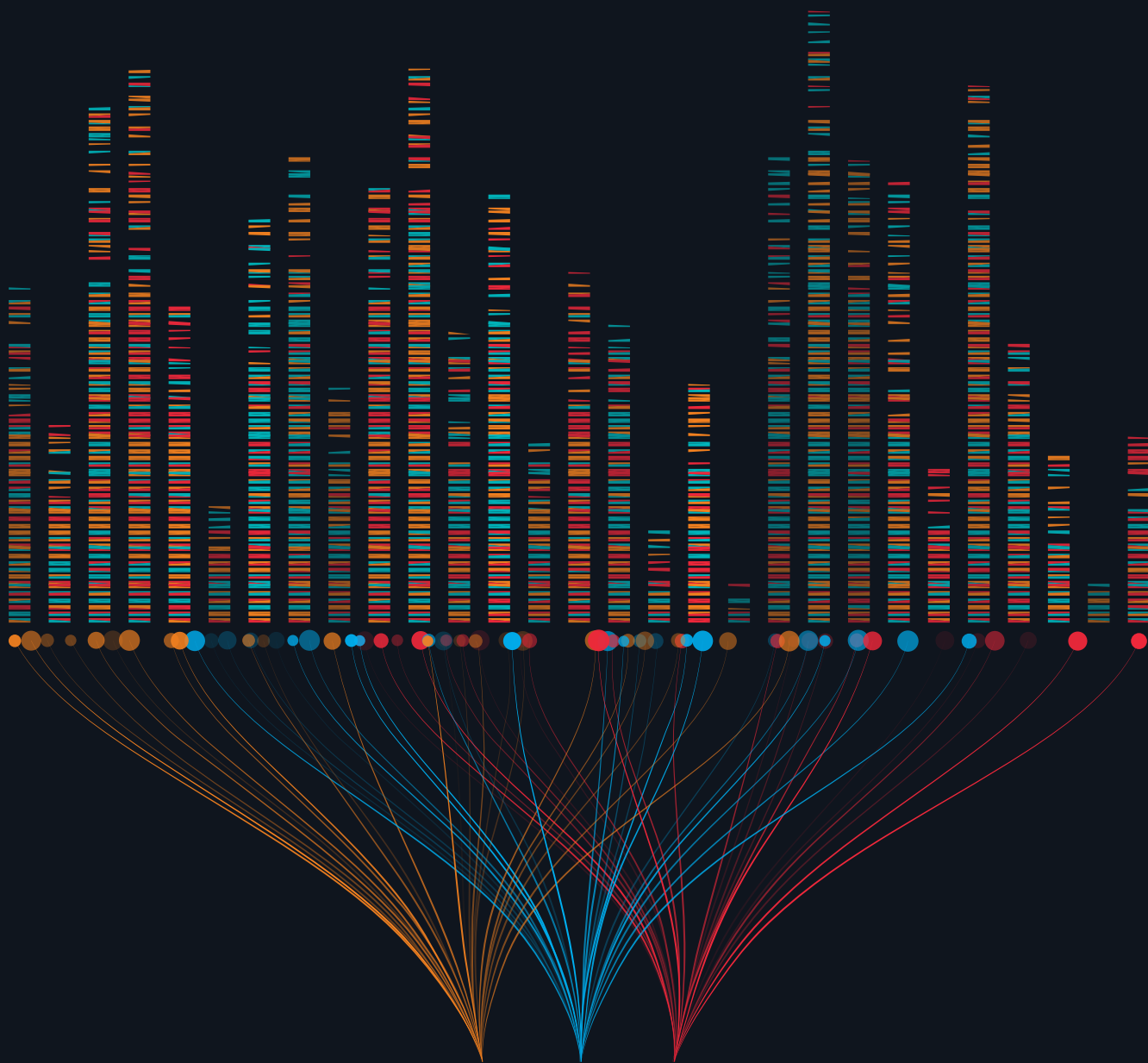


# ESR half-year report

31 December 2021



# Te kaupapa Our purpose

“Our purpose is to deliver enhanced scientific and research services to the public health, food safety, security and justice systems, and the environmental sector. By doing this, we help improve the safety of, and contribute to, the economic, environmental and social wellbeing of people and communities in New Zealand.”

*(Statement of Core Purpose)*

Through our  
leadership, we:

**Tautohua**  
Detect

Identifying  
emerging issues

**Tūhonotia**  
Connect

Developing and using  
best applied science  
resource + solutions

**Tiakina**  
Protect

Keeping communities  
healthy and safe

Through our ability to:

**Innovate / Collaborate / Elevate**

*(Statement of Corporate Intent)*

# Ngā kai o roto

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### ESR Science centres

#### ***Kenepuru Science Centre***

34 Kenepuru Drive, Kenepuru, Porirua 5022  
PO Box 50348, Porirua 5240, New Zealand

#### ***Mt Albert Science Centre***

120 Mount Albert Road, Sandringham, Auckland 1025  
Private Bag 92021, Auckland 1142, New Zealand

#### ***Wallaceville Science Centre***

66 Ward Street, Wallaceville, Upper Hutt 5018  
PO Box 40158, Upper Hutt 5140, New Zealand

#### ***Christchurch Science Centre***

27 Creyke Road, Ilam, Christchurch 8041  
PO Box 29181, Christchurch 8540, New Zealand

A map of New Zealand showing the locations of wastewater testing sites for COVID-19. The map is overlaid on a light grey map of New Zealand. Numerous blue dots of varying sizes are scattered across the country, representing testing sites. A large, detailed illustration of a COVID-19 virus particle is positioned in the upper right quadrant of the map. The text 'New Zealand' is visible on the map.

