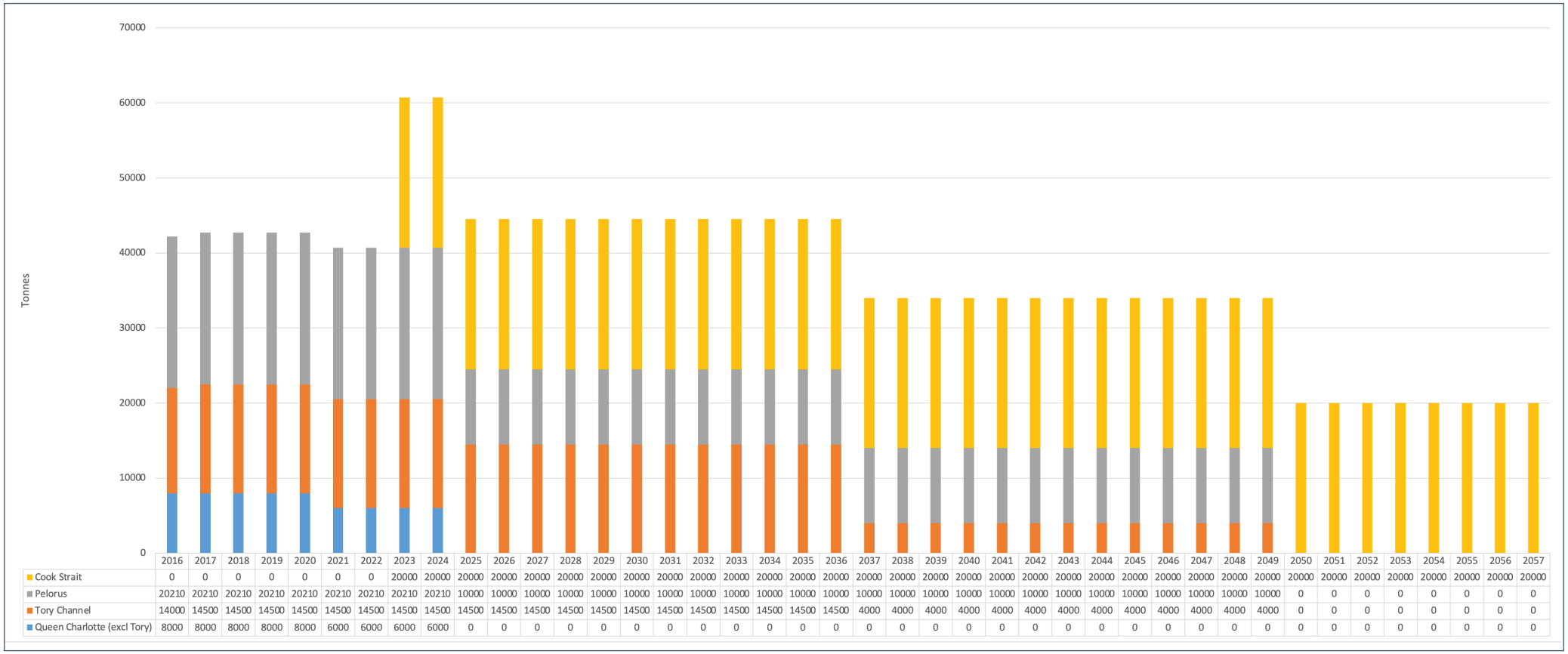
Infographic 6: An overview of NZKS's operations – By the numbers, Graph 1

A. Permitted feed discharge

Graph 1. Max feed discharge permitted (by condition, or in the case of MFL001, implied under the ARA)

Note: Ruakaka's feed discharge is shown as 2000 t for the years 2021–2024. This is due to the MFL001 decision dated 19 May 2020, which removed U021247 as the discharge permit, leaving the discharge governed by s 10(9)(c) of the ARA. See Table 4.2 for more detail.



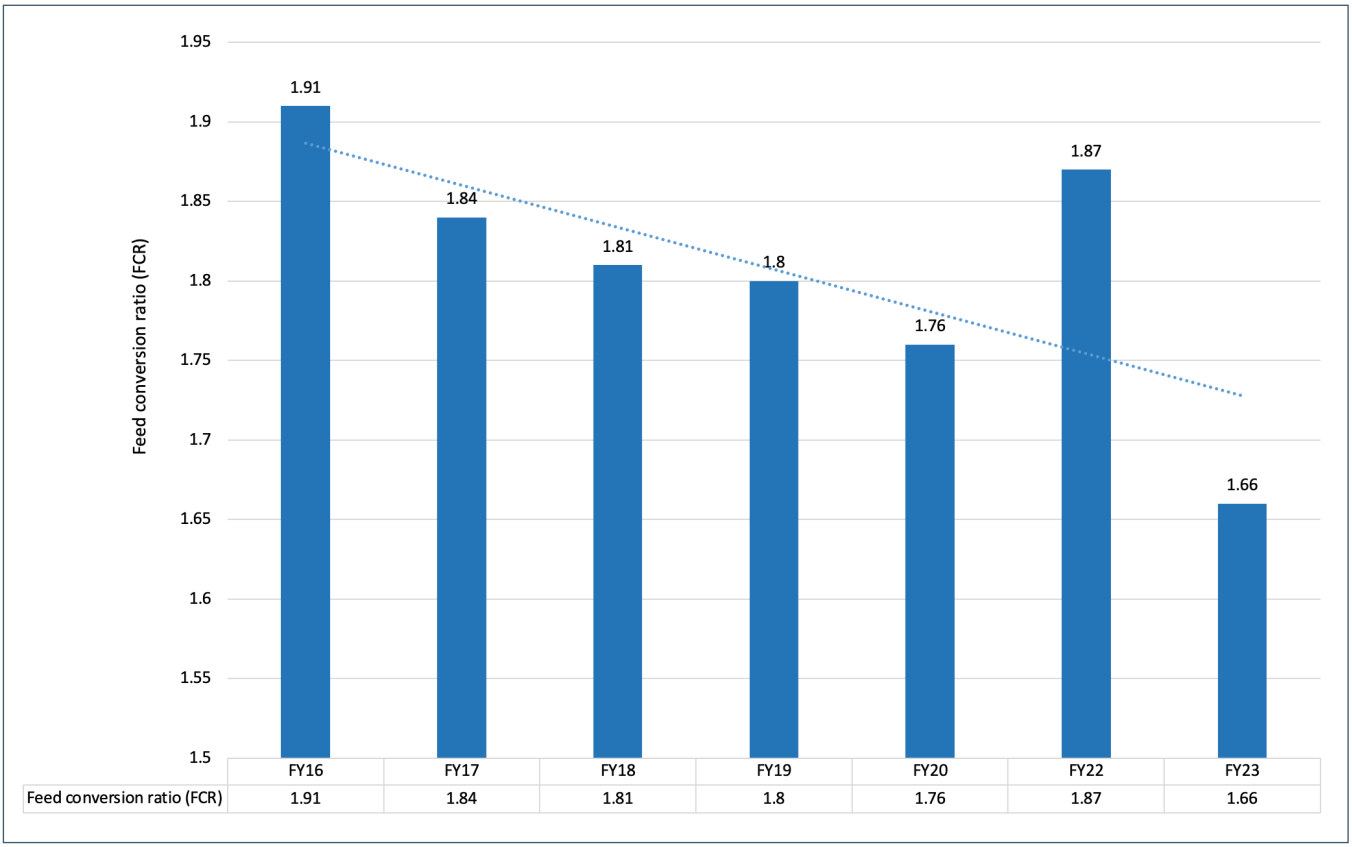
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057
Cook Strait	0	0	0	0	0	0	0	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000	20000
Pelorus	20210	20210	20210	20210	20210	20210	20210	20210	20210	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	10000	0	0	0	0	0	0	0	0
Tory Channel	14000	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	14500	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	0	0	0	0	0	0	0	0
Queen Charlotte (excl Tory)	8000	8000	8000	8000	8000	6000	6000	6000	6000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 2

