ANNUAL REPORT 2013

Directors' Report and Financial Statements

Part Two

Landcare Research
Manaaki Whenua

CONTENTS

Landcare Research New Zealand Limited
(Manaaki Whenua)
Annual Report 2013

Part 1:
Environmental Performance with Integrity
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Part 2:
Directors' Report and Financial Statements
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ANNUAL REPORT 2013
Our Annual Report is in two parts—together they fulfil our annual reporting responsibilities under the Crown Research Institutes Act 1992. Detailed information about our research, operational activities and governance is available on our website:

www.landcareresearch.co.nz

Cover photo:
Flowers of the culturally significant harakeke (*Phormium tenax*). Landcare Research is custodian of the New Zealand flax (harakeke) collection.
Peter Heenan

Cover stock: Splendorgel Digital, Chain of Custody certified, ECF free
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Introduction

Our Annual Report is in two parts—together they fulfil our Annual Reporting responsibilities under the Crown Research Institutes Act 1992. PDFs of both Part I and Part II are available on our website.

Part I of the Annual Report gives a summary of our science, business and operational performance during the year, and includes summary sustainability and financial information.

Part II, this document, presents the Directors' Report and our financial statements, and a summary of Core funding achievements as required by the Ministry of Business, Innovation and Employment.

Financial Performance

Summary of group financial performance

For year ended 30 June:	2011	2012	2013	2013	2014
	Achieved	Achieved	Budget	Achieved	Budget
Revenue, $m	63.4	58.4[1]	59.0	55.5	55.7
EBIT before investment, $m	3.9	3.3	3.3	2.2	2.2
EBIT, $m	2.9	2.2[2]	1.6	0.8	1.5
Investment, $m	1.0	1.2	1.8	1.4	0.7
Total assets, $m	50.9	45.3	43.6	45.5	43.3
Return on equity	8.4%[3]	4.9%	4.2%	4.1%[3]	3.5%
Dividend $m	0.7	1.1	-	-	-
Equity ratio	52%	56%	63%[4]	61%	65%[4]
Gearing	13%	0%	0%	0%	0%
Interest cover	31	47	101[5]	80	36

1 2012 Revenue achieved excludes Sirtrack, which was disclosed as a discontinued operation due to the sale of the business in November 2011.
2 2012 EBIT achieved excludes Sirtrack as this was disclosed as a discontinued operation as a result of the sale of the business in November 2011.
3 2011 and 2013 Return on equity excludes extraordinary restructuring costs.
4 2013 and 2014 Equity ratio target has been adjusted to calculate on averages rather than closing values (original SCI target 2013:64.1% and 2014 66.5%).
5 2013 Interest cover target has been adjusted to calculate on EBITDAF rather than EBIT (original SCI target 28.3).

Revenue:
Includes science research, subsidiaries, contract work for government and commercial clients, royalties, licence fees, plus income from the sale of product and the lease of assets. It excludes income from gain on sale of subsidiaries and interest on investments and from finance leases, $0.1m for 2013 (2012: $0.9m).

EBIT:
Earnings before interest and tax, and after committed business development expenditure and commercialisation expenditure.

Return on equity:
NPAT ÷ average shareholders' funds, expressed as a percentage. NPAT is net profit after tax. Shareholders' funds include share capital and retained earnings.

Equity ratio:
Average shareholders' funds ÷ average total assets.

Gearing:
Financial debt includes all interest-bearing liabilities. Gearing = interest bearing debt ÷ interest bearing debt plus shareholders' funds, expressed as a percentage. (The Minister of Finance and the Minister of Science and Innovation each hold 50% of the shares on behalf of the public.)

Interest cover:
Interest is the cost of debt and financial leases. Interest cover = EBITDAF ÷ interest. (EBITDAF is EBIT before depreciation, amortisation and fair value adjustments.)

Directors' Report







Top row: Peter Schuyt (Chair), Tania Simpson (Deputy Chair)
Bottom row: Chris Downs, Gavan Herlihy, John Luxton, Emily Parker, Victoria Taylor

The Directors of Landcare Research New Zealand Limited (Manaaki Whenua) are pleased to report that the Company fulfilled its obligations under the Crown Research Institutes Act 1992 for the year ended 30 June 2013. The disclosures relate to Landcare Research New Zealand Limited and its subsidiaries (the 'Group').

Core purpose

Landcare Research's Core Purpose is to drive innovation in New Zealand's management of terrestrial biodiversity and land resources in order to both protect and enhance the terrestrial environment and grow New Zealand's prosperity.

Governance framework

The Minister of Finance and Minister of Science and Innovation each hold 50% of the Company's shares on behalf of the public. The shareholding Ministers appoint the Chair, Deputy Chair, and the five other directors to the Board of Landcare Research. All directors are non-executive. Board decisions are made collectively. The Board evaluates its performance on a regular basis. The Board is also charged by the shareholding Ministers to take strategic advice from both leading scientists and key stakeholder partners. A formal Science Advisory Panel is in place and the Board has met with a stakeholder (user) panel. The Board appoints directors of subsidiary companies.

Board responsibilities

Board responsibilities include providing strategic direction, selecting, evaluating and recommending remuneration for the Chief Executive, succession planning for and appointment of a new Chief Executive, formulating policy, managing risk, ensuring legislative compliance, monitoring performance (economic, environmental and social), and communicating with the shareholding Ministers and other stakeholders.

The Crown research institute (CRI) reforms transferred significant accountability for investing in science and innovation to CRI boards. Landcare Research receives approximately $24 million per year of revenue from Government in a Core Funding Agreement with the Ministry of Business, Innovation and Employment (MBIE). The Board is responsible to shareholding Ministers for the impacts and value achieved from investing this funding in our research and technology transfer to deliver on four National Outcomes for New Zealand, (see the Statement of Core Purpose in Part 1 of the Annual Report 2013).

Commitment to sustainability

The Board believes that sustainability is an essential part of management practices at Landcare Research and affects not only the Company's current operations but also opportunities to grow and prosper. Where possible the Board supports investment in green technologies (e.g. energy and water-use efficiency) for new and refurbished buildings. The Board reviews sustainability activities and initiatives quarterly.

Commitment to ethical standards and compliance

Our Code of Ethics Policy is an overarching document that links numerous other ethics-related policies and codes of practice, and applies to all staff, senior executive managers and Directors. Policies include a Protected Disclosures (whistle-blower) Policy and guidelines. Every two years, the Audit and Risk Management

subcommittee reviews Landcare Research's Code of Ethics Policy.

Many staff are committed to professional codes of ethics by virtue of membership in scientific and other professional societies. The Landcare Research Code of Ethics Policy complements these. If a correct course of action is not clear the issue must be raised with managers or, if necessary, the Board, which reviews the code biennially. The Board regularly monitors whether the directors, managers, and staff maintain high standards of ethical behaviour and generally act as good corporate citizens.

During the year, there were no material incidences of unethical practice or non-compliance with internal protocols or legislation.

As well as setting out an expectation that staff, executives and directors must act honestly and in good faith, refraining from any activities that might bring discredit to the organisation or harm to colleagues, the policy covers points relating to lawful conduct, conflicts of interest, diligence, confidentiality, intellectual property, scientific honesty, fairness in relationships, privacy, and environmental sustainability and animal welfare. There is a zero tolerance of corruption and financial fraud.

All policies, codes of practice and guidelines are available to all staff via our intranet 'staffroom'.

Health & Safety

Landcare Research is committed to the highest health & safety standards and practices. The Board reviews initiatives, practices and performance each month.

Vision Mātauranga

The Government created the Policy Framework Vision Mātauranga in 2005 to ensure that all Vote Science and Innovation investments and activity were benefiting Māori as well as New Zealand in general. The CRI reforms required CRIs to incorporate Vision Mātauranga into their statements of corporate intent and annual reports to show how science is enabling the innovation potential of Māori knowledge, resources and people.

Landcare Research has a well-established 20-year history of collaborative research projects involving significant components of mātauranga Māori. These have included Māori values for land use planning, ecosystem health and sustainable development; integrated catchment management, including freshwater, wetland and estuary monitoring and restoration; indigenous biodiversity; and ethnobotanical resources. Māori increasingly want science that supports their goals and aspirations, and that builds capacity for managing their resources and sustaining cultural practices such as customary harvesting of taonga species (e.g. northern mutton birds) and native timber.

The Board supports moving to a more strategic position with specific iwi to support them in the particular stage they have reached in the Treaty of Waitangi claim settlement process.

Planning and reporting

In May and June each year, the Board negotiates a statement of corporate intent (SCI) for the next financial year with the shareholding Ministers. The SCI sets out the Company's core business, performance measures, and targets (financial and non-financial) for the coming year in accordance with the Operating Principles of the Crown Research Institutes Act 1992. The SCI is tabled in Parliament, and is a public document. All CRIs must produce an SCI, then report performance against the stated measures and targets.

All CRIs must produce an annual report by 30 September. The reports are tabled in Parliament, and each CRI's performance is reviewed by the Parliamentary Education and Science Select Committee.

Performance for 2012/13

Operating results

Group revenue for the year decreased to $55.566 million from $59.298 million in the previous year.

The Group net surplus before taxation expense decreased to $0.853 million from $2.021 million in 2011/12. The consolidated net surplus after tax attributable to Parent Company shareholders was $0.585 million compared with $1.333 million surplus in 2011/12. The Group incurred restructuring costs of $0.753 million to better position the company for changing science needs. The Group return on equity before restructuring costs was 4.1%. Return on equity after restructuring costs was 2.1%, compared to the target of 4.2%.

Directors

	Appointed	Term expires	Board meetings attended (12)	Audit Committee meetings attended (2)	People & Performance Committee (2)	Remuneration 2012/13	Remuneration 2011/12
Peter M Schuyt	01-07-06	30-06-15	12 (Chair)	2	2	$46,000	$28,526
Chris Downs	01-07-12	30-06-15	11	2	-	$23,000	$0
Gavan Herlihy	01-07-11	30-06-14	11	-	-	$23,000	$22,776
M John F Luxton	01-07-09	30-06-14	12	2	-	$23,000	$22,776
Emily Parker	01-07-11	30-06-14	11	-	1	$23,000	$22,776
Tania J Simpson	01-07-09	30-06-14	12	2	2	$28,750	$22,776
Victoria A Taylor	01-09-09	30-06-15	12	-	2	$23,000	$22,776

Precautionary approach

The Board had no cause to adopt a precautionary approach during the year. No situation arose where there was uncertainty regarding serious potential risks to health of staff or public, or harm to the environment.

Declared interests

Pursuant to S140(2) of the Companies Act 1993, Directors have declared they should be regarded as having an interest in any contract that may have been made with the entities listed below by virtue of their directorship or membership of those entities during the year ended 30 June 2013:

Peter M Schuyt *BCom, MInstD*
- carboNZero Holdings Ltd*, Chair
- Dairy Investment Fund Ltd, Director and Shareholder
- Port Nelson Ltd, Director
- Pumpkin Patch Ltd, Director
- The Tatua Co-operative Dairy Company Ltd, Director
- Tax Management New Zealand Ltd, Chair

Chris Downs *PhD, MSc, BSc*
- CSIRO Animal, Food and Health Services, Deputy Chief and Portfolio Director

Gavan J Herlihy *MAgrSc(Hons), GradDipBusStuds*
- Greenbank Pastoral Ltd, Chair
- Hamiltons Dairy Ltd, Chair
- Herlihy Consulting, Principal
- Otago Rural Support Trust, Deputy Chair

Hon. M John F Luxton *QSO, MMgt, PGDipBusAdmin, PGDipAgriSc, BAgriScience*
- Ahuwhenua Trust Management Group, Member
- Constitutional Advisory Panel, Member
- DairyNZ Ltd, Chairman
- JD & RD Wallace Ltd, Director
- Kaimai Cheese Company Ltd, Director
- Luxton & Co. Ltd, Director and Shareholder
- Marire Holdings Ltd, Director and Shareholder
- Massey University Foundation, Trustee
- Royal New Zealand Ballet, Director
- The Tatua Co-operative Dairy Company Ltd, Director
- Waikato River Authority, Co-Chair
- Wallace Corporation Ltd, Director

Professor Emily J Parker *PhD, BSc(Hons)*
- Maurice Wilkins Centre, Associate Investigator
- Ministry of Business Innovation & Employment – Catalyst Group, Group Member
- University of Canterbury, Associate Professor

Tania J Simpson *MMM (Masters of Mātauranga Māori), BA (Māori), AMInstD*
- AgResearch Ltd, Director
- King's Council, Council Member
- Kowhai Consulting Ltd, Director and Shareholder
- Maniapoto FM, Trustee
- Mighty River Power Ltd, Director
- Oceania Group Ltd, Director
- The Law Commission – Māori Consultative Committee, Member
- Tui Trust, Trustee
- Waikato Endowed Colleges Trust, Trustee
- Waitangi Tribunal, Member

Victoria A Taylor *BCom, MInstD*
- carboNZero Holdings Ltd, Director *
- Hall Family Trust, Beneficiary
- Vehicle Testing Group Ltd, Director

No directors acquired or disposed of equity securities in the Company during the year; and the Board has received no notices from directors of the Company requesting to use Company information received in their capacity as directors which would not otherwise have been available to them.

Directors of subsidiaries

carboNZero Holdings Limited *
- Peter M Schuyt *BCom, MInstD*
- Robert G M Fenwick *CNZM, DNatRes* (honoris causa, Lincoln University)
- Richard F S Gordon *PhD*
- Victoria A Taylor *BCom, MInstD*

Landcare Research US Limited
- Carol R Bellette *MBA(Dist.), BCom, CA, MInstD*
- Elizabeth G Harrison *PhD, MSc, BA*

Directors' and officers' liability insurance

The Group has entered into a deed of indemnity that includes insurance to cover directors and certain employees to the fullest extent permissible by law. Certain actions are excluded – for example, penalties and fines imposed in respect to breaches of the law and liabilities arising from any activity not conducted for the benefit of, or on behalf of, Landcare Research or its subsidiaries.

Donations

The Group has made various donations totalling $16,000 during the year ($12,000 in 2011/12).

Auditors

Audit New Zealand has been appointed as auditor by the Auditor-General in accordance with S32 of the Public Audit Act 2001.

Remuneration to Audit New Zealand in 2012/13 totalled $140,000 ($108,000 in 2011/12) for audit work, plus $1,000 for other services ($1,000 in 2011/12).

* carboNZero Holdings Limited changed its name to Enviro-Mark Solutions Limited on 1 July 2013.

Employee remuneration

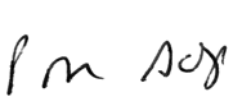
Total cost to the Group	Number of employees	
	2012/13	2011/12
$390,000 – $399,999	1(*)	-
$380,000 – $389,999	-	1(*)
$220,000 – $229,999	1	-
$210,000 – $219,999	-	-
$200,000 – $209,999	1	1
$190,000 – $199,999	2	1
$180,000 – $189,999	4	-
$170,000 – $179,999	2	2
$160,000 – $169,999	2	3
$150,000 – $159,999	3	4
$140,000 – $149,999	4	1
$130,000 – $139,999	7	6
$120,000 – $129,999	8	7
$110,000 – $119,999	14	14
$100,000 – $109,999	21	14

* CEO of Landcare Research New Zealand Limited

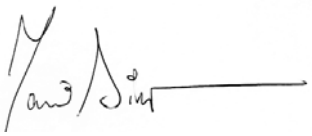
This table includes redundancy and termination payments to eight employees in 2012/13 (2011/12: one).

