of specialised materials must be added separately if required.  If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for felevant haulage and
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.). Include additional cost to import
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y		allow	Use alternate rate cell		\$0		materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.). Include additional cost to import
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y		allow	Use alternate rate cell		\$0		materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values. Long nauage soil / weathered rock / sediment e.g.	Υ		allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.). Capping/cover material available within
	capping/covers, removal of contamination, etc.	Y		m3	List		\$0	Select Haul Distance Here	50 km round trip e.g. waste / overburden
Land Preparation and			ı	ı	Wine wa	ste Subtotal	ΨΟ	Select Haul Distance Here	If topsoil is not available on-site, then
Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	у		m3	Select from List			Select Haul Distance Here	Virgin Excavated Natural Material (VENM) may need to be externally sourced.
	Direct seeding / fertiliser (pasture grass species)	Y		ha	\$1,875		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding). Includes treating, weighing, mixing with
	Direct seeding / fertiliser (tree or native grass species)	Y		ha	\$4,135		\$0		fertiliser + spreading by tractor or
									helicopter (aerial seeding).  Process to be used on flat well prepared
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y		m2	\$1.90		\$0		heliconter (aerial seeding). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00
		Y		m2 m2	\$1.90 \$0.43		\$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Native seed +\$1.00. Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10
	tack with native seed  Hydro-seeding with straw mulching and bitumen								helicooter (aerial seedino).  Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a gradient of less than 41. and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only artificing seeding required
	tack with native seed  Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas	Y		m2	\$0.43		\$0		helicooter (aerial seedino).  Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00.  Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10.  Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required for you have a stabilisation is required for up to a stabilisation is required for up to a stabilisation is required for up to 7-\$500kg/ha. This cost includes cover crop only, additional seedinor required for the process of the proces
	tack with native seed  Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep	Y		m2 m2	\$0.43 \$0.80		\$0 \$0		helicooter (aerial seedino).  Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop crob. Additional seeding required for up to 12 months. Application rate of ~3500kg/ha. This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only, additional seeding required.
	Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months  Hydromulch - high performance flexible growth	Y		m2 m2	\$0.43 \$0.80 \$1.80		\$0 \$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Native seed +\$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required for grow ASAP for stability. This cost includes cover crop only. additional seeding required. Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha. This cost includes cover crop only. additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18. Assumes use on extreme slopes where stabilisation is required for up to 18. Assumes use on extreme slopes where stabilisation is required for up to 18. months. Application rate of ~4,000kg/ha. This cost includes cover crop only. additional seeding required. Assumes 260 kg /ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade	Y Y Y		m2 m2 m2	\$0.43 \$0.80 \$1.80		\$0 \$0 \$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Native seed + \$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed + \$0.10 Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required for your ASAP for stability. This cost includes cover crop only. Additional seeding required. Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha. This cost includes cover crop only. Additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only. Additional seeding required. Assumes Use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only. Additional seeding required. Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.  These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)	Y Y Y Y		m2 m2 m2 ha	\$0.43 \$0.80 \$1.80 \$2.50		\$0 \$0 \$0 \$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation eras. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop and additional seeding required. Assumes use on batep areas where stabilisation is required for up to 12 months. Application rate of ~\$500kg/ha. This cost includes cover crop only, additional seeding required. Assumes use on stability and influence in the seed of the s
	Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)	Y Y Y Y		m2 m2 m2 ha	\$0.43 \$0.80 \$1.80 \$2.50 \$420.00		\$0 \$0 \$0 \$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed ±\$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed ±\$0.10 Assumes use on flat areas with a gradient of less than ±1.1 and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop anti- arditional seeding rease where stabilisation is required for up to 12 months. Application rate of 2500kg/ha. Priscost includes cover crop nily. additional seeding required for up to 12 months. Application rate of ~\$500kg/ha. This cost includes cover crop only. additional seeding required for up to 18 months. Application rate of ~\$000kg/ha. This cost includes cover crop only. additional seeding required for up to 18 months. Application rate of ~\$000kg/ha. This cost includes cover crop only. additional seeding required for up to 18 months. Application rate of ~\$000kg/ha. Masumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~\$000kg/ha. Masumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc). These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)  Single application of fertiliser (trees)  Spoil amelioration (adding lime / gypsum etc.)  growth media amelioration with biosolids Construct no-climb stock fence around rehabilitated	Y Y Y Y Y Y		m2 m2 m2 ha ha	\$0.43 \$0.80 \$1.80 \$2.50 \$420.00 \$1,000.00		\$0 \$0 \$0 \$0 \$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed ±\$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed ±\$0.10 Assumes use on flat areas with a gradient of less than ±1.1 and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop anti- arditional seeding rease where stabilisation is required for up to 12 months. Application rate of 2500kg/ha. Priscost includes cover crop nily. additional seeding required for up to 12 months. Application rate of ~\$500kg/ha. This cost includes cover crop only. additional seeding required for up to 18 months. Application rate of ~\$000kg/ha. This cost includes cover crop only. additional seeding required for up to 18 months. Application rate of ~\$000kg/ha. This cost includes cover crop only. additional seeding required for up to 18 months. Application rate of ~\$000kg/ha. Masumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~\$0,000kg/ha minimum. This cost includes cover crop only. additional seeding required. Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc). These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.  These rates have fluctuated over the last few pars however in light of current conditions (lower fuel prices, reduced demand etc). Standard rate for no-climb stock
	Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)  Single application of fertiliser (trees)  Spoil amelioration (adding lime / gypsum etc.) growth media amelioration with biosolids  Construct no-climb stock fence around rehabilitated areas.	Y Y Y Y Y Y Y Y Y		m2 m2 m2 ha ha ha	\$0.43 \$0.80 \$1.80 \$2.50 \$420.00 \$1,000.00 \$1,015		\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Native seed +\$1.00 Process to be used on flat well prepared surfaces under irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Pasture seed +\$5.100 Process to be used on flat well prepared surfaces under irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Pasture seed +\$5.101 Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop only additional seeding reasis where stabilisation is required for up to 12 months. Application rate of -\$500kg/ha. This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of -\$4,000kg/ha. This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of -\$4,000kg/ha minimum. This cost includes cover crop only, additional seeding required. Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate. Assumes 25 t / ha as an average application rate. Standard rate for no-climb stock fencing.
	Hydro-seeding with straw mulching and bitumen tack with pasture seed  Hydromulch - base grade or standard for flat areas that can be irrigated by water cart  Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months  Hydromulch - high performance flexible growth medium grade  Single application of fertiliser (pasture)  Single application of fertiliser (trees)  Spoil amelioration (adding lime / gypsum etc.) growth media amelioration with biosolids Construct no-climb stock fence around rehabilitated areas	Y Y Y Y Y Y Y Y Y Y Y Y Y		m2 m2 m2 ha ha ha ha	\$0.43 \$0.80 \$1.80 \$2.50 \$420.00 \$1,000.00 \$1,015 \$22.00		\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0		helicooter (aerial seedino). Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Native seed +\$1.00 Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and inout variables. Pasture seed +\$1.00 Assumes use on flat areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required for grow ASAP for stability. This cost includes cover crop only. additional seeding required. Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha. This cost includes cover crop only. additional seeding required. Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only. additional seeding required. Assumes seed on the extra stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only. additional seeding required. Assumes 25 bt g/ ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.  These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.  Recent experience with agronomy projects.  Standard rate for no-climb stock fencing.