B. Feed conversion ratio

Graph 2: Feed conversion ratio (FCR) by 12-month financial year

Note: 2021 was a seven-month financial year. As this is not comparable to the other financial years (i.e. 12 months), we have removed the 2021 financial year from graphs 2, 3a, 4, 8, 9, 10, 11, 12, 14, 15, 16, 17, 18 and 19 below.

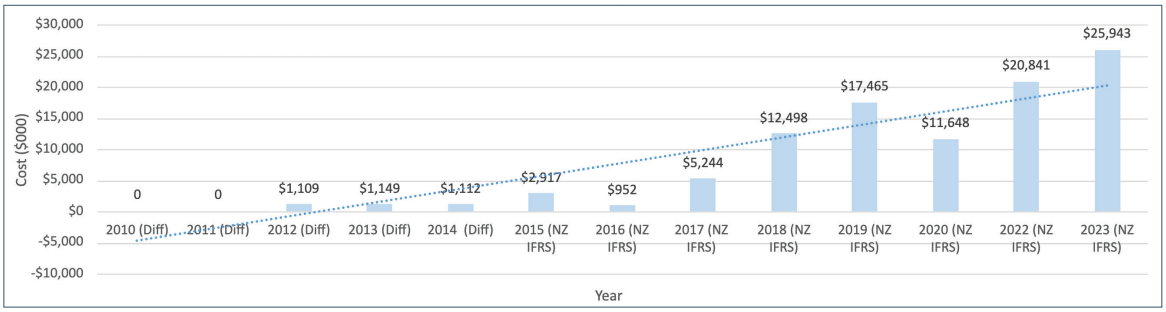


	FY16	FY17	FY18	FY19	FY20	FY22	FY23
Feed conversion ratio (FCR)	1.91	1.84	1.81	1.8	1.76	1.87	1.66

Infographic 6: An overview of NZKS's operations – By the numbers, Graphs 3–4

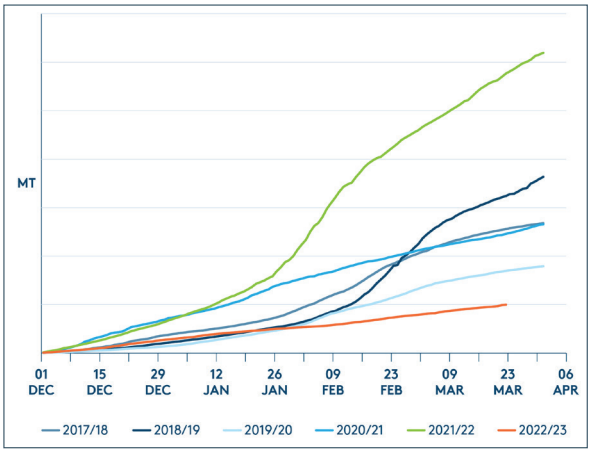
C. Mortality

Graph 3a: Fish health events (mortalities) net of insurance proceeds



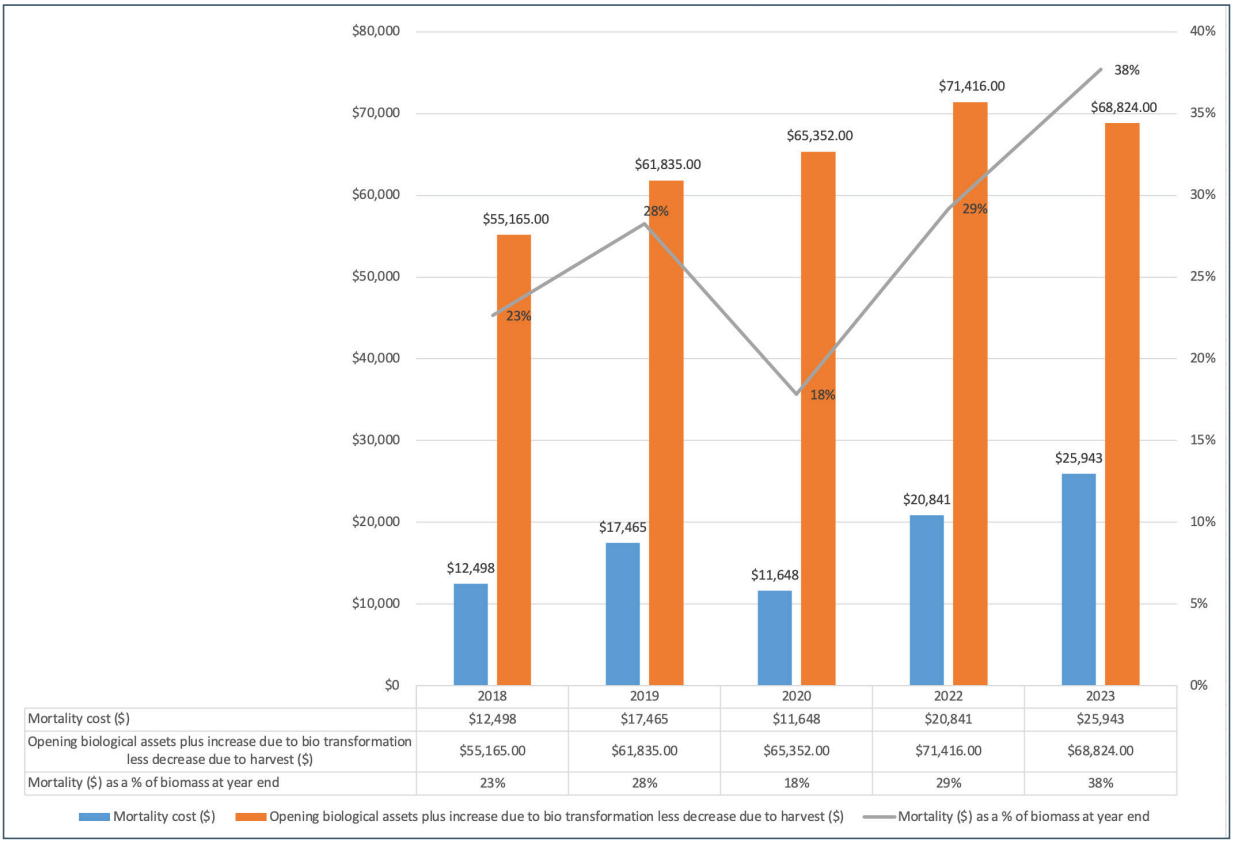
Graph 3b: Summer mortality, 2017–23

Note: This graph is found on p. 5 of the NZKS annual report FY23



Graph 4: Mortality as a percentage of biomass at year end

The percentage of mortalities is calculated by dividing mortalities into the total of (i) biological assets (opening balance), (ii) bio transformation over the 12-month period and (iii) harvest over the 12-month period.

