

Project: RailLink Official Opening
Client: Rail Link Joint Venture



The new Perth to Mandurah railway line is reaching practical completion with the official opening scheduled for "Sunday the 23rd of December". GHEMS is responsible for the construction of soft landscaping and revegetation on the southern suburbs rail corridor from Beeliah Road to Mandurah Station. The project area is 110 ha in total, but this transects over 50km through the Kwinana Freeway, urban landscapes and several bush heritage sites. The project site presented logistical problems of traffic and railway access management. Staff attained appropriate road and rail accreditations to meet industry standards and ensure a safe working environment.



To this point species representation and plant establishment has been very successful in reflecting the diversity of the adjacent bush heritage sites and is well on the way to meeting project completion criteria. This success has largely been attributed to a new mulching technique developed by GHEMS which has prevented erosion on steep batters of a 1:2 gradient. This allows improved plant establishment and is an important safety consideration. Subsequent to its success the mulching technique will now be adopted for the Mitchell Freeway extension and Perth to Bunbury Highway projects.

GHEMS will be responsible for RailLink's revegetation maintenance and monitoring program until 2010, where we will continue to maintain and improve areas of revegetation along the railway and adjacent areas, with environmental weed management being a key component.

International Projects
Project: Adaro Coal Mining Kalimantan, Indonesia

PT GHEMS Enviro (wholly owned by GHEMS Australia) is contracted to Indonesia's largest coal mine run by Adaro Coal Mining. Working together with Adaro in the past GHEMS have achieved a very high standard of surface protection and revegetation processes to minimise the impact of turbidity and acid drainage. Hydromulching and organic composting of local materials has been a key to the success of these works.

Having faith in GHEMS technology and their highly trained and capable local staff, Adaro Coal Mining most recently awarded the company a lucrative 400 - 500 ha contract. A large compost and service area has been developed on site to process the local mulch ingredients. The company has also purchased more service vehicles and completed the manufacture of an additional hydromulcher fitted to a 6 x 6 truck.

The good relations between companies saw Adaro management and PT GHEMS Enviro project manager Kahar Priyadi travel to Western Australia for a field study in August of this year. The studies proved to be a great success and focused on greenbelt and dam catchment protection combined with down stream agribusiness development.



Below: Greg's siesta spot when all things get too hard and too hot when visiting the GHEMS operations in Kalimantan.



Project News

2007 in Review

In 2007 GHEMS Revegetation Environmental have managed a period of consolidation whilst still achieving major milestones of construction handover and practical completion. The company is defining the revegetation processes of Western Australia's major infrastructure projects. The business is capitalising and developing a team of very capable and professional personnel as well as specialised equipment. Our mining client base is also continuing to grow, adding to the variety of tasks, skill developments and job satisfaction that GHEMS personnel enjoy. New projects are now ahead of our team, in particular the new Bunbury Highway and the Mitchell Freeway extension. We will all cherish a small Christmas break and look forward to kicking off new season activities.

Project: Telfer Gas Pipeline
Client: GasNet Australia

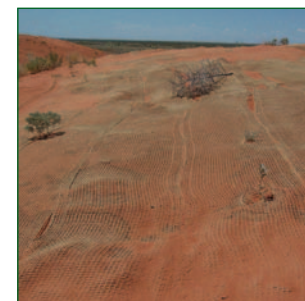


In 2006, GHEMS was commissioned by GasNet Australia to produce an action plan and undertake rehabilitation works on the desert dune systems in sections along the 443 km Port Hedland to Telfer Gas Pipeline.

Located on the edge of the Great Sandy Desert, extreme conditions are typical for this region, including strong winds, high temperatures, fires and a monsoonal wet season. These conditions and the disturbance from construction provided a big challenge for the GHEMS team.



The major focus for GHEMS was to ensure that further disturbance to these fragile sites did not occur by emulating natural processes to accelerate soil stabilisation and plant establishment. The rehabilitation treatments implemented to do this included scalloping, the use of jute netting, vegetative brushing, seed broadcasting, seed recovery as well as drainage works. In total over 26,000 square metres of jute netting was used and 45,000 pegs were required to secure it!



The combination of these remedial treatments has proven to be most successful, with dune stabilisation beginning to occur, micro and macro catchments trapping wind borne seed, resulting in extensive plant establishment.

Flora species native to this region have developed mechanisms to survive the harsh conditions. Newcomers, such as the Arabian camel, find the new growth quite appetising and enjoyed the fruits of Kim and his team's labour.



