St Helens Rehabilitation — Project Report Summary

Site 5

Area approximately 2800 m^2

- Site recontoured.
- Cut-off drain above site.
- Geotextile-lined high impact/flow sections of drain.
- Rock-lined cut-off drain to central drain.
- Jute laid down.
- Seed-bearing slash, seed and fertilizer applied.

Labor units (one person for one day):	13
Excavator hours:	16
Jute bales:	5
Geotextile:	40 m
Rock:	three loads (8 m^3 per load)
Fertilizer:	6 x 25 kg bags (spread over a further 10% of work area surrounds – 3000 m^2)

Comments

Our first attempt and a reasonably uncomplicated site.

Site 6

Area approx. 3000 m^2

- Site recontoured and gully systems battered to best possible gradient.
- Two central drains constructed with a small cut-off drain from the access road.
- Geotextile-lined high impact/flow sections of drain.
- Rock-lined drains and gully heads.
- Seed spread over site.
- Jute spread over site.
- Seed-bearing and non seed-bearing slash spread.
- Fertilizer applied.

Labor units:	13
Excavator hours:	21
Jute bales:	5
Geotextile:	100 m
Rock:	Three loads (8 m^3 per load)
Fertilizer:	7 x 25kg bags (spread over further 20% of work area – 3600 m^2)

Comments

We didn't use enough rock in the central drain. In hindsight one-two more loads would give a better result. Also could have allowed a deeper drain to accommodate rock (100-150m depth) for the length of the drain.

Site 3

Area approximately 3600 m^2

- Site recontoured, gully system battered.
- Two cut-off drains leading into a central drain constructed.
- Geotextile-lined high impact/flow sections of drain.
- Rock-lined drains.
- Seed spread.
- Jute applied.
- Seed-bearing and non seed-bearing slash spread.
- Fertilizer applied.

Labor units:	18
Excavator hours:	28.5
Jute bales:	7
Geotextile:	65 m
Rock:	six6 loads (8 m^3 per load)
Fertilizer:	7 x 25 kg bags (spread over a further 20% of work area – 4320 m^2)

Comments

Some trial sections on this site. Head of system root rake cultivation with seed-bearing slash. Also below northern-most cut off drain there is no fertilizer or jute. Monitor results 6-30 months.

Project Details

Given that this was a new style of operation for all parties on the ground, a great result was achieved. All involved have gained confidence and, combined with previous skills, we now have quite a comprehensive rehabilitation/revegetation team.

Down to nuts and bolts: jute was overlapped 20–50% over all the sites, and small piles of rocks remain at each site in the event of maintenance needs.

Slash from the surrounding area was predominately seed-bearing *Allocasurina*, *Leptospernum* sp., *Melaleuca* sp. and *Hakea nodosa*.

Seeding was customized to the areas vegetation communities, i.e. wet area species in drains, dryland species on slopes and sandy northern aspects.

Only one crewmember received First Aid training as the rest held current qualifications. One set of safety boots was supplied.

Myself and one other held chainsaw operator certificates and training was offered but declined by the other crew member due to prior commitments on training dates.

The labor break-down over the sites varied, but generally jute/geotextile component 30-40% to slash collection and spreading 60-70% depending on accessibility.

Unaccounted labor was on a more general project basis, i.e. communication, assessment, maintenance, induction, rubbish removal, and weed control.

Unaccounted excavator hours overall typically fueling/greasing, travelling from site to site and floating of machine.

Some seed supplied by Forestry Tasmania seed centre deemed unsuitable and exchanged for equivalent dollar value suitable species.

In surveying area for slash, some weeds were discovered – *Pinus radiata* and *Cupressus macrocarpa*. These were source points for further spread into areas otherwise weed free. Small individuals were hand pulled, larger ring barked. Also discovered was some backyard debris that had been dumped which included live invasive species material, which was disposed of. Less than 3 hours was committed to the above but a thorough result achieved.

I have contacted Orienteering Tasmania but as yet have not visited sites with them.

RECOMMENDATIONS

- To fully utilize flexible local labor force and their skills background therefore collect local provenance seed.
- Customize to area needs, seed-bearing slash use as well as regular weed survey and control (Nov–Dec 04 – 1 day).
- Use Griffiths as preferred contractor; good relationship, excellent machine and implements for objectives (tilt bucket with root rake), and clean rock source.
- Mid to late March is a good time to conduct earthworks and seeding.
- Look into signage at sites for information and Occupational Health and Safety/Public Liability/Duty of Care obligations.
- Formal risk assessment documents for protection/compliance (on-ground crews to complete).
- Letter to Forestry Tasmania and Break O'Day Council re: concern over dumping of wastes in bush land and associated costs for clean up, weed control etc.
- Letter of appreciation to Parks and Wildlife (St Helens), for their support and contribution to the project as well as use of their depot and equipment.
- Visit to site with Orienteering Tasmania to discuss works, mapping and any other concerns – Greg Louden to follow up on and refer back to John Pemberton.

