

COUNCIL 17. 5. 2012

12. INFRASTRUCTURE REBUILD MONTHLY REPORT



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PURPOSE OF REPORT

1. To provide the Council with a monthly update on the infrastructure rebuild.

EXECUTIVE SUMMARY

2. At its April 2011 meeting, the Council gave approval for an alliance to be formed to deliver the reinstatement of the City's damaged infrastructure. It was also agreed that the Chief Executive would report regularly to the Council on progress with regard to the reinstatement work.
3. The report (**Attachment 1**) is the eighth of what will be a regular monthly report that is provided to both the Council and the Canterbury Earthquake Recovery Authority (CERA).

STAFF RECOMMENDATION

It is recommended that the Council receive the Infrastructure Rebuild Monthly Report for May 2012.

Stronger Christchurch

Infrastructure Rebuild

INFRASTRUCTURE REBUILD PROGRESS REPORT MAY 2012

Project funded by

Christchurch
City Council 

New Zealand Government

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1. INTRODUCTION

The purpose of this report is to provide Council, CERA and NZTA an update on the horizontal infrastructure rebuild. For this month, and going forward, progress on all horizontal infrastructure rebuild work is reported. This includes the work activity being delivered by SCIRT (section 5) and also work being delivered under business as usual (BAU) mechanisms (section 6).

2. ACTIVITIES FOR THE MONTH

Rebuild activity continues to increase, with SCIRT focusing on increasing the amount of work passing through the design stages in order to feed the construction teams. The additional design resources are now embedded within the integrated services team which now totals 270 people over at Magdala Place. The ramp up with regard to construction activities is also gaining momentum. The challenge for the next few months is to maintain and build on this momentum.

With the increase in construction activities there is an operational focus on traffic management. All agencies are working together to review existing processes to ensure that we can achieve the best outcome for the people of Christchurch, as the number of construction sites increase over the coming months. A number of new initiatives are in the process of being investigated by CCC traffic management team.

There continues to be good feedback with regard to community engagement and external communication with regard to rebuild activities. A joint client communications protocol to ensure there is continued integration and interaction between the three client organisations is being developed. This is particularly important with the creation of the Christchurch Central Development Unit (CCDU) and the need to ensure horizontal infrastructure rebuild, within the CBD, is aligned with the CCDU. External roll out of the SCIRT project prioritisation framework and associated schedule of works is still targeted for June.

Work is continuing with regard to ensuring the necessary funding appropriations are in place for the next financial year. There is also a focus on ensuring projects that have been completed to date are closed out by this financial year end.

Overall, rebuild activities are continuing to ramp up and gain momentum with positive outcomes. There is an incredibly positive 'can do' culture developing within SCIRT that is aligned around the common purpose of 'Creating resilient infrastructure that gives people security and confidence in the future of Christchurch'.

3. COMMUNICATION AND COMMUNITY ENGAGEMENT

SCIRT is preparing for the forward schedule of works to be finalised in June so that the community can be informed of the details. The plan is to release the details to the public and media then follow up with more detailed information for local communities. Prior to this, SCIRT and Council staff will brief Councillors on the schedule and they will also carry out a series of visits to each of the Community Boards to talk about planned work in their wards. There is expected to be significant public interest in the schedule of work, as residents look to find out when work will be happening in their area.

SCIRT received some positive media coverage in April, with TV One's Close Up picking-up on the traffic safety campaign and running a piece promoting safe driving around road works. Media releases on work on the Lyttelton inner-harbour roads and on traffic safety and journey planning were also picked-up by local media.

SCIRT received a certificate of recognition from the Race Relations Commissioner, Joris De Bres for efforts to provide information about the rebuild in languages other than English.

During April, SCIRT delivered 75 start work notices for different work projects around the city to approximately 14,881 houses. Three e-newsletters were sent and advertising in The Press and local community papers helped publicise SCIRT work. SCIRT also had a display stand at the AMI Stadium open day on 28 April.

The six monthly independent telephone market research undertaken throughout the city showed an increase in satisfaction with communication, from 62 per cent in October 2011 to 75 per cent in March 2012.

4. FINANCIALS

The financial reporting structure will be refined overtime. However, below is a summary of the actual costs to date against the Annual Plan and a summary of actual costs to date against the overall infrastructure rebuild estimate.

4.1 2011/12 Annual Plan - Actual year to date cost against budget

The 2011/12 Annual Plan includes a budget for the infrastructure rebuild of \$283.5M, Auckland City Council Parks Donation of \$931k and Council roading approved projects of \$1,924k.

Table 1.0 below presents the actual costs for the year to date of the infrastructure rebuild for each activity against the 2011/12 Annual Plan budget. These costs are up to the end of April 2012.

It includes Work In Progress and contractor set up costs that are still to be allocated across activities. For the purpose of reporting this has been split into Non Physical Works and Physical Work components.

The Non Physical Works component includes costs associated with asset investigation and assessment, project definition and programme set up costs and overhead. These will be apportioned across the whole programme of the rebuild.

The Physical Works component includes costs associated with the concept and detailed design and physical construction of over 150 projects that are in the process of being completed and handed over, at which point they will move into the relevant activity.

As at the end of April 2012 the spend for 2011/12 is forecast to be \$3.3m over the annual budget. This is due mainly to the set up cost landing at the beginning of the project but budgeted for evenly over the programme. Also there is currently no budget against EQ Parking, however the project has been approved by Council. The Restart car park was an unplanned initiative to support the restart programme in Cashel Mall.

Table 1.0 Actual Year to Date Cost Against 2011/12 Annual Plan Budget

FINANCE AS AT 31 APRIL 2012					
Activity	Description	2011/12 Approved Budget	Actual Cost YTD	Forecast Total Spend This Year	Year End Variance
Parks & Open Spaces	Greenspace	\$ 6,500,000	\$ 1,530,620	\$ -	-
Refuse Minimisation & Disposal	Solid Waste	\$ 6,900,000	\$ 1,158,240	\$ -	-
Road Network	Roading	\$ 102,700,000	\$ 223,613	\$ -	-
Wastewater Collection		\$ 67,100,000	\$ 3,976,225	\$ -	-
Wastewater Treatment & Disposal	WW Treatment Plant	\$ 69,300,000	\$ 8,306,741	\$ -	-
Water Supply	Water Supply	\$ 14,200,000	\$ 1,512,649	\$ -	-
Waterways & Land Drainage	Stormwater	\$ 16,800,000	\$ 16,916,205	\$ -	-
Works in Progress and set up costs					
Non Physical works		\$ -	\$ 83,076,269	\$ -	-
Physical works		\$ -	\$ 107,835,365	\$ -	-
Total Work in Progress and set up costs		\$ -	\$ 190,911,635	\$ -	\$ -
TOTAL INFRASTRUCTURE REBUILD PROGRAMME		\$ 283,500,000	\$ 224,535,929	\$ 285,470,168	-\$ 1,970,168
Other					
Auckland CC Parks Donation	Greenspace	\$ 931,800	\$ 647,767	\$ 1,102,767	-\$ 170,967
Road Network	EQ Public Transport	\$ 827,400	\$ 934,726	\$ 934,726	-\$ 107,326
	EQ Parking	\$ -	\$ 1,096,205	\$ 1,096,205	-\$ 1,096,205
Total Other		\$ 1,759,200	\$ 2,678,699	\$ 3,133,699	-\$ 1,374,499
GRAND TOTAL		\$ 285,259,200	\$ 227,214,628	\$ 288,603,867	-\$ 3,344,667

4.2 Overall Infrastructure Rebuild Estimate - Actual life to date costs against estimate.

The current estimate for the overall rebuild of the City's horizontal infrastructure is \$2.015 billion (excluding contingency and escalation).

Table 2.0 includes the overall life to date costs against the current estimate for the rebuild of the City's infrastructure plus three projects not included in the current cost estimate.

It also includes Work In Progress and contractor set up costs that are still to be allocated across activities. For the purpose of reporting this has been split into Non Physical Works and Physical Works components.

The Non Physical Works component includes costs associated with asset investigation and assessment, project definition and programme set up costs and overhead. These will be apportioned across the whole programme of the rebuild.

The Physical Works component includes costs associated with the concept and detailed design and physical construction of over 150 projects that are in the process of being completed and handed over, at which point they will move into the relevant activity.

It is anticipated that a revised programme estimate will be completed by SCIRT in Q4 of 2012 to help inform the long term planning process.

