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# Half-yearly report for the six months ending 31 December 2020



**E / S / R**  
Science for Communities

# DIRECTORY

## **ESR Board of Directors**

Denise Church QSO *Chair*

Dr Cristin Print *Deputy Chair*

Richard Gill

Dr Andy Shenk

Kate Thomson

## **ESR Senior Leadership Team**

Peter Lennox *Chief Executive*

Trish Bolger *General Manager, People, Culture & Communications*

John Bone *General Manager, Forensic*

Dr Libby Harrison *General Manager, Health and Environment*

Dr Brett Cowan *Chief Scientist*

Amber McEwen *General Manager, Business Services*

Jymal Morgan *General Manager, Māori Strategy – He Pūtaiao Māori Impact Group*

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## **Auditor**

Chris Ussher of PricewaterhouseCoopers on behalf of the Auditor-General

## **Banker**

ANZ Bank New Zealand Limited

## **Solicitor**

Buddle Findlay



Science for Communities

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.

# CHAIR'S REPORT

The Board is pleased to present ESR's half-year report for the six months to 31 December 2020.

ESR has achieved significant success during this time, working tirelessly and collaboratively with iwi, our key government agencies, and partners for the benefit of New Zealand's people and communities. The Board is proud of the work ESR staff have delivered to keep New Zealand safe while contributing to the Government's priorities of future-proofing public health, supporting the economy, and improving the environment. ESR staff continue to demonstrate their innovation, adaptability, and resilience as they expand their science capabilities to deliver science solutions for health, forensics, food, and water and the environment.

## Highlights

As a result of our collaborative efforts to lead and support the Government's COVID-19 response and our co-design with New Zealand Police of the Lumi Drug Scan launched in July 2020, ESR's profile continues to grow. ESR's innovative science is making a strong impact and our achievements are being celebrated and recognised. The Board is delighted that in December 2020, ESR's COVID-19 response team won the Science New Zealand Supreme Award at the Science New Zealand awards held at Parliament. This award recognised the quality, timeliness, and relevance of our work to support Aotearoa's pandemic response and our collaborative work in developing the COVID-19 dashboard and our continued genome sequencing of every case to help aid analysis and intelligence and support contact tracing efforts.

During these six months, ESR has made strong progress in growing ESR's data science capabilities. Genome sequencing and analysis is now an integral component of ESR's public health intelligence. Our scientists are working on protocols for improving how we extract useful genomic information where standard techniques have failed.



We started an eight-week trial in November 2020 to test wastewater for the SARS-CoV-2 virus at pilot sites in the North and South Islands. The data and science behind the wastewater testing for the SARS-CoV-2 virus will help inform recommendations to the Government about options for ongoing surveillance of wastewater for the virus.



Additionally, the Lumi Drug Scan trial was expanded to the Canterbury Police District. ESR scientists are working to add a new drug detection model to the service. This will further support frontline Police efforts to reduce the harm illicit drugs cause to people and communities.

In a first for ESR, a paper 'COVID-19 in NZ and the impact of the national response: a descriptive epidemiological study' authored by ESR's Dr Sarah Jeffries and others, was published in *The Lancet: Public Health*. This collaborative paper provides insights to the international community about New Zealand's pandemic response and supports the ongoing need to achieve equitable health outcomes for minority and higher-risk groups. This paper received international attention, featuring on *The Late Show* with Stephen Colbert. It was mentioned by 15 news outlets and 3,035 tweeters, receiving an 'attention score' in the top 5% of all research outputs as scored by Altmetric.

We are making progress to grow genuine engagement and collaboration with iwi in the areas of wai and kai through our flagship He Wai Māpuna and Te Hāpai Ō Strategic Science Investment Fund programmes. We are developing projects combining both Mātauranga Māori and western science with Ngāti Awa, Ngāi te Rangi, Ngāti Kahungunu ki Wairarapa and Ngāi Tahu.

