

## Appendix 3.29.4

### Watercourse Fencing – Intensive Drystock

#### Assumptions:

- 248ha intensive drystock operation on predominantly class III and IV land located in the Mahurangi Catchment.
- Intensive paddock subdivision (47 paddocks), however no watercourses currently fenced to allow for stock access to water.
- Fencing on one side required where current paddock boundaries are already on one side.
- Fencing length on one side is total length of watercourse plus 15% to allow for extra angles.
- Fencing on both sides required where watercourses run through middle of paddocks.
- Fencing length both sides is total watercourse length plus 30% to allow for width of planting and extra angles.
- For maintenance purposes, fence life is assumed at 30 years.
- All fencing is able to be located outside of the floodplain, and will be eight wire post and batten.
- Watercourse fencing cost inclusive of any earthworks required.
- Total fencing cost is plus 10% to allow for any extra contingencies.
- Watercourse crossings required between paddocks that will be isolated by new fencing.
- 3 metre setback on both sides of both stream types, with an average watercourse width of 0.5m and planting spacing of 1 plant/square metre.
- Best efforts have been made to find actual costs, however some assumptions are made on expendable items.

### Watercourse Lengths

	Permanent Watercourse Length (m)	Fence Length (m)	Intermittent Watercourse Length (m)	Fence Length (m)
Fence One Side	5582	6419	820	943
Fence Both Sides	3830	8809	3441	7914
<b><u>Total Length</u></b>	<b><u>9412</u></b>	<b><u>15228</u></b>	<b><u>4261</u></b>	<b><u>8857</u></b>

**Total fencing required – 24,086m**

### Fencing Costs – 8 wire post and batten

\$20/m inclusive of materials, labour, transport and earthworks

24,086m @ \$20/m = \$481,720

Plus 10% contingencies = **\$529,892 plus GST**

Maintenance = **\$17,663/year plus GST**

### Fencing Costs – 3 wire electric

\$14/m inclusive of materials, labour, transport and earthworks

24,086m @ \$14/m = \$337,204

Plus 10% contingencies = **\$370,924 plus GST**

### Watercourse Crossings

12 new minor crossings and 1 major crossing required

### Minor Crossing

- Will meet permitted activity requirements – no resource consents required

Farm boss culvert pipe 500mm x 6m = \$1,342

Excavator Hire 5 hours/crossing @ \$100/hour = \$500

Labour Hire 5 hours/crossing @ \$30/hour = \$150

Rip rap and other metal 5m @\$45/m = \$225

Gates (2 for each crossing) including labour = \$300

12 crossings @ \$2517/crossing = \$30,204

### Major Crossing

- Will require piped ford, with 5 culvert pipes and concrete overlay
- Will not meet permitted activity requirements, therefore resource consent required
- Assume fencing and planting of watercourses will meet offset mitigation requirements
- Engineering design and approval will be required – assume it will be granted

Resource Consent and Engineering Approval Costs – to prepare application and process = \$10,000+

5 Farm boss culvert pipe 500m x 6m = \$6,710

Excavator Hire 20 hours @\$100/hour = \$2,000

Labour Hire 20 hours @ \$30/hour = \$600

Rip rap and other metal 25m @ \$45/m = \$1,125

Gates including labour = \$300

Concrete for crossing = \$500

Timber = \$500

Major crossing = \$21,735

Total Costs = **\$51,939 plus GST**

### **Alternative Water Supply**

47 troughs @\$650/trough = \$30,550

47 50mm alkathene pipe@ 150m/paddock @ \$590/100m = \$41,595

Fittings = \$500

Bore and pump installation = \$15,000

2 Water Tanks @ \$2700 = \$5,400

Labour 10 hours/trough @\$30/hour = \$14,100

Total Costs = **\$107,145 plus GST**

### **Planting**

Watercourse length = 13,973m

Planting width = 6m (3m each side)

Total planting area = 83,838m<sup>2</sup>

Total plants required = 83,838

83,838 plant supply @ \$1.90/plant = \$159,292

83,838 planting @ \$1.50/plant = \$125,757

Initial weed control 8.38ha @ \$900/ha = \$7,545

Release Spray 83,838 plants @ \$0.20/plant = \$16,768

Total Costs = **\$309,362 plus GST**

**PROJECT TOTAL COSTS = \$998,338 plus GST**

*Disclaimer: While all attempts have been made in providing as accurate information as possible, some of the assumptions made may impact on the overall accuracy of the estimates. The nature of the works estimated on can be affected by many on the ground influences that are unknown at the time of estimation, and this estimate should be used for guidance only.*