Table 2.0 Overall Life to Date Costs Against Current Infrastructure Rebuild Estimate

Activity	Description	Current Estimate of Cost	Actual Cost 2010/11	Actual Cost 2011/12	Total Actual Cost	Forecast Total Spend	Programme Variance
Parks & Open Spaces	Greenspace	\$ 56,952,381	\$ 493,384	\$ 1,530,620	\$ 2,024,005	\$ 56,952,381	\$ -
Refuse Minimisation & Disposal	Solid Waste	\$ 8,761,905	\$ 2,063,215	\$ 1,158,240	\$ 3,221,455	\$ 8,761,905	\$ -
Road Network	Roading	\$ 892,619,048	\$ 819,488	\$ 223,613	\$ 1,043,101	\$ 892,619,048	\$ -
Wastewater Collection		\$ 714,095,238	\$ 1,484,834	\$ 3,976,225	\$ 5,461,060	\$ 714,095,238	\$ -
Wastewater Treatment & Disposal	WW Treatment Plant	\$ 79,952,381	\$ 4,488,038	\$ 8,306,741	\$ 12,794,779	\$ 79,952,381	\$ -
Water Supply	Water Supply	\$ 152,238,095	\$ 4,105,579	\$ 1,512,649	\$ 5,618,229	\$ 152,238,095	\$ -
Waterways & Land Drainage	Stormwater	\$ 110,619,048	\$ -	\$ 16,916,205	\$ 16,916,205	\$ 110,619,048	\$ -
Works in Progress and set up costs	Non Physical works		\$ 25,004,416	\$ 83,076,269	\$ 108,080,685	\$ -	
	Physical works			\$ 107,835,365	\$ 107,835,365	\$ -	
TOTAL		\$ 2,015,238,095	\$ 38,458,955	\$ 224,535,929	\$ 262,994,884	\$ 2,015,238,095	\$ -
Other							
Auckland CC Parks Donation	Greenspace	\$ 931,800	\$ -	\$ 647,767	\$ 647,767	\$ 1,102,767	\$- 170,967
Road Network	EQ Public Transport	\$ 827,400	\$ -	\$ 934,726	\$ 934,726	\$ 934,726	\$- 107,326
	EQ Parking	\$ -	\$ -	\$ 1,096,205	\$ 1,096,205	\$ 1,096,205	\$- 1,096,205
		\$ 1,759,200	\$ -	\$ 2,678,699	\$ 2,678,699	\$ 3,133,699	-\$ 1,374,499
TOTAL		\$ 2,016,997,295	\$ 38,458,955	\$ 227,214,628	\$ 265,673,583	\$ 2,018,371,794	-\$ 1,374,499

5. SCIRT WORK ACTIVITY –from SCIRT Ops Report

5.1 Achievement Report

The progress report for this month includes an achievement report which outlines progress made by the construction projects against key metrics for each asset type. It is anticipated that this achievement report will be included in each monthly report.

The information collection process and the key metrics are still being developed in conjunction with SCIRT and the three Client organisations and so will be refined over the next few months.

Asset Type	Asset Sub-Type	Unit	Project	Name	Nov	Dec	Jan	Feb	Mar	Apr	Grand Total
Storm Water Reticulation	Drainage	m								26	26
Transport - Roading	Pavement	m2			240	4,560	918	4,396	1,280	572	11,966
	Retaining Walls	%	10424	Sumner Rd Retaining Wall L			3%	30%	5%	0	41%
			10445	Fitzgerald Ave Wall and Roading	33%	17%	20%	11%	29%		110%
			10763	Monks Bay Walkway - Temp Repairs		95%					95%
			10822	McCormacks Bay Reservoir Stage 2 Walls			5%	1%	3%	0	10%
			10821	Huntsbury Reservoir Tank No 2 & demolition				1%			1%
Waste Water Pump Stations	Pump Station	%	10335	PS54 - Catchment		1%					1%
			10361	PS54 Catchment Temp. Solutions			60%	287%	15%		362%
			10523	#N/A		2					2
Waste Water	Gravity	m			443	2,240	1,753	2,980	1,509	1,210	10,135

Asset Type	Asset Sub-Type	Unit	Project	Name	Nov	Dec	Jan	Feb	Mar	Apr	Grand Total
Reticulation											
	Pressure System	m			456	610	535	598	165	54	2,418
	Siphon System	m						32			32
Water Supply Pump & Reservoir Stations	Pump Station	%	10597	Huntsbury Reservoir	20%						20%
	Reservoir	%	10411	Clifton Reservoir 3	30%	4%					34%
			10417	Upper Balmoral Reservoir	5%	17%					22%
			10597	Huntsbury Reservoir	17%	12%					29%
			10607	PM 37		0					0
			10612	McCormacks Bay Reservoir No 2-2	28%	1%					29%
			10821	Huntsbury Reservoir Tank No 2 & demolition				10%	4%	0	15%
			10680	Clifton No. 4 Reservoir						0	0
Water Supply Reticulation	Mains	m			3,284	1,334	563	266	630	52	6,129
	Pipes	m			2,063	675	64	102	450		3,354

5.2 Number of Ongoing SCIRT Projects

The following table is a summary of the programme pipeline as at 30th April 2012. It shows how many projects and the total value at each stage of the project lifecycle.

Project Lifecycle Stage	April Estimate	May Estimate	April Estimated Construction Cost	May Estimated Construction Cost
Investigation (Asset Assessment)	2	6	\$2,625,000	\$0.00
Concept Design	67	69	\$430,847,516	\$447,900,000
Detailed Design	88	92	\$228,075,779	\$256,600,000
Construction	66	65	\$80,750,306	\$115,500,000
Handover	152	169	\$54,854,566	\$65,500,000
On Hold	0	95	\$0.00	\$81,000,000
Grand Total	375	496	\$797,153,167	\$966,500,000

In the table above, the previous monthly report totals have also been included to show the increase in activity.

5.3 Ongoing Projects By Ward

5.3.1 Introduction

The progress report this month includes a summary of all SCIRT projects that are currently either in detailed design or construction separated on a Ward basis. A separate table has been included specifically for projects either in detailed design or construction within the central city (within the four avenues). This has been created to assist in the coordination with the Central City Recovery Plan and vertical infrastructure rebuild going forward.

For projects in construction – estimated construction cost (Target Outturn Cost) has been included together with actual Life to Date Costs as at the end of April 2012.

5.3.2 Burwood / Pegasus

Burwood / Pegasus in Detailed Design		
Reference	Project	Project Description
10415	Pump Station PS63 (PS)	New PS63 at Beach Road end and approximately 4Km long 700 μ pressure main, to replace PS63.
10429	Estuary Rd Carriageway, PS37 to Bridge Street Catchment (WS,SW,RD)	Repairs to roads, stormwater and water in Estuary Road between Bridge Street and Beatty Street.
10430	PS28 - Catchment	PS 28 catchment services residential and industrial land loosely bounded by Pages Rd, Cuffs Rd, Wainoni Rd and Shortland St in the suburb of Wainoni. Other pockets of land are also serviced including 650 m of Wainoni Rd north of Shortland St and 240 m of Breezes Rd, an area west of Wainoni Rd including a portion of Avonside Dr, Newport St, Tenby Pl and Emlyn Pl, 350 m of Wainoni Rd south of Cuffs Rd and an area south of Pages Rd including Price Pl, 180 m of Kearneys Rd and Mecca Pl. The seismic events caused liquefaction and land settlement throughout the catchment. The pump station is still operational and in a serviceable state. The majority of the network suffered either loss of grade, cracks and breakages or a combination of the two. Therefore a significant proportion, if not all, of the network will need to be replaced.
10553	Avondale Road (Bridge Works)	Retrofit repair to bridge involving new abutments, piles, wingwalls and associated road approaches and services.
10585	PS25 - Catchment	Wastewater design for Pumping station 25 Catchment. This area includes sections of Banks Ave and Achillies Street that will be diverted into PS 108. This area also includes the Strathmore Gardens area. The majority of the catchment requires replacement of WW lines.
10620	Pages Rd Bridge	Repair to Pages Rd Bridge, including road network connecting to roundabout on North end of bridge.
10694	PS36 Renewal (WW)	New PS36 to replace existing PS36. New station capacity approximately 900 L/S. This project covers all design for the project and construction for above ground activities. A related project covers 2M of below ground construction works required.
10724	Bridge St bridge and approaches	Replace damaged bridge abutments and approaches with new structure including roadworks and services reinstatement.