Compensation paid or payable to thirteen persons in 2012/13 (2011/12: 5) who ceased to be employees during the year totalled $581,000 in 2012/13 (2011/12: $62,000).

Signed, for and on behalf of the Board



PM Schuyt
Chair
21 August 2013



TJ Simpson
Deputy Chair
21 August 2013

Audited financial Statements

Statement of comprehensive income

for the year ended 30 June 2013

		Consolidated			Parent		
	Note	2013 Actual $000s	2013 Budget $000s	2012 Actual $000s	2013 Actual $000s	2013 Budget $000s	2012 Actual $000s
Revenue	2.	55,566	59,208	59,298	53,758	57,130	58,260
Finance costs	3.	64	56	134	64	56	155
Operating expenses	3.	54,649	57,546	57,143	52,861	55,288	55,394
Surplus before tax		**853**	**1,606**	**2,021**	**833**	**1,786**	**2,711**
Income tax expense	27.	268	449	460	372	498	768
Surplus/(deficit) from continuing operations after tax		**585**	**1,157**	**1,561**	**461**	**1,288**	**1,943**
Surplus/(deficit) from discontinued operation after tax	28.	**0**	**0**	**(228)**	**0**	**0**	**0**
Net surplus / (deficit)		**585**	**1,157**	**1,333**	**461**	**1,288**	**1,943**
Other comprehensive income		0	0	(30)	0	0	(30)
Total comprehensive income		**585**	**1,157**	**1,303**	**461**	**1,288**	**1,913**

The accompanying notes form part of these financial statements.

Statement of changes in equity

for the year ended 30 June 2013

	Consolidated			Parent		
	2013 Actual $000s	2013 Budget $000s	2012 Actual $000s	2013 Actual $000s	2013 Budget $000s	2012 Actual $000s
Balance at 1 July	**27,191**	**26,795**	**26,976**	**27,314**	**27,647**	**26,489**
Financial assets at fair value through equity						
Fair value movement in Kiwi Innovation Limited investment	0	0	(30)	0	0	(30)
Net income/(expense) recognised directly in equity	0	0	(30)	0	0	(30)
Surplus/(deficit) for the year	585	1,157	1,333	461	1,288	1,943
Total comprehensive income for the year ended 30 June	585	1,157	1,303	461	1,288	1,913
Dividends paid	0	0	(1,088)	0	0	(1,088)
Balance at 30 June	**27,776**	**27,952**	**27,191**	**27,775**	**28,935**	**27,314**
Total comprehensive income attributable to:						
Parent company	585	1,157	1,303	461	1,288	1,913
	585	**1,157**	**1,303**	**461**	**1,288**	**1,913**

The accompanying notes form part of these financial statements.

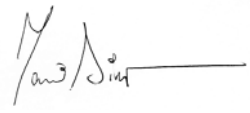
Statement of financial position

as at 30 June 2013

		Consolidated			Parent		
	Note	2013 Actual $000s	2013 Budget $000s	2012 Actual $000s	2013 Actual $000s	2013 Budget $000s	2012 Actual $000s
ASSETS							
Current assets							
Cash and cash equivalents	4.	1,165	267	1,976	1,111	354	1,818
Trade and other receivables	5.	7,845	6,773	8,155	7,756	6,770	8,431
Inventories	6.	37	160	121	0	135	96
Income tax paid in advance		171	0	0	57	0	0
Assets classified as held for sale	7.	48	0	0	476	0	0
Finance lease receivable	8.	97	97	88	97	97	88
Total current assets		**9,363**	**7,297**	**10,340**	**9,497**	**7,356**	**10,433**
Non-current assets							
Property, plant and equipment	10.	33,925	37,058	32,789	33,910	37,048	32,769
Patents and intellectual property	11.	490	724	467	80	549	375
Intangible assets	12.	1,025	1,441	937	1,025	1,434	937
Investments	13.	0	0	0	71	871	71
Finance lease receivable	8.	707	707	804	707	707	804
Total non-current assets		**36,147**	**39,930**	**34,997**	**35,793**	**40,609**	**34,956**
Total assets		**45,510**	**47,227**	**45,337**	**45,290**	**47,965**	**45,389**
LIABILITIES							
Current liabilities							
Trade and other payables	14.	5,701	5,631	6,639	5,627	5,497	6,502
Employee benefit liabilities	15.	4,068	4,450	4,587	3,945	4,285	4,476
Borrowings	16.	2,038	0	0	2,038	0	0
Liabilities classified as held for sale	7.	0	0	0	83	0	0
Finance lease	17.	0	0	42	0	0	42
Revenue in advance	18.	1,954	4,899	2,263	1,842	4,521	2,131
Tax payable		0	63	527	0	474	822
Derivative financial instruments	9.	2	0	28	2	0	28
Total current liabilities		**13,763**	**15,043**	**14,086**	**13,537**	**14,777**	**14,001**
Non-current liabilities							
Employee benefit liabilities	15.	722	605	764	703	601	749
Deferred tax liability	27.	3,249	3,627	3,296	3,275	3,652	3,325
Total non-current liabilities		**3,971**	**4,232**	**4,060**	**3,978**	**4,253**	**4,074**
Total liabilities		**17,734**	**19,275**	**18,146**	**17,515**	**19,030**	**18,075**
NET ASSETS		**27,776**	**27,952**	**27,191**	**27,775**	**28,935**	**27,314**
EQUITY							
Ordinary shares	19.	10,515	10,515	10,515	10,515	10,515	10,515
Retained earnings	19.	17,261	17,437	16,676	17,260	18,420	16,799
Total equity		**27,776**	**27,952**	**27,191**	**27,775**	**28,935**	**27,314**

The accompanying notes form part of these financial statements.

PM Schuyt
Chair
21 August 2013



TJ Simpson
Deputy Chair
21 August 2013

Statement of cash flows

for the year ended 30 June 2013

	Note	Consolidated 2013 Actual $000s	Consolidated 2013 Budget $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2013 Budget $000s	Parent 2012 Actual $000s
Cash flows from operating activities							
Receipts from customers		55,364	57,952	58,072	53,469	55,585	54,860
Interest received		26	96	289	26	96	307
Dividends received		0	0	0	0	0	181
Payments to suppliers and employees		(51,028)	(51,550)	(54,098)	(48,790)	(49,012)	(48,951)
Interest paid		(64)	(56)	(168)	(64)	(56)	(167)
Tax refund/(paid)		(641)	(599)	(823)	(929)	(600)	(830)
Net cash generated from operating activities	21.	**3,657**	**5,843**	**3,272**	**3,712**	**6,013**	**5,400**
Cash flows from investing activities							
Cash transferred to assets held for sale		(48)	0	0	(64)	0	0
Proceeds from sale of property, plant and equipment		153	0	1,336	153	0	1,361
Proceeds from sale of shares and investments		0	0	2,133	0	0	2,133
Purchase of property, plant and equipment		(6,611)	(7,855)	(6,128)	(6,621)	(7,836)	(7,454)
Purchase of intangible asset		0	(795)	37	0	(775)	(35)
Advances made (to)/from subsidiaries		0	0	0	75	0	(700)
Purchase of investments		0	0	(30)	0	0	(243)
Net cash used in investing activities		**(6,506)**	**(8,650)**	**(2,652)**	**(6,457)**	**(8,611)**	**(4,938)**
Cash flows from financing activities							
Proceeds from borrowings		2,038	0	(4,000)	2,038	0	(4,000)
Dividends paid		0	0	(1,088)	0	0	(1,088)
Net cash generated from (used in) financing activities		**2,038**	**0**	**(5,088)**	**2,038**	**0**	**(5,088)**
Net increase/(decrease) in cash		**(811)**	**(2,807)**	**(4,468)**	**(707)**	**(2,598)**	**(4,626)**
Cash, cash equivalents and bank overdrafts at beginning of the year		1,976	3,074	6,444	1,818	2,952	6,444
Cash, cash equivalents and bank overdrafts at end of the year	4.	**1,165**	**267**	**1,976**	**1,111**	**354**	**1,818**

The accompanying notes form part of these financial statements.

Notes to the Financial Statements

for the year ended 30 June 2013

1. Summary of Accounting Policies

Reporting entity

Landcare Research New Zealand Limited is a Crown Research Institute governed by the Crown Research Institutes Act 1992 and Crown Entities Act 2004. The Landcare Research Group ('the Group') consists of Landcare Research New Zealand Limited and its subsidiaries, Landcare Research US Limited (100% owned) and carboNZero Holdings Limited (100% owned). Landcare Research New Zealand Limited and carboNZero Holdings Limited are incorporated in New Zealand; Landcare Research US Limited is incorporated in the USA. Landcare Research New Zealand Limited subsidiary Sirtrack Limited (100% owned) was sold on 30 November 2011 to Lotek Wireless Inc. and ceased to be part of the Group from that date.

The core purpose of the Group is to drive innovation in New Zealand's management of terrestrial biodiversity and land resources in order to both protect and enhance the terrestrial environment and grow New Zealand's prosperity.

These audited financial statements of the Group are for the year ended 30 June 2013 and were authorised by the Board of Landcare Research New Zealand Limited on 21 August 2013.

Basis of preparation

The financial statements of the Group have been prepared in accordance with the requirements of the Crown Entities Act 2004, which includes the requirement to comply with New Zealand generally accepted accounting practice (NZ GAAP). These financial statements have been prepared in accordance with NZ GAAP. They comply with NZ IFRS, and other applicable financial reporting standards, as appropriate for profit-oriented entities.

The accounting policies set out below have been applied consistently to all periods presented in these financial statements.

The financial statements have been prepared on an historical cost basis modified by revaluation of certain financial instruments. The financial statements are presented in New Zealand dollars, the functional currency of the Group, and all values are rounded to the nearest thousand dollars ($000).

Foreign currency transactions are translated into the functional currency, using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions are recognised in the surplus or deficit.

The standards and interpretations below are not expected to have a material impact on the financial results. Except for the impending changes noted above there are no other standards or interpretations applicable to the Group that have been issued but are not yet effective.

Standards, amendments and interpretations issued but not yet effective

Standard/Interpretation	Effective for annual reporting periods beginning on or after	Expected to be initially applied in the financial year ending
NZ IFRS 9 Financial instruments	1 January 2013	30 June 2014
NZ IFRS 10 Consolidated financial statements	1 January 2013	30 June 2014
NZ IFRS 12 Disclosure of interest in other entities	1 January 2013	30 June 2014
NZ IFRS 13 Fair value measurement	1 January 2013	30 June 2014
NZ IAS 19 Employee benefits	1 January 2013	30 June 2014
NZ IAS 27 Consolidated and separate financial statements	1 January 2013	30 June 2014

Subsidiaries
Where the Group has the capacity to control the financing and operating policies of an entity, so as to obtain benefits from its activities, all such entities are consolidated as subsidiaries within the Group financial statements. This power exists where the Group controls the majority voting power on the governing body, or where such policies have been irreversibly predetermined by the Group, or where the determination of such policies is unable to materially impact the level of potential ownership benefits that arise from the activities of the subsidiary.

The Group measures the cost of a business combination as the aggregate of the fair values, at the date of exchange, of assets given, liabilities incurred or assumed, in exchange for control of the subsidiary plus any costs directly attributable to the business combination. Any excess of the cost of the business combination over the Group's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities is recognised as goodwill. If the Group's interest in the net fair value of the identifiable assets, liabilities and contingent liabilities recognised exceeds the cost of the business combination, the difference will be recognised immediately in the surplus or deficit.

Basis of consolidation
The purchase method is used to prepare the consolidated financial statements; this involves adding together like items of assets, liabilities, equity, income and expenses on a line-by-line basis. All significant intragroup balances, transactions, income and expenses are eliminated on consolidation.

Landcare Research New Zealand Limited's investment in its subsidiaries is carried at cost less impairment in its 'Parent entity' financial statements.

Revenue
Revenue is measured at the fair value of consideration received.

Revenue from the rendering of services is recognised by reference to the stage of completion of the transaction at balance date, based on the actual service provided as a percentage of the total services to be provided. Income received for goods and services which have not yet been supplied to customers has been recognised as Revenue in Advance. Sales of goods are recognised when a product is sold to the customer.

Core Funding from the Ministry of Building, Innovation and Employment (MBIE), previously the Ministry of Science and Innovation (MSI), is treated as a government grant and generally recognised in the year of receipt. The only exception is where MBIE gives prior written consent to carry over to the next financial year any part of the Core Funding that will be allocated to specified long term or large scale research activities that require the accumulation of funds over two or more financial years to fully fund those activities.

Interest income is recognised using the effective interest method, whereby the estimated future cash receipts are exactly discounted from the net carrying amounts through the expected life of the financial assets.

Dividends are recognised when the right to receive payment has been established.

Borrowing costs
Borrowing costs directly attributable to the acquisition, construction or production of a qualifying asset (i.e. an asset that necessarily takes a substantial period of time to get ready for its intended use or sale) are capitalised as part of the cost of that asset in accordance with NZ IAS 23 Borrowing Costs (revised). All other borrowing costs are expensed in the period they occur.

Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

Income tax
Income tax expense in relation to the surplus or deficit for the period comprises current tax and deferred tax.

Current tax is the amount of income tax payable based on the taxable profit for the current year, plus any adjustments to income tax payable in respect of prior years. Current tax is calculated using rates that have been enacted or substantively enacted by balance date.

Deferred tax is the amount of income tax payable or recoverable in future periods in respect of temporary differences and unused tax losses. Temporary differences are differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax *liabilities* are generally recognised for all taxable temporary differences. Deferred tax *assets* are recognised to the extent that it is probable that taxable profits will be available against which the deductible temporary differences or tax losses can be utilised. Deferred tax is not recognised if the temporary difference arises from the initial recognition of goodwill, or from the initial recognition of an asset and liability in a transaction that is not a business combination, and

at the time of the transaction affects neither accounting profit nor taxable profit. Deferred tax is recognised on taxable temporary differences arising on investments in subsidiaries and associates, and interests in joint ventures, except where the Company can control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset is realised, using tax rates that have been enacted or substantively enacted by balance date.

Current tax and deferred tax are recognised against the surplus or deficit, except to the extent that they relate to a business combination, or to transactions recognised in other comprehensive income or directly in equity.

Finance leases
A finance lease is a lease that substantially transfers to the lessee all risks and rewards incidental to ownership of an asset, whether or not title is eventually transferred.

At the commencement of the lease term, the Group recognises finance leases as assets and liabilities in the Statement of Financial Position at the lower of the fair value of the leased item or the present value of the minimum lease payments. The amount recognised as an asset is depreciated over its useful life. If there is no certainty as to whether the Group will obtain ownership at the end of the lease term, the asset is fully depreciated over the shorter of the lease term or its useful life.

Operating leases
An operating lease is a lease that does not substantially transfer all the risks and rewards incidental to ownership of an asset. Lease payments under an operating lease are recognised as an expense on a straight-line basis over the lease term. Lease incentives received are recognised evenly over the term of the lease as a reduction in rental expense.

Cash and cash equivalents
Cash and cash equivalents include cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown within borrowings in current liabilities in the Statement of Financial Position.

Trade and other receivables
Trade and other receivables are initially measured at fair value and subsequently measured at amortised cost, using the effective interest method, less any provision for impairment.