In August 2020, the Board agreed and endorsed a refreshed strategy and implemented ESR's Strategic Action Plan. The initiatives in the plan are shaping ESR's future direction. We finished 2020 on a high note, making good progress against several key strategic initiatives and projects articulated in our 2020-2025 Statement of Corporate Intent. These include:

- completion of the bulk of the first phase of the Customer Insights workstream, which is providing the foundations for ESR to become more customer-centric and co-design new services and products with its key customers;
- completion of a review into ESR's framework around how it makes strategic decisions relating to new science investments;
- developing ESR's technology to support real-time data and analysis as it moves to develop more digital science solutions;
- commencing a new technology roadmap to create a more effective, efficient and responsive organisation, and one

which can better meet its enterprise management and reporting obligations;

- reviewing our organisational capability so we continue to foster the collective skills and talents of ESR's staff, attracting and retaining the best staff so we grow a collaborative culture that builds our team; and
- determining how we shape our science future to strengthen ESR's position as a leader in New Zealand science and increase its science capabilities and collaboration as outlined in the findings from our 2020 Science Review.

The work programme to deliver ESR's Strategic Action Plan is progressing at pace and will remain a significant focus for the Board through 2021.



### **Awards for ESR's science**

ESR's Groundwater Nitrate Mitigation research team was a finalist for the Science and Research section of the New Zealand Primary Industry Awards held in November 2020 for their project on woodchip denitrification wall technology to mitigate on-farm nitrogen. A rebid for further project funding to continue the next phase of the project will be submitted in 2021.

As well as our COVID-19 response team winning the Science New Zealand Supreme Award, Dr Georgia Bell won the Science New Zealand Early Career Researcher Award, and Dr Virginia Hope won the Science New Zealand Individual Lifetime Achievement Award.

In the New Year's Honours list, Dr SallyAnn Harbison was awarded Member of the New Zealand Order of Merit for her contribution and services to forensic science.

### **Strengthening ESR and setting the future direction**

To deliver science solutions that meet the needs and aspirations of iwi, we must develop and grow strong Māori capability and Māori research across ESR. ESR's He Pūtaiao He Tangata Māori impact strategy is foundational to our future direction and success. In the period under review, we have made significant progress to strengthen our relationships with iwi, build grassroots relationships and grow genuine co-collaboration with iwi and communities. Systems thinking, collaboration and connectivity are vital if we are to make real impact for people, communities, and the environment.

We continued to focus on our governance capability with an external governance review, and workshop on governance in disruptive times.

Preparing ESR for the future includes understanding ESR's future direction and where ESR should be focusing its science efforts for greatest impact. ESR's Strategic Science Advisory Panel held a series of virtual meetings with our scientists and management over November and December 2020 to explore this issue.

We remain focused on ESR being an agile, innovative and customer focused organisation that can adapt and quickly respond to new opportunities and market changes. This will ensure that ESR continues to deliver creative and collaborative science solutions for the major health, community and environment challenges facing our country.

**Denise Church** QSO

Chair



# PROGRESS AGAINST OUR STATEMENT OF CORPORATE INTENT

## Growing Māori Science

Water quality plays a vital role in the wellbeing of everyone. ESR received additional Strategic Science Investment Funding of \$2.3 m for FY21 to grow Māori research and capability.

ESR's flagship wai programme, He Wai Māpuna, is about building relationships that bring science directly to iwi through a hands-on, co-design and co-collaboration approach. The aim is to deliver enhanced wellbeing benefits to meet the needs of Māori communities and the environment by using science and mātauranga knowledge systems.

Te Hāpai Ō, a mahinga kai programme that is Māori led and firmly rooted in mātauranga Māori, has been developed with Te Rūnanga o Ngāi Tahu in Christchurch. ESR has also developed community education and outreach programmes to encourage tamariki and rangatahi to be excited about mātauranga and science.

## Research

ESR is continuing to grow its data science and bioinformatics capabilities in the area of food safety and public health surveillance.

Following an increased growth in the last 12 months of the number of cases of yersiniosis, a bacterial infection that can cause acute stomach illness, we received Health Research Council funding in September 2020 to sequence the genome of yersiniosis. Sequencing the bacterium's genome will help us learn more about it and trace sources of infection more accurately. The goal of this study is to create new data sets to help us understand why yersiniosis infection rates are increasing in New Zealand and quantify the overall disease burden. The aim is to identify potential sources of yersiniosis, improve surveillance activities and help devise control strategies to ultimately reduce yersiniosis and other enteric diseases.