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Roe Highway Stage 6

Seed Collection Contract

Perth to Bunbury Highway Plant/Seed Salvage

Gidgee, Mt Gibson and Youanmi Gold Mines AERs

Services

- Rehabilitation & revegetation
- Environmental planning & consulting
- Native plant & seed recovery
- Bio-diversity reporting
- Forestry establishment & management
- Mulching & erosion control
- Environmental weed management

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Project: Gidgee, Mt Gibson and Youanmi Gold Mines AERs

Annual Environmental Reports (AERs) for Gidgee and Mt Gibson Gold Mines have been completed by GHEMS to satisfy reporting requirements for the Gold Mines and associated workings on behalf of Legend Mining Limited. Legend have since sold the Gidgee Gold Project to Apex Minerals NL who assumed management control of the Gidgee project including responsibility for all environmental works from the 10th of August 2007. Apex Minerals NL have subsequently contracted GHEMS to undertake the AER for their Youanmi Gold Mine operations.

AERs involve ecological assessment of rehabilitated sites requiring detailed biological surveys for approval by the various government authorities. They involve a description of the status of waste dumps and drilling areas and any changes in infrastructure since the last reporting period.

Assessments are made across the sites with regard to species diversity, species density, weed infestation, grazing pressures and erosion. These sites are monitored annually by qualified GHEMS personnel to ensure rehabilitated areas remain stable, self sustaining landforms following decommissioning of mining activities.



New!

The latest technology in weed spray systems is now available at GHEMS



We have recently added to our toolbox 2 x 4WD Mitsubishi Canter with 'Quikspray' dual remote reel spray units, each with capacities of 2000 litres

Call us on 9373 7100 to find out how we can help you with your weed management requirements

Project: Roe Highway Stage 6 Client: John Holland McMahon Joint Venture

GHEMS is proud to announce that handover of Roe Highway Stage 6 commenced in November 2007, after meeting the required completion criteria.

For the past four years GHEMS has been involved with the soft landscaping/revegetation and maintenance works. This project has involved the implementation, monitoring and maintenance of revegetation within the median strip and road reserve areas along the length of Roe 6, between Nicholson Road and South Street. The project was hampered somewhat by Western Power construction works on the southern side of Roe 6, which was eventually relinquished, turning GHEMS' focus to the median strip and northern sites.

Environmental weed management was a large component of this project. Low weed foliage was achieved through the successful implementation of weed management programs throughout the summer and winter of 2006/2007.



Project: Seed Collection Contract Client: Alcoa

Alcoa's mining rehabilitation in the species rich Jarrah forest region of WA require a large range of local provenance native species, many of which are difficult to collect in large quantities.

GHEMS has been undertaking seed recovery operations throughout the Jarrah Forest for Alcoa's rehabilitation programs since 1986 (through Managing Director Greg Hill), and are currently in the middle of a three year contract. Over the years, we have developed and maintained a solid relationship with Alcoa in helping them achieve their goal of 100% return of the species disturbed through bauxite mining.

The demand for species diversity and the quantity of seed required has increased significantly. Working in conjunction with Esther Cromer and her team in 2005/2006 GHEMS supplied the Marrinup Nursery with 2 tonnes of Zamia Palm (*Macrozamia riedlei*) and approximately 60 kilograms of other selected species, and this year we are contracted to supply over 4 tonnes of Zamia Palm alone.



Project: Perth to Bunbury Highway Plant/Seed Salvage Client: Southern Gateway Alliance

The Southern Gateway Alliance (SGA) project was formed to construct the new Perth to Bunbury Highway. This is a 70 km stretch of new road that will extend from the southern end of Kwinana Freeway to the Old Coast Road near Lake Clifton.

GHEMS was contracted in November 2006 by SGA to undertake seed recovery operations for this major project along the road corridor and adjacent areas for rehabilitation works associated with the construction of the new highway. Efforts were made to concentrate on those species that have previously proven to be successful in revegetation programs, whilst still ensuring a good range of diversity.

GHEMS have also partnered with SGA in the salvage of selected grass trees (*Xanthorrhoea preissii*) along the road corridor. GHEMS previous experience in the removal and translocation of grass trees along the Perth to Mandurah rail line corridor was instrumental in the co-ordination of these operations with SGA. GHEMS and SGA staff have worked together to preserve these unique plants and relocate them in appropriate locations.