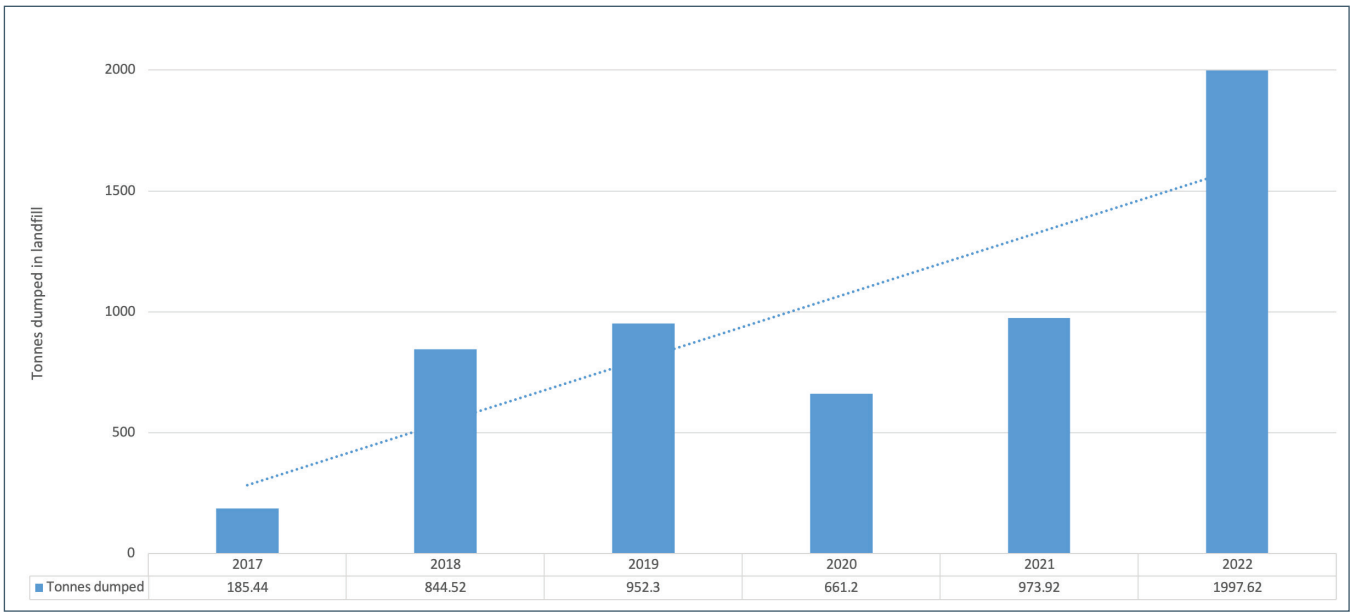


	2018	2019	2020	2022	2023
Mortality cost ($)	$12,498	$17,465	$11,648	$20,841	$25,943
Opening biological assets plus increase due to bio transformation less decrease due to harvest ($)	$55,165.00	$61,835.00	$65,352.00	$71,416.00	$68,824.00
Mortality ($) as a % of biomass at year end	23%	28%	18%	29%	38%

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 5

Graph 5: Salmon to Blenheim landfill by calendar year

Note: This data was provided by Ms Hanneke Kroon M.Sc.Eng (committee member of the Kenepuru and Central Sounds Residents' Organisation), who requested this data from MDC. See more detail in Graph 6.



	2017	2018	2019	2020	2021	2022
Tonnes dumped	185.44	844.52	952.3	661.2	973.92	1997.62

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 6

D. Salmon dumped in Blenheim

Graph 6: Salmon dumped at landfill in Blenheim, July 2017–April 2023

Note: This data was provided by Ms Hanneke Kroon M.Sc.Eng (committee member of the Kenepuru and Central Sounds Residents' Organisation), who requested this data from MDC.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017							30.28	20.50	22.02	18.56	27.58	66.50
2018	113.02	233.58	118.64	42.50	42.48	30.88	125.52	42.26	41.90	17.18	20.34	16.22
2019	0.00	193.86	357.72	186.36	42.44	21.62	19.76	20.42	13.52	12.22	15.74	68.64
2020	61.34	194.06	55.62	19.84	59.84	30.72	22.38	21.62	19.40	19.22	30.72	126.44
2021	46.04	89.78	91.02	111.22	121.94	55.58	52.40	35.76	38.70	32.80	55.64	243.04
2022	394.7	631.70	457.46	241.44	86.22	49.08	22.10	20.94	10.34	11.44	22.52	49.66
2023	48.28	66.68	93.62	103.86								

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 7a

Graph 7a: Comparing water temperature with cost of mortality

Note: Data supplied in Graph 7a on water temperatures is from MDC and NZKS and has been collated by Ms Hanneke Kroon M.Sc.Eng (committee member of the Kenepuru and Central Sounds Residents' Organisation). Water temperatures are at 12 selected sites close to NZKS farms (see Graphs 7b–7d overleaf) and are taken at various depths (e.g. 1.5 m and 5 m) but they are recorded at the same depth over time (see Figure 1, p. 29). This means that the number of months is out of 48, being 12 coastal water monitoring sites times four months. For example, in 2016/2017, 8 out of 48 months were above 17°C. The cost of mortality is from the NZKS annual reports (Note: 2020/2021 is a 7 month FY, see p. 6, Annual Report FY21) . This graph indicates that the cost of mortality per tonne has increased significantly in the 2022/2023 year (see also Graph 3b). We are unsure why the 2017/2018 and 2018/2019 cost of mortality is so low given that the number of months above 17°C over that same time period was so high. We have assumed that it is the length of time the water exceeds 17°C that determines the tonnes and therefore the cost of mortality. However, there may be other factors at play.

The actual cause/s of fish mortalities is the responsibility of MPI. Fish mortalities fall within the remit of MPI (rather than MDC). Currently MDC does not require or collect any records concerning mortalities at any of the NZKS farms. From an 'effects' perspective under the RMA, the only MDC requirement is that the odour from the temporary storage of dead fish is managed properly; however, this condition only relates to three of the twelve farms (see condition 48 on consents U140294 (Waitata); U140295 (Kopāua/ Richmond); and U140296 (Ngāmāhau)).

