



INTENSIVE MANGROVE PLANTING ON THE LANG LANG CLIFFS

Intensive Mangrove Planting on the Lang Lang Cliffs
Project No 7085
CMA Community Grants Program

Project Objectives

To reduce production of slimy sediment which is produced during erosion of the low Lang Lang cliffs and which completely prevents regeneration of seagrass by smothering.

It was proposed to plant three rows of mangroves one meter apart at one meter centres for about one kilometre south of the Lang Lang River. i.e .about 3,000 mangrove plants.

Also to thicken up this planting by growing as many seeds as possible.

Methods

Seedlings were transplanted from Pioneer Bay and Blind Bight and grown on the mud flats. Different methods of staking were tried as it is a very high energy environment with waves reaching two meters high. We were advised that the task was impossible. Volunteers, King Scouts and the Bass Valley Landcare work crew were employed for the work. In total 5,400 seedlings were planted including some germinating seeds. (Some were planted before the beginning of this grant)

About 5,000 seeds were planted during Dec 07 and Jan 08. Planting seeds is very tricky. If they are buried completely they will rot, so must be planted only 75% into the substrate in which case they are prone to wash away. Some operators seem better at planting than others as success rates were extremely variable. However the substrate is also variable

Results

We have had huge losses of seedlings and seeds. Many are killed by cold or of course washed away. Sometimes barnacles infest the leaves and retard growth, many simply die.

Although extreme care was taken when transplanting seedlings we believe that old small stunted seedlings which we took from under mature trees were simply unsuitable and died. In contrast young freshly germinated seedlings had a much better survival rate. Work in NSW suggested that plants raised from seeds grew twice as fast as transplanted seedlings. Our results confirm this. Seedlings of three years are only 50cm high, though apparently thriving, compared with three year old plants grown from seeds which are over one meter. Seeds we planted last summer are in places already outstripping transplanted seedlings which are at least a year older.

Despite considerable losses there are nevertheless 1,666 plants and 816 germinated seeds doing well along one kilometre of the Lang Lang coast. We were greatly relieved and indeed surprised during an inspection following recent horrendous weather to find that there were no further losses. It is probably safe to say that there will be over 2,000 mangroves growing along that part of the coast that were not there before. Now they have put down tap roots they may be secure unless frost kills them.



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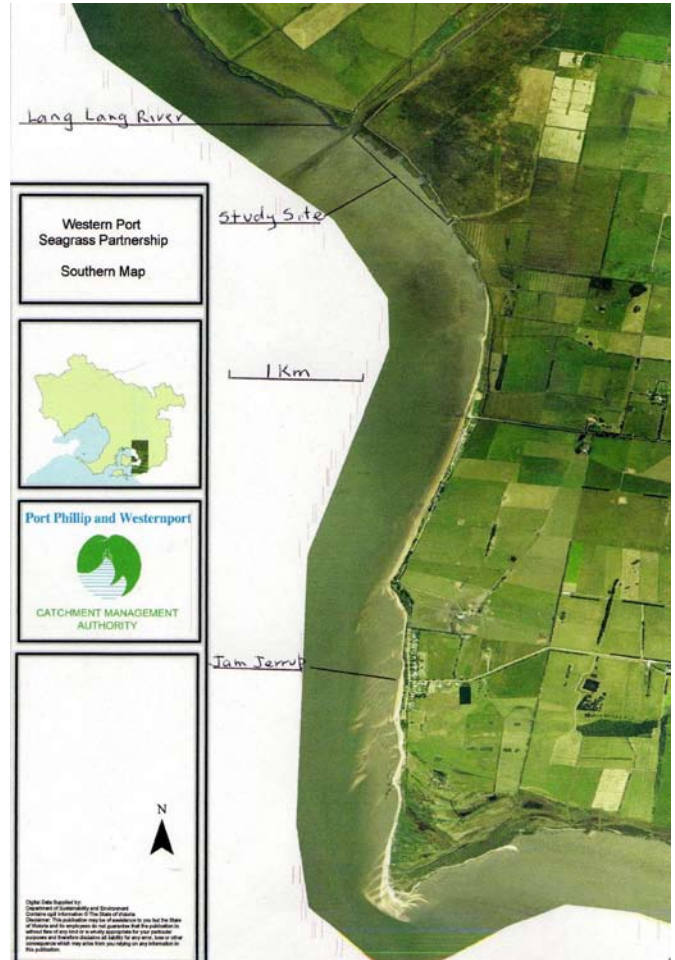
Maps

See full size versions of attachments 1&2 at the end of this document.