Loans are initially recognised at the present value of their expected future cash flows, discounted at the current market rate of return for a similar asset/investment. They are subsequently measured at amortised cost using the effective interest method. The difference between the face value and present value of expected future cash flows of the loan is recognised in the Statement of Comprehensive Income as a grant.

A provision for impairment of receivables is established when there is objective evidence that the Group will not be able to collect all amounts due according to the original terms of receivables. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted using the effective interest method.

Inventories
Inventories (such as spare parts and other items) held for distribution or consumption in the provision of services that are not supplied on a commercial basis are measured at the lower of cost and net realisable value. Inventories held for use in the production of goods and services on a commercial basis are valued at the lower of cost and net realisable value. The cost of purchased inventory is determined using the average cost method.

The write-down from cost to net realisable value is recognised in the surplus or deficit.

Financial assets
The Group classifies its financial assets into the following three categories: financial assets at fair value through profit or loss, loans and receivables, and financial assets at fair value through other comprehensive income. The classification depends on the purpose for which the investments were acquired. Management determines the classification of its investments at initial recognition and re-evaluates this designation at every reporting date.

Financial assets and liabilities are initially measured at fair value plus transaction costs unless they are carried at fair value through surplus or deficit, in which case the transaction costs are recognised in the surplus or deficit.

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. The quoted market price used is the current bid price. The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. The Group uses a variety of methods and makes assumptions that are based on market conditions existing at each balance date. Quoted market prices or dealer quotes for similar instruments

are used for long-term debt instruments held. Other techniques, such as estimated discounted cash flows, are used to determine fair value for the remaining financial instruments.

The three categories of financial assets are:

• *Financial assets at fair value through surplus or deficit*
This category has two sub-categories: financial assets held for trading, and those designated at fair value through surplus or deficit at inception. A financial asset is classified in this category if acquired principally for the purpose of selling in the short term, or if designated as so by management. Derivatives are also categorised as held for trading unless they are designated as hedges. Assets in this category are classified as current assets if they are either held for trading or are expected to be realised within 12 months of the balance sheet date. After initial recognition they are measured at their fair values. Gains or losses on remeasurement are recognised in the surplus or deficit. Financial assets in this category include foreign currency forward contracts.

• *Loans and receivables*
These are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. After initial recognition they are measured at amortised cost using the effective interest method. Gains and losses when the asset is impaired or derecognised are recognised in the surplus or deficit. 'Trade and other receivables' are classified as loans and receivables in the Statement of Financial Position.

• *Financial assets at fair value through other comprehensive income*
Financial assets at fair value through other comprehensive income are those that are designated as fair value through other comprehensive income or are not classified in any of the other categories above. This category encompasses:

- Investments that the Group intends to hold long term but which may be realised before maturity.
- Shareholdings that the Group holds for strategic purposes. The Parent's investments in its subsidiaries are not included in this category as they are held at cost (as allowed by NZ IAS 27 Consolidated and Separate Financial Statements) whereas this category is to be measured at fair value.
- Investment in Kiwi Innovation Network Limited.

After initial recognition, these investments are measured at their fair value. Gains and losses are recognised directly in other comprehensive income except for impairment losses, which are recognised in the surplus or deficit. In the event of impairment, any cumulative losses previously recognised in other comprehensive income will be removed from other comprehensive income and recognised in the surplus or deficit even though the asset has not been derecognised. On derecognition, the cumulative gain or loss previously recognised in other comprehensive income is recognised in the surplus or deficit.

Impairment of financial assets
At each balance sheet date the Group assesses whether there is any objective evidence that a financial asset or group of financial assets is impaired. Any impairment losses are recognised in the surplus or deficit.

Accounting for derivative financial instruments and hedging activities
The Group uses derivative financial instruments to cover the risk on foreign exchange. In accordance with its treasury policy, the Group does not hold or issue derivative financial instruments for trading purposes.

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured at their value. The Group does not designate derivatives as a hedging instrument and therefore accounts for derivative instruments at fair value through profit or loss. Changes in the fair value of derivative instruments are recognised immediately in the surplus or deficit.

Non-current assets held for sale
Non-current assets held for sale are classified as held for sale if their carrying amount will be recovered principally through a sale transaction, not through continuing use. Non-current assets held for sale are measured at the lower of their carrying amount and fair value less costs to sell. Any impairment losses for write-downs of non-current assets held for sale are recognised in the surplus or deficit.

Any increases in fair value (less costs to sell) are recognised up to the level of any impairment losses that have been previously recognised. Non-current assets (including those that are part of a disposal group) are not depreciated or amortised while they are classified as held for sale. Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale continue to be recognised.

Property, plant and equipment
Property, plant and equipment consist of:
• *Operational assets* These include land, buildings,

library books, plant and equipment, and motor vehicles.
- *Restricted assets* These are collections and databases, held by the Group, that provide a benefit or service to the community and cannot be disposed of because of legal or other restrictions.
- *Capital work in progress* This has been included within plant and equipment, and is not depreciated until ready for use.

Property, plant and equipment are shown at cost, less accumulated depreciation and impairment losses. Assets are not reported with a financial value in cases where they are not realistically able to be reproduced or replaced, and when they do not generate cash flows and where no market exists to provide a valuation.

Additions
The cost of an item of property, plant and equipment is recognised as an asset if, and only if, it is probable that future economic benefits or service potential associated with the item will flow to the Group and the cost of the item can be measured reliably. In most instances, an item of property, plant and equipment is recognised at its cost. Where an asset is acquired at no cost, or for a nominal cost, it is recognised at fair value as at the date of acquisition.

Disposals
Gains and losses are determined by comparing the proceeds with the carrying amount of the asset. Gains and losses on disposals are included in the surplus or deficit.

Subsequent costs
Costs incurred subsequent to initial acquisition are capitalised only when it is probable that future economic benefits or service potential associated with the item will flow to the Group and the cost of the item can be measured reliably.

Depreciation
Depreciation is provided on the Group's property, plant and equipment, other than land, at rates that will write off the cost of the assets to their estimated residual values over their useful lives. All Parent and carboNZero depreciable assets are depreciated on a straight-line (SL) basis. Up to the sale date of 30 November 2011 Sirtrack Limited's depreciable assets were depreciated at Inland Revenue rates on a diminishing value (DV) basis. The residual value and useful life of an asset is reviewed, and adjusted if applicable, at each financial year end.

Depreciation rates	Parent and carboNZero (SL)	Sirtrack (DV)
Buildings	1.67–10%	3–12%
Plant and equipment	4–33%	12–80%
IT equipment	25%	26–48%
Motor vehicles	25%	31%
Furniture and fittings	6.67–10%	9–30%
Office equipment	20%	12–40%
Finance lease assets	20%	25–36% (SL)
Library books and periodicals	20–50%	-
Rare books collections	1%	-

Intangible assets
Software acquisition and website development costs
Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and bring to use the specific software. Costs associated with maintaining computer software and websites are recognised as an expense when incurred. Costs that are directly associated with the development of software and websites for internal use by the Group are recognised as an intangible asset. Direct costs include the software development employee costs and an appropriate portion of relevant overheads.

Patents and intellectual property
Patents and intellectual property are capitalised on the basis of costs incurred.

Amortisation
The carrying value of an intangible asset with a finite life is amortised on a straight-line basis over its useful life. Amortisation begins when the asset is available for use and ceases at the date that the asset is derecognised. The amortisation charge for each period is recognised in the surplus or deficit. The useful lives and associated amortisation rates of major classes of intangible assets have been estimated as follows:

Computer software	4 years	25%
Intellectual property	3–20 years	5–35%

Impairment of non-financial assets
Non-financial assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment. Assets that have a finite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the

higher of an asset's fair value less costs to sell and value in use.

Value in use is depreciated replacement cost for an asset where the future economic benefits or service potential of the asset are not primarily dependent on the asset's ability to generate net cash inflows and where the entity would, if deprived of the asset, replace its remaining future economic benefits or service potential. The value in use for cash-generating assets is the present value of expected future cash flows.

If an asset's carrying amount exceeds its recoverable amount the asset is impaired and the carrying amount is written down to the recoverable amount. The total impairment loss is recognised in the surplus or deficit.

Employee benefits

Short-term benefits

Employee benefits that the Group expects to be settled within 12 months of balance date are measured at nominal values based on accrued entitlements at current rates of pay. These include salaries and wages accrued up to balance date, annual leave earned to but not yet taken at balance date, retirement and long-service leave entitlements expected to be settled within 12 months, and sick leave.

The Group recognises a liability for sick leave to the extent that absences in the coming year are expected to be greater than the sick leave entitlements earned in the coming year. The amount is calculated based on the unused sick leave entitlement that can be carried forward at balance date; to the extent that the Group anticipates leave entitlements will be used by staff to cover those future absences.

The Group recognises a liability and an expense for bonuses where contractually obliged or where there is a past practice that has created a constructive obligation.

All actuarial gains and losses that arise subsequent to the transition date in calculating the Group's obligation with respect to long service leave, retirement gratuities and sick leave are recognised as an expense in the surplus or deficit.

Superannuation schemes

- Defined contribution schemes: obligations for contributions to defined-contribution superannuation schemes are recognised as an expense in the surplus or deficit as incurred.
- Defined benefit schemes: the Group makes contributions to the Government Superannuation Fund, which is a multi-employer defined benefit scheme. Insufficient information is available to use defined benefit accounting, as it is not possible to determine from the terms of the scheme the extent to which the surplus/deficit will affect future contributions by individual employers, as there is no prescribed basis for allocation. The scheme is therefore accounted for as a defined contribution scheme.

Long service leave, retirement leave and sick leave

Entitlements that are payable beyond 12 months, such as long service leave, retirement leave and sick leave, have been calculated on an actuarial basis. The calculations are based on likely future entitlements accruing to staff, based on years of service, years to entitlement, payment history, the likelihood that staff will reach the point of entitlement, and contractual entitlements information.

Provisions

The Group recognises a provision for future expenditure of uncertain amount or timing when there is a present obligation (either legal or constructive), as a result of a past event, that probable expenditures will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation. Provisions are not recognised for future operating losses. Provisions are measured at the present value of the expenditures expected to be required to settle the obligation, using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the obligation. The increase in the provision due to the passage of time is recognised as an interest expense.

Borrowings

Borrowings are initially recognised at their fair value. After initial recognition, all borrowings are measured at amortised cost, using the effective interest method.

Goods and Service Tax (GST)

All items in the financial statements are stated exclusive of GST, except for receivables and payables, which are stated on a GST-inclusive basis. Where GST is not recoverable as input tax then it is recognised as part of the related asset or expense.

The net amount of GST recoverable from, or payable to, the Inland Revenue Department (IRD) is included as part of receivables or payables in the Statement of Financial Position. The net GST paid to or received from the IRD, including the GST relating to investing and financing activities, is classified as an operating cash flow in the Statement of Cash Flows.

Commitments and contingencies are disclosed exclusive of GST.

Budget figures
The budget figures are those in the Statement of Corporate Intent approved by the shareholding Ministers at the beginning of the year. The budget figures have been prepared in accordance with NZ GAAP, using accounting policies that are consistent with those adopted by the Group for the preparation of the financial statements.

Critical accounting estimates and assumptions
In preparing these financial statements the Group has made estimates and assumptions concerning the future. These estimates and assumptions may differ from the subsequent actual results. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations or future events that are believed to be reasonable under the circumstances. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below:

Revenue recognition
The Group uses the percentage-of-completion method in accounting for its fixed-price contracts to deliver research services. Use of the percentage-of-completion method requires the Group to estimate the services performed to date as a proportion of the total services to be performed.

Critical judgements in applying the Group's accounting policies
Management has exercised the following critical judgements in applying the Group's accounting policies for the year ended 30 June 2013:

Leases classification
Determining whether a lease agreement is a finance or an operating lease requires judgement as to whether the agreement transfers substantially all the risks and rewards of ownership to the Company.

Judgement is required on various aspects that include, but are not limited to, the fair value of the leased asset, the economic life of the leased asset, whether or not to include renewal options in the lease term, and determining an appropriate discount rate to calculate the present value of the minimum lease payments. Classification as a finance lease means the asset is recognised in the Statement of Financial Position as property, plant and equipment, whereas for an operating lease no such asset is recognised.

The Group has exercised its judgement on the appropriate classification of property and equipment leases and has determined that a number of lease arrangements are finance leases.

Provision for warranty
The Group has exercised judgement on the appropriate level of provision for warranty on sales of wildlife tracking equipment.

Changes in accounting policies
There were no changes in accounting policy during the financial year.

The Group has adopted the following revisions to accounting standards during the financial year, which have had only a presentational or disclosure effect:

NZ IAS 1 Presentation of Financial Statements – The amendments relate to Presentation of Items of Other Comprehensive Income.

Notes to the financial statements contd.

2 REVENUE	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Revenue from operations consisted of the following items:				
Ministry of Business, Innovation and Employment (MBIE)	30,608	34,037	30,608	34,037
New Zealand non-MBIE	23,350	23,033	21,776	21,680
International non-MBIE	1,441	1,347	1,209	986
Interest revenue:				
Bank deposits	28	191	26	188
Finance leases	77	84	77	84
Subsidiaries	0	0	0	21
Total interest	105	275	103	293
Dividends - subsidiaries	0	0	0	181
Gain on foreign currency contracts fair value	25	0	25	0
Gain/(loss) on sale of subsidiary	0	606	0	1,083
Gain on disposal of fixed assets	37	0	37	0
Total revenue	**55,566**	**59,298**	**53,758**	**58,260**

3 PROFIT BEFORE INCOME TAX	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Profit before income tax has been arrived at after charging the following expenses:				
Finance costs:				
Interest on loans	64	134	64	155
Inventory write off	40	0	40	0
Employee remuneration	29,249	29,532	28,088	27,952
Restructuring costs	753	173	644	127
Superannuation contributions	1,171	1,133	1,143	1,101
Employee entitlements increase/(decrease)	(463)	485	(550)	485
Net bad and doubtful debts	40	8	40	4
Donations	16	94	16	10
Auditors' remuneration:	40	0	40	0
Audit New Zealand – audit services	140	108	93	88
Audit New Zealand – other services	6	1	0	1
Directors' fees	238	261	190	207
Depreciation and amortisation of non-current assets	4,360	4,206	4,355	4,175
Loss on sale of non-current assets	6	118	0	74
Operating lease rental	652	646	648	641
Cost of sales	500	723	166	217
Movement in inventory	(84)	(14)	(96)	(33)
Loss on foreign currency contracts fair value	13	0	0	0
Impairment of investment/receivable in subsidiary	0	0	391	1,200

4 CASH AND CASH EQUIVALENTS	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Cash at bank and in hand	1,164	376	1,110	216
Short-term deposits maturing three months or less from date of acquisition	1	1,600	1	1,602
Total cash and cash equivalents	**1,165**	**1,976**	**1,111**	**1,818**

The carrying value of short-term deposits with maturity dates of three months or less approximates their fair value.