The 2012–2015 mortality event

An MPI Intelligence Report (*MPI Technical Paper No. 2017/39*) (pp. 17–18) indicated that stocking densities along with several other factors could have contributed to the unusual level of mortalities in 2015. From 2012 to 2015, only the Waihinau Bay and Forsyth Bay sites experienced periods of excessively high mortality in the summer months (February to May). MPI notes that '[d]uring the largest mortality peak at the Waihinau Bay, daily mortality rates reached over 320 deaths per 10,000 fish per day causing the overall loss of almost 70% of fish on the site'. MPI concluded:

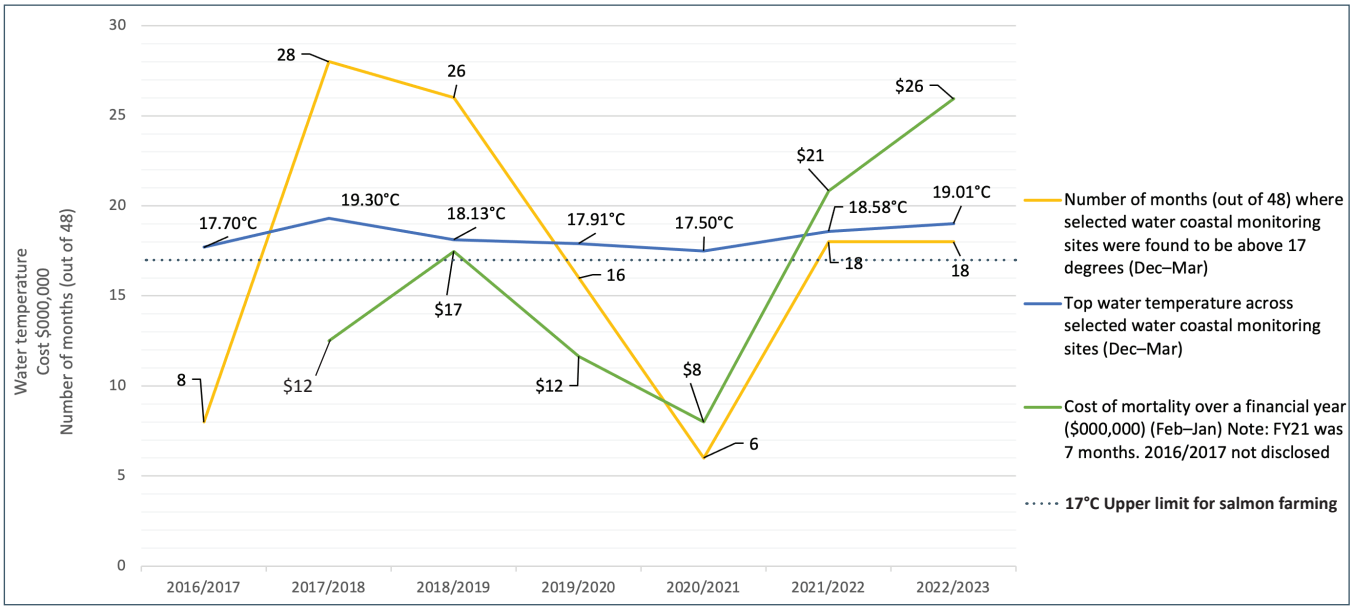
> 'Although the organisms isolated from moribund fish [very sick fish] have previously been associated with mortality, we cannot establish a direct causative relationship based on the historical data alone. This leads to several biologically plausible, but not mutually exclusive hypotheses:
>
> 1) The organisms may be acting synergistically and initial infection with T. maritimum may have increased susceptibility to NZ-RLOs by creating breaches in the skin barrier,
>
> 2) The organisms may be acting independently and only one may be responsible for the excessive mortality,
>
> 3) Thermal stress, nutritional stress, or stocking density may have predisposed fish to developing clinical disease following exposure to one or both organisms and/or,
>
> 4) The mortality was caused or enabled by other unmeasured environmental or management factors, perhaps unrelated to either organism.'

The 2018/2019, 2021/2022 and 2022/2023 mortality events

The Institute has requested further information from MPI on more recent mortalities (see OIA 2023/15), given the cost of mortalities as illustrated in the graph below and the mortality shown in the NZKS annual report, copied in Graph 3b: Summer mortality, 2017–23, p. 24.

Sources:

Fischer, J. & Appleby, J. (May 2017). *Intelligence Report: NZ-RLO& T. maritimum 2015 response*. Ministry for Primary Industries (MPI), pp. 17–18. Retrieved 1 September 2023 from www.mpi.govt.nz/dmsdocument/18253-NZ-RLO-T.-maritimum-2015-Intelligence-Report; Personal communication with MDC, 21 July 2023

