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Dear Roger

RE: PERKINS FARM EROSION CONTROL

Further to your enquiry I have reviewed the report from Biffa Miskell you supplied with the view of commenting on the implications of the options presented from a farm management viewpoint

You must appreciate my comments are made without visiting the property and viewing the erosion and land classes first hand.

Before commenting on the individual options, I'd make the following general observations.

The property is primarily made up of Greywake steep Hills soils which provide serious limitations for pastoral farming and erosion planting. These include:

- Very steep contour which means that fencing is best placed only on ridges.
- The soils are of a very rocky nature and as such difficult and expensive to fence. The report quoting fencing at a cost of \$10 – \$15 per metre. I believe this to be a very conservative estimate to fence with post/batten type fences. On today's prices I would expect this cost to be at least \$20 per metre. My understanding is that NZ TA have undertaken a fencing project on this block which cost well in excess of this figure.
- The area is particularly windy, this fact combined with the low moisture holding and rocky soils will impact on the ability to successfully establish poplar poles and possibly native's as well.

It is my understanding that the farm does not become available to NZ TA until the end of June 2013. I have been requested to visit the property sometime after takeover to advise NZ TA as to what would be the best farming options for the property. If this is to occur I would then be able to make a much more informed assessment of what are the best strategies to consider to rectify the erosion problems.

Option 1

This option recommends planting of gullies and headwaters with poplars. Of all the options presented this is probably the most practical from a farm management point of view. Limitations will be that the blocks planted with poplars will not be able to be grazed with cattle for a number of years until the poplar trees are grown to a stage they will not be damaged by cattle.

Provided the total farm is not planted at once and there is a reasonable level of subdivision paddocks on the whole property it is feasible to farm around such limitations.

A possible option to protect trees from cattle is to place temporary single wire electric fences around blocks as they are planted. This prevents access to the trees by cattle and allows grazing with sheep. Such fences are more flexible in terms of what contour they can be placed on. Once the trees have established these fences can be removed.

However I would draw your attention to the point made earlier that the soil and wind conditions may result in a very low survival of planted poplars.

Option 2

This option recommends planting gullies and headwaters with both poplars and natives. This option requires planted blocks to be individually fenced. In my opinion based on the photographs as shown in the report, the contour of the fence lines would suggest such an option is really not practical. Attempting to put permanent fencing across some of the potential fence lines would not only be very difficult but very unstable.

Even if this option was practical I believe the cost is excessive especially if the costs are greater than the \$15 per metre as suggested in the report.

Permanent fencing of these gullies would also have negative implications for the movement of stock about property.

Option 3

This option includes the retirement by way of fencing of those areas not considered economically viable to farm.

This option may have merit for certain areas where the area of lost grazing is not large and the boundaries of such areas have fence lines that are suitable to maintain permanent fencing. What areas might be suited for this option can only be gauged after a closer inspection of the property.

However I suspect that retiring some areas without addressing issues in the gullies may not be that productive in terms of gaining overall control of the erosion for the whole block.

Option 4

This option suggests the fencing specific areas of native forest that currently exist. These areas are designated on the final photograph of the report and are situated primarily in Hill Road Gully catchment.

In my opinion the placement fence lines to take out individual bush blocks is not practical as the fence lines are not suitable. At this stage I would discard this option as been not feasible unless the bush block falls within some of the areas that might get categorised for Option 3.

CONCLUSION

I trust that these comments may be of some use. Should you wish to discuss any the points of made in more detail please feel free to call.

Roy Fraser
GM - PGGWrightson Consulting