Cash and bank overdrafts include the following for the purposes of the cash flow statement:

Cash at bank and in hand	1,164	374	1,110	216
Short-term deposits maturing three months or less from date of acquisition	1	1,602	1	1,602
	1,165	**1,976**	**1,111**	**1,818**

5 TRADE AND OTHER RECEIVABLES	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Trade debtors	6,844	7,175	6,387	6,499
Accrued income and sundry debtors	218	124	41	124
Receivables from controlled entities (note 24)	0	0	336	254
Prepayments	839	874	804	856
Loans to controlled entities (note 24)	0	0	234	700
	7,901	8,173	7,802	8,433
Less provision for impairment of receivables	(56)	(18)	(46)	(2)
Total trade and other receivables	**7,845**	**8,155**	**7,756**	**8,431**
Total non-current portion	**0**	**0**	**0**	**0**
Total current portion of trade & other receivables	**7,845**	**8,155**	**7,756**	**8,431**

The carrying value of trade and other receivables approximates their fair value. The carrying value of loans to related parties approximates their fair value.

Apart from the Ministry of Business, Innovation and Employment, which is Government owned, there is no concentration of credit risk to receivables outside the Group, as the Group has a large number of customers.

As of 30 June 2013, all overdue receivables have been assessed for impairment and appropriate provisions applied. Landcare Research holds no collateral as security or other credit enhancements over receivables that are either past due or impaired. The impairment provision has been calculated based on expected losses for Landcare Research's pool of debtors. Expected losses have been determined based on review of specific debtors.

Movements in the provision for impairment of receivables are as follows:

As at 1 July	18	11	2	2
Additional provisions made during the year	38	9	46	2
Receivables written off during the period	4	(2)	(2)	(2)
Transferred to assets held for sale	0	0	0	0
As at 30 June	**60**	**18**	**46**	**2**

Age of trade debtors:

Current	6,424	6,625	6,072	6,009
Outstanding	420	550	315	490
Total trade debtors	**6,844**	**7,175**	**6,387**	**6,499**

6 INVENTORIES

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Finished goods (at net realisable value)	37	121	0	96
Total inventories	**37**	**121**	**0**	**96**

7 ASSETS/(LIABILITIES) HELD FOR SALE

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Current assets	48	0	147	0
Non-current assets	0	0	329	0
Current liabilities	0	0	(80)	0
Non-current liabilities	0	0	(3)	0
Total assets/(liabilities) held for sale	**48**	**0**	**393**	**0**

Prior to 30 June 2013 the Landcare Research Board agreed to transfer the operations of its Enviro-Mark business unit to its subsidiary Company carboNZero Holdings Limited. The assets of Enviro-Mark were held for sale and show in the Parent 2013 column. Net assets at book value were transferred to carboNZero Holdings on 1 July 2013.

Prior to 30 June 2013 Landcare Research agreed to cease Manaaki Whenua Press Bookshop operations later in 2013. The assets of Manaaki Whenua Press Bookshop were held for sale and show in the Parent and Group 2013 actual columns.

8 ANALYSIS OF FINANCE LEASE RECEIVABLE

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Total minimum lease payments are receivable:				
Not later than one year	165	165	165	165
Later than one year and not later than five years	465	552	465	552
Later than five years	608	686	608	686
Total minimum lease payments	1,238	1,403	1,238	1,403
Future finance charges	(434)	(511)	(434)	(511)
Total present value of minimum lease payments	**804**	**892**	**804**	**892**
Present value of minimum lease payments are receivable:				
Not later than one year	96	88	96	88
Later than one year and not later than five years	271	330	271	330
Later than five years	437	474	437	474
Total	**804**	**892**	**804**	**892**
Current	96	88	96	88
Non-current	708	804	708	804
Total	**804**	**892**	**804**	**892**

Finance lease receivable relates to the animal house facility. The building transfers to Lincoln University for nil consideration in 2016. Landcare Research New Zealand Limited has the right to continue occupying the building for a further 10 years to 2026 at a rent of $1.00 per annum.

9 DERIVATIVE FINANCIAL INSTRUMENTS

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Current asset/(liability) portion				
Foreign currency forward contracts	(2)	(28)	(2)	(28)
Total derivative financial instruments	**(2)**	**(28)**	**(2)**	**(28)**

10 PROPERTY, PLANT AND EQUIPMENT

	Parent						Group					
2012	Land $000s	Buildings $000s	Plant & equipment $000s	Library assets $000s	Finance lease $000s	Total $000s	Land $000s	Buildings $000s	Plant & equipment $000s	Library assets $000s	Finance lease $000s	Total $000s
Cost at 1 July 2011	519	23,556	35,729	4,933	122	64,859	519	23,556	35,729	4,933	122	**64,859**
Accumulated depreciation and impairment charges	0	(6,924)	(23,754)	(3,706)	(5)	(34,389)	0	(6,924)	(23,754)	(3,706)	(5)	**(34,389)**
Net book value at the beginning of the year	519	16,632	11,975	1,227	117	30,470	519	16,632	11,975	1,227	117	**30,470**
Year ended 30 June 2012												
Net book value at the beginning of the year	519	16,632	11,975	1,227	117	30,470	519	16,632	11,975	1,227	117	**30,470**
Additions	474	1,695	4,786	515	0	7,470	0	819	4,809	515	0	**6,143**
Disposals and transfers	(474)	(876)	(562)	0	0	(1,912)	0	0	(562)	0	0	**(562)**
Accumulated depreciation on disposals and transfers	0	0	536	0	0	536	0	0	533	0	0	**533**
Current year depreciation	0	(414)	(2,870)	(506)	(5)	(3,795)	0	(414)	(2,870)	(506)	(5)	**(3,795)**
Net book value at the end of the year	519	17,037	13,865	1,236	112	32,769	519	17,037	13,885	1,236	112	**32,789**
At 30 June 2012												
Cost	519	24,375	39,953	5,448	122	70,417	519	24,375	39,976	5,448	122	**70,440**
Accumulated depreciation	0	(7,338)	(26,088)	(4,212)	(10)	(37,648)	0	(7,338)	(26,091)	(4,212)	(10)	**(37,651)**
Net book value at the end of the year	519	17,037	13,865	1,236	112	32,769	519	17,037	13,885	1,236	112	**32,789**

	Parent						Group					
2013	Land $000s	Buildings $000s	Plant & equipment $000s	Library assets $000s	Finance lease $000s	Total $000s	Land $000s	Buildings $000s	Plant & equipment $000s	Library assets $000s	Finance lease $000s	Total $000s
Cost at 1 July 2012	519	24,375	39,953	5,448	122	70,417	519	24,375	39,976	5,448	122	**70,440**
Accumulated depreciation and impairment charges	0	(7,338)	(26,088)	(4,212)	(10)	(37,648)	0	(7,338)	(26,091)	(4,212)	(10)	**(37,651)**
Net book value at the beginning of the year	519	17,037	13,865	1,236	112	32,769	519	17,037	13,885	1,236	112	**32,789**
Year ended 30 June 2013												
Net book value at the beginning of the year	519	17,037	13,865	1,236	112	32,769	519	17,037	13,885	1,236	112	**32,789**
Additions	0	1,669	3,065	493	0	5,227	0	1,669	3,065	493	0	**5,227**
Disposals and transfers	0	(32)	(538)	0	(112)	(682)	0	(32)	(538)	0	(112)	**(682)**
Accumulated depreciation on disposals	0	32	538	0	0	570	0	32	538	0	0	**570**
Current year depreciation	0	(450)	(3,004)	(520)	0	(3,974)	0	(450)	(3,009)	(520)	0	**(3,979)**
Net book value at the end of the year	519	18,256	13,926	1,209	0	33,910	519	18,256	13,941	1,209	(0)	**33,925**
At 30 June 2013												
Cost	519	26,012	42,490	5,942	0	74,963	519	26,012	42,513	5,942	0	**74,986**
Accumulated depreciation	0	(7,756)	(28,564)	(4,733)	0	(41,053)	0	(7,756)	(28,572)	(4,733)	0	**(41,061)**
Net book value at the end of the year	519	18,256	13,926	1,209	0	33,910	519	18,256	13,941	1,209	0	**33,925**

Heritage Assets

Heritage collection assets are those assets held for the duration of their physical lives because of their unique scientific importance. The Crown, when establishing Crown Research Institutes in 1992, transferred various national databases and reference collections to individual Institutes at nil value. Many of these databases and collections were specifically identified by the Foundation for Research, Science and Technology as being of significant national importance, and they have covenants attached to them restricting an Institute's ability to deal with them.

Landcare Research has the following nationally significant collections and databases that have been defined as heritage assets:

- The New Zealand Arthropod Collection (NZAC), including the New Zealand National Nematode Collection (NZNNC) and associated database NZACbugs, BUGS bibliography and Pacific database.
- The New Zealand Fungal & Plant Disease Herbarium (PDD).
- The International Collection of Micro-Organisms from Plants (ICMP) and associated NZFungi Database.
- The Allan Herbarium.
- The National Vegetation Survey Databank (NVS).
- The 'Ngā Tipu Whakaoranga' Ethnobotany Database and New Zealand Flax and Living Plant collections.

Further details on these heritage assets are shown in the company's Statement of Corporate Intent page 53.
The nature of these heritage assets and their significance to the science and research that Landcare Research undertakes make it necessary to disclose them.
No reliable valuation is able to be obtained for these assets, and so they remain at nil value.

A rare books collection, previously considered to be part of the reference collections, was introduced in 2002/03 on a market value basis. This value has been accepted as deemed cost.

11 PATENTS AND INTELLECTUAL PROPERTY

	Consolidated	Parent
	Actual $000s	**Actual $000s**
As at 1 July 2011		
Cost	638	399
Accumulated amortisation and impairment	(122)	(19)
Net book amount	**516**	**380**
Year ended 30 June 2012		
Opening net book amount	516	380
Additions	24	24
Disposals/transfers	(181)	(35)
Amortisation on disposals/transfers	111	9
Amortisation charge	(3)	(3)
Closing net book amount	**467**	**375**
As at 1 July 2012		
Cost	481	388
Accumulated amortisation and impairment	(14)	(13)
Net book amount	**467**	**375**
Year ended 30 June 2013		
Opening net book amount	467	375
Additions	32	32
Disposals/transfers	(6)	0
Amortisation on disposals/transfers	0	0
Amortisation charge	(3)	(3)
Closing net book amount	**490**	**404**
As at 30 June 2013		
Cost	506	420
Accumulated amortisation and impairment	(16)	(16)
Net book amount	**490**	**404**
Classified as Patents and Intellectual Property	**490**	**80**
Classified as Non-current Assets Held For Sale	**0**	**324**
	490	**404**

Landcare Research has patents and trademarks amounting to $490,000 (2012: $467,000), which are carried at an indefinite life in the financial statements. These assets have not been impaired during the year (2012: no impairment writedown). Landcare Research has not recognised an impairment charge, as these assets are still used by the business.

12 INTANGIBLE ASSETS

	Consolidated Actual $000s	Parent Actual $000s
As at 1 July 2011		
Cost	3,126	3,004
Accumulated amortisation and impairment	(2,477)	(2,383)
Net book amount	**649**	**621**
Year ended 30 June 2012		
Opening net book amount	649	621
Additions	1,075	674
Disposals/transfers	(1)	(1)
Amortisation on disposals/transfers	1	1
Amortisation charge/impairment charge	(787)	(358)
Closing net book amount	**937**	**937**
As at 30 June 2012		
Cost	4,200	3,677
Accumulated amortisation and impairment	(3,263)	(2,740)
Net book amount	**937**	**937**
Year ended 30 June 2013		
Opening net book amount	937	937
Additions	490	490
Disposals/transfers	0	0
Amortisation on disposals/transfers	0	0
Amortisation/impairment charge	(402)	(402)
Closing net book amount	**1,025**	**1,025**
As at 30 June 2013		
Cost	4,690	4,167
Accumulated amortisation and impairment	(3,665)	(3,142)
Net book amount	**1,025**	**1,025**

13 INVESTMENTS

	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Investment in Kiwi Innovation Limited	0	0	0	0
Investment in Sirtrack Limited	0	0	0	0
Investment in carboNZero Holdings Limited	0	0	0	0
Investment in Landcare Research US Limited	0	0	71	71
Total investments	**0**	**0**	**71**	**71**

Landcare Research New Zealand Limited has 100% interest in Landcare Research US Limited and carboNZero Holdings Limited. The investment in Sirtrack was classified as held for sale as at 30 June 2011 and was physically sold on 30 November 2011.

carboNZero Holdings Limited commenced trading on 1 July 2011. The parent invested $1,200,000 in shares of carboNZero Holdings Limited, the investment included assets and liabilities transferred as a non cash transaction.

The subsidiaries are unlisted companies, and accordingly, there are no published price quotations to determine the fair value of these investments; therefore, they are accounted at cost less impairment as per the accounting policies.

As at 30 June 2012 the Parent Board assessed a $1,200,000 impairment of the investment in carboNZero Holdings Limited reducing the investment to zero value.

During the 2012 year Landcare Research New Zealand Limited purchased an 11.1% investment in Kiwi Innovation Network Limited for $30,000. As at 30 June 2012 the Parent Board assessed a $30,000 impairment of the investment in Kiwi Innovation Network Limited reducing the investment to zero value.

14 TRADE AND OTHER PAYABLES	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Trade payables	2,910	3,942	2,893	3,912
Amounts due to controlled entities	0	0	86	97
Amounts due to directors	1	5	0	3
GST & PAYE	1,208	830	1,135	753
Sundry creditors and accruals	1,582	1,862	1,513	1,737
Total trade and other payables	**5,701**	**6,639**	**5,627**	**6,502**

The carrying value of trade and other payables approximates their fair value.

15 EMPLOYEE BENEFIT LIABILITIES	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Accrued pay	682	695	652	695
Annual leave	1,941	2,074	1,861	1,999
Long service leave	1,197	1,253	1,178	1,238
Retirement leave	40	39	40	39
Time in lieu	164	183	160	183
Sick leave	62	69	61	68
Bonus provision	371	877	363	842
Restructuring provision	333	161	333	161
Total employee benefit liabilities	**4,790**	**5,351**	**4,648**	**5,225**
Comprising:				
Current	4,068	4,587	3,945	4,476
Non-current	722	764	703	749
Total	**4,790**	**5,351**	**4,648**	**5,225**

Entitlements that are payable beyond 12 months, such as long service leave and retirement leave, have been calculated on an actuarial basis by Eriksen and Associates Limited as at 30 June 2013. The calculations are based on:

- Likely future entitlements accruing to staff, based on years of service, years to entitlement, likelihood staff will reach the point of entitlement and contractual entitlements information; and
- Present value of estimated future cash flows using the following key assumptions:
  * Discount rates of 2.53% – 6.00% based on the risk-free rates as calculated from the yields on New Zealand Government Bonds
  * Inflation factor of 3.00% was based on the expected long-term increase in remuneration of employees.

16 BORROWINGS	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Current	2,038	0	2,038	0
Borrowings	**2,038**	**0**	**2,038**	**0**

The carrying value of borrowings approximates their fair value. Borrowings are unsecured.