Burwood / Pegasus in Detailed Design		
Reference	Project	Project Description
10786	PS108 Catchment Stormwater, Water Supply and Roading Renewals (SW,WS,RD)	Design for repair (some full reconstruction) of minor to severe earthquake damage to carriageways, kerbs and channels, and footpaths with associated storm water and water supply works in 11 streets situated immediately to the east and west of Gayhurst Rd from McBratneys Rd northwards to Mundys Rd. This work will follow construction of wastewater repairs/replacement.
10796	NZTA Anzac Bridge Repairs	Ground improvements, removal of landward bridge spans, demolish and rebuild abutments, repair piers, approaches and underpasses
10800	PS 108 Phase 2 Waste Water	Detailed Design of remediation works for wastewater catchment 108.
10801	PS108 Phase 2 Roading and Storm Water Renewals (RD,SW,WS)	Design for repair (some full reconstruction) of minor to severe earthquake damage to carriageways, kerbs and channels, and footpaths with associated storm water and water supply works in 10 streets situated immediately to the east and west of Gayhurst Rd - generally south of Strathfield Ave in the west and McBratneys Rd in the east. This work will follow construction of wastewater repairs/replacement.
10802	PS54 Stage 1 - Northern Roading Renewals Incl Breezes Road	Road design for 8 roads in Avondale. New pipe systems are needed in multiple roads requiring asset managers understanding and buy-in. Includes stormwater full dynamic modelling with probable need to restore capacity by optioneering new components (new basin and/or pump upgrading).
10840	PS37 Catchment RD SW WS	Linked to Project 10318 WW for the RD WS and SW elements

Burwood / Pegasus in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10314	Keyes Road Catchment (WW)	Repair and/or reinstatement of wastewater system.	12/03/12	2/10/12	\$4,433,111	\$92,645
10335	PS54 - Catchment	A large waste water catchment of approx 12 streets which all drain to Pump Station 54 in Avondale.	30/05/11	18/07/12	\$10,893,000	\$5,775,223
10349	PS39 - Birchfield Avenue WW EW	Emergency Works at the waste water pumping station in Dallington.	13/10/11	4/05/12	\$ 129,500	\$41,695
10359	PS54 - Niven St (WW)		25/10/11	21/05/12	\$22,100	\$115,901
10363	PS108 Catchment (old PS39 Catchment)	A large waste water catchment of approx 12 streets which all drain to Pump Station 54 in Avondale.	8/11/11	19/10/12	\$5,187,910	\$2,292,241
10421	Estuary Rd Carriageway, PS37 to Bridge Street Catchment (WW)	Estuary Road from Beatty Street to Bridge Street is undergoing the installation of a new deep gravity sewer main. Installation is required as a result of extensive earthquake damage on the existing main, allowing infiltration.	30/09/11	25/05/12	\$2,110,000	1,345,697
10532	Cnr Pages & Cuff - Emergency Repair	A large waste water renewal to a section of gravity pipe in Pages Rd.	30/01/12	15/06/12	\$945,238	\$782,365
10576	PM106 - Woolley	A small simple sewer pressure main being constructed in Woolley St to service a modified sewer catchment in Avondale.	31/01/12	2/07/12	\$124,770	\$489
10577	PS106 - Woolley	Minor new pump station.	11/04/12	20/07/12	\$428,800	\$3,074
10651	Keyes Rd Watermain (WS)	Watermain renewal in Keyes Road between Pratt Street and Hawke Street.	23/04/12	2/07/12	\$168,994	\$10,004

Burwood / Pegasus in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10681	Bower Avenue Watermain and Submains (WS)		24/02/12	18/06/12	\$322,458	\$37,153
10752	Desal plant long term storage		14/11/11	10/05/12	\$ -	\$79,688
10789	Woodham Road Water Supply Pumping Line Renewal	A small watermain replacement in Wainoni.	23/01/12	25/01/13	\$106,585	\$75,575
10859	Minor Works - Private Laterals Keyes Road	Investigation and repair of private laterals to valid EQC claimants. (Pilot project).	27/02/12	10/04/13	\$ -	\$4,422

5.3.3 Fendalton / Waimari

Fendalton / Waimari in Detailed Design		
Reference	Project	Project Description
10595	Wairakei Road (WW)	Replacement of the deep 225 mm sewer main and the construction of new 150 mm sewer rider mains over the deep main. The wastewater works are from Aorangi Street to Idris Road.

Fendalton / Waimari in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10480	R126 Monavale Footbridge	Minor structural repair works	5/03/12	26/06/12	\$27,385	\$1,000
10485	Merivale WW	Approximately 9km of WW gravity system, one new pump station.	19/04/12	20/03/13	\$14,263,822	\$9,515
10575	Papanui Rd - Knowles to May (WW)	The area has been broken into wastewater sub-catchments in order to determine the best catchment wide solution. The seismic events caused some liquefaction and land settlement in parts of the sub- catchment. Much of the network suffered either loss of grade, cracks and breakages or a combination of the two. Therefore a significant proportion, if not all, of the network will need to be repaired or replaced.	2/04/12	31/05/13	\$ 4,795,898	\$143

5.3.4 Central City

The Central City is a metropolitan area and has been set up as a new 'ward' to be reported on separately from the Hagley / Ferrymead ward it sits within. The boundary is the central city, inclusive of the four avenues.

Central City in Detailed Design		
Reference	Project	Project Description
10401	Moorhouse Brick Barrel 01 (SW)	Repair of a failed stormwater Brick Barrel pipe on Moorehouse Ave under the Colombo St over bridge
10464	F106 Antigua St Footbridge	Replacement of existing structure, or incorporate historical elements into major repair works
10482	Triumphal Arch	All works related to the permanent repair work. Project is in CBD and a heritage structure. Current time frame has construction of permanent repairs commencing in June 2012.
10507	PS3	Repair of wastewater reticulation and pump station within the PS3 catchment

Central City in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10445	Fitzgerald Ave Wall and Roothing	The works include the replacement of a failed retaining wall and carriageway. Ground stabilization is also being installed with stone columns 12 meters deep.	7/02/12	9/05/12	\$3,130,000	\$3,283,967
10506	Hagley Syphon	Open trenching through Avon and sewer works in North Hagley Park.	5/04/12	3/07/12	\$395,117	\$59,839
10830	Minor Works - Bridge Minor Works Project Package 01 Roothing	Minor repair to bridges requiring little design input. Project to be led by SCIRT Project Manager and Delivery teams.	5/04/12	21/08/12	\$37,582	\$4,171

5.3.5 Hagley / Ferrymead (*excludes central city)

Hagley / Ferrymead in Detailed Design		
Reference	Project	Project Description
10307	173 Maffey's Road retaining wall	Repair of retaining wall in Maffey's Rd, along with associated buried services
10347	Gayhurst Rd (Bridge Works - EW)	Retrofit repair to bridge involving new abutments, piles, wingwalls and associated road approaches and services.
10428	RW Mt Pleasant Rd Wall #156	Design a replacement retaining wall to support a section of Mt Pleasant Road. The existing wall is constructed from gabion baskets and is not of heritage value
10450	Riley Crescent	Provision of a permanent pressure sewer or enhanced gravity system to replace damaged WW reticulation
10462	Site 228 Rangatira Tce Retaining Wall (RW)	
10498	Woolston South 1	5km WW gravity system and 1 new pump station with associated rising main, and individual pressure pumps for industrial properties; roading repair works with design for 1 road; approximately 350m new WS, and currently unknown extent of SW
10579	PS5 - Catchment (West of river)	Pump Station 5 catchment originally serviced an area either side of the Avon River at the northern end of Linwood Avenue and south eastern edge of lower Richmond. Pump Station 5 was badly affected in the series of earthquakes. A proposal to split the PS5 catchment either side of the river to enable removal of pump station from close proximity of the river has received informal agreement among CCC Asset and technical representatives. This project relates to the reinstatement of sewer services to the portion of the original PS5 catchment to the west of the Avon River. Initial assessment of condition suggests that the entire sewer network requires replacement, due to gross and differential land settlement and consequential adverse impact on sewer grades, in addition to physical damage to the predominantly earthenware piping. Reinstatement options will consider the range of options allowed under the technical standards and will likely require a new pump station or siphon crossing beneath the Avon river.
10582	PS8 - Catchment	Design for repair to severe earthquake damage to wastewater within Pump Station 8 catchment green zone. The green zone is located to the north-west of the Avon River and generally bounded by Flesher Ave to the east and south, Chrystal St to the west and Medway St to the north.