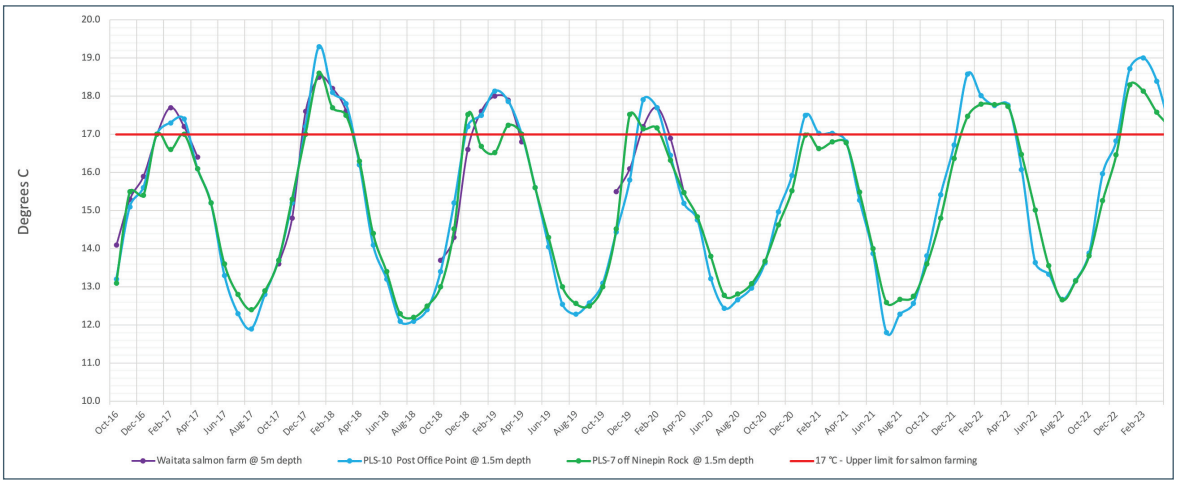


Infographic 6: An overview of NZKS's operations – By the numbers, Graphs 7b–7d

E. Temperature records close to NZKS farms

Graph 7b: Temperature, Pelorus Entrance and Waitata salmon farm, 2016–2023

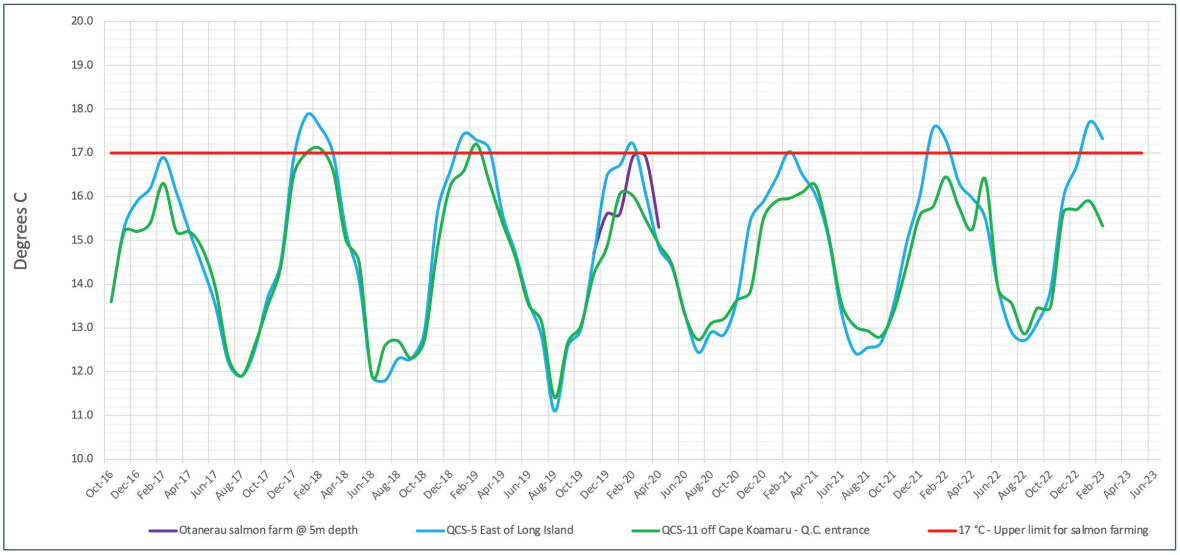
Note: Data supplied for these three figures is from MDC and NZKS and has been collated by Ms Hanneke Kroon M.Sc.Eng (committee member of the Kenepuru and Central Sounds Residents' Organisation).



Selected sites

- Waitata salmon farm @ 5m depth
- PLS-10 Post Office Point @ 1.5m depth
- PLS-7 off Ninepin Rock @ 1.5m depth

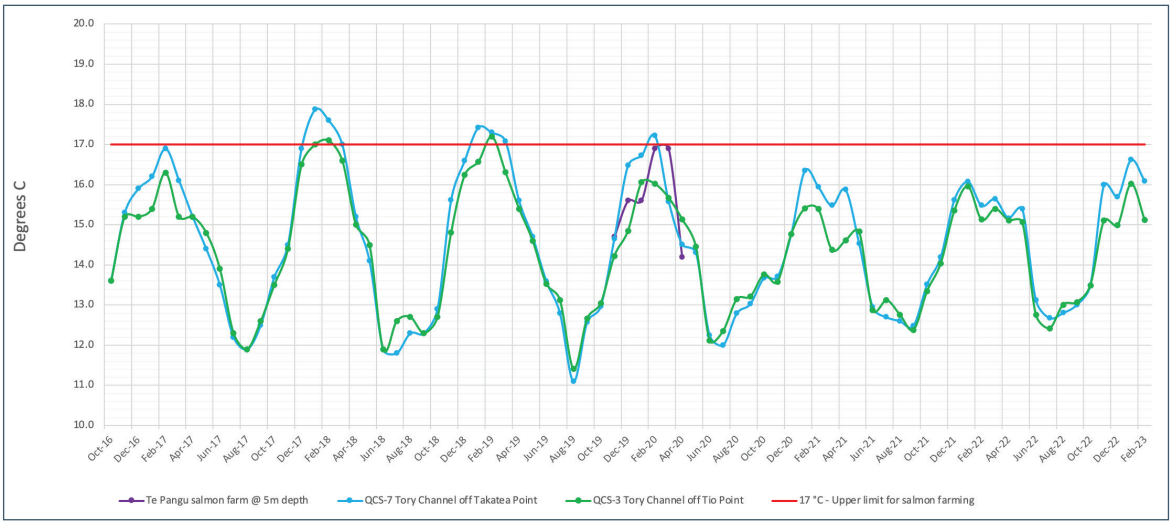
Graph 7c: Temperature, Queen Charlotte Entrance and Otanerau salmon farm, 2016–2023



Selected sites

- Otanerau salmon farm @ 5m depth
- QCS-5 East of Long Island
- QCS-11 off Cape Koamaru - Q.C. entrance

Graph 7d: Temperature, Tory Channel and Te Pangu salmon farm, 2016–2023



Selected sites

- Te Pangu salmon farm @ 5m depth
- QCS-7 Tory Channel off Takatea Point
- QCS-3 Tory Channel off Tio Point
- Waitata salmon farm @ 5m depth
- PLS-10 Post Office Point @ 1.5m depth
- PLS-7 off Ninepin Rock @ 1.5m depth

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 8

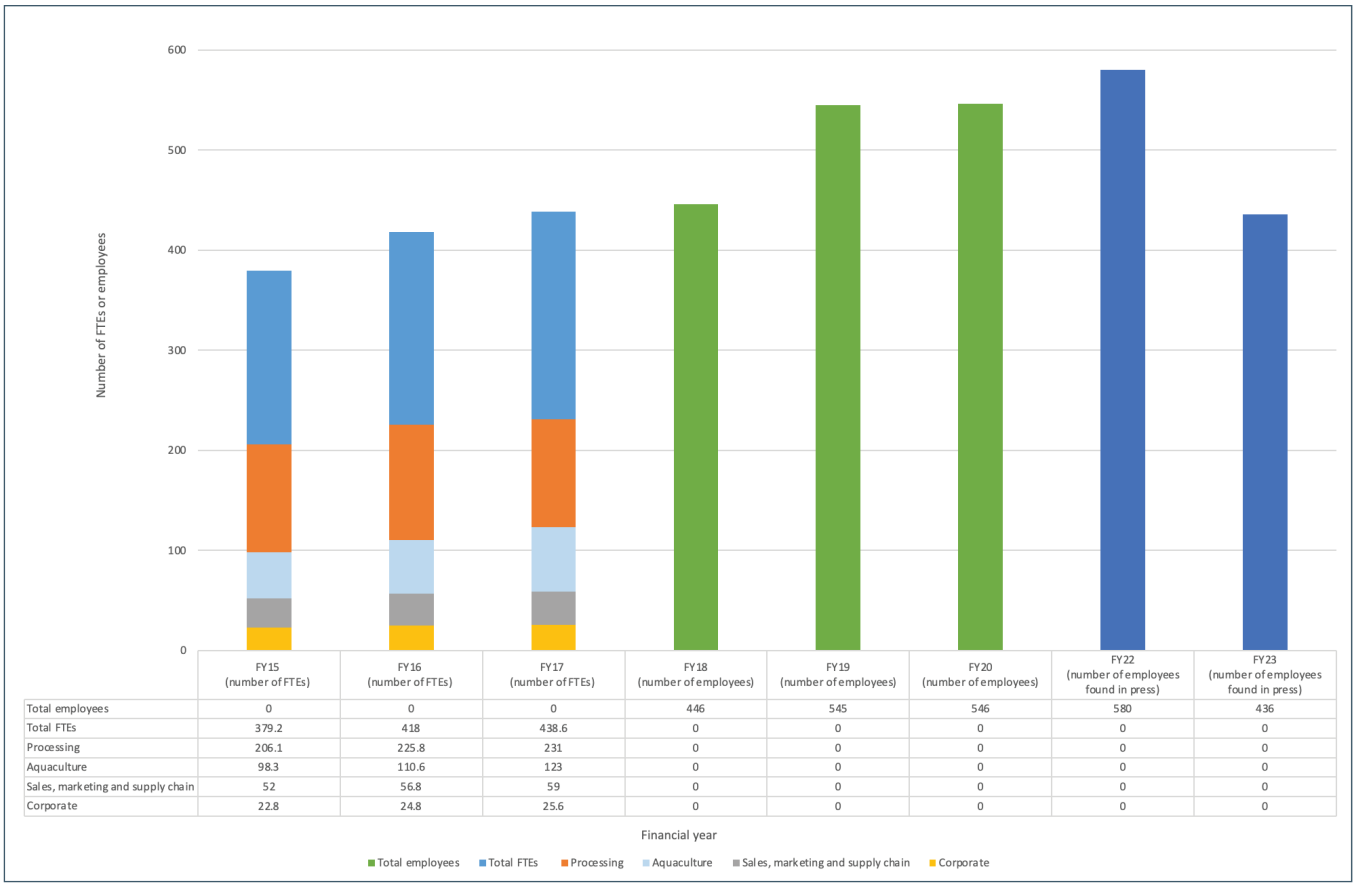
Figure 1: Coastal monitoring sites

Source: MDC. Yellow stars represent water temperature monitoring sites.