	Consolidated Borrowings $000s	Parent Borrowings $000s
Maturity analysis and effective interest rates		
2012		
Less than one year	0	0
Later than one year	0	0
Greater than five years	0	0
2013		
Less than one year	2,038	2,038
Later than one year	0	0
Greater than five years	0	0
Interest rates		
June 2013	5.45%	5.45%
June 2012	5.20%	5.20%

17 ANALYSIS OF FINANCE LEASE LIABILITIES	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Total minimum lease payments are payable:				
Not later than one year	0	45	0	45
Later than one year and not later than five years	0	0	0	0
Later than five years	0	0	0	0
Total minimum lease payments	0	45	0	45
Future finance charges	0	(3)	0	(3)
Present value of minimum lease payments	**0**	**42**	**0**	**42**
Present value of minimum lease payments are payable:				
Not later than one year	0	42	0	42
Later than one year and not later than five years	0	0	0	0
Later than five years	0	0	0	0
Total	**0**	**42**	**0**	**42**
Current	0	42	0	42
Non-current	0	0	0	0
Total	**0**	**42**	**0**	**42**

18 REVENUE IN ADVANCE	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
MBIE public good science funding	552	271	552	271
MBIE capability funding	1	303	0	303
Commercial contracts	1,401	1,689	1,290	1,557
	1,954	**2,263**	**1,842**	**2,131**

The carrying value of revenue in advance approximates fair value.

19 EQUITY	Consolidated 2013 Actual $000s	Consolidated 2012 Actual $000s	Parent 2013 Actual $000s	Parent 2012 Actual $000s
Retained earnings				
As at 1 July	16,676	16,461	16,799	15,974
Dividends paid	0	(1,088)	0	(1,088)
Fair value movement in financial assets classified as fair value through other comprehensive income	0	(30)	0	(30)
Surplus/(deficit) for the year	585	1,333	461	1,943
As at 30 June	**17,261**	**16,676**	**17,260**	**16,799**
Share capital				
As at 1 July	10,515	10,515	10,515	10,515
As at 30 June	**10,515**	**10,515**	**10,515**	**10,515**

The issued capital of the company is 10,515,000, fully paid up, and equally ranking shares.

Dividends of $0.00 (June 2012 full year: $0.1035) per share were paid during the year ended 30 June 2013.

20 CAPITAL MANAGEMENT

The Group's capital is its equity, which comprises retained earnings and other reserves. Equity is represented by net assets. The Group is subject to the financial management and accountability provisions of the Crown Entities Act 2004, Crown Research Institutes Act 1992 and the Shareholding Ministers' Annual Operating Framework, which impose restrictions in relation to borrowings, acquisition of securities, issuing guarantees and indemnities, and the use of derivatives.

The Group manages its equity as a by-product of prudently managing revenues, expenses, assets, liabilities, investments, and general financial dealings to ensure the Group effectively achieves its objectives and purpose, while remaining a going concern.

21 RECONCILIATION OF NET SURPLUS/(DEFICIT) AFTER TAX TO NET CASH FLOW FROM OPERATING ACTIVITIES

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Surplus/(deficit) after tax	585	1,333	461	1,943
Add/(less) non-cash items:				
Depreciation and amortisation	4,360	4,206	4,355	4,175
Fair value impairment	0	0	0	1,200
Movement in non-current employee entitlements	(42)	160	(46)	149
Increase in deferred tax	(47)	(298)	(50)	(293)
Add/(less) items classified as investing or financing activities:				
(Gain)/loss on sale of non-current assets and investments	(35)	(488)	(35)	(1,043)
(Gain)/loss in fair value of financial assets	(26)	(28)	(26)	(28)
Capital creditor movement	0	(739)	0	(739)
Movement in finance lease receivable	97	81	97	81
Repayment of loan to carboNZero Holdings Limited	0	0	(75)	0
Add/(less) movements in working capital items:				
Inventory	84	14	96	33
Trade and other receivables	301	(77)	666	227
Trade and other payables	(792)	963	(911)	1,443
Employee benefit liabilities	(519)	175	(531)	336
Revenue in advance	(309)	(2,030)	(289)	(2,084)
Net cash inflow/(outflow) from operating activities	**3,657**	**3,272**	**3,712**	**5,400**

22 CAPITAL COMMITMENTS AND OPERATING LEASES

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Capital commitments				
Estimated capital expenditure contracted for at balance date but not paid or provided for	607	2,207	607	2,207
Operating lease commitments				
Lease commitments under non-cancellable operating leases:				
Within one year	645	483	474	480
Later than one year and not later than two years	626	425	456	422
Later than two years and not later than five years	1,300	782	1,130	782
Later than five years	3,588	2,715	3,588	2,715

23 CONTINGENCIES

The Group is not aware of any significant contingent liabilities as at balance date (2012:nil).

24 RELATED PARTY TRANSACTIONS

Landcare Research New Zealand Limited is the ultimate parent of the Group and controls two entities, being Landcare Research US Limited and carboNZero Holdings Limited.

Intercompany transactions between Landcare Research New Zealand Limited and its subsidiaries are transacted on a commercial basis. No transaction between companies within the Landcare Research Group took place at nil or nominal value during the year.

	Parent	
The following transactions were carried out with related parties:	**2013 Actual $000s**	**2012 Actual $000s**
Sirtrack Limited:		
Interest received	0	21
Dividend received	0	181
Services provided to Sirtrack	0	23
Products and services provided by Sirtrack	0	182
Purchase of land and buildings	0	1,350
carboNZero Holdings Limited:		
Services provided to carboNZero Holdings	312	321
Products and services provided by carboNZero Holdings	17	43
Loan outstanding	234	700
Intercompany current account receivable/(payable)	250	220
Subvention payment	292	0
Loss offset	750	0
Issue of shares	0	1,200
Transfer/sale of assets and liabilities	0	800
Impairment of investment/receivable in subsidiary	391	1,200
Landcare Research US Limited:		
Intercompany current account receivable/(payable)	(71)	(71)

Landcare Research New Zealand Limited has capitalised Landcare Research US Limited for a sum of US$50,000, but the amount has been held by the Parent company pending requirement, and will be paid out on request.

	Consolidated		Parent	
Key management personnel compensation	**2013 Actual $000s**	**2012 Actual $000s**	**2013 Actual $000s**	**2012 Actual $000s**
Salaries and other short-term employee benefits	2,458	2,055	1,938	1,522
Post-employment benefits	0	0	0	0
Other long-term benefits	0	0	0	0
Termination benefits	0	0	0	0

Key management personnel include Directors, Chief Executive Officer and other senior management personnel.

During the year Director remuneration payments (including expense reimbursements) were made to the following entities at the request of the Directors and relate exclusively to Director remuneration payments that would have otherwise been paid directly to the existing Directors.

	2013 Services received from $000s	2012 Services received from $000s	2013 Services provided to $000s	2012 Services provided to $000s	2013 Amounts (Payable to)/ Receivable $000s	2012 Amounts (Payable to)/ Receivable $000s
Jo Brosnahan Leadership NZ	0	59	0	0	0	(1)
Luxton & Co. Limited	24	26	0	0	0	0
Hall Family Trust	25	27	0	0	0	0
The Commonwealth Scientific & Industrial Research Organisation	23	0	0	0	0	0

During the year Landcare Research provided services to or received services from the following companies, in which Directors have declared an interest. These transactions were conducted on normal commercial terms. Related parties have ceased and commenced during the year due to changes in directorships as noted.

	2013 Services received from $000s	2012 Services received from $000s	2013 Services provided to $000s	2012 Services provided to $000s	2013 Amounts (Payable to)/ Receivable $000s	2012 Amounts (Payable to)/ Receivable $000s
AgResearch	1,066	1,436	1,879	2,009	276	391
carboNZero Holdings Limited	270	0	141	0	29	0
The Commonwealth Scientific & Industrial Research Organisation	3	0	3	0	0	0
Dairy NZ Inc. Limited	0	0	36	206	24	27
Leadership NZ	23	15	0	0	0	0
Luxton & Co. Limited	0	0	21	0	0	0
Mighty River Power Limited	1	0	0	19	2	3
Rural Support Trust	9	0	0	0	0	0
The Catalyst Group	481	0	163	0	(5)	0
University of Auckland	234	542	38	180	(61)	(138)
University of Canterbury	206	444	21	109	0	(165)
University of Waikato	22	665	0	85	(13)	(8)
Waikato River Authority	0	0	0	2	0	2

In conducting its activities Landcare Research New Zealand Limited is required to pay various taxes and levies (such as GST, FBT, PAYE and ACC levies) to the Crown and entities related to the Crown. The payment of these levies and taxes, other than income tax, is based on the standard terms that apply to all tax and levy payers.

Landcare Research New Zealand Limited also supplies and purchases goods and services from entities controlled, significantly influenced or jointly controlled by the Crown. Sales to and purchases from these entities during the year ended 30 June 2013 were:

	2013 Services received from $000s	2012 Services received from $000s	2013 Services provided to $000s	2012 Services provided to $000s	2013 Amounts (Payable to)/ Receivable $000s	2012 Amounts (Payable to)/ Receivable $000s
Crown entities, SOEs and government departments	7,309	5,663	43,958	44,469	2,189	2,749
Inland Revenue Department	13,374	12,967	2	28	(1,097)	(283)

25 EVENTS AFTER THE BALANCE SHEET DATE

Post balance date the following key event occurred on 1 July 2013:
Landcare Research sold the net assets of its Enviro-Mark business unit to 100% owned subsidiary carboNZero Holdings Limited. These assets have been classified as held for sale as at 30 June 2013. Note carboNZero Holdings limited changed its name to Enviro-Mark Solutions Limited on 1 July 2013.

26 FINANCIAL INSTRUMENT RISKS

The Group has a series of policies to manage the risks associated with financial instruments. The Group is risk averse and seeks to minimise exposure from its treasury activities. Treasury and cash management policies approved by the Board do not allow any transactions that are speculative in nature to be entered into.

Market risk

Price risk

Group price risk is the risk that the value of a financial instrument will fluctuate as a result of changes in market prices. The Group is not exposed to price risk as it does not hold financial assets held at fair value through other comprehensive income.

Currency risk

Group currency risk is the risk that the value of a financial instrument will fluctuate due to changes in foreign exchange rates. The Group operates internationally and is exposed to foreign exchange risk arising from various contract exposures, primarily with respect to the US dollar, Australian dollar, Euro and UK pound. Currency risk arises when future commercial transactions, recognised assets and recognised liabilities are denominated in a currency that is not the entity's functional currency.

As 30 June 2013, if the US dollar had weakened/strengthened by 10% against the New Zealand dollar with all other variables held constant, surplus after tax for the year would have been $7,000 (2012: $12,000) higher/lower, mainly as a result of foreign exchange gains/losses on translation of US-dollar-denominated trade payables and receivables and the US dollar bank account.

At 30 June 2013, if the Australian dollar had weakened/strengthened by 10% against the New Zealand dollar with all other variables held constant, surplus after tax for the year would have been $23,000 (2012: $3,000) higher/lower, mainly as a result of foreign exchange gains/losses on translation of Australian-dollar-denominated trade payables and receivables and the Australian dollar bank account.

At 30 June 2013, if the Euro had weakened/strengthened by 10% against the New Zealand dollar with all other variables held constant, surplus after tax for the year would have been $0 (2012: $0) higher/lower, mainly as a result of foreign exchange gains/losses on translation of Euro denominated trade payables and receivables.

At 30 June 2013, if the UK pound had weakened/strengthened by 10% against the New Zealand dollar with all other variables held constant, surplus after tax for the year would have been $6,000 (2012: $0) higher/lower, mainly as a result of foreign exchange gains/losses on translation of UK-pound-denominated trade payables and receivables.

The Group foreign exchange management policy is to cover the risk on any foreign currency transactions greater than $50,000.

Interest rate risk

The interest rates on the Group's borrowings are disclosed in note 16.

Cashflow interest rate risk is the risk that the cashflows from a financial instrument will fluctuate because of changes in market interest rates. Short term bank deposits which receive variable interest rates expose the Group to cash flow interest rate risk.

Credit risk

Credit risk is the risk that a third party will default on its obligation to Landcare Research, causing Landcare Research to incur a loss. Landcare Research has a significant concentration of credit risk with the Ministry of Business, Innovation and Employment; however, the risk is mitigated as this entity is also Government owned.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty raising liquid funds to meet commitments as they fall due. Prudent liquidity risk management implies maintaining sufficient cash and the availability of funding through an adequate amount of committed credit facilities. The Group aims to maintain flexibility in funding by keeping committed credit lines available.

Contractual maturity analysis of financial liabilities, excluding derivatives

The table below analyses the Parent's and Group's financial liabilities into relevant maturity groupings based on the remaining period at balance date to the contractual maturity date. Future interest payments on floating rate debt are based on the floating rate on the instrument at balance date. The amounts disclosed are the contractual undiscounted cash flows and include interest payments.

2012	Carrying amount $000s	Contractual cash flows $000s	Less than 1 year $000s	1–2 years $000s	2–5 years $000s	More than 5 years $000s
Group						
Creditors & other payables	6,639	6,639	6,639	0	0	0
Secured loans	0	0	0	0	0	0
Finance leases	42	45	45	0	0	0
Total	**6,681**	**6,684**	**6,684**	**0**	**0**	**0**
Parent						
Creditors & other payables	6,502	6,502	6,502	0	0	0
Secured loans	0	0	0	0	0	0
Finance leases	42	45	45	0	0	0
Total	**6,544**	**6,547**	**6,547**	**0**	**0**	**0**

2013	Carrying amount $000s	Contractual cash flows $000s	Less than 1 year $000s	1–2 years $000s	2–5 years $000s	More than 5 years $000s
Group						
Creditors & other payables	5,701	5,701	5,701	0	0	0
Secured loans	0	0	0	0	0	0
Finance leases	0	0	0	0	0	0
Total	**5,701**	**5,701**	**5,701**	**0**	**0**	**0**
Parent						
Creditors & other payables	5,627	5,627	5,627	0	0	0
Secured loans	0	0	0	0	0	0
Finance leases	0	0	0	0	0	0
Total	**5,627**	**5,627**	**5,627**	**0**	**0**	**0**

Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

27 TAXATION

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Components of tax expense				
Current tax	284	749	397	1,087
Adjustments to current tax in prior years	29	(27)	30	(27)
Deferred tax expense	(45)	(262)	(55)	(292)
Income tax expense from continuing operations	268	460	372	768
Income tax expense from discontinued operation	0	(81)	0	0
Total income tax expense	**268**	**379**	**372**	**768**

27 TAXATION CONTINUED

	Consolidated		Parent	
	2013 Actual $000s	2012 Actual $000s	2013 Actual $000s	2012 Actual $000s
Relationship between tax expense and accounting profit				
Surplus/(deficit) before tax	853	2,021	833	2,711
Tax at 28% (2012 28%)	258	628	233	759
Non-deductible expenditure	(114)	(437)	12	(176)
Non-taxable income	109	179	108	182
Prior-year adjustment	15	9	18	3
Group loss offset	0	0	0	0
Total income tax expense	**268**	**379**	**371**	**768**

Deferred tax assets/(liabilities)	Property, plant and equipment $000s	Employee entitlements $000s	Other provisions $000s	Total $000s
Parent				
Balance at 1 July 2011	(4,490)	794	78	(3,618)
Transfer Asset held for sale	0	0	0	0
Charged to surplus/(deficit)	250	57	(14)	293
Balance at 1 July 2012	(4,240)	851	64	(3,325)
Transfer Asset held for sale	0	(5)	0	(5)
Charged to surplus/(deficit)	98	(42)	(1)	55
Charged to other comprehensive income	0	0	0	0
Balance at 30 June 2013	**(4,142)**	**804**	**63**	**(3,275)**
Group				
Balance at 1 July 2011	(4,490)	818	79	(3,593)
Transfer Asset held for sale	0	0	0	0
Charged to surplus/(deficit)	249	59	(11)	297
Charged to other comprehensive income	0	0	0	0
Balance at 1 July 2012	(4,241)	877	68	(3,296)
Transfer asset held for sale	0	0	0	0
Charged to surplus/(deficit)	99	(49)	(3)	47
Charged to other comprehensive income	0	0	0	0
Balance at 30 June 2013	**(4,142)**	**828**	**65**	**(3,249)**

28 DISCONTINUED OPERATION

Sirtrack Limited, previously a wholly owned subsidiary of Landcare Research Limited, was sold on 30 November 2011 to Lotek Wireless Inc.