Hagley / Ferrymead in Detailed Design		
Reference	Project	Project Description
10584	PS27 Catchment Area (WW)	Assessment and repairs/relay of wastewater services in the catchment of the old pump station 27 on Avonside Drive.
10634	Main Road (Mt Pleasant - Beachville) Sumner Causeway (RD)	Repairs to main road causeway including replacement of estuary seawall and minor cross culverts and carriageway repairs.
10770	Linwood Ave / Humphrys Dr Retaining Wall Emergency Permanent Repairs (RW)	8m replacement and 8m extension of retaining wall at the City outfall drain to the estuary.
10797	NZTA Heathcote/Opawa Bridge Repairs	Ground improvements, and underpinning and lifting (jacking) of the abutments
10798	NZTA Port Hills Overpass Bridges	Pier column refinement, subject to ground investigation results
10799	NZTA Horotane Overpass Bridges	Propping system between piers, subject to ground investigation results
10836	PS27 Catchment Area (RD,SW,WS)	Roading, Stormwater and Water Supply for a one pass approach for the PS27 Catchment. Linked to Project 10584.
10841	Charleston Catchment RD SW WS	Linked to Project 10472 WW for the RD SW and WS elements
10843	Lower Richmond Catchment RD SW WS	Linked to #10459 for the RD SW and WS elements of the project
10862	Lower Richmond Pump Stations - Avalon and Harvey	Pump Station construction
10863	Charleston Waste Water Pump Station	Pumps Station Construction

Hagley / Ferrymead in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10306	CCC - PM11 Randolph (WW)	3.6km, 1.2m dia WW pressure main	8/05/12	8/04/13	\$12,795,861	\$3,534,482
10317	Heberden Ave Permanent Solution (WW)	New gravity sewer diversion to replace broken sewer down Scarborough Cliffs.	2/04/12	10/07/12	\$256,733	\$173,142
10339	Woodham Road (Temp Repairs)	A large complex repair to a sewer trunk main in Woodham Rd.	12/09/11	23/07/12	\$3,500,000	\$3,925,971
10356	Woodham Rd (PS5 east of river)	The project scope requires replacement of 960m of damaged waste water from Linwood Ave to Ngarimu St. Road refurbishment will follow sewer works. Traffic diversions are required for this work to be completed safely.	14/11/11	27/07/12	\$3,095,185	\$1,801,369
10358	PS57 - McCormacks Bay Rd Sewer Overflow Renewal	A small repair to an important gravity waste water overflow from a pump station in McCormacks Bay.	21/11/11	10/05/12	\$124,548	\$170,231
10361	PS54 Catchment Temp. Solutions	Temporary solutions to the waste water network in the eastern part of the city. This package covers fourteen different areas of work as defined on GIS.	21/11/11	13/06/12	\$ -	\$777,959
10388	Richardson Clarendon Syphon	The extent of this work for this work package is the replacement of the 144 Richardson Terrace / 121	0/01/00	0/01/00	\$473,489	\$17,229
10403	Barbour St Water (WS)	Replacement of water mains in two streets to the south and east of AMI Stadium, Waltham.	20/02/12	30/05/12	\$174,742	\$ -

Hagley / Ferrymead in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10442	PS15 Gould Cres Overflow Structure	The overflow for Pump Station 15 was removed after collapsing in Feb quake. This work is replacing the structure in a new location of Gould Cres.	0/01/00	0/01/00	\$203,962	\$206,194
10459	Lower Richmond-Stanmore to Fitzgerald (WW)	Approximately 5km of WW, gravity system; requiring 2 new pump stations	20/03/12	18/12/12	\$11,833,107	\$2,135,100
10472	Charleston	Approx 2.9km WW enhanced gravity system, 1 new pump station; 0.3km SW; 8600m2 carriageway reconstruction, and 1830m2 localised repairs	3/04/12	28/09/12	\$3,737,683	\$15,278
10481	R223 Heathcote Barrage	Minor make safe works at flood gates on Heathcote River.	5/03/12	11/05/12	\$10,000	\$1,997
10483	Lower Richmond (Southern Section) WS,SW,RD	Full reconstruction of intersection (80m), and localised repairs on remaining streets; 86m of SW replacement	4/08/11	29/06/12	\$316,261	\$6,621
10496	PS13 Tilford	Minor pump station repairs.	25/01/12	30/04/12	\$5,000	\$9,846
10497	PS10 Linwood WW	Minor pump station repairs.	23/01/12	30/04/12	\$20,000	\$12,791
10539	Brittan Street	Renewal of Wastewater services for the full length of Brittan Street from Armagh Street to Woodham Road	19/03/12	6/07/12	\$538,718	\$91,067
10541	PS11 - Randolf		9/02/12	25/05/12	\$4,000	\$7,455
10586	PM107		2/04/12	4/05/12	\$325,825	\$227,431
10629	McCormacks Bay Rd WR mains and submains		4/07/11	2/05/12	\$1,234,018	\$1,979,018
10680	Clifton No. 4 Reservoir	Repair and retrofit of reservoir.	22/02/12	2/08/12	\$437,673	\$43,973
10716	PM 34 Sumner - Replacement		15/02/12	24/07/12	\$1,300,000	\$323,578

Hagley / Ferrymead in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10792	Truro Street Emergency Waste Water Sewer Renewal (Van Asch School)	Repair of wastewater pipeline through Van Ash School Sumner	10/01/12	25/06/12	\$264,929	\$33,505
10864	Woodham Road (SW,RD,WS)	Storm water and water supply elements linked to project 10356 WW & RD	3/04/12	28/09/12	\$441,840	\$49,530

5.3.6 Lyttelton / Mt Herbert

Lyttelton / Mt Herbert in Detailed Design		
Reference	Project	Project Description
10399	RW Package 07 - Lyttelton Stone	Design three replacement retaining walls on London Street, St Davids Street and Ticehurst Road, Lyttelton. The walls are up to 4m high and are of high heritage value.
10511	RW Package 06 - Selwyn and Ross	Design five retaining walls on Selwyn Road and Ross Terrace, Lyttelton. The walls range in height from 1.5m to 3m, and are of high heritage value.
10818	NZTA - Norwich & Gladstone Quay State Highway Repair (RD, WW, SW, WS)	Repairs to state highway adjacent to the Port of Lyttelton.

Lyttelton / Mt Herbert in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10394	RW Package 05 - Canterbury Stone Walls	Project to design three replacement retaining walls on Canterbury Street and one wall on Ripon Street, Lyttelton. The walls are up to 4.5m high and are of high heritage value.	23/04/12	17/12/12	\$1,482,372	\$5,113
10424	Sumner Rd Retaining Wall L	Stage one of new 450m long modular block retaining wall.	27/02/12	8/10/12	\$1,642,570	\$453,682
10475	Site 079 Coleridge/Dublin St Ret. Walls	200m replacement retaining wall and road reinstatement in Lyttelton	5/04/12	8/02/13	\$1,607,135	\$3,438
10636	Priority Roads - Governors Bay Road Rebuild	Make safe, Road patching job along Governors Bay Road	7/03/12	18/05/12	\$182,633	\$100,437

5.3.7 Riccarton / Wigram

Riccarton / Wigram in Detailed Design		
Reference	Project	Project Description
	*No projects in Detailed Design for this ward.	

Riccarton / Wigram in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10309	Halswell Minor Roding Works - All Areas	This project covers a range of emergency works on roading in Halswell area.	16/01/12	30/04/12	\$547,000	\$285,318

5.3.8 Shirley / Papanui

Shirley / Papanui in Detailed Design		
Reference	Project	Project Description
10534	Innes & Knowles - subcatchment	The local wastewater reticulation on Innes Rd and Knowles St between Philpotts Rd and Bretts Rd suffered earthquake induced damage during the recent seismic events. Some liquefaction and land settlement was recorded in the area. Investigations continue however much of the network is made up of Earthenware pipe laid during the 1920's and 1930's. This material has not performed well in other areas therefore it is anticipated some form of repair or replacement will be required for the majority of the network.
10814	PS7 Catchment Phase 3 Waste Water Renewal	Wastewater network remediation in the Pump Station 7 catchment which is situated in Shirley, centred upon Stapletons Road and Shirley Road which bisect the catchment. (Area 3 of 4, north western quarter of catchment)
10816	PS7 Catchment Phase 4 Waste Water Renewals	Wastewater network remediation in the Pump Station 7 catchment which is situated in Shirley, centred upon Stapletons Road and Shirley Road which bisect the catchment. (Area 4 of 4, central/western quarter of catchment)
10852	Minor Works - Casebrook Block	Minor footpath, K&C and pavement repairs
10856	Minor Works - Northwood Block	Footpath, K&C and pavement repairs.

