

Tabled at Assets/Infrastructure Committee
 On 17 March 2016



REPORT

SUBJECT: Emergency Works Update – Roading Structures – March 2016
TO: RDC Assets and Infrastructure Committee
FROM: Hamish Waugh, Jim Mestynek
DATE: 17 March 2016
FILE: 6-RT-5-18

1 Purpose of the Report

- 1.1 To update the Committee on the scope, scale, and progress of major Roading works generated by the June 2015 storm event.

2 Executive Summary

- 2.1 The storm event of June 2015 caused wide spread damage to the southwest of the Lower North Island region. The restoration costs have been estimated at \$30m for NZTA, \$25m for Wanganui, \$12m for Rangitikei, and \$6m for Manawatu. This has strained local engineering and physical construction resources, resulting in delays with designs and construction. Furthermore, the current high demand for skilled engineers and contractors has tended to raise the cost of the works in accordance with expected market forces.

3 Background

3.1 Major Damage Sites

- Bridge Washouts (2 nr)
- Roadside Dropouts (123 sites)

3.2 Progress to date

| Activity | % complete | Total Estimate | Forecasted Spend 2015-16 | Forecasted Spend 2016-17 |
|----------------------------------------------------|------------|----------------|--------------------------|--------------------------|
| Initial Response (flooding, drainage, slips, etc.) | 100% | \$2,316,900 | \$2,316,900 | \$0 |
| Low Tech Dropout Repairs (82 nr) | 28% | \$3,212,503 | \$1,599,640 | \$1,612,863 |

| Activity | % complete | Total Estimate | Forecasted Spend 2015-16 | Forecasted Spend 2016-17 |
|---------------------------------------|------------|---------------------|--------------------------|--------------------------|
| Engineered Retaining Walls (41 nr) | 39% | \$4,024,615 | \$2,537,963 | \$1,486,652 |
| Porewa Bridge | 100% | \$226,491 | \$226,491 | \$0 |
| Rata Bridge | 40% | \$886,286 | \$709,029 | \$177,257 |
| Staff Time | | \$500,000 | \$375,000 | \$125,000 |
| Subtotal | | \$11,166,794 | \$7,765,023 | \$3,401,772 |
| Contingency for jobs not yet designed | | \$1,620,570 | \$1,126,891 | \$493,679 |
| Total | | \$12,787,365 | \$8,891,914 | \$3,895,451 |

4 Discussion and Options considered

- 4.1 **The Challenge** – The overall challenge to Council has been to accomplish a large volume of work in a short period of time, while complying with the principles of the Council’s Procurement Policy. These principles include: thoughtful management, fairness, reasonableness, balanced decision making, and best value for money.
- 4.2 **Initial Response** – During and immediately following the event, the Maintenance Contractor carried out the initial response, which included clearing overslips, unblocking drains and culverts, repairing flood-damaged pavements and surfacings, etc.
- 4.3 **Simple Dropouts** – Following that the “simpler” dropout repairs were assigned directly to the Maintenance Contractor, with no consultant involvement.
- 4.4 **Professional Services**: Many sites have required engineering design. In order to get the design work moving, we engaged six consultants to complete ‘bundles’ of work which match their known skills and experience. The intention has been to spread the work around as reasonably as practical, while prudently managing the cost of services.

The following table summarises the work assigned to the various design engineers.

| Professional Services for EW Event June 2015 | | | | |
|----------------------------------------------|------------|------|--------------------------------------------|----------------|
| RDC | | | | |
| Asset Type | Consultant | Site | Selection Rationale for Direct Appointment | Approved Value |

| | | | | |
|----------------------|----------------|-----------------------------------|----------------------------------------------------------------------------------------------|------------------|
| Bridge | BPL Group | Rata Bridge Replacement | past experience designing bridge repairs in the district | \$65,200 |
| Bridge | GeoCivil | Rata Bridge Replacement (geotech) | capable and available | \$15,775 |
| Bridge Total | | | | \$80,975 |
| Dropout | GHD | 39 dropout sites RDC | longstanding involvement in retaining walls since 1999; sharp unit rate | \$276,153 |
| Dropout | GHD | programme management RDC | Having designed all walls, GHD was chosen to assist in management of contractors' workflow. | \$25,125 |
| Dropout | Opus | Mt Curl Rd RP3108 | competent geotech for complicated soils problems | \$49,500 |
| Dropout | Opus | Okirae Rd RP1709 | competent geotech for complicated soils problems | \$41,350 |
| Dropout | MWH | 7 dropout sites | quotation too expensive | declined |
| Dropout | Downer | given design & construct option | contractor declined to quote | \$0 |
| Dropout | Higgins | given design & construct option | contractor declined to quote | \$0 |
| Dropout | A & C Surveys | legal surveys for retreat sites | longstanding involvement in retreats and road realignments in our districts; sharp unit rate | \$18,000 |
| Dropout | Property Group | land transfer legalisation | longstanding involvement in retreats and road realignments in our districts; sharp unit rate | \$18,000 |
| Dropout Total | | | | \$428,128 |
| Grand Total | | | | \$509,103 |

