

Hillgrove Resources and Kanmantoo Callington Community Consultative Committee (KCCCC)

‘working together to add community value to the *Mine Closure and Completion Plan* of the Kanmantoo Copper Mine’

Background and resources designed to assist the Playford Trust scholarship holder

The project objective is to identify possible changes to the existing Mine Closure and Completion Plan of the Kanmantoo Copper Mine in order to optimise the benefits for the community once mining at the site is completed

Contents

The Project Objective	2
Background.....	2
Deliverables	2
The study area	3
Reality check.....	3
Starting point.....	3
Methodology	4
Community engagement.....	4
Timeline	5
APPENDIX 1: Resources framework	6
APPENDIX 2: Community ideas presented in a table that considers ease of implementation and value for the community	8
APPENDIX 3: Important recent work and examples for inclusion in the project	9
APPENDIX 4: DRAFT Master Plan	11
APPENDIX 5: Mine Closure and Completion Plan: progress to 2016	15

November 2016

The Project Objective

The project objective is to identify possible changes to the existing Mine Closure and Completion Plan for the Kanmantoo Copper Mine in order to optimise the benefits for the community once mining at the site is completed.

Background

Hillgrove Resources has a Mine Closure and Completion Plan (MCCP) for its Kanmantoo Copper Mine. This MCCP outlines how the mining lease will be progressively rehabilitated and finally left after mining has been completed. The MCCP is included in the Kanmantoo Copper Mine environment protection and rehabilitation plan or PEPR (mine plan) at the time mining approvals were granted¹.

Given the long time-frame of mining operations and the progressive nature of rehabilitation, it is contemplated that there may be changes to the MCCP over time. However, the MCCP must be agreed with the Mining Regulator, costed and guaranteed for the community through some form of bond. This means that any changes to the MCCP need to be consistent with the environmental objectives stated in the PEPR and subject to the agreement of the Mining Regulator.

It is therefore important to identify any potential changes to the MCCP as early as possible to allow time for consideration by Hillgrove, agreement to be reached between Hillgrove and the Mining Regulator and scheduling for implementation before work against the previously agreed schedule of works means that the opportunity is lost.

Deliverables

It is envisaged that the deliverables arising from this project will include:

1. Detailed GIS maps of the area that reflect the themes of the KCCCC Master Plan² which are:
 - a. mining history and heritage conservation and promotion
 - b. natural landscape preservation, remediation of disturbed landscape and rehabilitation
 - c. preservation and enhancement of environmental values
 - d. recreation and leisure opportunities for locals and visitors
 - e. curriculum and institutional links to education and research
 - f. Indigenous Australian and non-indigenous history, art and culture such as landscape art

For simplicity, these themes may be translated into broader map headings like history and heritage, vegetation, recreation, tourism and other enterprise.

2. A summary concept plan

¹ Kanmantoo Copper Mine PEPR 2014 Main Report part 8 source:
http://www.hillgroveresources.com.au/article/Community/Mine_Life_Extension

² Appendix 4

The study area

The area for mapping is focused on the Hillgrove mining lease and surrounding areas as this is the subject of the MCCP.

However, it should be noted that in the 1840's, Kanmantoo / Callington was subject to a 'special survey' for purposes of promoting its development as a mining province. At this time an area of about 8 miles by 4 miles (about 20,000 acres) was divided into 20 strips that could be purchased. The current mining lease sits within this broader special survey area and this land division is still visible today.

Other areas of the State such as Burra were developed for mining in a similar way and have subsequently used this mining legacy as part of their future prosperity.

Reality check

Delivery mechanisms within the MCCP include:

- final design and earthworks
- native vegetation programs like Significant Environmental Benefit (SEB) and rehabilitation
- decommissioning of facilities, plant and equipment
- preparation / return of areas of the mining lease so that they are suitable for an agreed future land use.

A clear link between the deliverables and these delivery mechanisms will assist in making sure that the proposals are realistic. This means confirming that the proposals are:

- within the scope of the MCCP
- can be implemented (for example, have not been compromised by previous work or are of such a significant variation from the current plan as to be cost or logistically prohibitive).

Starting point

It is expected that the starting point for the project will be contact with the Kanmantoo Callington Community Consultative Committee (KCCCC).

The KCCCC provides a forum for the community to come together to raise issues, provide comments, make suggestions, facilitate unique local insight and encourage action on matters related to the Kanmantoo Copper Mine. The Committee was formed in 2007 and includes representatives from the local community, the local school, local Council, the Mining Regulator and Hillgrove Resources who is responsible for the KCCCC.