Attachment 1



Attachment 2



Conclusions

We have not quite met our objectives. Although we have planted more than our target of 3,000 plants many have not survived. However we are confident we will meet our objectives, using the experience we have gained while supported by this and other grants.

We simply have to rethink our methodology, putting intensive effort into the seeding months of December and January. Also we are growing seedlings in cartons and biodegradable pots which we have shown to grow well. We have four schools growing mangroves for us and more want to help. Planting these seedlings and direct seeding will continue.

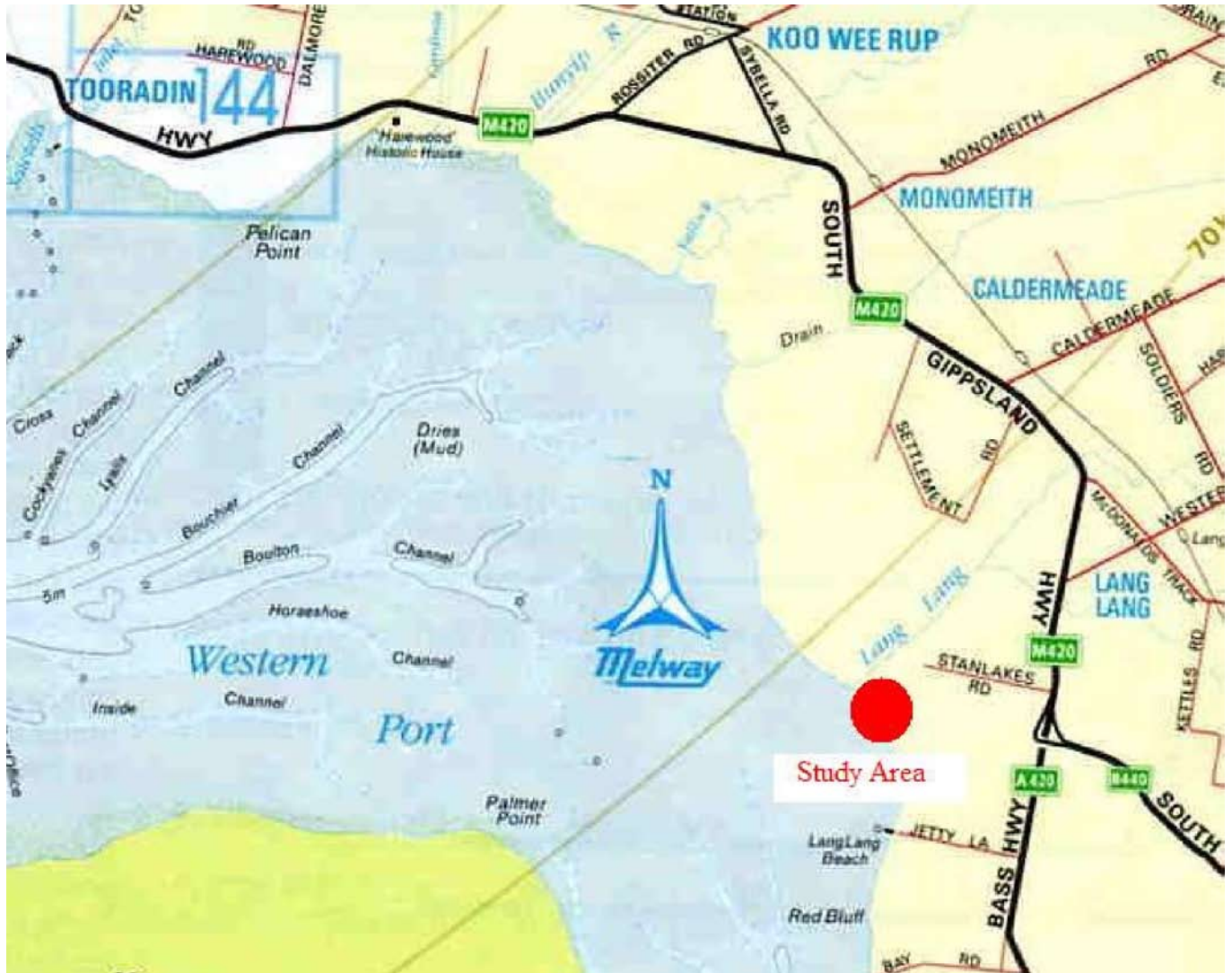
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Attachment 1





INTENSIVE MANGROVE PLANTING ON THE LANG LANG CLIFFS

Attachment 2