Map of COVID-19 in wastewater testing results,  
February 1 2022.

Presented to the House of Representatives pursuant to section 18 of the Crown Research Institutes Act 1992.

The Institute of Environmental Science and Research Limited (ESR) is a Crown research institute. It was incorporated in June 1992 and is wholly owned by the New Zealand Government. The two shareholding Ministers appoint a Board of Directors to govern the organisation. ESR has science facilities in Auckland, Wellington (Porirua and Wallaceville) and Christchurch.

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Published February 2022.

# He kupu nā te Heamana Chair's report

**The Board is pleased to present ESR's half-year report for the six months to 31 December 2021. ESR is consistently delivering outstanding applied science solutions for New Zealand and being at the forefront of the Government's COVID-19 response. The Board is proud of ESR's dedicated staff and their resilience, commitment and innovative science to support the ongoing response efforts.**

ESR's expertise was reinforced with ESR / Otago University successfully being selected to host the new Infectious Diseases Platform. The Board is delighted with this outstanding result for ESR, which is a testament to ESR's value proposition and expertise as the CRI with a dedicated focus on protecting public health and improving wellbeing outcomes. This is an important development for ESR's future position and role in strengthening and expanding New Zealand's infectious disease response and readiness. It also signals a significant period of change and growth for ESR as it further expands opportunities for collaboration and increases investment in organisational capacity and capability and systems to support government sector priorities.

Effective collaborations and partnerships together with iwi, our key government agencies, and partners are key to future-proofing public health, supporting the economy, and improving wellbeing. The creation of ESR's Drug CoLab of multi-disciplinary forensic scientists is exploring innovative and holistic approaches to reducing drug harm in New Zealand and further improving justice sector outcomes. ESR's partnership with the New Zealand Police to successfully develop the cutting-edge Lumi Drug Scan device led to the creation of the joint ESR/ New Zealand Police Innovation Group. This group was established to find new ways of developing and delivering smarter frontline policing solutions and technologies that support better justice outcomes.

While there are multiple advances in testing technologies and surveillance improvements, ESR's applied expertise lies in the conjunction of **detecting, connecting and protecting** – our ability to scale up capabilities across public health, forensic and environmental science areas contribute to high-level systems intelligence and evaluation as well as enabling critical data. This conjunction of capabilities is vital for successfully applied science solutions.

The longstanding partnership between ESR and Pūhoro continues to strengthen as we work to further Pūhoro's programme of bringing science to rangatahi, developing and inspiring them to be active participants in the fields of science, technology, engineering, mathematics and

Mātauranga. In early December 2021, we signed a Memorandum of Understanding (MoU) with the Pūhoro STEM Academy. The MoU, based on ESR's past initiatives to expose rangatahi to the breadth of ESR's science work and broaden their understanding of the importance of science, formally recognises ESR as one of five national partners to this programme. We look forward to advancing their aims of providing rangatahi further opportunities to explore science and develop as future science leaders.



## A changing research, science and innovation system

Four significant changes within the wider research, science and innovation (RSI) system will impact ESR's future and operating environment. These are The Green Paper Future Pathways, Te Ara Paerangi, a new operating model for New Zealand's health and disability system, the Three Waters Reform Programme and MBIE's new Infectious Diseases Research Platform.

ESR's successful joint bid with the University of Otago as joint co-hosts of MBIE's new Infectious Diseases Research Platform is an exciting opportunity to develop and deliver greater pathways for impact using systems thinking and a co-design approach. The platform will be co-designed and established with Māori, including Māori health providers, communities, researchers, educators, and Māori organisations such as Wānanga Hauora Māori providers to embed Te Tiriti o Waitangi principles. The goal is to equip the health and the research, science and innovation sectors to develop capability and technology that will lift New Zealand's capability and capacity to face infectious disease outbreaks and challenges. The establishment phase of the Infectious Disease Platform is critical to influencing and supporting health and disability system changes

Maintaining our leadership in and expanding our genomics capability is critical for ESR's future success.

Strengthening strategic relationships is vital to expanding ESR's reputation and impact through innovative science solutions that realise customer value and the public good. We continue to build and strengthen relationships between communities and universities.

### Looking ahead

In addition to these significant pieces of work, ESR is also working on refreshing its He Pūtaiao, He Tāngata strategy to further build on the progress made to date and position ESR for greater impact for Māori, especially as we consider current reforms.

ESR continues to look for opportunities to add value, protect people and support regulatory outcomes and look forward to greater collaboration with iwi, the Government and partners to ensure that the applied science services ESR provides for community health and wellbeing are delivered in the most effective way.