Work crew

Greg Louden (supervisor)
Todd Dudley
Adam Murfet

Excavator contractor – Andy Griffiths – North East Excavations
Excavator operator – Allan Barber

Inventory of materials

Geotextile x 175 m

Jute bales x 7

Pins box's 30 x large
40 x medium
10 x small

Chainsaw and case x 1

Fuel and oil container x 1

File kit x 1

Bolt cutters x 1

Safety helmet x 2

Visor and earmuffs (for above) x 1

Cut proof trousers x 1

Hydrocarbon spill mat x 1

First Aid kit (field trauma) x 1

Report text produced by Greg Louden with supporting pages produced by MRT.

Site 3. *Looking down gully to the north*

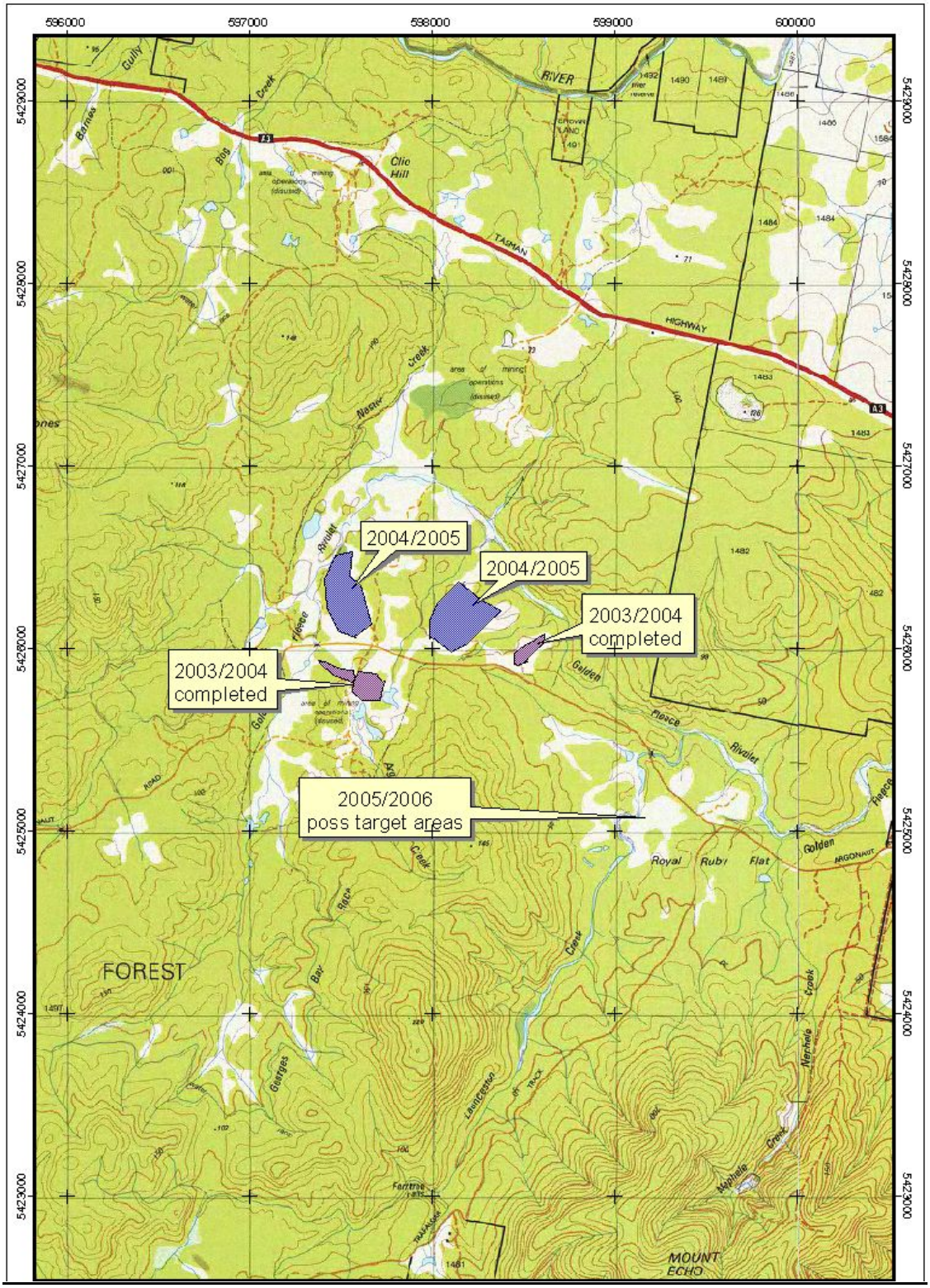
Site 5. *Looking to the north and east*.

Site 6. *Looking down gully to the west*

Argonaut Rehabilitation — Various

Location of completed sites and of areas planned for some work in 2004/2005.

Scale 1:25 000



Location plan showing general area of rehabilitation works
Scale 1:100 000