	2013 Actual $000s	2013 Budget $000s	2012 Actual $000s
Revenue	0	0	1,785
Finance costs	0	0	(22)
Expenditure	0	0	(2,072)
Surplus/(deficit) before taxation	**0**	**0**	**(309)**
Tax expense	0	0	(81)
Surplus/(deficit) after taxation	**0**	**0**	**(228)**

	2013 Actual $000s	2012 Actual $000s
Cash flows from/(used in) discontinued operation		
Operating activities	0	(611)
Investing activities	0	1,333
Financing activities	0	(369)
Net cash flows for the year	**0**	**353**

Contingencies

The Company is not aware of any significant contingent liabilities arising from the discontinued operation as at balance date (2012:nil).

29 EXPLANATION OF SIGNIFICANT VARIANCES AGAINST BUDGET AND BETWEEN YEARS

There were the following significant variances:

Statement of Comprehensive Income

- June 2013 result was impacted by lower research revenues in the Parent and lower international revenues for carboNZero Holdings Limited.
- Due to the reduced revenues the organisation undertook a restructuring exercise resulting in unbudgeted redundancy costs being incurred during 2013.

Statement of Financial Position

- On 1 July 2013 Landcare Research's Enviro-Mark business unit was acquired by its subsidiary company carboNZero Holdings Limited. The assets of Enviro-Mark business unit were classified as held for sale in the June 2013 Parent result.
- 2013 Trade and Other Receivables are consistent with 2012 year figures. However, the original budgeted amount under estimated year end accrued revenue.
- 2013 book value of Property, Plant and Equipment is below budget due to significant cuts to the capital budget during the year.
- 2013 Revenue In Advance is 60% below the budgeted amount due to the 2013 budget being set prior to the June 2012 change in treatment of revenue received from the Ministry of Business, Innovation and Employment, whereby all core revenue is recognised in the year of receipt, resulting in no carry forward of revenue in advance.

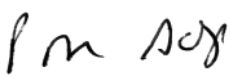
Statement of Responsibility

In terms of Section 155 of the Crown Entities Act 2004, we hereby certify that:

1 We have been responsible for the preparation of these financial statements and the judgements used therein.

2 We have been responsible for establishing and maintaining a system of internal control designed to provide reasonable assurance as to the integrity and reliability of financial reporting.

3 We are of the opinion that the financial statements of Landcare Research New Zealand Limited and the Group fairly reflect the financial position and operations for the year ended 30 June 2013.



PM Schuyt
Chair
21 August 2013

TJ Simpson
Deputy Chair
21 August 2013

AUDIT NEW ZEALAND
Mana Arotake Aotearoa

Audit Report

INDEPENDENT AUDITOR'S REPORT

To the readers of
Landcare Research New Zealand Limited
and group's financial statements
for the year ended 30 June 2013

The Auditor-General is the auditor of Landcare Research New Zealand Limited (the company) and group. The Auditor-General has appointed me, Bede Kearney, using the staff and resources of Audit New Zealand, to carry out the audit of the financial statements of the company and group, on her behalf.

We have audited the financial statements of the company and group on pages 8 to 33, that comprise the statement of financial position as at 30 June 2013, the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year ended on that date and the notes to the financial statements that include accounting policies and other explanatory information.

Opinion on the financial statements

In our opinion the financial statements of the company and group on pages 8 to 33:

- comply with generally accepted accounting practice in New Zealand;
- give a true and fair view of the company and group's:
  - financial position as at 30 June 2013; and
  - financial performance and cash flows for the year ended on that date.

Opinion on other legal requirements

In accordance with the Financial Reporting Act 1993 we report that, in our opinion, proper accounting records have been kept by the company as far as appears from an examination of those records.

Our audit was completed on 21 August 2013. This is the date at which our opinion is expressed.

The basis of our opinion is explained below. In addition, we outline the responsibilities of the Board of Directors and our responsibilities, and we explain our independence.

Basis of opinion

We carried out our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the International Standards on Auditing (New Zealand). Those standards require that we comply with ethical requirements and plan and carry out our audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

Material misstatements are differences or omissions of amounts and disclosures that would affect a reader's overall understanding of the financial statements. If we had found material misstatements that were not corrected, we would have referred to them in our opinion.

An audit involves carrying out procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgement, including our assessment of risks of material misstatement of the financial statements whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the company and group's preparation of the financial statements that fairly reflect the matters to which they relate.

We consider internal control in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the company and group's internal control.

An audit also involves evaluating:

- the appropriateness of accounting policies used and whether they have been consistently applied;
- the reasonableness of the significant accounting estimates and judgements made by the Board of Directors;
- the adequacy of all disclosures in the financial statements; and
- the overall presentation of the financial statements.

We did not examine every transaction, nor do we guarantee complete accuracy of the financial statements. Also we did not evaluate the security and control over the electronic publication of the financial statements. In accordance with the Financial Reporting Act 1993, we report that we have obtained all the information and explanations we have required. We believe we have obtained sufficient and appropriate audit evidence to provide a basis for our audit opinion.

Responsibilities of the Board of Directors

The Board of Directors is responsible for preparing financial statements that:

- comply with generally accepted accounting practice in New Zealand; and
- give a true and fair view of the company and group's financial position, financial performance and cash flows.

The Board of Directors is also responsible for such internal control as it determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is also responsible for the publication of the financial statements, whether in printed or electronic form.

The Board of Directors' responsibilities arise from the Crown Research Institutes Act 1992 and the Financial Reporting Act 1993.

Responsibilities of the Auditor

We are responsible for expressing an independent opinion on the financial statements and reporting that opinion to you based on our audit. Our responsibility arises from section 15 of the Public Audit Act 2001 and the Crown Research Institutes Act 1992.

Independence

When carrying out the audit, we followed the independence requirements of the Auditor-General, which incorporate the independence requirements of the External Reporting Board.

Other than the audit, we have no relationship with or interests in the company or any of its subsidiaries.

Bede Kearney
Audit New Zealand
On behalf of the Auditor-General
Christchurch, New Zealand

Core Funding Achievements 2012-2013

Landcare Research received $24.2M Core Funding in 2012/13 for research to achieve, for New Zealand:

Outcome 1: Improved measurement, management and protection of New Zealand's terrestrial biodiversity

Outcome 2: Sustainable use of land resources and their ecosystem services across catchments and sectors

Outcome 3: Improved measurement and mitigation of greenhouse gases from the terrestrial biosphere

Outcome 4: Development of industries and organisations within environmental limits, to meet market and community requirements

Our Core Funding investment and key achievements are shown in the following table.

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST)			End-users
	2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	
PORTFOLIO: MANAGING BIODIVERSITY	$3.32	$3.83	$3.91	
Restoring resilient dryland biodiversity – Outcome 1		$0.44	$0.44	
• Demonstrated the value of validated vulnerability data for conservation planning; convened a major symposium on sustaining biodiversity in drylands; influenced RMA decisions affecting dryland biodiversity through the Mackenzie and Waitaki district plans and the Canterbury Regional Plan.				
Maintaining threatened naturally rare ecosystems – Outcome 1		$0.44	$0.44	DOC Non-governmental conservation organisations (NGOs) Community conservation/ restoration groups Local government Environment Court Researchers Māori Landowners/ managers
• Demonstrated the importance of measuring multiple biodiversity elements (e.g. plants and invertebrates) for accurate assessments of biodiversity across naturally rare ecosystems; provided a comprehensive overview of the development, implementation and utilisation of the classification of naturally uncommon ecosystems in New Zealand; contributed to new international standards for rare ecosystem evaluation.				
Reducing extinction risk by sustaining genetic diversity in threatened species – Outcome 1		$0.73	$0.68	
• Developed tools to translocate threatened taxa using genomic data from a variety of methods, to inform population selection and management; demonstrated use of new technologies in providing rapid data for decision-making, and linked these data to empirical fitness traits to ensure optimal population viability.				
• Integrated genetic and demographic data for woody and herbaceous species and showed the effects of inbreeding, change of environment, and virus infections on plant performance.				
• Demonstrated ability of populations of a woody species (cabbage tree, *Cordyline australis*) to adapt to a new environment, and that observed genetic changes differ depending on the environment.				
• Implemented centralised software licencing, pipelines for genetic RNA transcriptome analysis and access to high-throughput computing facilities, enabling a wider range of research and expanded use of genomic approaches.				
• Combined molecular and behavioural data for tūī, to assist in management.				
Increasing iconic species and enhancing biodiversity outcomes of eco sanctuaries – Outcome 1		$0.59	$0.58	
• Demonstrated increases in iconic honeyeaters – bellbirds and tūī – in two urban areas, due to mammal control in surrounding forests, and verified the mainland rediscovery of a Duvaucel's gecko, the first record for 60 years. Convened the 10th annual Sanctuariesnz.org workshop, which included a focus on sustaining predator control for biodiversity outcomes.				DOC NGOs

continued

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	End-users
PORTFOLIO: MANAGING BIODIVERSITY *(continued)*	$3.32	$3.83	$3.91	
• Reviewed literature to assess threatened species occurrence and limiting factors in fragmented productive landscapes, and potential for functional traits to predict threat status of species and their responses to management interventions.				Community conservation/ restoration groups Local government
Sustaining critical functional species interactions – Outcome 1		$0.44	$0.44	
• Demonstrated the importance of sustaining moderate bird densities on the mainland to provide effective pollination of native shrubs. • Established that grazing birds can reduce weed grasses and promote native herbs, providing a cost effective approach to wetland restoration.				DOC NGOs Community conservation/ restoration groups Local government Researchers Māori Landowners/ managers
Biodiversity responses to global change – Outcome 1		$0.94	$0.93	
• Demonstrated the value of detailed palaeoecological studies to modern conservation: o showed, from analysis of pre-human era kākāpō dung, the threatened plant parasite *Dactylanthus taylorii* could be pollinated by species other than the threatened burrowing bat; o increased understanding of fire risk in New Zealand woody ecosystems; o provided a new reconstruction of NZ vegetation cover at the Last Glacial Maximum to inform assessments of vegetation response to climate change; o provided new insights, from analysis of preserved moa dung, into lost plant–animal interactions that may have long-lasting legacies for ecosystem services in remaining forested ecosystems. • Established that introduced mammals assist the spread of invasive conifers. • Developed a biodiversity risk assessment framework for New Zealand and explored application of a UK framework to NZ, based on indigenous birds and historic and current distribution records.				
Strategic and partnership initiatives – Outcome 1		$0.25	$0.40	
• Initiated a major investigation of biodiversity, water and carbon dynamics in two catchment types – *Pinus radiata* and tussock grassland. • Developed a reliable technique for sex-determination in native frogs (NZ Centre for Conservation Medicine partnership). • Evaluated new tools to compare and measure the costs and biodiversity benefits of community-based conservation projects. • Showed, using new measuring techniques, that lizard density increases in predator-free areas. • Demonstrated the sensitivity of conservation decisions based on optimisation tools with different extinction probabilities and levels of phylogenetic relationships between taxa. • Organised a major symposium on sub-Antarctic ecosystems to facilitate comparisons of biodiversity, invasive species, and restoration across islands in this bioclimatic zone.				DOC NGOs Community conservation/ restoration groups Local government Researchers Māori Landowners/ managers
PORTFOLIO: MANAGING INVASIVE WEEDS PESTS AND DISEASES	$3.70	$2.96	$3.01	
Beating weeds – Outcome 1		$1.24	$1.24	
• Compared herbicide use and biocontrol as management tools for invasive exotic heather, providing quantitative evidence of biodiversity benefits of weed biocontrol. • Provided quantitative evidence of the field impact of the broom gall mite on damage and biomass reduction of broom and used the gall microcosm as a model of system effects of multiple predators on biocontrol agents and the agent's impact on the local food web. • Completed a cost-benefit study of biocontrol of St John's wort; results showed cost savings provided by the programme exceed the costs of all other NZ weed biocontrol programmes to date.				Policy agencies (DOC, MPI) Regional councils NZ Defence Force Universities (NZ & international)

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	 2012/13 (planned)	 2012/13 (actual)	End-users
PORTFOLIO: **MANAGING INVASIVE WEEDS PESTS AND DISEASES** *(continued)*	$3.70	$2.96	$3.01	
Strategic pest control – Outcomes 1 and 4		$0.09	$0.09	
• Helped a local conservation trust develop long-term and intermediate outcomes and associated monitoring indicators for project planning, and engaged stakeholders in identifying research needed to reduce unwanted impacts of NZ wild ungulates and to manage them as a resource.				Community conservation groups
Invasive mammal Impacts on biodiversity – Outcome 1		$1.04	$1.05	
• Developed a novel method to predict high seed production (masts) using readily available climatic data, and predicted invasive mammal responses to climate-related changes in mast frequency in forest ecosystems. • Investigated interactions between native raptors and invasive mammalian predators to provide knowledge on effects of competition in invaded communities for multi-species management of predators. • Modelled likely distribution of invasive paper wasps in NZ and estimated impact on regional biodiversity.				DOC Regional councils
Preventing and managing disease impacts – Outcome 1		$0.21	$0.21	
• Built NZ's first capability in next-generation DNA sequencing for 'pathogen discovery' (i.e. detection and identification of unknown or cryptic disease-causing agents) in wildlife; application to date has supported conservation management (Kākāpō and Adélie penguins) and public health (viral screening of native bats for potential zoonoses or emerging infectious diseases). • Characterised the symbiotic endophyte organisms in kauri root nodules, and explicitly visualised the endophyte and its relationship with the invasive *Phytophthora* Taxon *Agathus* (PTA) pathogen. • Developed expertise in scanning electron microscopy and explored new technologies (fluorescent *in situ* immunoassay) for applications including development of biocontrol options for PTA, determining efficacy of weed biocontrol agents and visualising endophytes in aquatic plants.				Policy agencies (DOC, MPI, Health) Regional councils
Invasive species international – Outcome 1		$0.06	$0.06	
• Supported development of collaborative research with the Invasive Animals Cooperative Research Centre (Australia) that: o increased understanding for a wide range of end users in both Australia and NZ of the likely impact of RCVs (benign rabbit caliciviruses) on the effectiveness of virulent strains of the virus for rabbit biocontrol, particularly in temperate climates; o forecast outbreaks of mice at a regional scale across Australian cropping systems; o provided DOC with a framework to implement small- and large-scale trials to address reinvasion by invasive mammals onto near-shore islands.				Policy agencies (DOC, MPI) Regional councils Researchers (NZ and Australia)
Pest control technologies – Outcome 1		$0.16	$0.19	
• Demonstrated ongoing DDT contamination of NZ wildlife by confirming DDT levels in tissues of road-killed Australasian harriers that are among the highest reported worldwide and are similar to figures reported over 35 years ago. • Developed and patented novel efficacious rat-specific toxicants, the first novel rodenticides to be developed and patented in over 25 years, and initiated research assessing chemosterilants for mammal pest control.				Policy agencies (DOC, MPI) Regional councils Businesses and industries
Applied biocontrol solutions – Outcome 1		$0.16	$0.16	
• Assessed the NZ risk potential of several invasive invertebrates, the prospects and risks of pre-emptive biological control, and built capability in invertebrate pests in natural ecosystems, from imminent pre-border threats to well-established pests.				Policy agencies (DOC, MPI) Regional councils

