

## LOWER WAIRARAPA VALLEY DEVELOPMENT SCHEME

## SCHEDULE OF FLOOD DAMAGE FROM JULY 2006 FLOOD EVENT

| Site   | Damage   | Repair Work  | Cost (\$)      | Priority |
|--|--|--|----------------|----------|
| <b>RUAMAHANGA RIVER</b>                              |  |  |                |          |
| Ruamahanga River – Shelton peninsular U/S bend       | Erosion of bank & damage to bank at the d/stream end of upper bend         | Shift Gravel, rock groynes, & willow clumps  | 86,000         | Medium   |
| Ruamahanga River – Shelton peninsular D/S of bend    | Erosion of bank & damage to bank and trees at the d/stream end of the bend | Shift Gravel & place willow clumps   | 43,000         | Medium   |
| Ruamahanga River – Phil Guscott                      | Erosion of bank & damage to bank protection work, & threat to stopbank     | Shift Gravel, rock groynes, stopbank, & willow clumps<br><b>(Design to be finalised)</b> | <b>332,000</b> | High     |
| Ruamahanga River – Blundell                          | Erosion of bank & damage to bank and previous work                         | Shift Gravel & place willow clumps   | 26,000         | Medium   |
| Ruamahanga River – Richard Osborn                    | Further erosion of bank & threat to stopbank                               | Rock boulders to prevent damage to stopbank  | 16,500         | Medium   |
| Ruamahanga River – Hikunui Sill – bank slumping      | Slumping of bank in front of the sill                                      | Rock boulders to prevent damage to bank  | 14,000         | High     |
| Ruamahanga River – Emergency repairs to Hikunui Sill | Erosion of sill bank   | Emergency repairs to sill with sand bags & river boulders                                | 13,000         | High     |
| Ruamahanga River – Hikunui Sill – Permanent repairs  | Erosion of bank at the sill  | Replace 300m of earth sill bank with a concrete sill<br><b>(Design to be finalised)</b>  | <b>300,000</b> | High     |
| Ruamahanga River – Old Dairy Factory at Pukio        | Further bank slumping  | Boulders for the slumped area  | 22,500         | High     |
| Ruamahanga River – Butchers                          | Slumping of previous repaired bank   | Repair with silt & gravel mixture  | 25,000         | High     |
| Ruamahanga River – D/S of Devenport                  | Erosion of bank & threat to stopbank                                       | Rock boulders to prevent damage to stopbank  | 24,000         | High     |

|  |  |  |                    |        |
|--|--|--|--------------------|--------|
|  |  |  |                    |        |
| Ruamahanga River – Tobin                       | Erosion of bank & threat to stopbank             | Rock boulders to prevent damage to stopbank  | 74,000             | High   |
| Ruamahanga River – Bill Herrick                | Bank slumping                                    | Rock boulders to prevent damage to stopbank  | 24,000             | Medium |
| Ruamahanga River – Diversion                   | Bank slumping at several locations on right bank | Repairs to stopbank  | 35,000             | Medium |
|  |  | <b>Sub-Total</b>   | <b>\$1,035,000</b> |        |
| <b>FLOODWAY</b>                                |  |  |                    |        |
| Oporua left-bank downstream end of “duckbill”  | Erosion of sill bank and land behind             | Emergency repairs - Plug with boulders, place filter cloth and backfill a 30m strip with silt. | 45,000             | High   |
| Oporua left-bank downstream end of “duckbill”  | Erosion of sill bank and land behind             | Permanent Repairs – Place Reno mattress and gabion basket.                                     | 70,000             | High   |
| Oporua left-bank downstream end of “duckbill”  | Erosion of sill bank and land behind             | Convert the eroded area to a wetland   | 20,000             | Medium |
| Oporua right-bank downstream end of “duckbill” | Large holes in the sill bank                     | Fill the holes with gravel & silt mixture, place reinforced grass matt & place silt            | 8,000              | High   |
| Oporua right-bank downstream of spillway       | Bank slumping over a long length                 | Batter bank, plant willows & re-fence  | 8,000              | Medium |
| Simond’s drop structure                        | Erosion on downstream of the structure           | Place river boulders   | 30,000             | High   |
|  |  | <b>Sub-Total</b>   | <b>181,000</b>     |        |
| <b>EASTERN TRIBUTARIES</b>                     |  |  |                    |        |
| Taunui   | Bank erosion                                     | Bank repairs   | 7,000              | Medium |
| Taunui   | Damage to stopbank                               | Repairs to stopbank with river boulders  | 14,000             | Medium |
| Turanganui                                     | Bank erosion & scattered debris along river bed  | Bank repairs & debris removal  | 14,000             | Medium |
| Turanganui                                     | Damage to stopbank at several locations          | Repairs to stopbank  | 8,000              | High   |
| Dry River                                      | Bank erosion at several locations                | Bank repairs   | 27,000             | Medium |

|                   |                                   |                     |                  |        |
|-------------------|-----------------------------------|---------------------|------------------|--------|
|                   |                                   |                     |                  |        |
| Huangularua River | Bank erosion at several locations | Bank repairs        | 11,000           | Medium |
| Huangularua River | Erosion at Biss's stopbank        | Repairs to stopbank | 16,000           | High   |
|                   |                                   | <b>Sub-Total</b>    | <b>97,000</b>    |        |
|                   |                                   |                     |                  |        |
|                   |                                   | <b>Total</b>        | <b>1,313,000</b> |        |

### **Savings from Annual Maintenance Programme**

|   |                   |              |
|---|-------------------|--------------|
| • | Sheltons U/S      | 16,000       |
| • | Sheltons D/S      | 16,000       |
| • | Guscott           | 25,000       |
| • | Oporua            | 20,000       |
| • | Taunui River      | 7,000        |
| • | Turanganui River  | 8,000        |
| • | Dry River         | 5,000        |
| • | Huangularua River | <u>3,000</u> |
|   | Total             | 100,000      |

### **SUMMARY**

|   |             |
|---|-------------|
| Total flood damage cost                         | \$1,313,000 |
| Savings from Annual Maintenance Programme       | \$ 100,000  |
| Therefore total funds required                  | \$1,213,000 |
| Contribution from the Scheme Reserve Fund       | \$ 606,500  |
| Contribution from Flood Damage Contingency Fund | \$ 606,500  |

Total cost of flood damage work is \$1,213,000 after allowing a saving of \$100,000 from the annual maintenance budget. The two repair items at Guscott's and at Hikunui Sill need further investigation and design to finalise the work. Therefore funds for these two items would be drawn at a later stage. The funding required now is \$606,500.