Resilience, endurance, innovation and flexibility will be key as we continue to operate in a time of uncertainty and change.

### Financial progress

ESR is reporting a post-tax loss of \$0.8m for the six months to 31 December 2021 compared to the net profit after tax of \$1.3m achieved for the same period in 2020. Total revenue increased 11% compared to the six months to December 2020. Revenue from contracts with customers increased by \$7.4m (19%), driven by the considerable amount of work carried out in support of the Ministry of Health COVID-19 response efforts. ESR also saw improved earnings from other core contracts, commercial operations and research activity.

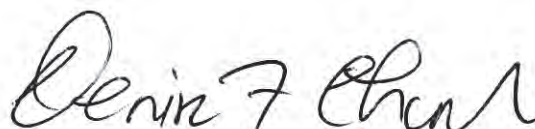
This revenue growth has largely offset the loss of crown COVID-19 Response and Recovery Funding (\$3.15m) received in the first half of the 2021 financial year.

An improved underlying operating result over the prior period is offset by increased investment in strategic initiatives, in particular two major projects, the implementation of a new Enterprise Resource Planning (ERP) and Human Relationship Management (HRM) system (in collaboration with GNS) and the KSC redevelopment programme.

The ERP/HRM system is a cloud-based software as a service product and this requires system configuration and implementation costs to be largely expensed as incurred. This accounting treatment is driving a budgeted post-tax loss planned in FY22.

The KSC redevelopment work continues apace, with preliminary design work nearing completion and developed design work set to commence in quarter four of this financial year. While these design activities were anticipated to be capitalised this financial year, they will be accounted for as operating costs until such time as the detailed business case is approved by shareholding ministers.

Until then, this accounting treatment presents a risk to the achievement of ESR's 2022 operating budget result.



**Denise Church, QSO**

Chair

# Ngā mahi whakahirahira

## Highlights

### December 2021

Secured funding of **\$36m** over the next three years from FY23 to jointly host the **Infectious Disease Research Platform** with Otago University. This signals a new approach for collaboration and innovation in public health to ensure New Zealand is better prepared for known and emerging infectious disease threats, including future pandemics.

ESR's groundwater remediation research programme and work with **experimental woodchip denitrification walls** is gaining international attention. ESR's work was presented online at the AGU (Advancing Earth and Space Science) conference in New Orleans, USA in December 2021.



### November 2021

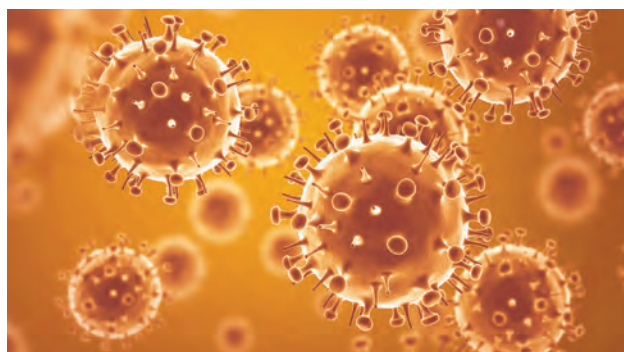
The research findings by ESR's **forensic drug and toxicology teams** after analysing the ingredients of **vaping products** have revealed significant discrepancies between the ingredients listed on the label and the results of laboratory testing. These findings are vital to support the vaping regulatory framework and help consumers make informed choices about the vaping products they choose. The next phase of this research is under way.



### October 2021

**STRmix™** has now reached the milestone of 90 user organisations worldwide and is used to interpret DNA evidence in more than 300,000 cases worldwide.

Work is under way to **expand** ESR's suite of **health surveillance and intelligence tools**. Our ability to scale up capabilities across public health, forensic and environmental science areas contributes to high-level systems intelligence and evaluation as well as enabling critical data. This conjunction of capabilities is crucial for successfully applied science solutions.



● **September 2021**

We successfully developed and launched a **wastewater testing dashboard** for the Ministry of Health. This tool, created by ESR data scientists, provides public health surveillance data around potential COVID-19 'hotspots' and helps inform response plans. ESR's website has a public wastewater dashboard available with weekly testing results from wastewater plants around New Zealand.

Following the successful co-design of the Lumi™ Drug Scan Service, the **joint ESR and New Zealand Police Strategic Governance Group** was established to promote greater strategic alignment and innovation to develop applied science solutions for the future. The aims are to further improve justice sector outcomes and seek equitable outcomes for Māori through better understanding the perspectives of Māori whānau and communities.

ESR's newly formed **Drug CoLab** of multi-disciplinary forensic specialists is using its collective data and drug expertise to provide thought leadership and develop world-class solutions and innovative approaches with clear evidence for best practice decision-making to reduce drug harm in New Zealand.

Week ending 8 January 2022	Week ending 15 January 2022	Week ending 22 January 2022	Week ending 29 January 2022
Not Detected	Detected	Detected	Detected
Detected			
Not Detected	Not Detected	Not Detected	Not Detected
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Not Detected	Not Detected	Detected	Not Detected



● **August 2021**

ESR's **SHIVERS-V** influenza research programme receives a funding boost of \$9.8m from FluLab to help New Zealand prepare for post-COVID-19 respiratory disease outbreaks.