F. Employment data

Graph 8: NZKS full-time equivalents or employees (FTEs) by financial year

1. FY22: Phillips, V. (24 May 2022). New Zealand King Salmon reduces workforce by 139. Stuff. Retrieved 13 June 2023 from www.stuff.co.nz/business/farming/aquaculture/128728620/new-zealand-king-salmon-reduces-workforce-by-139
2. FY23: Morrison, T. (29 March 2023). NZ King Salmon returns to profit after cutting back farms, staffing. Stuff. Retrieved 13 June 2023 from www.stuff.co.nz/business/farming/aquaculture/131633576/nz-king-salmon-returns-to-profit-after-cutting-back-farms-staffing

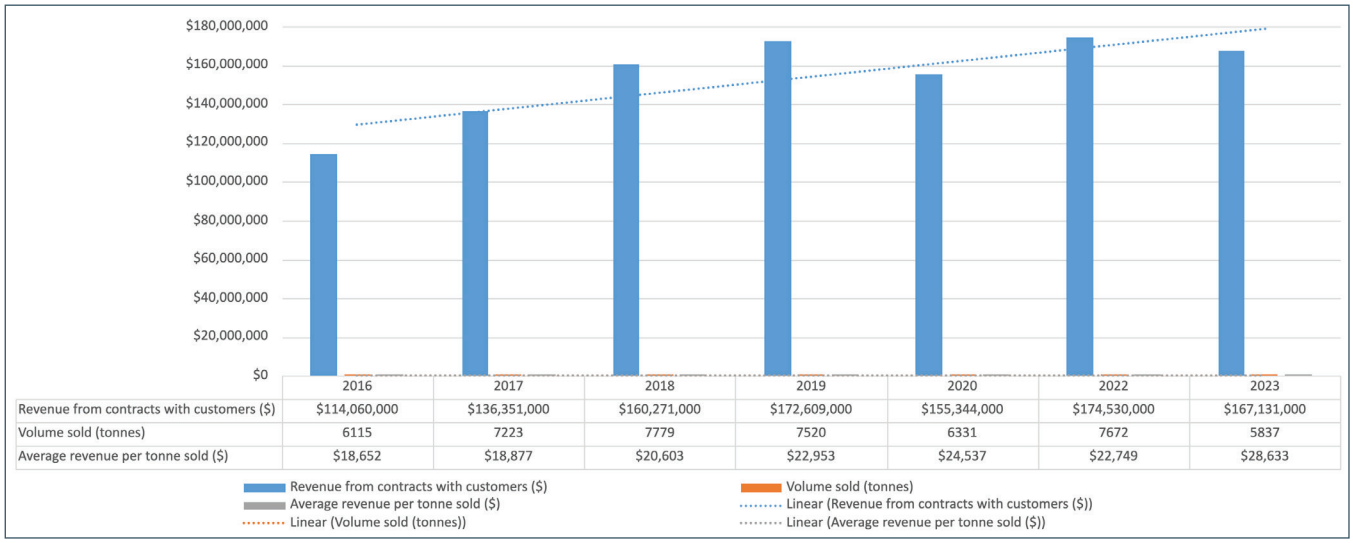


	FY15 (number of FTEs)	FY16 (number of FTEs)	FY17 (number of FTEs)	FY18 (number of employees)	FY19 (number of employees)	FY20 (number of employees)	FY22 (number of employees found in press)	FY23 (number of employees found in press)
Total employees	0	0	0	446	545	546	580	436
Total FTEs	379.2	418	438.6	0	0	0	0	0
Processing	206.1	225.8	231	0	0	0	0	0
Aquaculture	98.3	110.6	123	0	0	0	0	0
Sales, marketing and supply chain	52	56.8	59	0	0	0	0	0
Corporate	22.8	24.8	25.6	0	0	0	0	0

Infographic 6: An overview of NZKS's operations – By the numbers, Graphs 9–11

G. Statement of comprehensive income

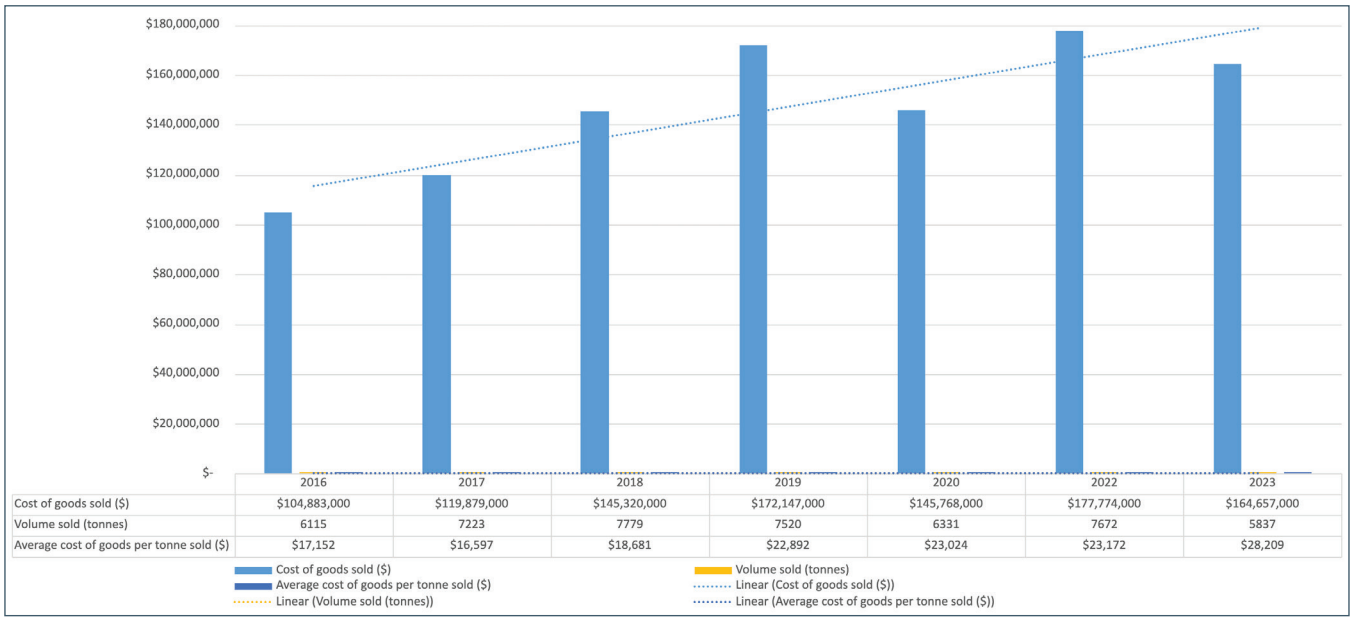
Graph 9: Average revenue per tonne sold



	2016	2017	2018	2019	2020	2022	2023
Revenue from contracts with customers ($)	$114,060,000	$136,351,000	$160,271,000	$172,609,000	$155,344,000	$174,530,000	$167,131,000
Volume sold (tonnes)	6115	7223	7779	7520	6331	7672	5837
Average revenue per tonne sold ($)	$18,652	$18,877	$20,603	$22,953	$24,537	$22,749	$28,633