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	End-users
PORTFOLIO: MEASURING BIODIVERSITY CHANGE	$2.23	$2.05	$2.15	
Interpreting measures of ecological integrity – Outcome 1		$0.91	$0.91	
• Progressed understanding of large-scale trends in ecosystem function and biodiversity: o designed national-scale monitoring for vegetation, birds and mammals to monitor ecological integrity, adopted by DOC and regional councils and informing sustainability research; o completed installation of a nationally-significant seedfall monitoring network with representative coverage of key masting species and environmental conditions, providing data and simple forecasting tools for implementation of pest animal control; o used predictive models to forecast long-term impacts of pest animals and disturbance on forest dynamics, nutrient cycling and carbon storage; o demonstrated that feedbacks between above- and below-ground diversity are critical for determining impacts of plant species on nutrient cycling, and the consequences of herbivory by introduced animals; o demonstrated relationships between skua abundance and Adélie penguin colony size, enabling prediction of the size of skua populations.				DOC Regional councils Non-Governmental organisations (NGOs) Community conservation groups Landowners
Measuring biodiversity outcomes – Outcome 1		$0.33	$0.33	
• Developed and demonstrated approaches to measuring outcomes from biodiversity research, using Sustaining and Restoring Biodiversity outcome-based investment as a case study, and significantly advanced measurement techniques and understanding of the rates and patterns of land-use change, land conversion, and biodiversity loss in New Zealand. • Contributed to development of national and international best practice and policy on biodiversity offsets. • Developed a standard classification of geothermal vegetation types in the Taupō volcanic zone. • Developed a novel genetic assay tool, now available as an Ecogene® service, for rapid and cost-effective identification of 19 terrestrial mammal species from small amounts of DNA.				DOC Regional councils NGOs Community groups Landowners
Developing standardised measures of biodiversity – Outcome 1		$0.16	$0.18	
• Developed terrestrial biodiversity indicators for regional council use; published procedures for field collection and preservation of earthworms and earthworm sampling in New Zealand forests; assessed plant species richness below ground using next generation sequencing technology.				DOC Regional councils NGOs Community groups Landowners
National Vegetation Survey (NVS) Databank – Outcome 1		$0.42	$0.42	
• Enhanced the NVS databank with addition of data from 4860 plots, and the NVS website with improved search and view capability. • Supplied over 3000 NVS datasets to users.				DOC Regional councils NGOs Community groups Māori and other New Zealanders
Biodiversity condition and trends – Outcome 1		$0.23	$0.31	
• Developed approaches to link trends in biodiversity, ecosystem services, and changing land management: o demonstrated utility of terrestrial biodiversity indicators for production landscapes, in design of a biodiversity monitoring and reporting system for Greater Wellington Regional Council, and recommending measurement tools for value chains and individual beef and sheep farms; o explored, with stakeholders, the use of reporting bird biodiversity according to their functional characteristics, shown in European agricultural settings to be useful for defining thresholds and limits; o evaluated management of indigenous biodiversity under different farming regimes in New Zealand and Australia. • Developed methods for rapid assessment of national soil invertebrate diversity.				DOC Regional councils Primary industry NGOs Community groups Māori and other New Zealanders

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST)			End-users
	2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	
PORTFOLIO: DEFINING LAND BIOTA	$7.24	$6.39	$6.41	
Defining Plants – Outcomes 1 and 4		$2.25	$2.26	
• Progressed discovery, description and interpretation of NZ's indigenous and naturalised terrestrial flora: o completed new eFlora treatments for ferns (Equisetaceae, Loxsomataceae, Marsileaceae, Psilotaceae and Salviniaceae); o completed the first chapter of the Moss Flora, the family Amblystegiaceae (16 species), for publication in the eFlora; o completed revisions of *Gackstroemeria* and *Tetracymbaliella* for volume two of the Liverwort Flora; o published research demonstrating pitfalls of using algae chloroplast gene sequences to construct evolutionary trees; o completed species level studies of NZ green algae at alpine and lowland site, increasing reliability of data; o demonstrated the potential for algae to supply oxygen to an electrode in a microbial fuel cell; o proposed a new generic classification for southern beech (Nothofagaceae), based on new analyses of genetic, anatomical and morphological data; o named and described new species of NZ ferns and flowering plants, including *Gleichenia, Hymenophyllum*, *Gingidia* and *Uncinia*, and 10 new and nationally threatened *Lepidium* species. Showed that introduced viruses are prevalent among NZ coastal *Lepidium* species and impact on species survival; o provided new understanding of hybridisation and species relationships in *Pachystegia* and genetic variation among populations of *Craspedia* and *Brachyglottis* (NZ Compositae), and demonstrated the utility of new microsatellites data generated for *Craspedia* in resolving species-level taxonomic problems; o contributed data from genetic-based studies of evolutionary relationships to an international comparison of traditional medicinal plants; o enhanced knowledge of genetic structure at the landscape scale, and invasiveness of Didymo (*Didymosphenia geminata).* • Added over 7000 new specimens to the Allan Herbarium, increased the records and data quality in the Specimen Database (c. 8900 records added; c. 7200 updated) and the Plant Names Database (c. 600 names added; c. 1900 updated, and developed a draft protocol for adding georeferences to specimens. • Identified over 1000 plants in response to queries related mainly to biosecurity and biodiversity.				Policy agencies (DOC, MPI) Regional councils Educators Museums Horticultural industry Researchers Māori and other New Zealanders
Ethnobotany – Outcomes 1 and 4		$0.20	$0.20	
• Completed assessments of fibre and weaving qualities of each *Phormium* cultivar in the Orchiston Collection and enhanced web-based resources on harakeke with improved format and new information.				Educators Researchers Māori and other New Zealanders
Defining Invertebrates – Outcomes 1 and 4		$1.65	$1.67	
• Progressed discovery, description and interpretation of NZ's indigenous and naturalised terrestrial invertebrate fauna: o published a Fauna of New Zealand (FNZ) volume on ground beetles (Carabidae), reviewing 134 species and providing detailed information on species ecology and habitat; o described 16 new species of New Zealand Hymenoptera including threatened and biosecurity-relevant species; o addressed taxonomic problems of some threatened and range-restricted beetle species on New Zealand offshore islands, which described 13 new species and 1 new genus of beetles endemic to the Three Kings Islands, and the phylogenetic distinctiveness of key beetle lineages from these islands; o progressed the taxonomic revision of Noctuidae moths for a future FNZ volume.				Policy agencies (DOC, MPI) Primary industry Regional councils Educators Researchers Māori and other New Zealanders

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST)			End-users
	2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	
PORTFOLIO: DEFINING LAND BIOTA *(continued)*	$7.24	$6.39	$6.41	
Defining Fungi & Bacteria – Outcomes 1 and 4		$1.70	$1.70	
• Progressed discovery, description and interpretation of NZ's indigenous and naturalised terrestrial fungi and bacteria: o clarified relationships and nomenclature in NZ's mycobiota, improving knowledge of species origins and their ecological and biosecurity significance; o phylogenetic studies based on specimens in the International Collection of Micro-Organisms from Plants (ICMP) culture collection, provided accurate, genetically based taxonomies and identification tools for organisms of high biosecurity importance, and data to support international barcoding initiatives for plant pathogenic bacteria and fungi, such as the European Union Q-Bank identification tool for *Colletotrichum*; o updated the NZ Fungi website with NZ-relevant data from research publications enabled by specimens and cultures in the New Zealand Fungal and Plant Disease Collection and the ICMP, and gene sequences from our "Barcoding New Zealand's Fungi" project. • Provided specimens and DNA sequences that enabled Danish collaborators to identify the new apple disease 'Topaz spot'.				Policy agencies (DOC, MPI) Regional councils Educators Researchers Māori and other New Zealanders
Developing Information Systems – Outcomes 1 and 4		$0.36	$0.36	
• Improved information systems: o updated the Names Editor to improve management of literature associated with taxonomic data; o enhanced usability of the Annotation Tool; o Collection Information System improvements including locality data, and record addition and deletion; o tested improved search functionality on the Systematics Collections Data website.				
Developing New Zealand Organisms Register – Outcomes 1 and 4		$0.06	$0.06	Policy agencies (DOC, MPI) Regional councils Researchers Māori and other New Zealanders
• Reduced uncertainty in nomenclature and status of organisms in New Zealand with additions to and updating of the NZ Arthropod Collection names database: o Added over 1100 names (*Coleorrhyncha, Auchenorrhyncha, Heteroptera, Diptera*); o Improved names data for fungal taxa not present in NZ but of biosecurity interest (930 names and 143 supporting references added; 295 names updated).				
Strategic and partnership initiatives – Outcomes 1 and 4		$0.17	$0.16	
• Outcome-focussed, strategy-relevant or tactical research projects building science knowledge and capability to preserve, maintain and develop data and access to Nationally Significant Collections and databases to enable authoritative identification of species for user needs.				
PORTFOLIO: REALISING LAND'S POTENTIAL	$0.48	$0.68	$0.77	
Mitigating and managing methane and nitrous oxide – Outcome 3		$0.43	$0.43	
• Confirmed the potential of biofilters to reduce methane emissions from the dairy sector (our prototype biofilter continuing to achieve removal of >95% of dairy pond methane emissions); characterised microbial methanotroph functions in biofilters, and initiated testing of the methane reducing capability of an 'artificial' methanotroph-soil matrix. • Developed automated analysis of nitrous oxide and nitrogen to better understand dynamics of denitrification and nitrous oxide production, and enable measurement of small rates of denitrification. • Determined the efficacy of a soil covering a landfill to remove methane.				Agricultural industry Farmers Policy agencies (MPI, MfE) Regional councils Landfill operators

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	End-users
PORTFOLIO: REALISING LAND'S POTENTIAL – *(continued)*	$0.48	$0.68	$0.77	
Land and water management – Outcomes 2 and 4		$0.05	$0.10	
• Assessed the environmental and economic benefits of introducing dung-feeding beetles into New Zealand's pastoral ecosystems. • Modelled interactions between groundwater and river water levels to determine impacts of water abstraction. • Enhanced the efficacy of raingardens in removing contaminants.				MPI Agricultural industry Farmers Regional councils Urban planners
Managing and mitigating contaminants – Outcomes 2 and 4		$0.16	$0.16	
• Tested the potential for cadmium leaching in stony soils in lysimeters, and demonstrated significant leaching of cadmium from dairy effluent.				Policy agencies (MfE, MPI) Regional councils Fertiliser industry Farmers
Multifunctionality – Outcomes 2, 3, and 4		$0.04	$0.08	
• Developed multifunctionality as a research framework to address complex land-use issues.				Policy agencies (MfE, MPI, DOC) Regional councils
PORTFOLIO: UNDERSTANDING ECOSYSTEM SERVICES AND LIMITS	$2.84	$2.03	$2.03	
Ecosystem services interactions and controls – Outcome 2		$0.74	$0.74	
• Extended knowledge of weed impacts in ecosystems, and the effects of weed management, and methods to include monitoring of wilding conifer management; reviewed ecological knowledge of tree invasions with international colleagues; and migrated data from a long-term experiment into the National Vegetation Survey databank. • Developed novel DNA-based methods to identify arbuscular mycorrhizal fungi (fungi that underpin virtually all plant productivity) in NZ; discovered a number of new species, and characterised interactions between plant and fungal communities, and the links between arbuscular mycorrhizal fungi and environmental conditions.				Regional councils Policy agencies (DOC MPI)
Multiple pressures and ecosystem services – Outcome 2		$0.09	$0.09	
• Reviewed published methods for categorising and quantifying land-use intensity and intensification, and developed a new framework and standardised terminology for land-use intensification, to improve understanding of the consequences of intensification on ecosystem services.				MPI Regional councils Farmers
Ecosystems services pressures and limits – Outcome 2		$1.20	$1.20	
• Analysed archived soils from long-term (~50 year) trials, and showed rate of phosphate fertilizer application had no effect on carbon (C) accumulation rate, but irrigation slowed C and nitrogen accumulation. • Resampled soils at 148 National Soils Database sites, revealing large increases of C and N under hill country pastures, losses of C and N in allophanic and gley soils on flat land, and C:N ratios indicating gradual saturation of organic matter with N. Confirmed a positive correlation between pastoral intensification, N losses and soil N^{15}, indicating potential as an indicator for soil quality monitoring. • Reviewed climate change effects on soil services, including soil stocks, and C and N cycling and losses. • Demonstrated that fate and behaviour of veterinary antibiotics in NZ agricultural soils are influenced by properties of both soils and the antibiotic.				Policy agencies (MPI, MfE) Regional councils Farmers AgResearch

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	 2012/13 (planned)	 2012/13 (actual)	End-users
PORTFOLIO: UNDERSTANDING ECOSYSTEM SERVICES AND LIMITS *(continued)*	$2.84	$2.03	$2.03	
• Showed vulnerability of stony soils to microbial leaching is variable and may increase after pugging, and examined spatial regionalisation of movement of microbes through soil, contributing data to AgResearch's Pond Storage Calculator and knowledge to improve effective land treatment of wastes. • Reviewed the role of microbes in the ecosystems services provided by soils to humans, describing soil microbes (bacteria, fungi and Archaea) and their role in nutrient cycling and detoxification of environmental pollutants. • Reviewed current knowledge of the state and trend of NZ's ecosystems services and their management, focussing on how spatial and temporal variation in ecosystems services can be used in improved management for sustainable land use.				Policy agencies (MPI, MfE) Regional councils Farmers
PORTFOLIO: CHARACTERISING LAND RESOURCES	$2.61	$2.64	$2.73	
Soil and water – Outcome 2		$0.77	$0.79	
• Enhanced the quality of S-map spatial coverage and associated infrastructure: o improved Profile Available Water data, especially for soils formed from pumice and volcanic ash; o extended coverage to new areas in the Gisborne, Waikato, Canterbury, Auckland and West Coast regions; o improved digital elevation models, developing methods for digital soil mapping of hill-country, and characterising soil-landscape relationships; o with key stakeholders, planned development of the National Soil Database (NSD) and S-Map to enhance soil data and information delivered in S-map Online and the LRIS Portal, and tools (such as S-map and Overseer) used for regulatory purposes. • Undertook a national stocktake of distribution, knowledge and distribution of NZ's stony soils. Characterised soil water attributes of three key stony soils and assessed leaching vulnerability of young stony sand soils to inform regional land and water planning, particularly land use intensification and irrigation development.				Policy agencies (MPI, MfE) Regional councils Researchers Educators Landowners NZ public
Land and ecosystem services – Outcomes 2 & 3		$0.59	$0.62	
• Improved detection and automation methods for land use and land cover mapping: o developed a method to automatically partition fields, and applying it to update land use maps and generate version 4 of the Land Cover Database (currently in progress); o enhanced and upgraded mapping of crops and irrigation expansion – developed authoritative irrigation maps for Canterbury based on satellite observations rather than inferences from other data. • Compiled NZ ecosystems services (ES) knowledge in science and policy sectors (publication in press) as a reference for future research and reporting on ES and natural capital at national scale. • Developed methods, with initial focus on afforestation land-use change, to measure ES nationally, and upscale data to map ES and changes under different land-use scenarios for policy and regional planning, and targeting restoration and biodiversity offsetting. • Determined optimal land use configuration for ES provision/condition, applying the Land Use Management Support System (LUMASS) framework to assess the potential of the landscape to maximise ES while maintaining food production in the Waitaki catchment, and assessed ES trade-offs in the Manawatu catchment.				Regional councils Policy agencies (MPI, MfE, DOC, LINZ) Researchers Educators Landowners NZ public