	Total Cost for 1	<b>Failings</b>	& Reje	cts Dor	nain			\$0	
			munic		Additional Ite		\$0		
	landform	ř	Mainte		habilitated Ar	eas Subtotal	\$0		construction of landform.
	Existing rehabilitation repair - total failure of	Y		ha	\$40.000		\$0		Areas that require extensive rehabilitation repair - re-design and re
	Existing rehabilitation repair - major	Y		ha	\$2,500		\$0		gullies, growth media replacement, some level of additional surface water management.
	Existing rehabilitation repair - moderate	Y		ha	\$1,700		\$0		significant growth media replacement Areas requiring major repair - rills,
	Existing rehabilitation repair - minor				\$1,200				minor growth media replacement.  Areas requiring moderate repair - ri
Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Y		ha ha	\$925		\$0 \$0		include re-seeding, watering, fertilis minor re-shaping, erosion control, inspections/audits - does not includ maior repair works. Areas requiring minor repair - rills,
aintenance of Rehabilitated				www	iter wanagem	ent Subtotal	90		Rehabilitation maintenance might
	(Select Haul Distance from list)			147	ater Managem		\$0		dozer to clean out the dam.
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure	Y		m3	Select from List			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring removal using an excavator, truck a
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Y		allow	\$10,500		\$0		revegetation required to rehabilitate batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.
	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Y		allow	\$2,500		\$0		revegetation required to rehabilitate batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ ~\$200 per hour and past grass. Provisional sum for earthworks and
Water Management						,			Provisional sum for earthworks and
	Land Preparation and Revegetation (Grov	vth Media De	evelopment ar	nd Ecosysten	n Establishme	ent) Subtotal	\$0		hydromulching.
	Utilise biotic soil media - organic topsoil alternative	Y		m2	\$2.50		\$0		Material that can be applied as an alternative to spreading topsoil prior
	Growth media supplementation with manure	Y		ha	\$747.50		\$0		necessary. Addition of manure to improve soil quality.
	Topsoil stripping	Υ		m3	\$4.86		\$0		Stripping or topsoil at an approxima depth of 0.2 m into stockpiles; load haul to final rehabilitation location required or respreading where
	Clearing and grubbing of trees and vegetation	Y		ha	\$4,730.00		\$0		growth e.g. regrowth
	Supply from external sources a combination of virgin excavated natural material (VENM) and spoil from large excavation for filing voids and/or capping etc.	Υ		m3	\$72.50		\$0		D10 push into void at \$270/hr, Excavator (\$220/hr) load Artic Truci (90c/km) from imported stockpile - nominal rate of \$60/m3 for imported Clearing and grubbing of light veget

#### **Total Cost for Overburden & Waste Domain**

\$0

Additional Assumptions: Record any relevant assumptions to this domain below:

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y	Quantity	Unit	Default Unit	Alternative	Total Cost	Basis for Costs Estimation and Additional Relevant	Description / Notes:
		or N)	,,		Rate	Unit Rate		Information	Assumes ASS is treatable via
Contaminated Materials		ĺ							neutralisation and does not require
	Treatment of known Acid Sulfate Soils	Y		ha	\$2,580		\$0		capping and isolation. Assumes 1% by weight lime addition and treatment to
	Removal and disposal of plastic liner (i.e. dam,	<b>.</b>		<u> </u>					100 mm depth only.  Provisional sum for cutting using rippin
	leach pad, sump etc.)	Y		m2	\$1 Select from		\$0		tynes and on-site disposal of the liner.  Costs for haulage to location for
	Long haulage brine/salt for disposal (Select Haul Distance from list)	Υ		tonne	List			Select Haul Distance Here	authorised disposal.
	Brine disposal to landfill - fees only	Y		tonne	\$288		\$0		Rate for trackable liquid levy of \$78.20 per tonne and authorised disposal to
	Long haulage water (clean or contaminated) (Select				Select from		**		landfill. Assumes transport in a 20,000 L tanke
	Haul Distance from list)	Y		tonne	List			Select Haul Distance Here	Add disposal costs to additional items
Roads and Tracks	Unsealed roads / vehicle park-up areas – minor			1	ninated Mater	ials Subtotal	\$0		Assumes ~6 m road width - 16H
Rodus and Tracks	works including deep rip and trim	Y		ha	\$1,040.00		\$0		Grader.
	Unsealed roads / access tracks / vehicle park-up areas with windrows and/or small earthen bunds –	Υ		ha	\$1,500		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50%
	minor earthworks and deep rip and trim Unsealed roads / vehicle park-up areas – Minor								utilisation) - no seed D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip and seed	Y		ha	\$3,700		\$0		grader @ \$230 per hour (50%
	(pasture grass) Unsealed roads / vehicle park-up areas – Minor								utilisation) - pasture grass seed D10 Dozer @ \$400 per hour and 16 H
	earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	Υ		ha	\$4,485		\$0		grader @ \$230 per hour (50% utilisation) - native tree/shrub seed
	Unsealed roads / haul roads / vehicle park-up areas								D10 Dozer @ \$400 per hour and 16 H
	with windrows and/or small earthen bunds – Minor earthworks, final trim and deep rip, ameliorate and	Υ		ha	\$4,870		\$0		grader @ \$230 per hour (50%
	seed (pasture grass) Unsealed roads / haul roads / vehicle park-up areas			<u> </u>					utilisation) - pasture grass seed
	with windrows and/or small earthen bunds - Minor	Υ		ha	\$7,025		\$0		D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50%
	earthworks, final trim and deep rip, ameliorate and seed (native tree/shrub/grass)	1		110	<b>V.,020</b>		Ų,		utilisation) - native tree/shrub seed
	acca (nauve neoramas/grace)							Select Haul Distance Here	This item includes the scraping and
	Remove stabilised material (blue metal, aggregate				Select from				removal of the volume of stabilised material from the road, laydown or other
	etc.) from roadways and disposal on-site/locally (Select Haul Distance from list)	Y		m3	List				surface using an excavator, dozer and
	(ostost riadi Biotanio irom not)								grader to enable the establishment of rehabilitation.
				R	oads and Tra	cks Subtotal	\$0		
Earthworks / Structural Works								Select Push Length Here	
(Landform Establishment)	Major bulk pushing to achieve grades nominated in	Υ		m3	Select from List				Major bulk pushing to achieve grades
	the approval/permit – Select Push Length				LIST				nominated in the approval/permit
									D10 Dozer @ \$400 per hour and 16 H
	Minor reshaping and pushing	Υ		ha	\$3,900		\$0		grader @ \$230 per hour (50% utilisation).
	Fill dams, voids etc Source local material, cart							Select Haul Distance Here	This item includes the volume of
	and spread to cap or backfill, cap thickness	Υ		m3	Select from				material requiring backfill using an excavator and scraper to fill the void an
	determined by approval / permit (Select Haul Distance from List)	1		0	List				enable the establishment of
				<u> </u>					rehabilitation.  This rate is used to rehabilitate steep
	Shotcrete application on cuttings and steep slopes	Y		m2	\$185.00		\$0		slopes of weathered rock, roadway
					********		**		cuttings, etc that cannot be cut back an stabilised.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	Υ		ha	\$1,130.00		\$0		Undertaken using D10 dozer and 16M grader.
	Structural works, banks, waterways - contour banks,								Combination of dozer and excavator
	drainage channels and other soil conservation measures	Y		ha	\$1,600		\$0		work plus grader for ~4 hours each per ha.
									Installation of on-site rock material (rip-
	Construction of spine drains / drop structures and/or								rap) where managing water run-off from disturbed land and/or upon entry to
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0		rap) where managing water run-off from disturbed land and/or upon entry to water courses - prevents erosion of gull
	stabilising water course entry points - required for	Y		m2	\$27.00		\$0		rap) where managing water run-off fron disturbed land and/or upon entry to water courses - prevents erosion of gull head (assumes competent material is locally available). If required to be
	stabilising water course entry points - required for large catchments		tructural Wo	m2 rks (Landforn	,	ent) Subtotal	\$0 <b>\$0</b>		rap) where managing water run-off from disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is
Mine Waste	stabilising water course entry points - required for large catchments		tructural Wor		,	ent) Subtotal	·		rap) where managing water run-off fron disturbed land and/or upon entry to water courses - prevents erosion of gull head (assumes competent material is locally available). If required to be
Mine Waste	stabilising water course entry points - required for large catchments		tructural Wo		,	ent) Subtotal	·		rap) where managing water run-off frod disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is locally available). If required to be sourced off site, assume an additional trins microuses sourcing, carring, spreading, moisture conditioning and compaction of a suitable volume
Mine Waste	stabilising water course entry points - required for large catchments		tructural Wor		,	ent) Subtotal	·		rap) where managing water run-off frod isturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is locally available). If required to be sourced off site, assume an additional runs incuses sourcing, caring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate
Mine Waste	stabilising water course entry points - required for large catchments		itructural Wo		,	ent) Subtotal	·		rap) where managing water run-off frod fushurbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is locally available). If required to be sourced off site, assume an additional runs includes sourcing, caring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is
Mine Waste	stabilising water course entry points - required for large catchments	arthworks / S	itructural Wo		,	ent) Subtotal	·		rap) where managing water run-off frod isturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is locally available). If required to be sourced off site, assume an additional time incures sourcing, carring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and saverage cap thickness of approximatel
Mine Waste	stabilising water course entry points - required for large catchments  E  Ideal Tailings Capping - reshaping, capping / sealing	arthworks / S	itructural Wo		,	ent) Subtotal	·		rap) where managing water run-off frod isturbed land and/or upon entry to water courses - prevents erosion of gu head (assumes competent material is locally available). If required to be sourced off site, assume an additional rms incuous sourcing, carring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximation 0.5 m to 1 mand 0.5 m to 2.0 m growth.
Mine Waste	stabilising water course entry points - required for large catchments  E  Ideal Tailings Capping - reshaping, capping / sealing of tarficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming	arthworks / S	tructural Wo		,	ent) Subtotal	·		rap) where managing water run-off frod isturbed land and/or upon entry to water courses - prevents erosion of gu head (assumes competent material is locally available). If required to be sourced off site, assume an additional rms incuous sourcing, carring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximate 0.5 m to 1 mand 0.15 m - 0.2 m growlf media (assume at least 1 m thick cover required for carbonaceous material
Mine Waste	stabilising water course entry points - required for large catchments  E  Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine	arthworks / S	itructural Wo		n Establishme	ent) Subtotal	\$0		rap) where managing water run-off froi disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is locally available). If required to be sourced off site, assume an additional runs incuoues sourcing, caring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximatel 0.5 m to 1 mand 0.15 m - 0.2 m growtl media (assume at least 1 m thick cove required for carbonaceous material covers). Water quality from runoff,
Mine Waste	stabilising water course entry points - required for large catchments  E  Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical	arthworks / S	itructural Wo	rks (Landforn	,	ent) Subtotal	·		rap) where managing water run-off frod isturbed land and/or upon entry to water courses - prevents erosion of gu head (assumes competent material is locally available). If required to be sourced off site, assume an additional hims incuoues sourcing, caring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximated to,5 m to 1 mand 0.15 m - 0.2 m growtl media (assume at least 1 m thick covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values.
Mine Waste	stabilising water course entry points - required for large catchments  E  Ideal Tailings Capping - reshaping, capping / sealing of tarficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no	arthworks / S	itructural Wo	rks (Landforn	n Establishme	ent) Subtotal	\$0		rap) where managing water run-off froi disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is locally available). If required to be sourced off site, assume an additional time includes sourcing, caring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximatel 0.5 m to 1 mad 0.15 m - 0.2 m growtl media (assume at least 1 m thick covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km rount pad defended the province of the relevant to the desired that the province of the relevant to the province of the relevant to the province of the province of the relevant to the province of the province of the relevant to the province of the pr
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Mine Waste	stabilising water course entry points - required for large catchments  E  Ideal Tailings Capping - reshaping, capping / sealing of tarficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no	arthworks / S	itructural Wo	rks (Landforn	n Establishme	ent) Subtotal	\$0		rap) where managing water run-off froi disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material locally available). If required to be sourced off site, assume an additional time includes sourcing, carring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximatel 0.5 m to 1 mand 0.15 m - 0.2 m growtl media (assume at least 1 m thick cover required for carbonaceous material covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate). If additional material to make up
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Mine Waste	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no artificial strengthening required)	arthworks / S	itructural Wo	rks (Landforn	n Establishme	ent) Subtotal	\$0		rap) where managing water run-off froi disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material tocally available). If required to be sourced off site, assume an additional surprise of the source of the
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Mine Waste	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophile, shear strength does not limit equipment choice, no artificial strengthening required)  Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	arthworks / S	itructural Wo	rks (Landforn	s82,000	ent) Subtotal	\$0 \$0		rap) where managing water run-off froi disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material tocally available). If required to be sourced off site, assume an additional material with the appropriate chemical and physical properties. This rate assumes suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximatel 0.5 m to 1 mand 0.15 m - 0.2 m growtl media (assume at least 1 m thick control of the control o
Mine Waste	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophilic, shear strength does not limit equipment choice, no artificial strengthening required)  Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.  Additional materials required for reshaping, capping	Y	Structural Wo	rks (Landforn	s82,000	ent) Subtotal	\$0 \$0		rap) where managing water run-off from disturbed land and/or upon entry to water courses - prevents erosion of gul head (assumes competent material is locally available). If required to be sourced off site, assume an additional material with the appropriate chemical and physical properties. This rate assumes suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximately 0.5 m to 1 mand 0.15 m - 0.2 m growth media (assume at least 1 m thick coverequired for carbonaceous material covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material include in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap, user rate from 9.02 for relevant haulage and spreading in additional to any long include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric composite liming etc.). Include additional cost to import materials (i.e., shale / clay, competent composite liming etc.).
Mine Waste	Ideal Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with little chemical reactivity (no to low risk Potential Acid Forming (PAF) Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and good physical properties (not significantly hydrophile, shear strength does not limit equipment choice, no artificial strengthening required)  Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	arthworks / S	Structural Wo	rks (Landforn	\$82,000	ent) Subtotal	\$0 \$0		rap) where managing water run-off frod sturbed land and/or upon entry to water courses - prevents erosion of gui head (assumes competent material is locally available). If required to be sourced off site, assume an additional runs includes sourcing, carring, spreading, moisture conditioning and compaction of a suitable volume material with the appropriate chemical and physical properties. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness of approximatel to .5 m to 1 mand 0.15 m - 0.2 m growtl media (assume at least 1 m thick cover equired for carbonaceous material covers). Water quality from runoff, seepage etc. meets site-specific environment water quality values. If site haulage longer than 10 km rount trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate), if additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and spreading in additional relavage and spreading in additional relavage and spreading in additional relavage materials etc.), and / or additional requirements (i.e., sofabric composite lining etc.).