During the Delta outbreak, **ESR continues to broaden its pandemic response efforts** by increasing capacity for wastewater testing and additional genomic testing of COVID-19 samples across ESR's sites.

● **July 2021**

We completed an evaluation of the [innovative Lumi™ Drug Scan Service](#) following the pilot that was completed in January 2021. We are continuing to develop additional features for Lumi™ to further **enhance this frontline policing solution** should the New Zealand Police decide to roll out Lumi™ nationally.



# Financial statements

For the six months ended 31 December 2021

## Key financial performance measures

	6 months ended 31 December 2021 Actual	Year ended 30 June 2022 Plan	Year ended 30 June 2021 Actual	Year ended 30 June 2020 Actual
<b>Revenue</b>	\$51.1m	\$97.3m	\$96.6m	\$83.8m
<b>Operating margin</b>				
<i>Earnings before interest, tax, depreciation and amortisation (EBITDA) as a percentage of revenue</i>	4.6%	4.6%	9.5%	10.1%
<b>Return on equity</b>				
<i>Net profit after taxation as a percentage of equity</i>	(2.8%)	(4.3%)	2.0%	4.6%
<b>Return on assets</b>				
<i>Earnings before interest and tax as a percentage of total assets</i>	(2.8%)	(4.7%)	1.7%	1.7%
<b>Acid test ratio</b>				
<i>Current assets excluding prepayments and inventory to current liabilities excluding deferred revenue</i>	3.3	2.3	2.8	2.6
<b>Equity ratio</b>				
<i>Equity as a percentage of total assets</i>	66.5%	71.0%	67.6%	71.2%
<b>Gearing</b>				
<i>Debt (including finance lease liabilities) as a percentage of debt and equity</i>	6.3%	3.7%	5.5%	2.2%
<b>Annualised operating margin per full time equivalent employee</b>				
<i>Earnings before interest, tax, depreciation and amortisation, per average full time equivalent employee for the year</i>	\$10,874	\$8,500	\$19,500	\$21,100



## Statement of profit or loss and other comprehensive income

For the six months ended 31 December 2021

	Note	Group unaudited 6 months ended 31 December 2021 \$'000s	Group audited 12 months ended 30 June 2021 \$'000s	Group unaudited 6 months ended 31 December 2020 \$'000s
<b>Operating revenue</b>				
Operating Revenue	2	45,885	84,374	41,670
Strategic science investment funding		5,256	12,234	4,330
		<b>51,141</b>	<b>96,608</b>	<b>46,000</b>
<b>Operating expenses</b>				
Scientific materials		4,521	8,029	3,318
Subcontracting, commissions and royalties		4,955	10,595	5,155
Personnel		29,271	51,153	23,737
Depreciation and amortisation		3,606	7,736	3,854
Other		10,056	17,681	8,247
		<b>52,409</b>	<b>95,194</b>	<b>44,311</b>
<b>Operating profit / (loss)</b>				
		<b>(1,268)</b>	<b>1,414</b>	<b>1,689</b>
Interest income		214	542	326
Interest expense	4	(60)	(35)	(10)
Share of net loss of associate accounted for using the equity method		–	(75)	(61)
		<b>154</b>	<b>432</b>	<b>255</b>
<b>Profit / (loss) before income tax expense</b>				
		<b>(1,114)</b>	<b>1,846</b>	<b>1,944</b>
Income tax (benefit) / expense	4	(271)	680	605
<b>Profit / (loss) for the period attributable to the shareholder of the parent</b>				
		<b>(843)</b>	<b>1,166</b>	<b>1,339</b>
Other comprehensive income		–	–	–
<b>Total profit or loss and other comprehensive income for the period attributable to the shareholder of the parent</b>				
		<b>(843)</b>	<b>1,166</b>	<b>1,339</b>

The accompanying notes form an integral part of these financial statements.

## Statement of changes in equity

For the six months ended 31 December 2021

	Share capital \$'000s	Retained earnings \$'000s	Total \$'000s
<b>Balance at 1 July 2020</b>	<b>8,494</b>	<b>50,467</b>	<b>58,961</b>
Profit / (loss) for the period	–	1,339	1,339
Other comprehensive income	–	–	–
<b>Total comprehensive income</b>	<b>–</b>	<b>1,339</b>	<b>1,339</b>
Transactions with owners:			
Dividend	–	–	–
<b>Balance at 31 December 2020</b>	<b>8,494</b>	<b>51,806</b>	<b>60,300</b>
<b>Balance at 1 July 2021</b>	<b>8,494</b>	<b>51,633</b>	<b>60,127</b>
Profit / (loss) for the period	–	(843)	(843)
Other comprehensive income	–	–	–
<b>Total comprehensive income</b>	<b>–</b>	<b>(843)</b>	<b>(843)</b>
Transactions with owners:			
Dividend	–	–	–
<b>Balance at 31 December 2021</b>	<b>8,494</b>	<b>50,790</b>	<b>59,284</b>

The accompanying notes form an integral part of these financial statements.