Shirley / Papanui in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10313	PM6 - Harrison St	Renewal of 6 inch AC pressure main with new PE pressure main.	11/04/12	2/05/12	\$131,117	\$450
10344	Edgware Road - Emergency Works	A large complex repair to a sewer trunk main in Edgware Rd.	19/09/11	6/07/12	\$1,734,794	\$1,209,296
10535	Rutland Rd - subcatchment	Wastewater repair along a single street east of Papanui. This project area is lightly to be revised.	20/02/12	26/09/12	\$1,556,699	\$1,483
10536	Edgware Rd - WW	This contract is for the supply and installation of approximately 1430m of 150 mm diameter PVC-U to replace the existing wastewater line along Edgware Road. The works include supply and installation of new manholes and wastewater pipeline and connection to laterals from adjacent residential properties. The works include any temporary measures required to provide continued operation of the gravity system during construction.	5/03/12	28/08/12	\$1,770,383	\$233,574
10805	Madras Street Road, Storm Water & Water Supply Repairs	Design for repair of minor/moderate earthquake damage to carriageway, kerb and channel, and footpaths in Madras and Forfar Streets between Edgware Rd and Warrington St. Carriageway work consists of isolated dig out repairs and a surface rip and remake. This work will follow construction of wastewater repairs/replacement which has just commenced.	27/02/12	20/06/12	\$197,367	\$73,428

5.3.9 Spreydon / Heathcote

Spreydon / Heathcote in Detailed Design		
Reference	Project	Project Description
10310	Milton St / Frankleigh St Arterial Road Repairs	Repair of road and all buried services along Milton and Frankleigh Streets, including the section of Lyttelton either side of the intersection
10398	Summerfield Package 01 (WW,SW,RD,WS)	Repair and reconstruction of all assets within a small catchment block.
10407	St Martins Package 02	Repair of road and all buried services within the St Martins loop, north of Centaurus Rd.
10793	CCC - Pressure Main 105 BAU Project (WW)	

Spreydon / Heathcote in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10311	Antigua St / Burke St Arterial Roads (WW,WS,SW,RD)	Repair of road and all buried services along Antigua St (between Moorehouse & Brougham) and Burke St (between Selwyn & Montreal)	7/05/12	25/02/13	\$3,151,988	\$-
10319	10319 St Martins Package 01 - Project Allocation Construction	Replacement renewal and repair of selected wastewater mains and laterals along partial extents of Wilsons Road South, St Martins Road and Gamblins Road in the St Martins suburb.	5/12/11	2/05/12	\$1,403,507	\$1,409,953
10385	Bewdley Evesham and Dellow	Repair of road and all buried services along Bewdley St, Eversham Cres & Dellow Pl.	19/04/12	17/08/12	\$1,374,176	\$167,009

Spreydon / Heathcote in Construction						
Reference	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10404	Hollis Ave Water (WS)	The works consist of the replacement of approximately 330 m of existing 100 mm AC water main in Holliss Avenue with 125 mm PE100 PN16 pipe.	8/11/11	19/09/12	\$135,869	\$2,648
10410	Hollis Ave WW	Repair of wastewater along a section of Holliss Ave between Gunns Cres & Centaurus Rd.	18/04/12	20/09/12	\$643,868	\$2,866
10432	PS19 Beckford	Minor pump station repairs.	14/12/11	30/04/12	\$3,000	\$3,201
10433	PS20 Locarno	Minor pump station repairs.	25/01/12	30/04/12	\$20,000	\$15,372
10477	F212 Sloan Tce Footbridge	Corbel addition to pre cast concrete span bridge	30/01/12	26/07/12	\$24,229	\$165
10821	Huntsbury Reservoir Tank No 2 & demolition	New reservoir tank (no.2) constructed in NE corner of old reservoir.	2/02/12	1/11/12	\$3,458,765	\$742,821

5.3.10 Multiple Wards

The Multiple Wards section has been set up as there may be some projects that span across various wards.

Multiple Wards in Detailed Design			
Reference	Ward	Project	Project Description
10858	Burwood/Pegasus Central City Hagley/Ferrymead Riccarton/Wigram Shirley/Papanui Spreydon/Heathcote	Minor Works - Pump Station Demolition and Repairs (WW)	Minor repair works to slightly damaged Pump Stations that require no major works during the rebuild programme. Demolition of 3 PS buildings to make safe in Red Zones. Project led by the delivery team with a SCIRT Design input and coordination. Close liaison with CCC Operations team required throughout the project.

Multiple Wards in Construction							
Reference	Ward	Project	Project Description	Estimated Construction Start	Estimated Construction Finish	Estimated Construction Cost	Life To Date
10893	Burwood/Pegasus Fendalton/Waimari Hagley/Ferrymead Riccarton/Wigram Shirley/Papanui Spreydon/Heathcote	Minor Works-Bridge Minor Works Project Package 01 Bridging	Minor repairs to bridges requiring little design input. Project to be led by SCIRT Project Manager and Delivery teams.	0/01/00	0/01/00	\$221,172	\$ -

5.4 Projects Complete By Ward

The following section outlines projects within each ward that have been completed since SCIRT was established on 1st September 2011. It includes both a summary of numbers of projects as well as a list of specific projects. It is anticipated that the completed projects for the last quarter will be reported on a monthly basis.

Ward	April Number of Projects	May Number of Projects	April Project Life to Date Cost	May Project Life to Date Cost
Burwood-Pegasus	72	74	\$14,728,048	\$17,493,558
Fendalton-Waimairi	2	2	\$177,175	\$178,993
Central City	5	5	\$176,996	\$178,329
Hagley-Ferrymead	43	53	\$8,791,597	\$11,286,557
Lyttelton-Mt Herbert	4	4	\$38,936	\$39,384
Riccarton-Wigram	5	5	\$4,190,819	\$4,458,829
Shirley-Papanui	15	14	\$2,735,222	\$2,745,231
Spreydon-Heathcote	7	10	\$5,459,115	\$6,174,346
Total	153	167	\$36,297,908	\$42,555,227

In the table above, the previous monthly report totals have also been included to show the increase in activity.

5.4.1 List of Projects Complete By Ward

Ward	Reference	Project	Project Life to Date Cost
Burwood-Pegasus	10312	Rowes/Tomrich Street Watermain	\$263,771
	10321	PM51 Emergency Repair	\$1,510
	10325	Cresswell Avenue - Watermains	\$148,362
	10327	Pembroke Street	\$146,277
	10328	De Ville Place	\$103,999
	10331	PM39 - Gayhurst Rd	\$1,557,488
	10332	PM54 - Niven-Avonside	\$375,379
	10338	Wainoni Road (WW EW - Ottawa to Avonside)	\$908,330
	10340	Ottawa Road Sewer Emergency Repair	\$517,444
	10342	Avondale Road (Bridge Emergency Works)	\$-
	10343	PM16 - Oakmont Green	\$4,287
	10346	Fleete Street - Emergency Repair	\$9,243
	10351	Ardrossan Street - Temp. Solution	\$347,571
	10355	Landy Street	\$18,438
	10364	Shortland Street	\$343,883
	10366	McBratneys Road - WM	\$348
	10376	PM28	\$1,493,722
	10384	Pacific_Tedder Watermain Replacement	\$524,901
	10440	PS 25C	\$4,752
	10443	PM38_Beach Rd	\$585,085
	10484	Pump Station 25 connection repair	\$8,977
	10551	Avondale Rd (Temp Repair)	\$-
	10604	PM 45	\$318,143
	10605	Sylvia Street watermain	\$131,851
	10606	Chadlington Street Water Mains	\$35,376
	10607	PM 37	\$1,879,091
	10608	PM 35	\$1,078,502
	10614	Aldershot Street watermain (WS)	\$254,801
	10615	Willryan Avenue Watermain	\$236,997
	10616	Flemington and Ascot Ave Watermains	\$525,661
	10617	PM46	\$5,913
	10621	Chartwell Street Water Mains	\$384,089
	10626	Bridge Street Watermains (WS)	\$203,708
	10638	630 Pages Road 450mm WW	\$25,397
	10639	23 Leaver Tce WW	\$62,858
	10640	153 Beach RD WW	\$-
	10641	Kirner St WW	\$21,497
	10642	Cygnat St WW	\$-
	10645	Inwoods Close 450mm WW	\$194,359
	10647	Travis Rd watermains and submains	\$215,845