Research activity 2012/13 Key Achievements	Core Funding Investment ($Ms excl GST) 2011/12 (actual)	 2012/13 (planned)	 2012/13 (actual)	End-users
PORTFOLIO: CHARACTERISING LAND RESOURCES *(continued)*	$2.61	$2.64	$2.73	
Uncertainty and error – Outcome 2		$0.21	$0.20	
• Addressed gaps in data and knowledge needed to support regional council policy, by modelling water quality impacts in three regions to inform limit setting; enhanced digital soil mapping using meta-data on uncertainty and fitness-for-purpose of digital elevation models (DEMs); and produced an enhanced DEM with associated error for modelling Hawke's Bay soils.				Policy agencies Regional councils Researchers
Data management and delivery – Outcome 2		$1.07	$1.13	
• Determined uncertainty and fitness for purpose of stony soil information and prioritised hotspots for further data acquisition, and analysed the extent of high intensification land use on the stony soils which have a high risk of leaching.				Policy agencies (MfE, MPI, DOC, LINZ, Stats NZ) Regional councils Researchers Educators Landowners NZ public
• Maintained and improved content, infrastructure and access to LRIS data via the LRIS Portal, S-map Online and Our Environment, including: o published significant data updates, e.g. wetlands data, basic ecosystems and new versions of maps based on LCDB, available to users through Our Environment; o improved robustness, deployment and functionality of the portals, including custom area queries in Our Environment, and providing new ways to access land and soils data and maps; o used cloud technology to scale maps and guarantee availability of mapping web services.				
• Identified land resource data needs of stakeholders and businesses and formed a roadmap for the future of the NZ Land Resource Inventory (NZLRI) and the Land Use Capability (LUC) classification system. Determined data improvements needed to meet the needs of current research and future opportunities, and technical options to improve delivery of this data.				Researchers Data managers
• Facilitated use of the national e-science infrastructure (NeSI) to enhance research efficiency and outputs.				
• Standardised provision of data using open standards, demonstrated proof of concept for integrating data from multiple web data sources into a single coherent data set, and contributed in international meetings to development of international standards for taxonomic and soils data.				
PORTFOLIO: MEASURING GREENHOUSE GASES AND CARBON STORAGE	$2.23	$2.27	$2.20	
Quantification of greenhouse gas (GHG) emissions – Outcome 3		$0.96	$0.96	
• Developed non-intrusive technology for on-farm, paddock-scale measurement of methane emissions, enabling resolution of emissions differences of 10% between two groups of cattle.				
• Established continuous measurements of greenhouse gas emissions from irrigated dairy farming and produced the first year-long dataset of fluxes of CO_2, CH_4, N_2O and water vapour, and meteorological variables; developed a prototype database for continuous time series of greenhouse gas flux and evaporation data and relevant environmental and farm management variables.				Policy agencies (MPI, MfE) Pastoral industries and farmers Regional councils Researchers
• Investigated control of soil respiration to improve models of soil carbon turnover, and established that response of respiration to temperature is regulated primarily by autotrophic respiration. Developed and validated a novel approach using $^{13}CO_2$ soil respiration to measure labile carbon vulnerable to loss with soil disturbance, and demonstrated the sensitivity to environmental conditions of a recently developed measurement strategy to quantify water-use efficiency using stable-isotope signatures of plant-respired CO_2.				
• Hosted the annual joint workshop of NZ and Australian researchers ("OzFlux" and "KiwiFlux") to exchange data and knowledge on measuring exchange of greenhouse gases between ecosystems and the atmosphere.				

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	End-users
PORTFOLIO: MEASURING GREENHOUSE GASES AND CARBON STORAGE *(continued)*	$2.23	$2.27	$2.20	
Modelling GHG emissions – Outcome 3		$0.25	$0.25	
• Developed a new metric, the climate-change impact potential (CCIP), quantified the CCIP of greenhouse gas emissions, and developed methodology to quantify net warming impact from land use change. CCIP provides an alternative to greenhouse warming potentials (GWP) as an indicator of the impact of greenhouse gases. • Compared N-dynamics using the CenW and NZ-DNDC models to identify implications for development of a combined model. • Modelled *Pinus radiata* productivity dynamically in response to changing climate over time, overcoming limitations of classical analyses that assess static changes at future points in time. • Demonstrated a relationship between changing carbon availability and response of soil respiration to temperature, providing new data to enhance soil carbon modelling.				Policy agencies (MPI, MfE) Regional councils Farmers Forestry industry Researchers
Soil and biomass carbon storage – Outcome 3		$0.37	$0.36	
• Developed Visible-Near Infra-Red (Vis-NIR) methodology for application in spatial soil carbon mapping and map microbial habitats in Antarctica, and a statistically robust method for selecting sampling positions at the farm-scale. • Characterised soil and land variability at two long-term field trial sites, using a combination of in situ proximal sensing methods. • Examined methods to link high resolution (paddock-scale) spatial modelling to regional and national scales. • Collected data to investigate the thermal decomposition characteristics of soil organic matter in soils with contrasting mineralogies. • Assessed C and N dynamics and compared environmental controls of soil processes under two contrasting mānuka and kānuka shrubland stands.				Policy agencies (MPI, MfE) Primary industries and sector groups Regional councils Farmers and growers Researchers
Upscaling GHG emissions and C storage – Outcome 3		$0.18	$0.18	
• Mapped N_2O emissions and estimated national direct N_2O emissions from sheep, beef and dairy grazing, and produced N_2O emission factor look-up tables for sheep and beef, dairy irrigated and dairy non-irrigated farm types over the range of soil and climate conditions in New Zealand. • Reviewed current knowledge on: o sources and sinks of greenhouse gases and carbon with land use/land cover changes in the last 20 years; o impact of elevated atmospheric levels of CO_2 on soil properties; o methods for up-scaling models to map ecosystem services, including climate regulation; o carbon stocks in NZ freshwater wetlands, providing data to improve carbon accounting.				Policy agencies (MPI, MfE) Primary industries and sector groups New Zealand Beef & Lamb Regional councils Researchers
Understanding GHG emissions – Outcome 3		$0.51	$0.45	
• Completed field measurement of N_2O emissions from pasture following grazing, showing variability in N_2O emissions due to urine patches and a difference in response due to soil moisture. • Compared emissions simulations using three models – NZ-DNDC, CenW, and APSIM – to inform modelled estimates of greenhouse gases. • Analysed internationally published data on background levels of N_2O emissions from managed and unmanaged land types. • Appointed the inaugural Des Ross Memorial Scholar (PhD researcher) to further our development of effective biofilters to mitigate methane emissions from dairy waste water ponds.				Policy agencies (MPI, MfE) Dairy industries and sector groups Regional councils Farmers Researchers

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	 2012/13 (planned)	 2012/13 (actual)	End-users
PORTFOLIO: ENHANCING POLICY DEVELOPMENT	$0.65	$0.92	$0.83	
Effective policy to protect terrestrial ecosystems and biodiversity – Outcome 1		$0.04	$0.04	
• Identified how biodiversity offsets could be applied more effectively within constraints of the Resource management Act and key Environment Court decisions. • Reviewed salvage and storage of wetland herb field and red tussock at Stockton Mine and identified rehabilitation risks and mitigation strategies.				Policy agencies (DOC, MfE, MPI) Regional councils Mining companies Community groups
Mainstreaming ecosystem services in decision-making – Outcomes 2 and 4		$0.44	$0.31	
• Developed, jointly with regional councils, guidance for incorporating ecosystem services into policy, planning and asset management, including: o finalised data collection for a comprehensive, national, spatiotemporal landscape dataset (New Zealand Landscape Database) documenting national trends in land use, land cover, and land tenure from 1996 to 2008; o demonstrated use of available tools (e.g. the Land Use Management Support System – LUMASS) to optimise land use and ecosystem services; o developed, with Waikato Regional Council, a NZ-first draft ecosystem services prioritisation process; o identified a range of instruments available to manage ecosystem services, their advantages and disadvantages, current use and how they can be used to incorporate multiple ecosystem services; o compared existing and evolving water quality trading programmes in Australia, New Zealand and North America and identified hurdles and success factors; o refined models: water yield and soil erosion added to all catchments in NZEEM, and developing a framework to streamline incorporation of new ecosystem services into NZFARM.				Policy agencies (DOC, MfE, MPI) Regional councils Community groups Māori and other New Zealanders
Responding to climate change pressures – Outcomes 3 and 4		$0.18	0.18	
• Further developed models and frameworks for assessing climate change responses, and identified and assessed pathways to address the complexity of integrating climate change and other social and environmental change issues. • Maintained extensive networks and regular dialogue with Māori; identified Māori knowledge systems, networks, and actions for responding to climate change, informing climate relevant initiatives organised by iwi, Maori organisations, regional councils, and policy agencies. Wrote the NZ indigenous section for the Inter-governmental Panel on Climate Change's 5th assessment report. • Clarified differences between proposed Horizons Regional Council policy and NZFARM model analyses; developed methodology to estimate elasticities of land use and land management change and incorporated alternative elasticities into NZFARM. • Contributed to organisation of the 2013 NZCCC Climate Change Conference, and led the forestry, agriculture and marine work stream of the Auckland Energy Transformation and Climate Change Strategy.				Policy agencies (DOC, MfE, MPI) Regional councils Māori (organisations and iwi)
Governance of complex systems – Outcomes 1, 2, 3, and 4		$0.26	$0.30	
• Developed a manual to run the Foresight Engine to engage public in debate, with initial focus on predator management (Predator-free NZ). • Refined the ARLUNZ model by improving social networks between agents, and implementing other non-economic attributes such as farming tradition, identity, and risk profiles. • Following an MfE-funded survey of rural decision-makers in 3 regions on landowner behaviour, we extended the survey to NZ's remaining 13 regions. • Identified future opportunities and investment areas for building Māori capacity in governance and policy research, and developed a NZ social science research strategy: *Responding to Climate Change in the Land - Based Sectors*. • Identified possibilities to introduce biodiversity, manage hard-surface runoff and create sustainable urban ecosystems in Auckland's Wynyard Quarter.				Policy agencies (DOC, MfE, MPI) Regional councils Urban planners Primary producers Māori and other New Zealanders

Research activity 2012/13 Key Achievements	Core Funding Investment ($M excl GST) 2011/12 (actual)	2012/13 (planned)	2012/13 (actual)	End-users
PORTFOLIO: ENHANCING POLICY DEVELOPMENT *(continued)*	$0.65	$0.92	$0.83	
• Analysed labour and graduate migration, providing new data on indicators, drivers and migration destinations. • Surveyed horticultural and cropping producers in Hawke's Bay on interaction between climate change impacts and freshwater management, providing the Regional Council with data on community perceptions of, and willingness to engage in, Council measures to improve water quality. • Integrated expertise in urban ecology and water management with low/no mow technology and began to explore practical cost-effective applications to manage urban biodiversity and improving public urban spaces.				Policy agencies Regional councils Horticultural and arable sectors Urban planners
PORTFOLIO: SUPPORTING TRADE	$0.24	$0.45	$0.47	
TB freedom – Outcome 4		$0.04	$0.07	
• Surveyed farmers to determine their willingness to pay for outcomes of TB-possum control, including ancillary benefits such as reduced pasture loss and increased native bird numbers; results will provide new and more objective measures of the value of TB-possum control.				Policy agencies (MPI, DOC) TB-free New Zealand Regional councils Farmers
Production pests and environmental compensation – Outcome 4		$0.11	$0.12	
• Reviewed environmental compensation and enhancement offsetting, clarifying how to shift compensation from "no-net-loss" to "net positive gain", and identifying key research needs to ensure pest control can achieve offset outcomes. • Developed probability and bio-economic theory to assess progress and success of broad-scale eradications of wildlife-disease and pests, providing a framework for TB research and management. • Initiated a trial of biocontrol of field horsetail in the UK.				Policy agencies (DOC) Regional councils TB-free New Zealand
Risk mitigation and environmental limits – Outcome 4		$0.05	$0.05	
• Compared footprinting methodologies used in kiwifruit production in France and NZ, and surveyed small/medium enterprises (SMEs) in NZ's kiwifruit sector to identify barriers and enablers to using life cycle management technology transfer techniques. • Identified and recommended potential biodiversity indicators for inclusion in farm management, to improve understanding of production sustainability and enhance the industry's 'licence to operate'.				Policy agencies (MPI, MfE) Kiwifruit industry Primary sector businesses (SMEs) Farmers Agricultural industries
Export competitiveness and innovation – Outcome 4		$0.25	$0.23	
• Identified approximately 4000 specimens of weevils to improve DNA diagnostics, especially of weevils important to biosecurity of NZ's imports and exports of timbers and crops. • Reviewed green growth indicators and engaged with finance and insurance industries to improve understanding of green growth at business and sector levels. • Developed collaborations in governance and policy research. • Interviewed NZ businesses to identify research needs to meet future environmental, sustainability, consumer and market demands.				Policy agencies (MPI, MFAT) Primary producers and industries NZ businesses Export industries Researchers

Note:
Actual totals for *Defining Land Biota* and *Characterising Land Resources* portfolios include revenue carried forward from 2011/12.

Financial Indicators

Financial key performance indicators

For year ending 30 June:	2013 Budget	2013 Achieved
Efficiency:		
Operating margin	9.5%	9.4%
Operating margin per FTE	$13,418	$14,860
Risk:		
Quick ratio	0.65	0.73
Interest coverage	101	80
Operating margin volatility	12.0%	10.7%
Forecasting risk	-4.4%	-2.1%
Tailored rate of return:		
ROE before investment	8.9%	5.9%
ROE before restructuring	4.5%	4.1%
Return on equity (ROE) (based on NPAT)	4.2%	2.1%
Growth/investment:		
Revenue growth	-0.7%	-6.2%
Capital renewal	1.7	1.2

Operating Margin:
EBITDAF ÷ Revenue, expressed as a percentage. (EBITDAF is EBIT before depreciation, amortisation and fair value adjustments.)

Quick ratio:
(Current assets – Inventory - Prepayments) ÷ (Current liabilities – Revenue in advance).

Interest cover:
Interest is the cost of debt and financial leases. Interest cover = EBITDAF ÷ interest. (EBITDAF is EBIT before depreciation, amortisation and fair value adjustments.)

Forecasting Risk:
5-year average of return on equity less forecast return on equity.

Return on equity:
NPAT ÷ Average shareholders' funds, expressed as a percentage.
(NPAT: net profit after tax.)

Shareholders' funds:
Includes share capital and retained earnings.

Capital Renewal:
Capital expenditure / Depreciation expense plus amortisation expense.

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Katrina Direen	General Manager, People & Culture
Dr Libby Harrison	General Manager, Development (resigned 30 Sep 2013)
Dr Phil Hart	General Manager, Science Investment & Evaluation
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Annual Report

2013 Part Two

Landcare Research
Manaaki Whenua