## Statement of financial position

As at 31 December 2021

	Note	Group unaudited 6 months ended 31 December 2021 \$'000s	Group audited 12 months ended 30 June 2021 \$'000s	Group unaudited 6 months ended 31 December 2020 \$'000s
<b>Non-current assets</b>				
Property, plant and equipment		26,132	26,840	27,749
Intangible assets		5,472	6,090	6,899
Right-of-use-assets		4,006	3,520	1,048
Investments accounted for using the equity method	3	–	–	167
Investment cash		1,000	5,000	9,000
Other investments		30	30	30
Deferred taxation		180	180	–
		<b>36,820</b>	<b>41,660</b>	<b>44,893</b>
<b>Current assets</b>				
Cash and cash equivalents		3,361	2,182	3,874
Investment cash		32,523	32,549	23,000
Trade and other receivables		11,825	9,928	10,172
Contract assets		2,648	1,713	2,961
Income tax receivable		1,021	–	–
Inventories – scientific materials and consumables		953	874	896
Derivative financial instruments		–	9	–
		<b>52,331</b>	<b>47,255</b>	<b>40,903</b>
<b>Current liabilities</b>				
Trade and other payables		11,144	11,362	8,803
Contract liabilities		7,531	6,283	7,308
Employee benefits		4,909	4,586	4,462
Lease liabilities		335	501	522
Income tax payable		–	748	522
Derivative financial instruments		11	–	–
		<b>23,930</b>	<b>23,480</b>	<b>21,617</b>
<b>Net current assets</b>		<b>28,401</b>	<b>23,775</b>	<b>19,286</b>
<b>Non-current liabilities</b>				
Employee benefits		2,260	2,289	2,180
Lease liabilities		3,677	3,019	540
Deferred taxation		–	–	1,159
		<b>5,937</b>	<b>5,308</b>	<b>3,879</b>
<b>Net assets</b>		<b>59,284</b>	<b>60,127</b>	<b>60,300</b>
<b>Equity</b>				
Share capital		8,494	8,494	8,494
Retained earnings		50,790	51,633	51,806
<b>Total equity</b>		<b>59,284</b>	<b>60,127</b>	<b>60,300</b>

The accompanying notes form an integral part of these financial statements.

## Statement of cash flows

For the six months ended 31 December 2021

	Note	Group unaudited 6 months ended 31 December 2021 \$'000s	Group audited 12 months ended 30 June 2021 \$'000s	Group unaudited 6 months ended 31 December 2020 \$'000s
<b>Cash flows from / (used in) operating activities</b>				
<i>Cash was provided from:</i>				
Customers		50,522	97,036	46,831
Interest received		232	529	326
		<b>50,754</b>	<b>97,565</b>	<b>47,157</b>
<i>Cash was applied to:</i>				
Suppliers and employees		(49,389)	(82,369)	(39,419)
Interest paid		–	(18)	–
Income tax paid		(1,498)	(2,709)	(1,520)
		<b>(50,887)</b>	<b>(85,096)</b>	<b>(40,939)</b>
<b>Net cash (outflow) / inflow from operating activities</b>	5	<b>(133)</b>	<b>12,469</b>	<b>6,218</b>
<b>Cash flows from / (used in) investing activities</b>				
<i>Cash was provided from:</i>				
Term deposit maturities		18,549	27,000	18,000
		<b>18,549</b>	<b>27,000</b>	<b>18,000</b>
<i>Cash was applied to:</i>				
Purchase of property, plant and equipment		(1,940)	(3,530)	(1,837)
Purchase of intangible assets		(491)	(943)	(542)
Investment in term deposits		(14,523)	(35,549)	(21,000)
		<b>(16,954)</b>	<b>(40,022)</b>	<b>(23,379)</b>
<b>Net cash inflow / (outflow) from investing activities</b>		<b>1,595</b>	<b>(13,022)</b>	<b>(5,379)</b>
<b>Cash flows from / (used in) financing activities</b>				
<i>Cash was applied to:</i>				
Repayment of lease liabilities		(283)	(598)	(298)
<b>Net cash outflow from financing activities</b>		<b>(283)</b>	<b>(598)</b>	<b>(298)</b>
<b>Net increase / (decrease) in cash held</b>		<b>1,179</b>	<b>(1,151)</b>	<b>541</b>
<b>Cash and cash equivalents at the beginning of the period</b>		2,182	3,333	3,333
<b>Cash and cash equivalents at the end of the period</b>		<b>3,361</b>	<b>2,182</b>	<b>3,874</b>

The accompanying notes form an integral part of these financial statements.

## Notes to the Financial Statements

### 1. Statement of significant accounting policies

#### Reporting entity

These financial statements of the Institute of Environmental Science and Research Limited and its subsidiaries ('ESR' and the 'Group') are for the six months ended 31 December 2021.

ESR is a Crown Entity incorporated and based in New Zealand. Its registered office is at 34 Kenepuru Drive, Porirua.

ESR is a Crown research institute that provides specialist scientific services and research, particularly to the public health, food safety, security and justice systems and the environmental sector.