The KCCCC has established a Master Planning Working Party with a particular interest in this project. The Working Party will help identify interested local people with relevant local knowledge who may assist with the project. Each of the KCCCC members has a particular portfolio of interest and the Working Party also hosts other stakeholders like Mt Barker District Council, local Landcare and the SA Mining History Group.

The KCCCC and Hillgrove Resources have each identified a lead person from within their respective groups and they have jointly prepared some preliminary material in GIS form that will assist the project.

A list of contacts has also been prepared that includes connections to the State Government departments of Department of State Development (DSD) Minerals and Energy and Primary Industries and Regions SA (PIRSA).

There are a small number of existing resources that should be considered for integration into the project. These include a drive trail of mining historical sites and a walking trail linked to social history.

Some examples of similar projects elsewhere in the world have been identified such as the Copper Coast in Ireland (<http://www.coppercoastgeopark.com>)

A Resources Framework that spells out these resources is included as APPENDIX 1.

Methodology

Despite the availability of significant resources identified elsewhere in this background paper, the project is expected to involve a considerable amount of primary research such as:

1. visiting the site to confirm the location (eg by GPS) of the inventory of significant mining history and heritage
2. visiting the site to compare similar environmental and other features where a 'best example' may be of benefit to the project rather than highlighting all examples
3. walking the terrain to confirm the topography and other factors to assist with design options for access trails, vantage points and the like
4. in conjunction with Hillgrove, research constraints that may impact on design proposals such as public safety, land ownership, caveats that may constrain future public access or other matters that may be identified through consultation

Community engagement

The KCCCC is particularly aware of the need to involve the wider community in this project. Over the past 18 months, the Working Party has produced discussion papers, contributed to the local Council's strategic planning, put together displays for the Callington Shows (2015 and 2016), invited contributions from other groups like the SA Mining History Group and dedicated agenda items at its KCCCC meetings to open public discussion on the topic.

It is important that this next step of producing a concept plan and detailed GIS maps is available for community comment and input and that sufficient time is allowed for their consideration. This process should be negotiated as part of the project.

A summary of important work of the Working Party that should be taken into account in the project is included in APPENDIX 3.

Timeline

The project objective is to identify possible changes to the existing MCCP in order to optimise the benefits for the community once mining at the site is completed. This objective is time sensitive in that suggestions need to be put to Hillgrove as early as possible to allow time for consideration by the company, agreement to be reached between Hillgrove and the Mining Regulator and the scheduling of work before the opportunity is lost as a result of alternative works that are being undertaken under the current MCCP.

The project is expected to take 4 – 5 months to complete. However, given the time imperative and requirement for community involvement, monthly progress reports and other initiatives should be considered to provide early notice of possible changes to the MCCP.

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APPENDIX 1: Resources framework

Kanmantoo Callington Community Consultative Committee (KCCCC)

The KCCCC is a forum for the community to come together to stay fully informed, identify and discuss issues, make comment and provide suggestions and generally be involved in matters that may impact on them arising from the presence of the Kanmantoo Copper Mine in the community.

The KCCCC established a Master Planning Working Party in late 2014 to focus attention on the community development opportunities that may arise from the eventual closure of the mining operations. In particular, the Working Party is looking to the MCCC to deliver long term and sustainable benefits reflective of how the community sees the area developing into the future.

The Master Planning Working Party has significant resources to offer this project including:

1. access to local knowledge carried by KCCCC members and the wider community
2. the draft Master Plan which describes a vision for the future
3. a set of practical ideas collected from a wide range of community members and other stakeholders that translate the vision into action.

Hillgrove Resources

Hillgrove Resources has a significant data set of relevant information mapped in MapInfo and ArcView formats. These include data sets relevant to:

1. vegetation including rehabilitation, SEB offset programs and remnant native vegetation
2. final landscape design and engineering
3. modern infrastructure including current facilities as built form, fixed plant and equipment, access (ie roads and tracks), water retention and other engineered structures and utilities provision
4. historic infrastructure including previous and now redundant facilities as built form, historical fixed plant and equipment and other relics

Hillgrove Resources has produced comprehensive mine plans (PEPR) that have been progressively updated at milestones like the proposal for a mine life extension in 2014. These include research and data sets that are likely to be valuable to this project. The Mine Closure section of the PEPR (2014) can be found in Section 8 of the Main Report source:

http://www.hillgroveresources.com.au/article/Community/Mine_Life_Extension

State Government

The State Government has data sets that may be useful including:

1. DSD minerals and energy – SARIG data set
2. PIRSA – data sets that demonstrate land use opportunities for agriculture and horticulture which can be presented as scenarios

Local Government

The Mt Barker District Council has important information including:

1. Mt Barker 2035 District Strategic
2. MBDC Development Plan
3. MBDC Biodiversity Strategy
4. MBDC Trails Program
5. MBDC Built Heritage program
6. MBDC Arts and Culture program

State wide interest groups


The SA Mining History Group (SAMHG) is an informal body of people interested in the mining history and heritage of the State.