		•						This is no instrument and a second
	Efficient Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (low to medium risk Potential Acid Forming (PAF) / Neutral Mine Drainage (SMD) and/or low to moderate propensity for spontaneous combustion) and moderate physical properties (not significantly hydrophilic, shear strength limits equipment choice somewhat, no artificial strengthening required)	Y	ha	\$146,500		\$0		This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities where the tailings or rejects base is at a strength that enables economically efficient construction methods with small plant. This rate assumes suitable capping material is available on site within 10 km, and an average cap thickness ranging from >1 m to 2 m thickness constructed in 1 m layers + growth media up to 0.2 m depth. This may require additional materials (such as capillary breaks, geofabric, etc.) - use alternate rate cells below, specific material types (e.g. acid neutralising) consuming materials, competent rock etc.), and associated activities (i.e., load / haul / place / crush / screen / borrow etc.). Costs for haulage of specialised/additional materials must be added separately if required. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate). If additional material is make up landform, provide buttress or other works aside from 10.2 for relevant haulage and spreading in additional to any lonn
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Υ	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric /
	Adverse Tailings Capping - reshaping, capping / sealing of trafficable tailings facility with moderate chemical reactivity (melium to high risk Potential Acid Forming (PAF) / Neutral Mine Drainage (NMD) / Saline Mine Drainage (SMD) and/or moderate to high propensity for spontaneous combustion) and moderate physical properties (not significantly hydrophilic, Shear strength limits equipment choice somewhat, no artificial strengthening required)	Υ	ha	\$313,000		\$0		composite linina etc. 1.  This item includes sourcing, carting, spreading, moisture conditioning and compaction of a suitable volume of material to cap / cover facilities of high geochemical risk, and / or low shear strength that prohibits economically efficient construction methods. This rate assumes suitable capping material/s are available on site within 10 km, and an average cap thickness of approximately >2 m + growth media up to 0.2 m depth.  This may require additional materials (i.e., capillary breaks, geofabric, etc.), specific material types (e.g., acid neutralising / consuming materials, competent rock etc.), and associated activities (i.e., load / haul / place / crush / screen / borrow etc.).  Costs for haulage of specialised materials must be added separately if required. If site haulage longer than 10 km round trip add the volume of the relevant material requiring haulage for this distance in 8.05 (spreading costs for tailings cap material included in rate). If additional material to make up landform, provide buttress or other works aside from tailings cap, use rate from 9.02 for relevant haulage and
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Difficult Tailings Capping- reshaping, capping / sealing of weak or soft surfaced tailings facility with poor physical properties (significantly hydrophilic, low shear strength limits equipment choice greatly, artificial strengthening required) OR visible adverse impacts on legacy sites from chemical reactivity over lengthy exposure prior to rehabilitation	Y	ha	\$843,000		\$0		Inis option is typically driven by time constraints and/or when tailings properties significantly restrict adequate desicaction, resulting in a tailings shear strength that is very weak excluding access by conventional small plant. Small equipment used for rehabilitation. This excludes any additional material required to form the final landform smaller in additional cost to import
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values.	Y	allow	Use alternate rate cell		\$0		materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).
	Additional materials required for reshaping, capping / sealing of structure to facilitate water quality from runoff, seepage etc. meeting site-specific environment water quality values. Long haulage soil / weathered rock / sediment e.g.	Υ	allow	Use alternate rate cell		\$0		Include additional cost to import materials (i.e., shale / clay, competent drainage materials etc.) and / or additional requirements (i.e., geofabric / composite lining etc.).  Capping/cover material available within
	capping/covers, removal of contamination, etc.	Y	m3	List	este Subtotal	\$0	Select Haul Distance Here	50 km round trip e.g. waste / overburden
Land Preparation and				Mine Wa	iste subtotal	Ψ	Select Haul Distance Here	If topsoil is not available on-site, then
Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	Y	m3	Select from List				Virgin Excavated Natural Material (VENM) may need to be externally sourced.
	Planting mature trees (>15 cm)	Y	allow	\$15.00		\$0		4 m centres.
	Planting tube stock (<15 cm)  Direct seeding / fertiliser (pasture grass species)	Y	allow	\$6.60 \$1,875		\$0 \$0		4 m centres. Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding).
	Direct seeding / fertiliser (tree or native grass species)	Υ	ha	\$4,135		\$0		Includes treating, weighing, mixing with fertiliser + spreading by tractor or helicopter (aerial seeding).
	Hydro-seeding with straw mulching and bitumen tack with native seed	Y	m2	\$1.90		\$0		Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00