#### Statement of compliance

The interim financial statements have been prepared in accordance with the requirements of the Crown Entities Act 2004, the Crown Research Institutes Act 1992, the Companies Act 1993 and the Financial Reporting Act 2013.

#### Basis of preparation of half yearly report

The condensed consolidated interim financial report for the half year reporting period ended 31 December 2021 has been prepared in accordance with Accounting Standard IAS 34 Interim Financial Reporting.

The interim report does not include all the notes of the type normally included in an annual financial report. Accordingly, this report is to be read in conjunction with the annual report for the year ended 30 June 2021.

The accounting policies adopted are consistent with those of the previous financial year and corresponding interim reporting period, except for the estimation of income tax.

The financial statements are prepared on the basis of historical cost, except for financial instruments and long service leave.

The financial statements are presented in New Zealand dollars and all values are rounded to the nearest thousand dollars (\$000).

The results for the six months ended 31 December 2021 and comparative period figures presented in the financial statements are unaudited.

#### Changes in accounting policies

The accounting policies set out in the 2021 Annual Report have been applied consistently to all the periods in these interim financial statements. There have been no changes in accounting policies from those applied in ESR's 2021 Annual Report. Where necessary, comparative figures have been reclassified for consistency with current year disclosures.

### 2. Revenue

#### a) Total operating revenue

##### COVID-19

On 11 March 2020, the World Health Organization declared coronavirus (COVID-19) a pandemic.

Since 1 July 2021, the ongoing impact of COVID-19 has largely been on commercial revenues from the sale of forensic and related science services to domestic and international customers.

The revenue reduction has been offset by the increase in revenue generated from the services provided to Ministry of Health for COVID-19.

While travel costs remain lower than pre-pandemic levels, this has been more than offset by additional costs to deliver services to the Ministry of Health and COVID-19 related overhead costs.

The Group anticipates there will be a continued reduction in some revenue streams over the next 12 months.

	Group unaudited 6 months ended 31 December 2021 \$'000s	Group audited 12 months ended 30 June 2021 \$'000s	Group unaudited 6 months ended 31 December 2020 \$'000s
Revenue from contracts with customers	45,885	81,224	38,520
Crown COVID-19 Response and Recovery Funding	–	3,150	3,150
<b>Total operating revenue</b>	<b>45,885</b>	<b>84,374</b>	<b>41,670</b>

## b) Revenue from contracts with customers

### i) Disaggregated revenue information

<b>Group – 6 months ended 31 December 2021</b>	<b>Domestic \$'000s</b>	<b>International \$'000s</b>	<b>Total \$'000s</b>
Core government contracts	33,225	–	33,225
Research	3,945	1,521	5,466
Commercial products and services	1,939	5,255	7,194
	<b>39,109</b>	<b>6,776</b>	<b>45,885</b>

<b>Group – year ended 30 June 2021</b>	<b>Domestic \$'000s</b>	<b>International \$'000s</b>	<b>Total \$'000s</b>
Core government contracts	56,599	–	56,599
Research	8,832	2,467	11,299
Commercial products and services	3,829	9,497	13,326
	<b>69,260</b>	<b>11,964</b>	<b>81,224</b>

<b>Group – 6 months ended 31 December 2020</b>	<b>Domestic \$'000s</b>	<b>International \$'000s</b>	<b>Total \$'000s</b>
Core government contracts	26,137	–	26,137
Research	4,552	1,160	5,712
Commercial products and services	1,650	5,021	6,671
	<b>32,339</b>	<b>6,181</b>	<b>38,520</b>

Note that the overall research output of the Group includes activity funded by \$5,256,000 (2020: \$4,330,000) of Strategic Science Investment Funding. This funding is accounted for as a government grant and not included in the table above.

## 3. Investment in associates

The carrying amount of equity accounted investments has changed over the reporting period as below:

	<b>Group unaudited 6 months ended 31 December 2021 \$'000s</b>	<b>Group audited 12 months ended 30 June 2021 \$'000s</b>	<b>Group unaudited 6 months ended 31 December 2020 \$'000s</b>
Beginning of the period	–	228	228
Additions	–	–	–
Profit / (loss) for the period	–	(75)	(61)
Impairment loss	–	(153)	–
<b>Total investment in associates</b>	<b>–</b>	<b>–</b>	<b>167</b>

ESR's equity accounted investment in AuramerBio Limited, a start-up company focussed on the development of DNA aptamer sensors, was fully impaired in the 2021 financial year following AuramerBio going into liquidation in April 2021.

#### 4. Other profit and loss information

##### a) Interest expense

	Group unaudited 6 months ended 31 December 2021 \$'000s	Group audited 12 months ended 30 June 2021 \$'000s	Group unaudited 6 months ended 31 December 2020 \$'000s
Lease liability interest	60	17	10
Other interest	–	18	–
<b>Total interest expense</b>	<b>60</b>	<b>35</b>	<b>10</b>

##### b) Income tax

Income tax expense is recognised based on management's estimate of the weighted average effective annual income tax rate expected for the full financial year. The estimated average annual tax rate used for the six months to 31 December 2021 is 24%, compared to 31% for the six months ended 31 December 2020.