The SAMHG has contributed to the discussion of Master Planning through the involvement of its convener and some targeted discussion at the 2016 SAMHG annual workshop which was held at Callington.

Local interest groups

Local groups like the Kanmantoo Callington Landcare Group and local history and heritage group are very active in the area and have local knowledge and resources to contribute to the project. The Peramangk are the Indigenous Australian people who are traditional custodians of the area.

APPENDIX 2: Community ideas presented in a table that considers ease of implementation and value for the community

	Higher value to community	<ol style="list-style-type: none"> 1. Mining centre/ facility (economic infrastructure) 2. Mining research and innovation centre / facility (economic infrastructure) 3. Visitors' Centre / facility (economic infrastructure) 4. Wetland infrastructure (economic and environmental infrastructure) 	<ol style="list-style-type: none"> 1. Access roads (access) 2. Car parking (access) 3. Fencing and security (access) 4. Rest areas (access) 5. Tourism phone app (access) 6. European history and heritage trail including mining - living history / art and culture (interactive experiences) 7. Aboriginal history and heritage trail including living history / art and culture (interactive experiences) 8. Cottage stays (interactive experiences) 9. Land use planning such as tourism, food production and value adding, other industries, education and research, art and culture, recreation and sport etc (planning) 	<ol style="list-style-type: none"> 1. Public viewing platform (access) 2. Walking / riding trails (access) 3. Signage (access) 4. Website (access) 5. Active fossicking and mineral collection site (interactive experiences) 6. Geology wall and stonemason display (interactive experiences) 7. Roads and trails plan (planning) 8. Traffic management plan (planning) 9. Land management plan (planning) 10. Wildlife reserve and wildlife corridor (planning)
	Medium value to community	<ol style="list-style-type: none"> 1. Wildlife Rescue Centre / facility (environmental infrastructure) 2. Arts / entertainment venue / facility (economic infrastructure) 3. Movie set (economic infrastructure) 4. Extreme sports activity centre / facility (economic infrastructure) 5. Extreme sports park / access only (interactive experiences) 	<ol style="list-style-type: none"> 1. Industry Hub (economic infrastructure) 2. Water Hub (economic infrastructure) 3. Energy hub (economic infrastructure) 4. Botanical garden (interactive experiences) 5. Bird sanctuary (environmental infrastructure) 6. Mountain bike course (economic infrastructure) 	
	Lower value to community			
		Harder to implement	Medium to implement	Easier to implement



- Tier 1: major projects led by substantial investment from the private and / or public sectors with strong commercial drivers
- Tier 2: significant projects led by the private and / or public sectors including projects involving facilitating infrastructure like utilities
- Tier 3: smaller scale projects that may be consistent with compliance obligations of the mine as it implements its mine closure and completion plan. The community may be involved in a leadership role consistent with the KCCCC's terms of reference

APPENDIX 3: Important recent work and examples for inclusion in the project

The Working Party reached a milestone at its September 2016 meeting where lists of community ideas gathered over the previous year or so were consolidated into a table and considered against their ease of implementation and their value to the community (see APPENDIX 2)

At the same time, the preparation of three sets of preliminary maps were commenced (with these ideas in mind) on the following topics:

1. Mining history and heritage
2. Natural environment
3. Infrastructure

These three maps were then used as the basis for a workshop at the November 2016 KCCCC meeting where input was sought from the KCCCC members and the wider group of gallery members (public meeting) who attended.

The results of this workshop are presented below:

Mining history and heritage

The group looked at revitalising existing drive trails around the area to complement a proposed walking trail.

The group also pointed out the importance of social history including architecture and lifestyle of the current and previous townships of Callington, Kanmantoo, Staunton Village and Paringa Village.

The opportunity for establishing a geo park comprising the area of the special survey was raised. The clear link between the geology of the area, mining, native vegetation and natural ecosystems was described.