Ward	Reference	Project	Project Life to Date Cost
	10649	Corhampton St watermains and submains	\$261,190
	10650	Water Main on Bridge Street Bridge (WS)	\$4,199
	10664	Saltaire (Bower to Marriots Rd) - WS	\$69,096
	10665	Sinclair (keyes to Rawson) - WS	\$250,841
	10669	Palmers Rd PS Stabilisation	\$16,065
	10670	Major flooding Pratt St.	\$297,118
	10671	Owles Tce Temp. (WW)	\$113,618
	10676	Marine Parade Watermain	\$153,358
	10682	Briarmont St watermain	\$87,200
	10683	Cowes St Watermain and Submains (WS)	\$107,789
	10684	Gresham Terrace Watermain and Submains (WS)	\$161,116
	10685	Inverell Pl Watermain and Submains (WS)	\$63,477
	10686	Orrick St Watermain and Submains (WS)	\$83,284
	10688	Blake St Watermain (WS)	\$343,340
	10689	Pegasus Ave Watermain	\$168,650
	10690	Bassett St Watermain (WS)	\$225,196
	10691	Falcon St Watermain	\$179,827
	10692	Beach Rd Watermain	\$138,143
	10695	Allstone Watermain	\$90,800
	10696	Marriotts Road Watermain	\$33,221
	10700	Hulverstone Drive Emergency Repair	\$22,188
	10702	Rawhiti Water Well Stormwater Outfall	\$147,524
	10706	Bowhill Watermain (WS)	\$147,748
	10708	Rookwood Ave Watermain	\$170,374
	10711	Waitaki St Temp. Sewer	\$-
	10713	Chartwell St Wastewater	\$-
	10714	Kate Sheppard Emergency Repair (Barkers Lane Temp Works) (WW)	\$187,534
	10723	Merrington Cres Watermain	\$183,621
	10728	Rowan Ave Emergency Work WW	\$447,340
	10744	PS 36 Gravity Main (Pages Rd)	\$579
	10749	Beach Rd Gravity Sewer (WW)	\$67,291
	10756	PM39 Temp Overland Pipe (PM)	\$7,828
	10794	Pratt Street (Keyes Road) Water Main from Pumping Station	\$221,321
Central City	10447	Fitzgerald Ave Temp Sewer Replacement (WW)	\$22,117
	10455	Fitzgerald Ave Twin Bridges Temp Repairs	\$-
	10726	Stormwater Pump Station 203	\$44,888
	10764	PM3 Temporary Repair (Complex Emergency)	\$3,365
	10790	Liverpool Street Water Main (CBD)	\$107,959
Fendalton-Waimairi	10354	Papanui Road - Emergency Work	\$53,511

Ward	Reference	Project	Project Life to Date Cost
	10590	Thornycroft Street - Pri4 WM	\$125,482
Hagley-Ferrymead	10301	CCC - Tanner Street Replacement Well (WS)	\$15,792
	10326	Retreat Road	\$678,922
	10333	PM57 - Replacement (Stage 2 March)	\$2,067,481
	10337	Avonside - WW Trunk Sewer	\$204,090
	10341	River Road - Siphon (WW)	\$659,907
	10350	Avonside Drive/Retreat - Gravity Sewer Repair	\$93,588
	10352	Avonside Drive/Morris Bowie - Gravity Sewer Temp. Solution	\$86,006
	10353	294 Avonside Drive - Temp. Solution	\$241,562
	10360	Eveleyn Couzins Ave - Temp. Solutions	\$ -
	10362	PS5 - Glade	\$ -
	10372	Dacre Street	\$125,100
	10386	St Andrews Hill Rd Sewer (Major Hornbrook)	\$42,686
	10391	Stevens St Watermain	\$163,942
	10402	Moorhouse SW BB 02	\$72,424
	10406	226 Main Road SW	\$4,600
	10411	Clifton Reservoir 3	\$360,172
	10417	Upper Balmoral Reservoir	\$407,316
	10422	PM 31 Renewal Works	\$1,535,733
	10431	PS15 Alport	\$190,146
	10434	PS12 Smith	\$20,460
	10441	Ferry Road_873	\$174,678
	10448	PM 12	\$710
	10451	Manning-Ferry	\$13,751
	10452	WW No Service Grafton	\$134,458
	10454	225 Linwood Ave	\$67,795
	10458	31 Stanmore Road	\$47,109
	10463	Hamner Street - waste water relay	\$73,204
	10471	33 River Terrace	\$38,939
	10473	Wickham St Watermain replacement	\$303,003
	10478	F805 McCormacks Bay 1 Footbridge	\$8,407
	10479	F806 McCormacks Bay 2 Footbridge	\$7,970
	10499	Saxon Street Waste Water	\$15,687
	10505	Stanmore Road Lateral	\$ -
	10537	Patten Street	\$619,261
	10545	PS19 - Syphon	\$ -
	10609	PM 47	-\$41,140
	10612	McCormacks Bay Reservoir No 2-2	\$640,328
	10613	Mt Pleasant Reservoir 2/2	\$95,660
	10618	Beachville Road Pressure + Gravity Main	\$467,579

Ward	Reference	Project	Project Life to Date Cost
	10644	55 Clark St WW	\$916
	10666	Head Street - Esplanade to Nayland (WS)	\$76,392
	10677	Beachville Watermain (WS)	\$248,815
	10687	Wakefield Ave Watermain (WS)	\$156,717
	10729	WW, Gravity Bridal Path and Cannon	\$250,116
	10734	WW, 262 Main Road	\$ -
	10739	Heberden Ave Temporary Solution (WW)	\$102,792
	10743	281 River Rd Siphon (WW)	\$ -
	10746	Ruru Ave Repair PM 11	\$42,191
	10747	Bromley Waste Water Treatment	\$150,092
	10753	WW No Service Glendever (WW)	\$2,081
	10763	Monks Bay Walkway - Temp Repairs	\$45,416
	10779	Linwood Avenue Water Main	\$439,013
	10782	15 Dunoon Place Emergency Stabilisation / Sewer Repair	\$134,691
Lyttelton-Mt Herbert	10382	Lyttelton Treatment Plant Access	\$ -
	10672	Sutton Quay Retaining wall 441	\$39,384
	10732	Flat land at base on hill along Main Road - WW	\$ -
	10784	Canterbury Street Retaining Wall - Emergency Temporary Support (RW)	\$ -
Riccarton-Wigram	10380	Halswell WW Package 02	\$2,016,095
	10387	Townshend Crescent Wastewater	\$42,977
	10389	Sparks Rd Watermain	\$166,792
	10392	Halswell WW Package 1 (WW)	\$2,083,997
	10408	Glovers St water (WS)	\$148,967
Shirley-Papanui	10322	Ranfurly Street	\$118,626
	10323	Chrystal Street	\$83,927
	10329	Hope street	\$143,266
	10330	Orontes Street - WS	\$90,022
	10334	PM7 - Stapletons Rd	\$239,379
	10345	Nancy Ave / Weston Rd	\$16,297
	10348	Shirley Road - Wastewater (Emergency Repair)	\$696
	10369	Orion Street	\$41,881
	10437	PM 40_Marshlands	\$465,800
	10439	Heyders_29-65_WW	\$312,477
	10446	Brooklands Roding - Temporary Repairs	\$344,497
	10460	449 Durham Street North	\$293,099
	10555	Madras Street / Forfar Wastewater	\$587,456
	10748	Madras / Purchas Emergency Repair (WW)	\$7,808
Spreydon-Heathcote	10308	Riselaw Street	\$91,424
	10320	Murray Aynsley Reservoir 2	\$148,173
	10381	Rydal St (WW)	\$891,306

Ward	Reference	Project	Project Life to Date Cost
	10390	Centaurus Rd Watermain	\$143,455
	10393	Smartlea WW Emergency Repair	\$109,816
	10396	75 Wilsons Emergency Repair	\$825
	10397	Glenelg Spur 01	\$129,444
	10597	Huntsbury Reservoir	\$4,057,106
	10745	CCC - Sydenham Stn Replace Wells (WS)	\$203,400
	10755	PS19 Fifield - 171 Fifield (PS)	\$104,829
	10787	Rydal Street Water Supply, Storm Water and Roading Renewals (SW,WS, RD)	\$399,397
Grand Total			\$42,555,226

6. NON-SCIRT WORK ACTIVITY

6.1 Introduction

The following section of the report includes a progress report against infrastructure and other associated rebuild projects that are not being delivered by SCIRT. It includes a report on progress on Greenspace projects, Christchurch Wastewater Treatment Plant and Organics Processing Plant, Burwood Landfill; and Water Supply Wells. It is anticipated that these reports will be included on an ongoing basis.