			len & W		Additional Ite		\$0 \$0	\$0	
	Existing rehabilitation repair - total failure of landform	Y	Mainte	ha enance of Re	\$40,000	eas Subtotal	\$0 <b>\$0</b>		rehabilitation repair - re-design and re- construction of landform.
	Existing rehabilitation repair - major	Υ		ha	\$2,500		\$0		Areas requiring major repair - rilis, gullies, growth media replacement, some level of additional surface water management.  Areas that require extensive
	Existing rehabilitation repair - moderate	Y		ha	\$1,700		\$0		Areas requiring moderate repair - rills, significant growth media replacement. Areas requiring major repair - rills.
	Existing rehabilitation repair - minor	Y		ha	\$1,200		\$0		Areas requiring minor repair - rills, minor growth media replacement.
Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Υ		ha	\$925		\$0		include re-seeding, watering, fertilising, minor re-shaping, erosion control, inspections/audits - does not include major repair works.
Maintenance of Rehabilitated	1			Wa	iter Managem	nent Subtotal	φU		Rehabilitation maintenance might
	enable it to be converted into clean water structure (Select Haul Distance from list)	Y		m3	List	ent Subtotal	\$0		removal using an excavator, truck and dozer to clean out the dam.
	earthworks  Remove sediments from the floor of the dam to			0	Select from			Select Haul Distance Here	alternate land-user - D6 Dozer (or similar) + pasture grass.  This item includes the volume of contaminated sediment requiring
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor	Y		allow	\$10,500		\$0		grass. Provisional sum for earthworks and revegetation required to rehabilitate dai batters etc suitable for re-use by an
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Y	·	allow	\$2,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate dai batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and pasture
	Land Preparation and Revegetation (Grov	wth Media De	velopment ar	nd Ecosysten	n Establishme	ent) Subtotal	\$0		hydromulching.
	Growth media supplementation with manure  Utilise biotic soil media - organic topsoil alternative	Y		ha m2	\$747.50 \$2.50		\$0 \$0		quality.  Material that can be applied as an alternative to spreading topsoil prior to
	Growth media supplementation with manure	Y		ha	\$747.50		\$0		required or respreading where necessary. Addition of manure to improve soil
	Topsoil stripping	Υ		m3	\$4.86		\$0		growth e.g. regrowth Stripping or topsoil at an approximate depth of 0.2 m into stockpiles; load an haul to final rehabilitation location
	from large excavation for filing voids and/or capping etc.  Clearing and grubbing of trees and vegetation	Y		ha	\$4,730.00		\$0		(90c/km) from imported stockpile - allo nominal rate of \$60/m3 for imported fi Clearing and grubbing of light vegetati
	natural material (VENM) for growth media.  Supply from external sources a combination of virgin excavated natural material (VENM) and spoil	Y		m3	\$72.50		\$0		nominal rate of \$70/m3 for imported fi material. D10 push into void at \$270/hr, Excavator (\$220/hr) load Artic Trucks
	Supply from external sources virgin excavated	Y		m3	\$80.80		\$0		installed every 25 m. D7 to spread material at \$205/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - allo
	areas  Purchase and erect warning signs	Υ		allow	\$250.00		\$0		Compliance with AS 1319-1994 - Safe signs for the occupational environmen
	areas Construct standard stock fence around rehabilitated	Y		m	\$13.00		\$0		fencing. Standard rate for standard stock fencing.
	Construct no-climb stock fence around rehabilitated	Y		m	\$22.00		\$0		projects. Standard rate for no-climb stock
	growth media amelioration with biosolids	Y		ha	\$1,000		\$0		application rate.  Recent experience with agronomy
	Single application of fertiliser (trees)  Spoil amelioration (adding lime / gypsum etc.)	Y		ha ha	\$140.00 \$1,000		\$0 \$0		conditions (lower fuel prices, reduced demand etc) this is a suitable standar rate. Assumes 2.5 t / ha as an average
	Single application of fertiliser (pasture)	Y		ha	\$420.00		\$0		however in light of current conditions (lower fuel prices, reduced demand et this is a suitable standard rate.  These rates have fluctuated over the lafew years however in light of current
	Hydromulch - high performance flexible growth medium grade	Y		m2	\$2.50		\$0		stabilisation is required for up to 18 months. Application rate of ~4,000kg/minimum. This cost includes cover or only, additional seeding required. Assumes 250 kg / ha. These rates har fluctuated over the last few years
	Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months	Y		m2	\$1.80		\$0		stabilisation is required for up to 12 months. Application rate of ~3500kg/r This cost includes cover crop only, additional seeding required. Assumes use on extreme slopes where
	Hydromulch - base grade or standard for flat areas that can be irrigated by water cart	Y		m2	\$0.80		\$0		gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP 1 stability. This cost includes cover cro not additional seeding required. Assumes use on steep areas where
	Hydro-seeding with straw mulching and bitumen tack with pasture seed	Υ		m2	\$0.43		\$0		surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges frr \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a