The need to ensure the conservation of significant relics and remnants of each of the generations of mining was mentioned with particular reference to the Paringa mine site.

Natural environment

The group noted that there were three drivers of native vegetation distribution shown on the topic display map: remnant native vegetation, previous Landcare and other programs on land in the area and the mine's rehabilitation and SEB program on and off the mining lease.

The need for practical approaches to potential future ownership of land in the area was presented. One example mentioned was land management plans. There was particular reference to Hillgrove-owned land that has been subject to SEB programs.

Land use potential was shown on the maps. This had been sourced from PIRSA. It was felt that with infrastructure legacy like water left after mining, there may be many options for agriculture / horticulture that could be considered as a future land use.

It was also felt that roads in the area may have potential as revegetation corridors and, in this context, the importance of contiguous vegetation was highlighted.

Infrastructure

The group looked at options for retaining mine infrastructure like access roads and buildings after mining operations had concluded.

It was felt that a case would need to be made by matching the retention of infrastructure with future land use options like:

- roads, power and appropriate zoning for an industrial site
- water management facilities for agricultural / horticultural land use and
- access roads, tracks and pathways for mining history and heritage tourism trails.

This was seen as important because there were other decision makers involved like Council who was responsible for land use zoning.

It was pointed out that eventually any infrastructure left behind needed to be owned and maintained by some entity.

The group also identified the potential for new infrastructure initiatives like energy projects (wind and water management – mini hydro) based on leveraging off existing infrastructure like the electricity grid connection.

The need to identify how, and to what extent, continuing access to the site would be available for local residents (and others) after mining was identified as important.

APPENDIX 4: DRAFT Master Plan

Kanmantoo Callington Community Consultative Committee (KCCCC)

Draft Master Plan: October 2015

Helping to make sure that the Mine Closure and Completion Plan for the Kanmantoo Copper Mine is in line with the way the local community sees the area developing after mining

Vision for Kanmantoo and Callington

Callington Kanmantoo will be a vibrant, sustainable and prosperous community long after mining has concluded at the Kanmantoo Copper Mine.

The future prosperity of the area will be supported where possible by collaboration between Hillgrove Resources and the local community in planning for mine closure that leaves a permanent positive legacy in line with the priorities identified by the community.

About this Master Plan

The KCCCC provides a forum for the community to come together on matters related to the Kanmantoo Copper Mine. With this role in mind, the KCCCC is seeking to better understand the local community's vision for the Kanmantoo Callington area once mining has finished and encourage Hillgrove Resources to fully realise any community benefit that may be possible through their Mine Closure and Completion Plan (MCCP) which is contained in the Program for Environment Protection and Rehabilitation or PEPR (mine plan).

In simple terms, the KCCCC is limited in its scope of influence to providing comments, making suggestions, bringing local knowledge and encouraging action from Hillgrove under their MCCP to bring promised (compliance) and additional (beyond compliance) benefits to the community.

The KCCCC Master Plan fits in with other plans like:

1. the District Council of Mt Barker's (DCMB) Strategic Plan
 - DCMB Development Plan including DCMB Tourism DPA (under development)
 - DCMB Biodiversity Strategy
 - DCMB Trails program
 - Mt Barker, Littlehampton and Nairne Regional Structure Plan September 2014
 - DCMB Built Heritage program
 - DCMB Arts and Culture program
2. Rural City of Murray Bridge Strategic Plan and Development Plan and Monarto DPA (under development)
3. RDA Adelaide Hills, Fleurieu and Kangaroo Island Regional Roadmap
4. Adelaide and Mt Lofty Ranges Natural Resource Management (NRM) Plan and the SA Murray Darling Basin NRM Plan
5. Adelaide Hills Tourism Regional Strategic Plan

Working together to add community value to the *Mine Closure and Completion Plan* of the Kanmantoo Copper Mine

The KCCCC Master Plan is written from the perspective of mine closure which includes:

1. rehabilitation and enhancement opportunities for the natural environment through native vegetation programs and significant environmental benefit (SEB) plantings
2. design and construction opportunities for landscaping of the final landform
3. likely legacy infrastructure opportunities that may become available after mine closure like water supply and management facilities, electricity sub-station, mining heritage built form and the like
4. opportunities that, without forward planning, may be lost to the area like the skills pool of the current labour force

You are invited to make comment on this draft Master Plan to:

Bob Goreing, independent Chair KCCCC

e mail: bob@cega.com.au

ph 0418 816 788

The ‘big picture’