There are projects under way to help us expanding our capabilities in machine learning and artificial intelligence. These projects include using machine learning to predict groundwater health, and a project exploring how artificial intelligence can support justice outcomes.

## COVID-19 research

COVID-19 research is continuing. We expanded our COVID-19 wastewater testing initiative in November 2020. The eight-week project will see our scientists test wastewater treatment plants in east Auckland, Hamilton, Rotorua, Wellington, and Christchurch for COVID-19. This work forms part of ongoing wastewater testing and surveillance to detect any early outbreaks of SARS-CoV-2 in communities.

Key on-going projects include the rollout of the saliva trail in collaboration with Air NZ and the Border NET project, a collaboration with different agencies to set up a paperless COVID-19 lab test order request system at managed isolation facilities in Auckland and Christchurch.

## Kenepuru Science Centre rebuild

It is vital that ESR's infrastructure (both physical and technological) supports ESR's science for the future and that ESR's future laboratories are designed to maximise innovation and collaboration. We are continuing to make progress on the concept design work for the KSC redevelopment programme. We continue to engage regularly with Ngāti Toa Rangatira to ensure that the design of the new facility will capture the values and features of significance to Ngāti Toa Rangatira, including aspects of Porirua's local landscape. All stages of the design process are closely aligned to ESR's strategic priorities to ensure we capture the aspirational intent of our new facility. Work under way includes design thinking and considerations around what future laboratories look like, and how we capture those requirements into the concept design.

## Financial performance

ESR achieved a net profit after tax of \$1.3m for the six months to 31 December, an increase on the \$0.3m achieved for the same period in 2019.

The main driver of the improved result is the COVID-19 Response and Recovery Funding (RRF) received from MBIE. This has been accounted for in total in the first half of the financial year and, as intended, will be used to maintain science capability and to support capital investment programmes – the costs of which will continue to accrue through this financial year and beyond. As a consequence, profitability in the second half of the financial year 2021 is expected to moderate from that achieved in the first six months. The Board and Management continue to focus attention on the ongoing impacts and uncertainties brought about by the pandemic.

In addition to COVID-19 RRF, revenue growth has been achieved through increased funding from the Ministry of Health – largely for services supporting the Ministry's response to COVID-19 – and an increase in research revenues (also significantly directed towards COVID-19). These funding increases have offset the ongoing reduction in some internationally derived commercial revenues resulting from COVID-19.

Operating costs increased year-on-year as ESR invested in its capabilities, delivered more services to the Ministry of Health and increased the level of investment in our transformation programme of work, including the planning stages of the redevelopment of the Kenepuru Science Centre.

## Key Financial Performance Measures

Group	6 months ended 31 Dec 2020	Year ended 30 June 2021	Year ended 30 June 2020	Year ended 30 June 2019
	Actual	Plan	Actual	Actual
<b>Revenue</b>	\$46.0m	\$79.4m	\$83.8m	\$78.6m
<b>Operating margin</b> <i>Earnings before interest, tax, depreciation and amortisation (EBITDA) as a percentage of revenue</i>	12.1%	3.2%	10.1%	9.6%
<b>Return on equity</b> <i>Net profit after taxation as a percentage of equity</i>	4.4%	(3.7%)	4.6%	3.4%
<b>Return on assets</b> <i>Earnings before interest and tax as a percentage of total assets</i>	4.0%	(4.7%)	1.7%	2.4%
<b>Acid test ratio</b> <i>Current assets excluding prepayments and inventory to current liabilities excluding deferred revenue</i>	3.0	3.1	2.6	2.6
<b>Equity ratio</b> <i>Equity as a percentage of total assets</i>	70.3%	73.0%	71.2%	70.6%
<b>Gearing</b> <i>Debt (including finance lease liabilities) as a percentage of debt and equity</i>	1.7%	1.3%	2.2%	–
<b>Annualised operating margin per FTE</b> <i>Earnings before interest, tax, depreciation and amortisation, per average full time equivalent employee for the year</i>	\$25,781	\$6,300	\$21,100	\$19,300