# **Open Cut Operations**

# Domain 4c: Active Mine & Voids

#### Total Cost for Active Mine & Voids Domain

\$0

Additional Assumptions: Record any relevant assumptions to this domain below:

Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y or N)	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant Information	Description / Notes:
Open Cut	Active pit area – benches blasted and doze to acceptable grade	Υ		Lm	\$1.93		\$0	mormation	Blasting in a 8x9 pattern of bench height 25 m with D11 push of 50-75 m.
	Drill & blast faces to make safe	Υ		m3	\$0.95		\$0		Bulk Drilling say 8°0 pattern, assuming a stem height of 6 m, charge length of 19 m, explosive density of 0.9, diameter of 229 mm, explosives at 665.3 kg/hole with a powder factor of 0.37 with an approximate bench height of 25 m.
	High wall treatment – (trench and safety berm)	Y		m	\$90.00		\$0		D10 dozer, 16H Grader and revegetation with pasture grass.
Forthweske / Otwork and Montes			ı	ı	Open	Cut Subtotal	\$0		ı
Earthworks / Structural Works (Landform Establishment)	Major bulk pushing to achieve grades nominated in the approval/permit – Select Push Length	Y		m3	Select from List			Select Push Length Here	Major bulk pushing to achieve grades nominated in the approval/permit
	Minor reshaping and pushing	Y		ha	\$3,900		\$0	Oak at Hard Distance Harr	D10 Dozer @ \$400 per hour and 16 H grader @ \$230 per hour (50% utilisation).
	Fill dams, voids etc Source local material, cart and spread to cap or backfill, cap thickness determined by approval / permit (Select Haul Distance from List)	Y		m3	Select from List			Select Haul Distance Here	This item includes the volume of material requiring backfill using an excavator and scraper to fill the void and enable the establishment of rehabilitation.
	Shotcrete application on cuttings and steep slopes	Y		m2	\$185.00		\$0		This rate is used to rehabilitate steep slopes of weathered rock, roadway cuttings, etc that cannot be cut back and stabilised.
	Trim, rock rake & deep rip (includes levelling / landscaping and rip in 1 direction)	Υ		ha	\$1,130.00		\$0		Undertaken using D10 dozer and 16M grader.
	Structural works, banks, waterways - contour banks, drainage channels and other soil conservation measures	Y		ha	\$1,600		\$0		Combination of dozer and excavator work plus grader for ~4 hours each per ha.
	Construction of spine drains / drop structures and/or stabilising water course entry points - required for large catchments	Y		m2	\$27.00		\$0		Installation of on-site rock material (rip- rap) where managing water run-off from disturbed land and/or upon entry to water courses - prevents erosion of gully head (assumes competent material is locally available). If required to be
	E	arthworks / S	tructural Wo	rks (Landforr	n Establishm	ent) Subtotal	\$0		sourced off site assume an additional
Land Preparation and Revegetation (Growth Media Development and Ecosystem Establishment)	Source, cart and spread growth media (Select Haul Distance from List)	Y		m3	Select from List			Select Haul Distance Here	If topsoil is not available on-site, then Virgin Excavated Natural Material (VENM) may need to be externally sourced.
	Planting mature trees (>15 cm)	Y		allow	\$15.00		\$0		4 m centres.
	Planting tube stock (<15 cm)			allow	\$6.60		\$0		4 m centres. Includes treating, weighing, mixing with
	Direct seeding / fertiliser (pasture grass species)  Direct seeding / fertiliser (tree or native grass	Y		ha	\$1,875		\$0		fertiliser + spreading by tractor or helicopter (aerial seeding). Includes treating, weighing, mixing with
	species)	Y		ha	\$4,135		\$0		fertiliser + spreading by tractor or helicopter (aerial seeding).
	Hydro-seeding with straw mulching and bitumen tack with native seed	Υ		m2	\$1.90		\$0		Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Native seed +\$1.00
	Hydro-seeding with straw mulching and bitumen tack with pasture seed	Υ		m2	\$0.43		\$0		Process to be used on flat well prepared surfaces under irrigation e.g. sewage treatment irrigation areas. Ranges from \$0.15 - \$0.50 depending on size and input variables. Pasture seed +\$0.10 Assumes use on flat areas with a
	Hydromulch - base grade or standard for flat areas that can be irrigated by water cart	Y		m2	\$0.80		\$0		Assumes use on that areas with a gradient of less than 4:1, and where irrigation from water cart may be possible. Industry standard application rate of 2500kg/ha. Product will last short term (less than 3 months) and vegetation is required to grow ASAP for stability. This cost includes cover crop nolly. additional seerling required.
	Hydromulch - bonded fibre matrix grade for steep areas to stabilise up to 12 months	Y		m2	\$1.80		\$0		Assumes use on steep areas where stabilisation is required for up to 12 months. Application rate of ~3500kg/ha. This cost includes cover crop only, additional seeding required.
	Hydromulch - high performance flexible growth medium grade	Y		m2	\$2.50		\$0		Assumes use on extreme slopes where stabilisation is required for up to 18 months. Application rate of ~4,000kg/ha minimum. This cost includes cover crop only, additional seeding required.
	Single application of fertiliser (pasture)	Y		ha	\$420.00		\$0		Assumes 250 kg / ha. These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Single application of fertiliser (trees)	Y		ha	\$140.00		\$0		These rates have fluctuated over the last few years however in light of current conditions (lower fuel prices, reduced demand etc) this is a suitable standard rate.
	Spoil amelioration (adding lime / gypsum etc.)	Υ		ha	\$1,000.00		\$0		Assumes 2.5 t / ha as an average application rate.
	growth media amelioration with biosolids	Y		ha	\$1,015		\$0		Recent experience with agronomy projects.
	Security fence around steep section of high wall	Y		m	\$64.00		\$0		1800mm x 3 barb chain-link mesh security fence and gate standard 2.5mm mesh & 32 mm post not concreted
	Purchase and erect warning signs	Y		allow	\$250.00		\$0		Compliance with AS 1319-1994 - Safety signs for the occupational environment - installed every 25 m.  D7 to spread material at \$205/hr,
	Supply from external sources virgin excavated natural material (VENM) for growth media.	Y		m3	\$80.80		\$0		D7 to spread material at \$2.05/hr, Excavator (\$220/hr) load Artic Trucks (90c/km) from imported stockpile - allow nominal rate of \$70/m3 for imported fill material.