The future of the Kanmantoo Callington area should be one of sustainable prosperity with the following characteristics:

1. sustainable conservation and management of its unique natural environment
2. appropriate valuing of natural assets like limited water resources with opportunities arising from infrastructure that has been developed for, and because of, the mining in the area
3. viable, profitable and sustainable businesses and industry development that provides local jobs in industries like
 - a. food production and value adding
 - b. tourism
 - c. art and culture
 - d. education
 - e. existing businesses and
 - f. new businesses that are consistent with the community characteristics
4. limited residential development, mindful of the potential loss of population after mine closure and the risk of subsequent reduction in services based on population like schools
5. a healthy, rural lifestyle for residents
6. a local community well connected to the region as a whole with well managed local infrastructure like roads and telecommunications
7. a community serviced by appropriate local community, sports and recreation facilities

Mine closure and adding value to the ‘big picture’

The purpose of Hillgrove Resources’ Mine Closure and Completion Plan (MCCP) is to:

1. establish a base closure plan that can be reviewed and updated throughout the project life
2. identify potential future land uses for the site
3. provide relevant information upon which stakeholders can provide feedback
4. ensure that closure planning (including accountability and resourcing) is incorporated into project development, construction and operations
5. estimate the costs of implementing the MCCP to enable Hillgrove to provide for mine closure over the life of the mine.

The MCCP relates to Hillgrove Resources’ legislative requirement under its mining lease conditions to complete agreed ‘mine completion environmental outcomes’ (with associated measurement criteria)

for each of the identified environmental impacts. Achieving these agreed mine completion environmental outcomes is necessary for establishing community and regulator confidence.

Well managed mine closure and completion planning has the potential to add value for the community in areas such as:

1. mining history and heritage conservation and promotion
2. natural landscape preservation, rehabilitation and remediation of disturbed landscapes
3. preservation and enhancement of environmental values
4. recreation and leisure opportunities for locals and visitors
5. curriculum and institutional links to education and research
6. Indigenous Australian and non-indigenous history, art and culture such as landscape art

By understanding the community's big picture for the area, the company may identify opportunities to add value to these through the MCCC that can be regularly reviewed and revised. The MCCC has a minimum revision period of every three years.

Optimising the mining legacy at mine closure

In the 1840's, Kanmantoo Callington was subject to a 'special survey' for purposes of promoting its development as a mining province. At this time an area of about 8 miles by 4 miles (about 20,000 acres) was divided into 20 strips that could be purchased.

Other areas of the State such as Burra were developed for mining in a similar way and have subsequently used this mining legacy as part of their future prosperity.

Kanmantoo Callington has some comparative advantages over these other locations such as:

1. the area is part of a regional mining province that covers a wide area where mining and smelting history can be seen on a significant scale
2. a modern mine and processing facility is still operating which provides a sense of continuity in the history of mining from the early 1800's til today
3. there are existing links with education, training and research institutions like Universities focused on mining
4. the area is located in close proximity to Adelaide and has easy access via the South East Freeway

To optimise benefits for the community, the KCCCC Master Plan in conjunction with the MCCC could identify possible programs like:

1. environmental rehabilitation that restores parts of the degraded landscape to reflect the unique native vegetation and support healthy ecosystems, recognising the new science and research that the mine has contributed to this understanding, the work done in the past and the local knowledge of the community
2. considering where appropriate, consolidating prime agriculture land currently held as buffers into viable farming landholdings for future on-selling
3. the preservation and protection of relics from the European mining history of the area
4. encouraging relationships with education and research institutions like Universities to ensure appropriate hand over of corporate knowledge of mining history at mine closure
5. highlighting the history and heritage of the Peramangk people through art and other culturally appropriate initiatives as well as providing a forum for others such as artists to represent the area through Landscape Art and perhaps linking up with the region's Sculpture Symposium
6. encouraging healthy lifestyle and recreational use of the area when safe to access.