6.2 Greenspace

WARD	Work Package Number	Work Package Name	Description	Number of projects in package	Phase	Estimated Construction Start	Estimated Construction Finish	Estimated Cost
Banks Peninsula Wards	WP0000537	PARKS Marine Structures Repairs	Marine Structures Repairs	13	Investigation	01/08/2011	30/06/2012	\$462,000
	WP0000551	PARKS Marine Structures Assessments	Marine Structures Assessments	10	Complete	01/08/2011	30/11/2011	\$60,000
	WP0000783	B/P Retaining Walls	Retaining wall repairs in parks and cemeteries on Banks Peninsula	4	Investigation			\$241,000
Burwood Pegasus	WP0000251	PARKS CEAF 1.1 Sth New Brighton CAPEX	Hard surface and playground undersurfacing renewals	8	On Hold	01/10/2011	30/06/2012	\$227,000
	WP0000257	PARKS CEAF 1.2 B/P CAPEX	Bexley, Avondale and Burwood Parks hard surfacing renewals	3	Complete	01/09/2011	31/10/2011	\$60,200
	WP0000258	PARKS CEAF 1.2 B/P OPEX	Hard surface repairs	11	Build	01/10/2011	29/02/2012	\$131,000
	WP0000284	PARKS CEAF 2.6 TRAVIS CAPEX	Hard surface renewals	5	Build	01/12/2011	29/02/2012	\$175,500
	WP0000285	PARKS CEAF 2.7 AVON PARK CAPEX	Hard surface renewals	3	Investigation	01/03/2012	31/05/2012	\$290,550
	WP0000286	PARKS CEAF 2.8 ESTUARY CAPEX	Hard surface renewals	1	Investigation	01/03/2012	31/05/2012	\$300,000
City wide	WP0000177	PARKS Playground Softfall - CAPEX	Replacement of contaminated softfall to playgrounds	24	Complete	01/08/2011	30/11/2011	\$358,460

WARD	Work Package Number	Work Package Name	Description	Number of projects in package	Phase	Estimated Construction Start	Estimated Construction Finish	Estimated Cost
	WP0000206	PARKS Playground Softfall - OPEX	Repairs to playground undersurfacing	8	Complete	01/08/2011	20/12/2011	\$46,500
	WP0000269	PARKS CEAF 2.2 S/P,F/W,R/W,L/M OPEX	Hard surface and minor structural repairs	11	Build	01/03/2012	31/05/2012	\$54,500
	WP0000312	PARKS Hard Surface Nthn & Sthn - OPEX	Hard surface repairs	58	Build	01/03/2012	30/04/2012	\$127,950
	WP0000313	PARKS Hard Surfaces Nthn & Sthn CAPEX	Hard surface renewals	14	Build	01/03/2012	30/04/2012	\$204,600
	WP0000318	PARKS Hard Surfaces Eastern CAPEX	Hard surface renewals	24	Build	01/03/2012	31/05/2012	\$902,450
	WP0000321	PARKS Hard Surface Eastern - OPEX	Hard surface repairs	76	Build	01/03/2012	31/05/2012	\$227,900
	WP0000323	PARKS City Wide Turf Repairs - OPEX	Repairs to non sports turf surfaces	110	Complete	01/11/2011	31/05/2012	\$393,050
	WP0000357	PARKS Retaining Walls CAPEX	Minor retaining wall renewals	6	Investigation	01/08/2011	30/06/2012	\$262,000
	WP0000358	PARKS Retaining Wall Repairs	Minor retaining wall repairs	26	Build	01/08/2011	30/06/2012	\$203,150
	WP0000376	PARKS Minor Structures CAPEX	Minor structures renewals	9	Investigation	01/08/2011	30/06/2012	\$206,000
	WP0000377	PARKS Minor Structures Repairs	Minor structures repairs	64	Build	01/08/2011	30/06/2012	\$275,150
	WP0000571	PARKS 2012 Sports Fields Repairs	Repairs to sports turf 2011/12	45	Complete	01/09/2011	31/03/2012	\$496,614
	WP0000768	PARKS Mature Tree Replacements	Tree renewals at Hagley Park and Sth Brighton Domain	2	Build	01/03/2012	30/06/2012	\$100,000

WARD	Work Package Number	Work Package Name	Description	Number of projects in package	Phase	Estimated Construction Start	Estimated Construction Finish	Estimated Cost
	WP0000769	PARKS Port Hills Restoration	Port Hills rock fencing and planting	2	Investigation			\$200,000
	WP0000205	PARKS Sports Fields Repair - Moderate	Repairs to sports turf	19	Complete	01/05/2011	31/07/2011	\$254,000
	WP0000207	PARKS Sports Fields Repair - Minor	Repairs to sports turf	23	Complete	01/05/2011	31/07/2011	\$122,550
	WP0000779	Structural	Bridge repairs on Parks City wide	15	Investigation			\$816,200
	WP0000780	Regional Parks	Repairs to structures and hard surfaces	6	Investigation			\$465,000
	WP0000781	Trees	City wide tree renewals	1	Investigation			\$500,000
	WP0000782	Ponds	Repairs to small ponds and outflows in parks	2	Investigation			\$50,000
	WP0000784	Cemeteries - Operational	Repairs and make safe work to headstones in Operational cemeteries	18	Build	01/12/2011	30/06/2012	\$250,000
	WP0000785	Cemeteries - Heritage	Repairs and make safe work to headstones in Heritage cemeteries	3	Investigation			\$250,000
	N/A	On Hold	Projects on hold due to them being in Red Zoned areas, cordons, rock fall risk etc. Depending on land decisions some of these repairs/renewals may become redundant in the future.	141	On Hold	XXXXX	XXXXX	\$6,133,100

WARD	Work Package Number	Work Package Name	Description	Number of projects in package	Phase	Estimated Construction Start	Estimated Construction Finish	Estimated Cost
Hagley Ferrymead	WP0000252	PARKS Victoria Lake CAPEX	Relining Victoria lake	1	Complete	01/07/2011	29/02/2012	\$500,000
	WP0000253	PARKS CEAF 1.3 Hagley Pk/Bot.Gdns CAPEX	Hard surface and playground undersurfacing renewals	5	Complete	01/09/2011	29/02/2012	\$295,000
	WP0000254	PARKS CEAF 1.4 Hagley Pk North CAPEX	Irrigation and Turf renewals	2	Complete	01/07/2011	31/07/2011	\$90,000
	WP0000263	PARKS CEAF 1.6 H/F CAPEX	Hard surface renewals	5	Complete	01/10/2011	29/02/2012	\$103,500
	WP0000264	PARKS CEAF 1.6 H/F OPEX	Hard surface, track and minor structure repairs	21	Build	01/10/2011	29/02/2012	\$178,499
	WP0000265	PARKS CEAF 1.8 BOT. GARDENS CAPEX	Playground undersurfacing repairs	1	Complete	01/10/2011	29/02/2012	\$50,000
	WP0000287	PARKS CEAF 2.9 VICTORIA SQUARE CAPEX	Hard surface, track and minor structure renewals	4	Investigation	XXXXX	XXXXX	\$727,000
	WP0000288	PARKS CEAF 2.10 CENTRAL CITY PARKS CAPEX	Hard surface renewals	3	On Hold	XXXXX	XXXXX	\$15,000
	WP0000289	PARKS CEAF 2.10 CENTRAL CITY PARKS OPEX	Hard surface, track and minor structure repairs	10	On Hold	XXXXX	XXXXX	\$14,100
	WP0000767	PARKS Sumner/Scarborough Restoration	Hard surface renewals	9	Build	01/12/2011	31/03/2012	\$187,000
Riccarton Wigram	WP0000280	PARKS CEAF 2.5 MONA VALE CAPEX	Hard surface, bridge and wall renewals	5	Investigation	XXXXX	XXXXX	\$292,000
Shirley Papanui	WP0000255	PARKS CEAF 1.5 Groynes CAPEX	Car Park, Driveway, Turf, Track and Jetty renewals	6	Complete	01/08/2011	30/09/2011	\$106,000
	WP0000256	PARKS CEAF 1.7 Temp Changing Rooms CAPEX	Portable changing facilities for sports parks	2	Build	01/02/2012	31/05/2012	\$300,000