# FINANCIAL STATEMENTS

## Statement of Profit or Loss and Other Comprehensive Income

For the six months ended 31 December 2020

Group		Group unaudited 6 months ended 31 December 2020	Group audited 12 months ended 30 June 2020	Group unaudited 6 months ended 31 December 2019
	Note	\$'000s	\$'000s	\$'000s
<b>Revenue</b>				
Operating revenue	2	41,670	74,516	35,894
Strategic science investment funding		4,330	9,234	4,149
		<b>46,000</b>	<b>83,750</b>	<b>40,043</b>
<b>Operating expenses</b>				
Scientific materials		3,318	6,733	3,082
Subcontracting, commissions and royalties		5,155	8,570	3,817
Personnel		23,737	43,999	22,075
Depreciation and amortisation		3,854	7,032	2,909
Other expenses		8,247	16,003	8,185
		<b>44,311</b>	<b>82,337</b>	<b>40,068</b>
<b>Operating profit/(loss)</b>				
		<b>1,689</b>	<b>1,413</b>	<b>(25)</b>
Interest income		326	876	477
Interest expense	4	(10)	(28)	(16)
Share of net loss of associate accounted for using the equity method		(61)	(64)	(28)
		<b>255</b>	<b>784</b>	<b>433</b>
<b>Profit before income tax expense</b>				
		<b>1,944</b>	<b>2,197</b>	<b>408</b>
Income tax expense / (benefit)	4	605	(447)	143
<b>Profit for the period attributable to the shareholder of the parent</b>				
		<b>1,339</b>	<b>2,644</b>	<b>265</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>1,339</b>	<b>2,644</b>	<b>265</b>

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

## Statement of Changes in Equity

For the six months ended 31 December 2020

Group	Note	Share capital	Retained earnings	Total
		\$'000s	\$'000s	\$'000s
<b>Balance at 1 July 2019</b>		<b>8,494</b>	<b>47,823</b>	<b>56,317</b>
Profit for the period		–	265	265
Other comprehensive income		–	–	–
<b>Total comprehensive income</b>		<b>–</b>	<b>265</b>	<b>265</b>
Transactions with owners:				
Dividend		–	–	–
<b>Balance at 31 December 2019</b>		<b>8,494</b>	<b>48,088</b>	<b>56,582</b>
<b>Balance at 1 July 2020</b>		<b>8,494</b>	<b>50,467</b>	<b>58,961</b>
Profit 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>

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



## Statement of Financial Position

As at 31 December 2020

Group	Note	Group unaudited 6 months ended 31 December 2020 \$'000s	Group audited 12 months ended 30 June 2020 \$'000s	Group unaudited 6 months ended 31 December 2019 \$'000s
<b>Non-current assets</b>				
Property, plant and equipment		27,749	29,047	29,349
Intangible assets		6,899	7,459	8,008
Right-of-use-assets		1,048	1,334	1,607
Investments accounted for using the equity method	3	167	228	414
Investment cash		9,000	5,000	–
Other investments		30	30	30
		<b>44,893</b>	<b>43,098</b>	<b>39,408</b>
<b>Current assets</b>				
Cash and cash equivalents		3,874	3,333	1,467
Investment cash		23,000	24,000	27,000
Trade and other receivables		10,172	10,447	9,493
Contract assets		2,961	1,052	736
Income tax receivable		–	–	178
Inventories		896	889	894
		<b>40,903</b>	<b>39,721</b>	<b>39,768</b>
<b>Current liabilities</b>				
Trade and other payables		8,803	7,871	6,440
Contract liabilities		7,308	5,717	5,481
Employee benefits		4,462	4,441	3,971
Lease liabilities		522	578	564
Income tax payable		522	1,438	–
		<b>21,617</b>	<b>20,045</b>	<b>16,456</b>
<b>Net current assets</b>		<b>19,286</b>	<b>19,676</b>	<b>23,312</b>
<b>Non-current liabilities</b>				
Employee benefits		2,180	1,886	1,702
Lease liabilities		540	768	1,049
Deferred taxation		1,159	1,159	3,387
		<b>3,879</b>	<b>3,813</b>	<b>6,138</b>
<b>Net assets</b>		<b>60,300</b>	<b>58,961</b>	<b>56,582</b>
<b>Equity</b>				
Share capital		8,494	8,494	8,494
Retained earnings		51,806	50,467	48,088
<b>Total equity</b>		<b>60,300</b>	<b>58,961</b>	<b>56,582</b>