## 5. Reconciliation of profit / (loss) after taxation to cash flows from operating activities

	Group unaudited 6 months ended 31 December 2021 \$'000s	Group audited 12 months ended 30 June 2021 \$'000s	Group unaudited 6 months ended 31 December 2020 \$'000s
<b>Profit / (loss) for the period after taxation</b>	<b>(843)</b>	<b>1,166</b>	<b>1,339</b>
<b>Non-cash items:</b>			
Depreciation and amortisation expense	3,606	7,736	3,854
Depreciation on right-of-use assets	259	582	290
Gain on modification of lease contracts	(21)	(12)	–
Equity accounted earnings from associate company investment	–	75	61
Impairment of equity accounted earnings from associate company investment	–	153	–
(Decrease) / increase in provision for expected credit losses	(7)	(29)	(36)
(Decrease) / increase in deferred tax liability	–	(1,339)	–
Fair value (gain) / loss on derivative financial instruments	11	(9)	–
Other non-cash items	–	(5)	–
	<b>3,848</b>	<b>7,152</b>	<b>4,169</b>
<b>Changes in working capital:</b>			
(Increase) in trade and other receivables and contract assets	(2,825)	(109)	(1,224)
(Increase) / decrease in inventories	(79)	15	(7)
Increase in trade and other payables and contract liabilities	1,030	4,057	2,149
(Decrease) in income tax payable	(1,769)	(690)	(916)
Increase in employment benefits	294	548	315
	<b>(3,349)</b>	<b>3,821</b>	<b>317</b>
<b>Items classified as investing and financing activities:</b>			
Loss on disposal of property, plant and equipment	3	73	–
Decrease in payables related to property, plant and equipment	148	239	383
Finance charge on leases	60	18	10
	<b>211</b>	<b>330</b>	<b>393</b>
<b>Net cash (outflow) / inflow from operating activities</b>	<b>(133)</b>	<b>12,469</b>	<b>6,218</b>

## 6. Capital commitments

The following amounts have been committed to by ESR but have not been recognised in the financial statements.

	Group unaudited 6 months ended 31 December 2021 \$'000s	Group audited 12 months ended 30 June 2021 \$'000s	Group unaudited 6 months ended 31 December 2020 \$'000s
Property, plant and equipment	638	641	785
Intangible assets - software	10	10	5
<b>Total capital commitments</b>	<b>648</b>	<b>651</b>	<b>790</b>



## **7. Contingent liabilities**

The directors are satisfied that there are no other claims outstanding that would have a material impact on ESR's financial position as at 31 December 2021 (30 June 2021: Nil).

## **8. Events subsequent to balance date**

There were no events subsequent to reporting date that require disclosure in the financial statements.

## Key management personnel remuneration

Key management personnel are those with responsibility and authority for planning, directing and controlling the activities of the Group. Key management personnel of the Group are considered to be the Directors, Chief Executive and Senior Leadership Team.

### Chief Executive's remuneration

The remuneration of our Chief Executive is reviewed annually by the Board and is determined by a range of factors including advice from external remuneration specialists, including job sizing and market relativity exercises. These are also undertaken on a regular basis and drawn on to inform the determination of salary package.

Financial year	Salary <sup>a</sup>	STI <sup>b</sup>	Percentage STI against maximum	Benefits <sup>c</sup>	Total
Peter Lennox					
HY2022	\$252,429	n/a	n/a	\$7,876	\$260,305
2021	\$454,372	n/a	n/a	\$14,048	\$468,420
Keith McLea					
2021	\$134,961	n/a	n/a	\$19	\$134,980
2020	\$508,210	n/a	n/a	\$533	\$508,743
2019	\$394,746	\$89,200	81%	\$599	\$484,545
2018	\$379,256	\$80,000	73%	\$644	\$459,900

<sup>a</sup> Chief executive remuneration in 2021 and 2020 did not include a short-term incentive (STI) component.

<sup>b</sup> STIs are shown for the year to which they relate but were unpaid as at that balance date.

<sup>c</sup> Benefits comprise insurance cover and employer KiwiSaver contributions.

### Senior Leadership Team remuneration

The total combined remuneration of our Senior Leadership Team (excluding the Chief Executive's remuneration).

Financial year	Salary & STI <sup>a</sup>	Benefits <sup>b</sup>	Total
HY2022	\$1,015,767	\$35,750	\$1,051,517
2021	\$2,104,372	\$57,595	\$2,161,967
2020	\$1,463,900	\$42,189	\$1,506,089
2019	\$1,827,863	\$55,489	\$1,883,352
2018	\$1,681,556	\$45,248	\$1,726,804

<sup>a</sup> Senior leadership team remuneration in 2021 and 2020 did not include a short-term incentive (STI) component. STIs are shown for the year to which they relate but were unpaid as at that balance date.

<sup>b</sup> Benefits comprise insurance and employer KiwiSaver contributions.