Revenue from contracts with customers ($)
Volume sold (tonnes)
Average revenue per tonne sold ($)
Linear (Revenue from contracts with customers ($))
Linear (Volume sold (tonnes))
Linear (Average revenue per tonne sold ($))

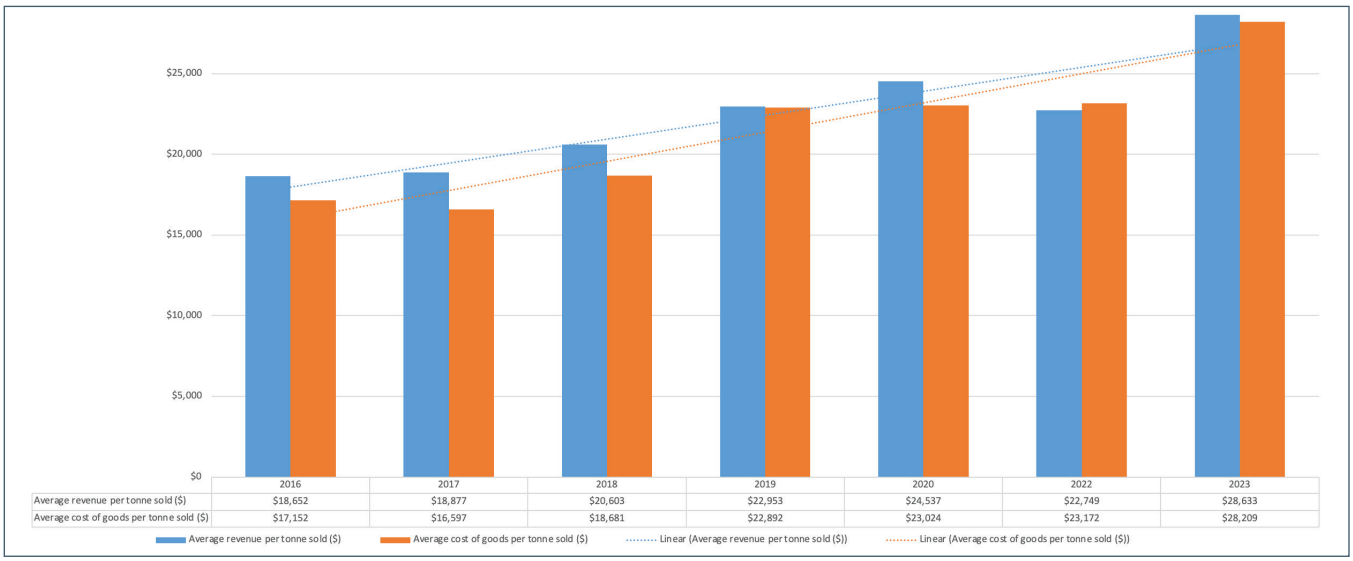
Graph 10: Average cost of goods sold per tonne



	2016	2017	2018	2019	2020	2022	2023
Cost of goods sold ($)	$104,883,000	$119,879,000	$145,320,000	$172,147,000	$145,768,000	$177,774,000	$164,657,000
Volume sold (tonnes)	6115	7223	7779	7520	6331	7672	5837
Average cost of goods per tonne sold ($)	$17,152	$16,597	$18,681	$22,892	$23,024	$23,172	$28,209

Cost of goods sold ($)
Volume sold (tonnes)
Average cost of goods per tonne sold ($)
Linear (Cost of goods sold ($))
Linear (Volume sold (tonnes))
Linear (Average cost of goods per tonne sold ($))

Graph 11: Average revenue and cost of goods sold per tonne

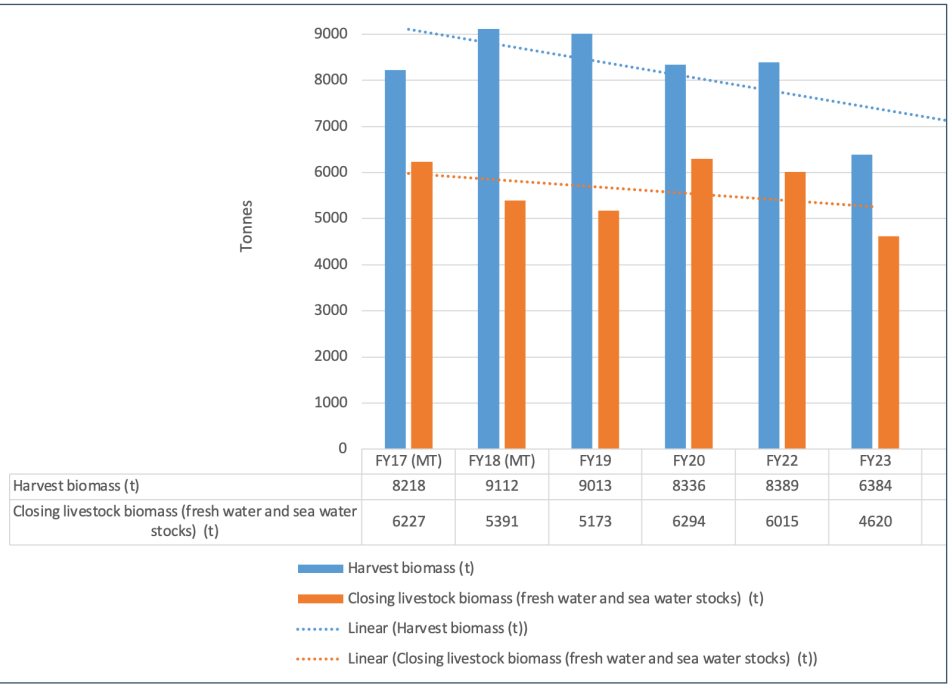


	2016	2017	2018	2019	2020	2022	2023
Average revenue per tonne sold ($)	$18,652	$18,877	$20,603	$22,953	$24,537	$22,749	$28,633
Average cost of goods per tonne sold ($)	$17,152	$16,597	$18,681	$22,892	$23,024	$23,172	$28,209

Average revenue per tonne sold ($)
Average cost of goods per tonne sold ($)
Linear (Average revenue per tonne sold ($))
Linear (Average cost of goods per tonne sold ($))