Total Cost for Active Mine & Voids Domain								\$0		
					Additional Ite	ms Subtotal	\$0			
			Mainte		habilitated Ar		\$0			
	Existing rehabilitation repair - total failure of landform	Y		ha	\$40,000		\$0		Areas that require extensive rehabilitation repair - re-design and re construction of landform.	
	Existing rehabilitation repair - major	Υ		ha	\$2,500		\$0		Areas requiring major repair - rills, gullies, growth media replacement, some level of additional surface water management.	
	Existing rehabilitation repair - moderate	Y		ha	\$1,700		\$0		Areas requiring moderate repair - rill significant growth media replacemen	
	Existing rehabilitation repair - minor	Υ		ha	\$1,200		\$0		Areas requiring minor repair - rills, minor growth media replacement.	
laintenance of Rehabilitated Areas	Maintenance of areas that have been shaped and seeded and revegetation has been 'successful'	Υ		ha	\$925		\$0		Rehabilitation maintenance might include re-seeding, watering, fertilisi minor re-shaping, erosion control, inspections/audits - does not include major repair works.	
				Wa	ater Managem	ent Subtotal	\$0			
	Remove sediments from the floor of the dam to enable it to be converted into clean water structure (Select Haul Distance from list)	Υ		m3	Select from List			Select Haul Distance Here	This item includes the volume of contaminated sediment requiring removal using an excavator, truck as dozer to clean out the dam.	
	Large clean water dams (i.e. ≥ 2 ha) to be retained after mine closure – make safe and minor earthworks	Y		allow	\$10,500		\$0	D. L. L. L. L. D. L.	Provisional sum for earthworks and revegetation required to rehabilitate batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) + pasture grass.	
Water Management	Clean water dams to be retained after decommissioning – make safe and minor earthworks	Υ		allow	\$2,500		\$0		Provisional sum for earthworks and revegetation required to rehabilitate batters etc suitable for re-use by an alternate land-user - D6 Dozer (or similar) @ -\$200 per hour and past orass.	
	Land Preparation and Revegetation (Grov	vth Media De	evelopment ar	nd Ecosysten	n Establishme	ent) Subtotal	\$0			
	Utilise biotic soil media - organic topsoil alternative	Υ		m2	\$2.50		\$0		Material that can be applied as an alternative to spreading topsoil prior hydromulching.	
	Growth media supplementation with manure	Υ		ha	\$747.50		\$0		necessarv. Addition of manure to improve soil quality.	
	Topsoil stripping	Y		m3	\$4.86		\$0		Stripping or topsoil at an approximal depth of 0.2 m into stockpiles; load a haul to final rehabilitation location required or respreading where	
	Clearing and grubbing of trees and vegetation	Υ		ha	\$4,730.00		\$0		Clearing and grubbing of light veget growth e.g. regrowth	
	Supply from external sources a combination of virgin excavated natural material (VENM) and spoil from large excavation for filing voids and/or capping etc.	Y		m3	\$72.50		\$0		D10 push into void at \$270/hr, Excavator (\$220/hr) load Artic Truck (90c/km) from imported stockpile - a nominal rate of \$60/m3 for imported	

# **Open Cut Operations**

# Domain 5c: Management Activities

# **Total Cost for Management Activities**

\$0

Additional Assumptions: Record any relevant assumptions to this domain below
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Key Rehabilitation Area Data for Domain	Enter data below manually
Total Landform Establishment:	
Total Growth Media Development:	
Total Ecosystem Establishment:	