# Directory

## ESR Board of Directors

Denise Church QSO *Chair*

Dr Cristin Print *Deputy Chair*

Dr Andy Shenk

Richard Gill

Kate Thomson

## ESR Senior Leadership Team

Peter Lennox *Chief Executive*

Mark Ottoway *General Manager, Business Services*

John Bone *General Manager, Forensic*

Trish Bolger *General Manager, People and Culture*

Jymal Morgan *General Manager, Māori Impact*

Dr Libby Harrison *Joint General Manager, Health and Environment (Environment)*

Dr Jill Vintiner *Joint General Manager, Health and Environment (Health)*

Dr Brett Cowan *Chief Scientist*

## Registered office

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Porirua 5240

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[www.esr.cri.nz](http://www.esr.cri.nz)

## Auditor

Sarah Turner of PricewaterhouseCoopers on behalf of the Auditor-General

## Banker

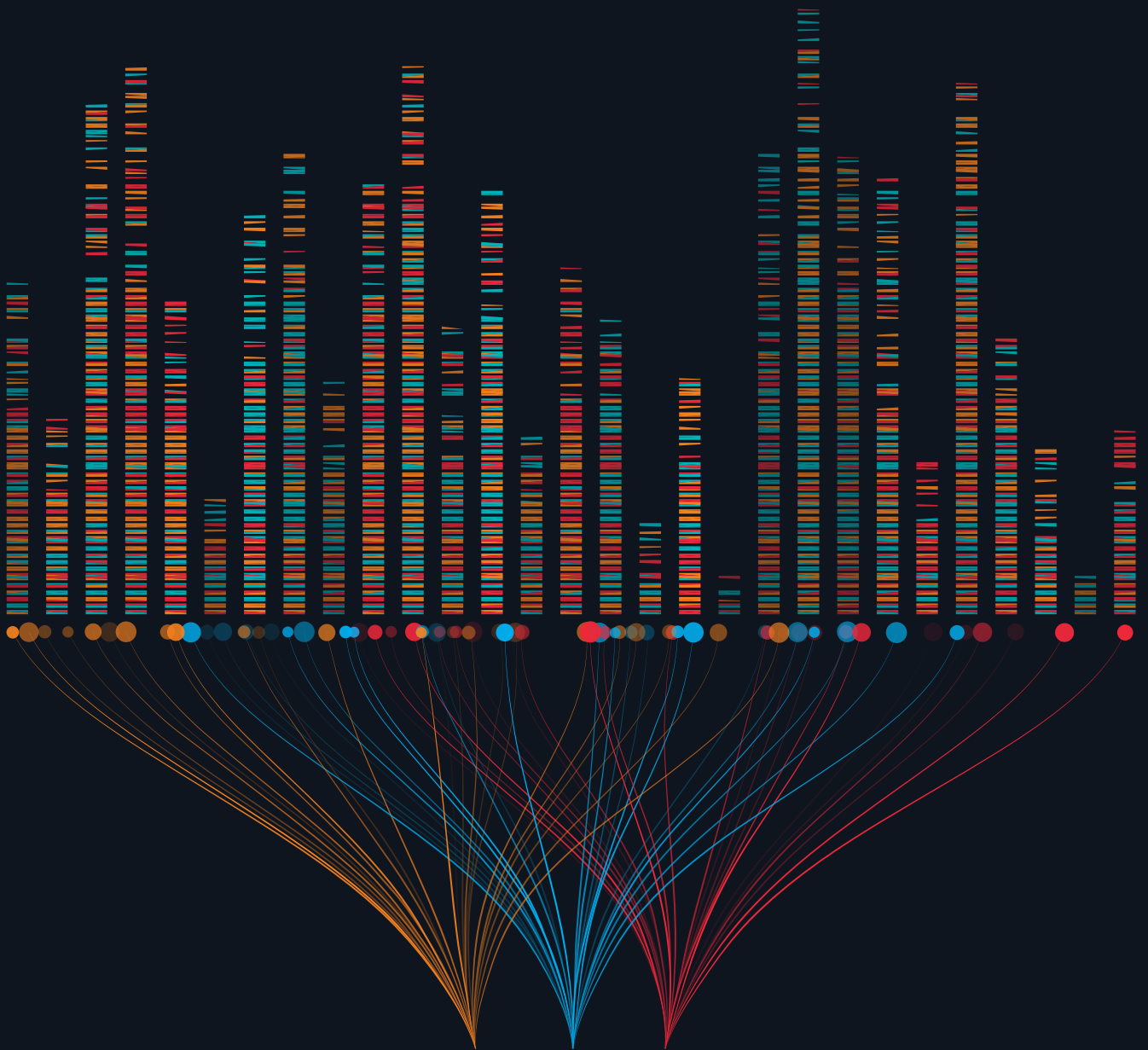
ANZ Bank New Zealand Limited

## Solicitor

Buddle Findlay



The Institute of Environmental Science and Research Limited (ESR) is a Crown research institute. It was incorporated in June 1992 and is wholly owned by the New Zealand Government. The two shareholding Ministers appoint a Board of Directors to govern the organisation. ESR has science facilities in Auckland, Wellington (Porirua and Wallaceville) and Christchurch.



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