4.5 **Physical Works** the physical works were procured as follows;

- 12 Oct 5 local and experienced suppliers were invited to register Expressions of Interest (EOIs). The suppliers' EOI submission consisted of their companies attributes and unit rates for typical wall components priced on an indicative Schedule of Quantities (SoQ)
- 30 Oct Received EOIs
- 26 Nov EOIs were assessed and suppliers ranked according to price, availability of staff, proximity of supplier's depot to dropout sites.

- 1 Dec As structural designs were completed packages of work were awarded directly to individual pre-selected suppliers, based on the following:
 - site-specific design drawings and SoQ's
 - bundles of work (less than \$200k);
 - bundles grouped geographically;
 - option to award additional work to well-performing suppliers;
 - limit total value of work to approximately \$1m for any given supplier.

Suppliers have not necessarily been selected on the basis of their submitted unit rates alone. Consideration was given also to attributes and available resourcing. However, the submitted unit rates provided the basis for negotiation and award of further work.

Retaining Wall Bundles completed and underway as of 12 March 2016 :

| Physical Works for Dropout Repairs | | | | | |
|-------------------------------------------|-------------------|--------------|------------------------|-------------------|-----------------|
| MDC | | | RDC | | |
| Bundle | Contractor | Value | Bundle | Contractor | Value |
| Simple dropout repairs | Higgins | \$322,208 | Simple dropout repairs | Higgins | \$1,890,680 |
| 1 | McIntyre | \$101,840 | 1 | Higgins | \$182,317 |
| 2 | Higgins | \$165,501 | 2 | FH | \$241,954 |
| 3 | McIntyre | \$111,368 | 3 | Stringfellow | \$161,093 |
| 4 | McIntyre | \$182,197 | 4 | Higgins | \$249,091 |
| 5 | FH | \$188,146 | 5 | Not awarded | ** \$204,800 |
| 6 | Not awarded | ** \$120,000 | 6 | Not awarded | ** \$220,000 |
| 7 | Not awarded | ** \$129,983 | 7 | Not awarded | ** \$155,000 |
| 8 | Not awarded | ** \$215,000 | 8 | Not awarded | ** \$211,247 |
| Junction Rd | Not awarded | ** \$220,000 | 9 | Not awarded | ** \$108,000 |
| | | | 10 | Not awarded | ** \$232,800 |
| | | | Mt Curl Rd | Not awarded | ** \$249,029 |
| | | | Okirae Rd | Not awarded | ** \$245,752 |
| | | | remaining | Not awarded | ** \$914,300 |

** indicates Engineer's Estimate

| Programme for Bridge Replacements | | | |
|-----------------------------------|-------------------------------------------------|--------------------------------|------------------------------------------------------------------------------|
| RDC | | | |
| Bridge | Task | Expected Time Frame | Expected Value |
| Porewa Bridge 5 | Reinstate true left approach using sheet piling | Completed Aug 2015 | Total \$226,491 |
| Rata Bridge 82 | Design Tendering Construction | Complete Mar-Apr Jun-Jul | Bailey Br \$157,000 PS \$92,000 PW \$550,000 Total \$799,000 |

PS = Professional Services

PW = Physical Works

- 4.6 **Unexpected Delays** – While the Infrastructure Shared Services staff have been working intensely at getting the required reinstatement work under way, in the course of the months since the event, we have experienced some disappointing delays in the work. We now recognise that these delays have been due to the widespread nature of the damage. We in the Manawatu are competing for the same engineering and construction resources that are simultaneously focused on \$30m worth of damage on State Highways, \$25m worth of damage in Wanganui, and \$6m worth of damage in the Manawatu. Indeed, in the course of doing our work, our consultants have been accessing their own in-house resources from as far away as Auckland and Invercargill. In brief, engineering and construction resources are quite simply stretched to the limit. We will continue to do the best we can.

5 Operational Implications

Funding – The estimate for the flood recovery is \$12.8m. This estimate has been approved by NZTA.

6 Recommendation

That the report 'Emergency Works Update – Roothing Structures – March 2016' be received.

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