Management Precinct	Activity / Description	Applicable (Y	Quantity	Unit	Default Unit Rate	Alternative Unit Rate	Total Cost	Basis for Costs Estimation and Additional Relevant	Description / Notes:
Water Management	On-site treatment of contaminated water due to high salt (includes removal of metals etc, brine disposal and cost of mobile water treatment unit)	Y		ML	\$3,600		\$0	Information	Rate can fluctuate depending on treatment type however this is a suitable standard rate for current programs at mining operations.
	On-site treatment of contaminated water due to low pH (incudes removal of metals etc, neutralisation treatments and cost of mobile water treatment unit	Υ		ML	\$1,500		\$0		Rate can fluctuate depending on treatment type however this is a suitable standard rate for current programs at mining operations.
			l	Wa	ater Managen	nent Subtotal	\$0		
Creek Diversions	Repairs and/or stabilisation of new or compromised water course diversion	Y		m	\$2,500		\$0		Assumes material is suitable for revegetating and has a reasonable chance of stabilising.
	Long term maintenance of water course diversion – Channel constructed through backfilled material Long term maintenance of water course diversion –	Y		m	\$1,500		\$0		Assumes maintenance has been kept u and significant works are not required. Assumes maintenance has been kept u
	Channel constructed through competent material	Y		m	\$750.00		\$0		and significant works are not required. Assumes competent material is locally
	Installation of rock armouring	Y		m2	\$6.00 Creek Diversi	ons Subtotal	\$0 \$0		available - multiply costs by 2 for sourcing and transporting from offsite
Maintenance of Rehabilitated Areas	Pest management on buffer lands, non-disturbed, and rehabilitated areas	Υ		ha	\$150.00		\$0		Feral animal baiting programs if required and waste materials required
	Land management of undisturbed areas (rehabilitation, weeds, ferals, erosion and sediment	Y		ha	\$400.00		\$0		to be removed.  Undisturbed areas within the lease boundary that require land managemen
	control works)		Mainte	enance of Re	habilitated Ar	reas Subtotal	\$0		activities.
Heritage Items	The restoration and care and maintenance of items				Use alternate				Item for the redistribution of Aboriginal artefacts, preservation of European
	that have heritage significance	Y		allow	rate cell		\$0		heritage items or a combination of activities.
Sundry Items			1	1	Heritage It	ems Subtotal	\$0		Provisional sum to be used to reline the
	Development of an 'Unplanned' Project Closure Plan - State Significant Development with closure Planning well progressed i.e. preferred cover design, closure environment modelled e.g. groundwater /subsidence / plt lakes, preliminary seal designs, etc. and only finalisation of detailed engineering deigns required	Υ		allow	\$100,000		\$0		conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Assumes outcomes of studies readily available including modelling, landform design, geochemistry, demolition, etc. Costs to finalise options by domain and finalise designs for construction. Assume a simple site eq., single open cut, no legacy operations historic in the area, little social dependence, etc. Depending on site size, complexity, fine land use requirements and knowledge base investigations can range from ~\$75k to >\$1 M. Sites with more than 1 pit to add \$50.000.10 rate.
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with at least ±2 of the following aspects requiring closure planning, but no significant lissues realised at this time: previous subsidence, medium or higher geochemistry risk and/or spontaneous combustion propensity, known/ likely contamination, taillings / rejects, final void	Y		allow	\$90,000		\$0		conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Estimated cost for developing closure plan including studies - basic to satisfy risks and decisions - includes risk assessment, options analysis, Closure Plan. Sites with more than 1 pit to add
	Development of an Unplanned Project Closure Plan - Non State Significant Development with no EPL and/or only one of the following relevant aspects: previous subsidence, low to medium geochemistry risk and/or spontaneous combustion propensity, known limited contamination, small approved final void	Y		allow	\$15,000		\$0		Assumes sediment control is the key concern for rehabilitation e.g. small mines, exploration operations. Includer risk assessment, sampling and analyse on <5 samples, one study and Closure Plan.
	Development of an 'Unplanned' Project Closure Plan - State Significant Development with only preliminary to conceptual closure planning in place	Y		allow	\$300,000		\$0		studies including designs e.g., geochemistry, Contamination Remediation Action Plan, subsidence risk, cover/capping and final landform, site wide surface water, etc. Provisions sum to be used to refine the conceptual closure plan into a detailed closure plan with execution strategies for rehabilitation activities. Assume at least 15 types of studies required ranging from geotechnical to ecology and social, development of a closure plan including address of obligations. Assume a simple site e.g. single open cut, no legacy operations historic in the area, little social dependence, etc. Depending on site size, complexity, fine land use requirements and knowledge base investigations can range to >3 M Sites with more than 1 pit to add
	Development of an 'Unplanned' Project Closure Plan - Non State Significant Development with at least ±2 of the following aspects resulting in significant issues requiring remediation: previous subsidence, medium or higher geochemistry risk and/or spontaneous combustion propensity, known/ likely contamination, tailings / rejects, final void	Y		allow	\$125,000		\$0		ifficial costs for key investigations an studies including economic treatments and designs e.g. geochemistry, Contamination Remediation Action Plan, subsidence risk, cover(capping and final landform, site wide surface water, etc. Provisional sum to be used to refine the conceptual dosure plan inti a detailed closure plan with execution strategies for rehabilitation activities Based on experience for a REF after
	Develop a Review of Environmental Factors (REF) to facilitate rehabilitation including contamination works.	Υ		allow	\$27,950		\$0		Based on experience for a REF after completion of a detailed closure study (e.g. contamination investigation) costs could range from \$10,000 to \$100,000 ex GST. Note this does not apply to a Statement of Environmental Effects or Environmental Impact Statement.

	Site security during closure	Υ		yr.	\$75,000		\$0		Provisional sum for site security measures required during closure. This includes nightly patrols and first
									response in the event of an out of hours
	Choose type of HAZMAT Clean-up required - cleaning and decontaminating plant and equipment, chemical storage locations, oil and grease traps, tanks, vessels, and pipe work etc	Υ		allow	\$0			Select type of HAZMAT Clean-up Required	Type of HAZMAT Clean-up required - cleaning and decontaminating plant and equipment, chemical storage locations, oil and grease traps, tanks, vessels, and pipe work etc
	Removal and disposal of radiation devices	Υ		each	\$31,630		\$0		Provisional sum for removal and disposal of monitoring devices on conveyors using a radiation source (i.e., Americium – 241, Plutonium – 238, Caesium - 137 etc). Source Isotope type, quantity, strength, weight, source holder type, source holder wight, inclick un location famona.
	Additional fees for accessing State, Crown or other public lands for rehabilitation/remediation activities	Υ		allow	Use alternate rate cell		\$0		Provisional sum.
	public lands for renabilitation/renrediation activities					ems Subtotal	\$0		
Mobilisation and Demobilisation	Mobilisation & Demobilisation for small mine or quarry - small fleet	Υ		Item	\$12,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation for small mine or quarry - medium to large fleet	Υ		Item	\$35,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site <150 km)	Υ		item	\$100,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site >150 km but <500 km)	Υ		item	\$150,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site >500 km but <1000 km)	Υ		item	\$300,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
	Mobilisation & Demobilisation (Distance to site >1000 km)	Υ		item	\$500,000		\$0		May include specialist demolition equipment and/or suitable plant to execute bulk earthworks as required.
			Mol	bilisation and	l Demobilisat	tion Subtotal	\$0		
Additional Items	Other 1 <insert></insert>	N			This is				This item includes < <to added="" be="" by="" operator="" the="">&gt;</to>
	Other 2 <insert></insert>	N			deliberately				This item includes < <to added="" be="" by="" operator="" the="">&gt;</to>
	Other 3 <insert></insert>	N			left blank				This item includes < <to added="" be="" by="" operator="" the="">&gt;</to>
	•				Additional Ite	ems Subtotal	\$0		The second secon
	Total Cost for	Mana		A adiscidi				\$0	

Assumptions and rehabilitation requirements							
List or record any assumptions made when completing this tool:							



Activity

Domain

# Justification for Change of Rates in the Rehabilitation Cost Estimation Tool

DRG unit/rate

Tool. A ju	In completing the Rehabilitation Cost Estimation, we are seeking an adjustment to the rates currently utilised in the Rehabilitation Cost Estimation Tool. A justification for the rate change by a third party has been included and I confirm that only the rates identified in the above table have been altered in the Rehabilitation Cost Estimation Tool.								
	Authrorisation Representatives	Date							

**Adopted Rates** 

Justification