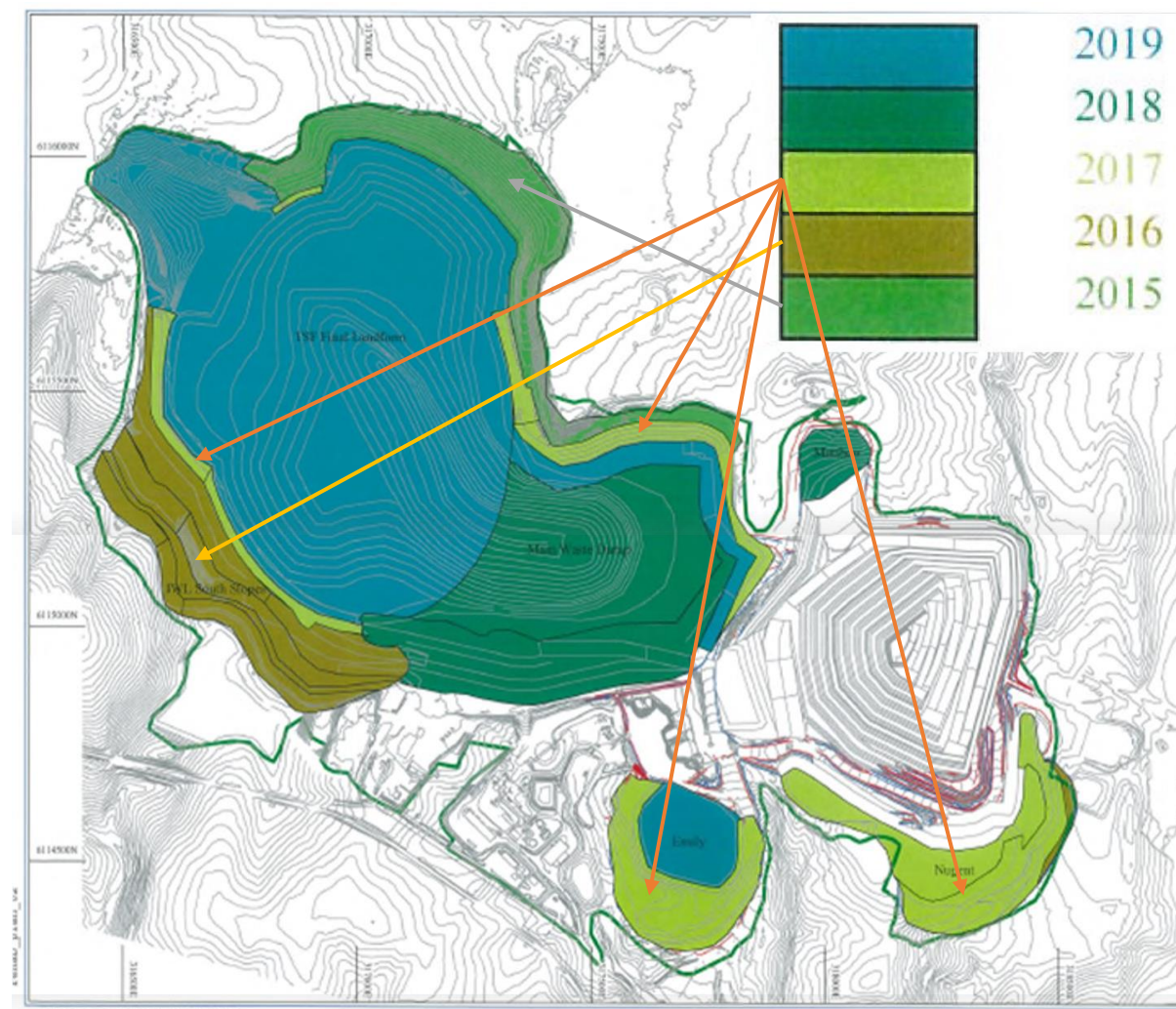
All of these initiatives could be linked together through a final landform design which may promote a series of walking and riding trails providing safe access to the area for tourism, environmental interests, art and culture, education and recreation.

The end result could be a geo-park defined by the unique geology of the area which takes advantage of the mining history and makes for a recognisable backdrop to the next stage of the area's development.

The scope of this Master Plan is limited to the mining lease and other areas where Hillgrove has responsibility such as some SEB sites along Mine Road and some landholdings that act as buffers for the mine. However the Master Plan provides a guide for others such as private landowners and Councils (MBDC and Rural City of Murray Bridge) to join in, if and when they feel it is appropriate.

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APPENDIX 5: Mine Closure and Completion Plan: progress to 2016³



Mine Closure and Completion Plan including schedule



Rehabilitation is part of the daily operations: December 2015

³ From Hillgrove presentation to KCCCC 10th November 2016



Backfilling of Nugent Pit commenced in July 2015



Pit filled in: April 2016



Shaping and topsoil: July 2016



Reconstruction of hill shape and further topsoil: September 2016