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

## Statement of Cash Flows

For the six months ended 31 December 2020

	Note	Group unaudited 6 months ended 31 December 2020 \$'000s	Group audited 12 months ended 30 June 2020 \$'000s	Group unaudited 6 months ended 31 December 2019 \$'000s
<b>Cash flows from / (used in) operating activities</b>				
<i>Cash was provided from:</i>				
Customers		46,831	81,749	39,673
Interest received		326	876	323
		<b>47,157</b>	<b>82,625</b>	<b>39,996</b>
<i>Cash was applied to:</i>				
Suppliers and employees		(39,419)	(73,960)	(38,459)
Interest paid		–	(1)	–
Income tax paid		(1,520)	(823)	(800)
		<b>(40,939)</b>	<b>(74,784)</b>	<b>(39,259)</b>
<b>Net cash inflow from operating activities</b>	<b>5</b>	<b>6,218</b>	<b>7,841</b>	<b>737</b>
<b>Cash flows from / (used in) investing activities</b>				
<i>Cash was provided from:</i>				
Term deposit maturities		18,000	22,000	9,000
		<b>18,000</b>	<b>22,000</b>	<b>9,000</b>
<i>Cash was applied to:</i>				
Purchase of property, plant and equipment		(1,837)	(4,477)	(2,270)
Purchase of intangible assets		(542)	(948)	(499)
Investment in term deposits		(21,000)	(21,000)	(6,000)
		<b>(23,379)</b>	<b>(26,425)</b>	<b>(8,769)</b>
<b>Net cash (outflow) / inflow from investing activities</b>		<b>(5,379)</b>	<b>(4,425)</b>	<b>231</b>
<b>Cash flows from / (used in) financing activities</b>				
<i>Cash was applied to:</i>				
Repayment of lease liabilities		(298)	(592)	(10)
<b>Net cash outflow from financing activities</b>		<b>(298)</b>	<b>(592)</b>	<b>(10)</b>
<b>Net increase in cash held</b>		<b>541</b>	<b>2,824</b>	<b>958</b>
<b>Cash and cash equivalents at the beginning of the period</b>		<b>3,333</b>	<b>509</b>	<b>509</b>
<b>Cash and cash equivalents at the end of the period</b>		<b>3,874</b>	<b>3,333</b>	<b>1,467</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 2020.

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 2020 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 2020.

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 2020 and comparative period figures presented in the financial statements are unaudited.

### Changes in accounting policies

The accounting policies set out in the 2020 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 2020 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. In response, the New Zealand government put the country into level 4 of the alert level response system (lockdown) on 25 March. The alert level was lowered in April, reducing some of the restrictions on business operations and travel, enabling most of the Group's operations to recommence.

Since 1 July 2020, the ongoing impact of COVID-19 has largely been on the sale of forensic and radiation safety services to 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 and COVID-19 Response and Recovery Funding provided by the government.

Some operating costs fell compared to December 2019 due to a reduction in variable costs associated with lost revenue and much reduced travel, however, these reductions have more than offset by additional costs to deliver services to the Ministry of Health and COVID-19 related overhead costs.

	Group unaudited 6 months ended 31 December 2020 \$'000s	Group audited 12 months ended 30 June 2020 \$'000s	Group unaudited 6 months ended 31 December 2019 \$'000s
Revenue from contracts with customers	38,520	71,358	35,894
Other revenue	3,150	3,158	–
<b>Total operating revenue</b>	<b>41,670</b>	<b>74,516</b>	<b>35,894</b>

## b) Revenue from contracts with customers

### i) Disaggregated revenue information

Group – year ended 30 June 2020	Domestic \$'000s	International \$'000s	Total \$'000s
Core government contracts	49,686	–	49,686
Research	5,883	2,226	8,109
Commercial products and services	4,355	9,208	13,563
	<b>59,924</b>	<b>11,434</b>	<b>71,358</b>

Group – 6 months ended 31 December 2020	Domestic \$'000s	International \$'000s	Total \$'000s
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 \$4,330,000 (2019: \$4,149,000) 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:

	Group unaudited 6 months ended 31 December 2020 \$'000s	Group audited 12 months ended 30 June 2020 \$'000s	Group unaudited 6 months ended 31 December 2019 \$'000s
Beginning of the period	228	442	442
Additions	–	–	–
Profit / (loss) for the period	(61)	(64)	(28)
Impairment loss	–	(150)	–
<b>Total investment in associates</b>	<b>167</b>	<b>228</b>	<b>414</b>

ESR's equity accounted investment in AuramerBio Limited, a start-up company focussed on the development of DNA aptamer sensors.