WARD	Work Package Number	Work Package Name	Description	Number of projects in package	Phase	Estimated Construction Start	Estimated Construction Finish	Estimated Cost
	WP0000268	PARKS CEAF 2.1 English Park CAPEX	Car Park renewal	1	Complete	01/08/2011	30/10/2011	\$247,500
	WP0000277	PARKS CEAF 2.3 S/P OPEX	Hard surface and track repairs	5	Investigation	01/03/2012	31/05/2012	\$20,500
	WP0000278	PARKS CEAF 2.3 S/P CAPEX	Hard surface renewals	3	Investigation	01/03/2012	31/05/2012	\$90,000
	WP0000778	Roto Kohatu	Repairs to bankworks at Roto Kohatu Reserve	1	Complete	01/02/2011	30/04/2011	\$200,000
Spreydon Heathcote	WP0000279	PARKS CEAF 2.4 S/H OPEX	Hard surface and minor structural repairs	11	Complete	01/11/2011	31/03/2012	\$86,000
				82	Investigation			\$5,172,250
				341	Build			\$3,317,699
				275	Complete			\$3,469,374
				162	On Hold			\$6,389,200
					TOTAL			\$18,348,523

*NOTE: ACC: Auckland City Council grant. CEAF: Canterbury Earthquake Appeal fund projects are billed directly to Dept. Internal Affairs.

6.3 Waste Water Treatment Plant and Organics Processing Plant

Project	Description	Phase	Estimated Construction Start	Estimated Construction End	Estimated Cost
Clarifiers	C4 - New structural bottom - CIPP repair to influent pipe - Modify Arms to suit new structure.	Complete	Nov 11	3 Feb 12	\$8,982,026
	C3 - New structural bottom - CIPP repair to influent pipe. - Modify Arms to suit new structure	Construction	24 Jan 12	30 May 12	
	C1 - New structural bottom - CIPP repair to influent pipe - Modify Arms to suit new Structure	Investigation	June 12	30 Sept 12	
	C2 - Verify that emergency repairs have returned asset to pre-EQ functionality and asset condition.	Investigation			
Civil & Structural	<ul style="list-style-type: none"> • Paving • C2 water • Crack repairs to structures. • Reclad Digester 2 	Construction Complete Construction Complete	Oct 11 Oct 11 April 11 Sept 11	Sept 12 Feb 12 Sept 12 Dec 11	\$3,187,259
Oxidation Ponds	<ul style="list-style-type: none"> • Transfer structures 1-4 • Transfer Structure 4-5. • Pond banks strengthen and reinstate to design levels. • Estuary outfall structure • Cuthberts Road transfer structure 	Complete Complete Construction Design Design	Oct 11 Dec 11 Jan 12 July 12 Aug 12	Feb 12 Mar 12 Oct 12 Sept 12 Nov 12	\$18,122,788
Galleries	<ul style="list-style-type: none"> • South Gallery – drainage and structural Proposed repair strategy unsuccessful, 	Design	Feb 12	June 12	

Project	Description	Phase	Estimated Construction Start	Estimated Construction End	Estimated Cost
	redesign underway <ul style="list-style-type: none"> • North Gallery – drainage & joints • Diagonal Gallery – drainage & joints • Pump Stn A – drainage & joints • Sludge Rm A – drainage & joints 	Design Design Design Design	May 12 April 12 July 12 July 12	July 12 July 12 Aug 12 Aug 12	\$1,353,550
Trickling Filters	<ul style="list-style-type: none"> • Trickling Filter 1 Taking out of service for Investigation 20th May • Trickling Filter 2 	Investigation Investigation	Aug 12 Nov 12	Nov 12 Mar 13	\$700,000
Mechanical & General Repairs	<ul style="list-style-type: none"> • Digesters 2 – Structural Assessment undergoing peer review • Digesters 3 • Digester 4 • Digester 1 • Digesters 5 • Digester 6 • Buffer Tank • Primary Sedimentation Tanks • Bio- Solids Holding Tank 	Construction Design Investigation Investigation Investigation Investigation Complete Construction Design	Oct 11 June 12 Aug12 Nov 12 Jan 13 April 13 Nov 11 June 11 July 12	May 12 Aug 12 Nov 12 Dec 12 Feb 12 July 12 Jan 12 July 12 Dec 12	\$4,088,195
Organics Processing Plant	<ul style="list-style-type: none"> • Demolish & Reconstruct Tunnels • Repair & Strengthen Process Hall • Repair Hard Standing 	Construction	Mar 12	July 13	\$9,518,133
	TOTAL				\$45,951,951

6.4 Burwood Landfill

Project	Description	Material Received (tonnes)	Material Processed (tonnes)	Phase	Estimated Construction Start	Estimated Construction End	Estimated Cost
Burwood Landfill Liquefaction and Infrastructure Rebuild Waste Disposal	<ul style="list-style-type: none"> Prepare areas for disposal Operate and maintain disposal site Restoration and landscaping Resource consent application Consultation documents to affected parties 	330,000	330,000	Completed	Feb 11	Jan 12	Self Funded
				Operation	Feb 11	Dec 13	
				Investigation	Jan 12	Dec 13	
Burwood Landfill Residual Demolition Waste Disposal	<ul style="list-style-type: none"> Design of new cell for residual waste Cell construction Operate and maintain disposal site Restoration and landscaping Resource consent application Consultation documents to affected parties 	0	0	Design	Oct 11	Jun 12	To be funded by Transwaste Canterbury
				Design	Mar 12	Sep 12	
				Design	Sep 12	Dec 17	
Burwood Resource Recovery Park Demolition Sorting and Processing Facility	<ul style="list-style-type: none"> Construct areas for storage of material and associated roading Design of sorting plant Construction of sorting plant Sorting operation Rehabilitation and landscaping Resource consent application Consultation documents to affected parties 	300,000	0	Complete	Feb 11	Jun 11	To be funded by Transwaste Canterbury
				Design	Mar 11	Feb 12	
				Construction	Mar 12	Dec 12	
				Operation	Dec 12	Dec 17	
				Design	Jul 17	Dec 17	
				Investigation	Oct 11	Jun 12	
				Completed	Apr 12	Apr 12	
TOTAL		630,000	330,000				

6.5 Wells

The damage to wells has been reported separately from the remainder of the non-SCIRT infrastructure rebuild because much of the wells repair work is reactionary due to the ongoing aftershocks.

Forward programming is limited by the reactionary work and the operational requirements of the water supply network, meaning that each package of work is programmed “on the fly” on a prioritised basis before it is issued.

The programme of work must be kept flexible in order to keep as many damaged wells operational as possible while at the same time moving forward with the repair and replacement programme. Only a limited number of wells can be taken out of service at one time to avoid affecting the demand on water supply network, and to minimise water restrictions.

	April At Ground Level	May At Ground Level	April Below Ground Level	May Below Ground Level	April Totals	May Totals
Total number of active wells					154	154
Wells yet to be repaired ⁺ *	37	35	56	55	93	90
Cost Estimate all repairs ⁺	\$4,692,000	\$4,692,000	\$17,368,000	\$17,273,000	\$22,060,000	\$21,965,000
Wells repaired to date ⁺ *	66	67	70	71	136	138
Cost to date⁺	\$2,331,707	\$2,501,045	\$3,576,353	\$3,695,897	\$5,908,060	\$6,196,942

⁺ includes replacement wells

^{*} some wells are damaged both at and below ground level

In the table above, the previous monthly report totals have also been included to show the increase in activity.