AuramerBio Limited has not completed any further investment rounds year to date to which ESR is committed.

#### 4. Other profit and loss information

##### a) Interest expense

	Group unaudited 6 months ended 31 December 2020 \$'000s	Group audited 12 months ended 30 June 2020 \$'000s	Group unaudited 6 months ended 31 December 2019 \$'000s
Lease liability interest	10	27	16
Other interest	–	1	–
<b>Total interest expense</b>	<b>10</b>	<b>28</b>	<b>16</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 2020 is 31%, compared to 35% for the six months ended 31 December 2019.

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

	Group unaudited 6 months ended 31 December 2020 \$'000s	Group audited 12 months ended 30 June 2020 \$'000s	Group unaudited 6 months ended 31 December 2019 \$'000s
<b>Profit for the period after taxation</b>	<b>1,339</b>	<b>2,644</b>	<b>265</b>
<b>Non-cash items:</b>			
Depreciation and amortisation expense	3,854	7,032	2,909
Depreciation on right-of-use assets	290	577	285
Equity accounted earnings from associate company investment	61	64	28
Impairment of equity accounted earnings from associate company investment	–	150	–
(Decrease) / increase in provision for expected credit losses	(36)	48	1
(Decrease) / increase in deferred tax liability	–	(2,228)	–
Fair value (gain) / loss on derivative financial instruments	–	(6)	(6)
Other non-cash items	–	5	–
	<b>4,169</b>	<b>5,642</b>	<b>3,217</b>
<b>Changes in working capital:</b>			
(Increase) in trade and other receivables and contract assets	(1,224)	(2,241)	(924)
(Increase) / decrease in inventories	(7)	153	148
Increase / (decrease) in trade and other payables and contract liabilities	2,149	(510)	(2,171)
(Decrease) / increase in income tax payable	(916)	959	(657)
Increase in employment benefits	315	861	207
	<b>317</b>	<b>(778)</b>	<b>(3,397)</b>
<b>Items classified as investing and financing activities:</b>			
Loss on disposal of property, plant and equipment	–	4	4
Decrease in payables related to property, plant and equipment	383	302	632
Finance charge on leases	10	27	16
	<b>393</b>	<b>333</b>	<b>652</b>
<b>Net cash inflow from operating activities</b>	<b>6,218</b>	<b>7,841</b>	<b>737</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 2020 \$'000s	Group audited 12 months ended 30 June 2020 \$'000s	Group unaudited 6 months ended 31 December 2019 \$'000s
Property, plant and equipment	785	1,058	750
Intangible assets – software	5	36	3
<b>Total capital commitments</b>	<b>790</b>	<b>1,094</b>	<b>753</b>

## 7. Contingent liabilities

ESR is subject to a legal claim by Cybergenetics in the United States of America which alleges patent infringement related to aspects of the Group's commercial operations in that country. The Group is defending the action. The Group's motion to dismiss the case was successful, but Cybergenetics has appealed. The appeal continues. The impact of these proceedings cannot be reliably quantified due to uncertainty around the outcome.

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 2020 (30 June 2020: Nil).

## 8. Events subsequent to balance date

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

# GOVERNANCE

## 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	HY2021	\$201,943	n/a	n/a	\$6,278	\$208,221
Keith McLea	HY2021	\$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
	2017	\$359,086	\$95,000	100%	\$523	\$454,609

<sup>a</sup> CE remuneration in 2021 and 2020 did not include a STI component.

<sup>b</sup> Short-term incentives (STI) 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
HY2021	\$900,930	\$23,240	\$924,170
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
2017	\$1,587,967	\$40,664	\$1,628,631

<sup>a</sup> SLT remuneration in 2021 and 2020 did not include a STI component. Short-term incentives (STI) 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.



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