Infographic 6: An overview of NZKS's operations – By the numbers, Graphs 12–14

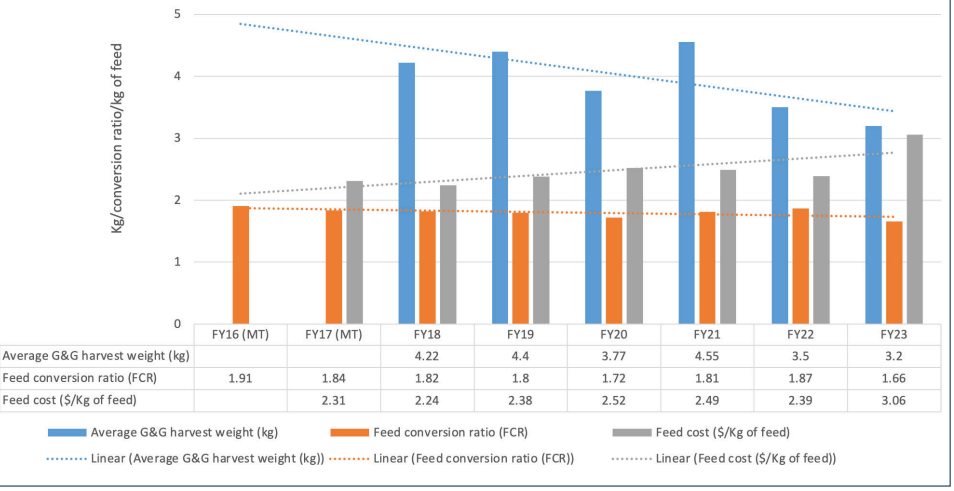
Graph 12: Harvest volumes and closing livestock biomass (fresh water and seawater)



	FY17 (MT)	FY18 (MT)	FY19	FY20	FY22	FY23
Harvest biomass (t)	8218	9112	9013	8336	8389	6384
Closing livestock biomass (fresh water and sea water stocks) (t)	6227	5391	5173	6294	6015	4620

1. Restated to 12 months, 1 February to 31 January, *2022 Investor Report*, p. 10.
2. There is a difference between the metrics contained in the FY2022 financial statements and the annual report (the management commentary). For example, the FY2022 harvest biomass volume is 8389 (t) (p. 54) while the management commentary is 7382 (t) (p. 9). Given this difference, we have opted to use the metrics contained in the financial statements.

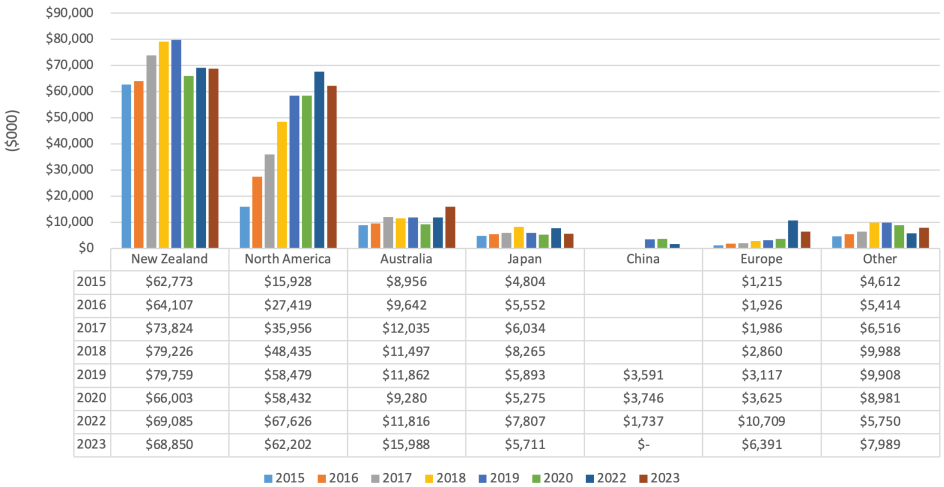
Graph 13: Harvest weight and feed cost



	FY16 (MT)	FY17 (MT)	FY18	FY19	FY20	FY21	FY22	FY23
Average G&G harvest weight (kg)			4.22	4.4	3.77	4.55	3.5	3.2
Feed conversion ratio (FCR)	1.91	1.84	1.82	1.8	1.72	1.81	1.87	1.66
Feed cost ($/Kg of feed)		2.31	2.24	2.38	2.52	2.49	2.39	3.06

1. Restated to 12 months, 1 February to 31 January, *2022 Investor Report*, p. 10.
2. The FY2020 annual report shows the FCR as 1.76, whereas the FY2022 annual report and *2022 Investor Report* shows 1.72. We have used 1.72.

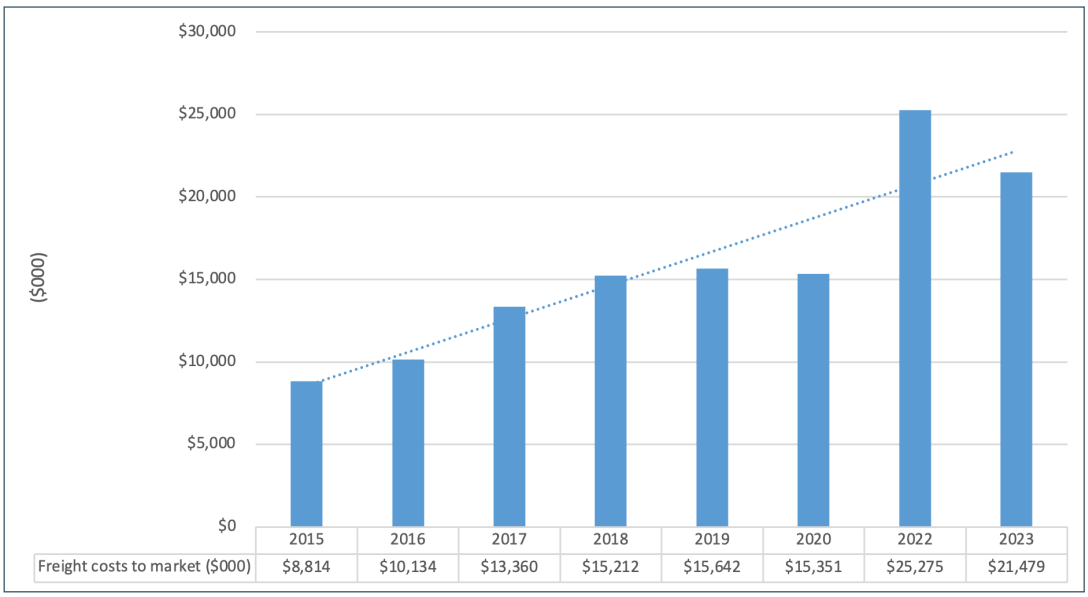
Graph 14: Revenue by geographical location of customers



	New Zealand	North America	Australia	Japan	China	Europe	Other
2015	$62,773	$15,928	$8,956	$4,804		$1,215	$4,612
2016	$64,107	$27,419	$9,642	$5,552		$1,926	$5,414
2017	$73,824	$35,956	$12,035	$6,034		$1,986	$6,516
2018	$79,226	$48,435	$11,497	$8,265		$2,860	$9,988
2019	$79,759	$58,479	$11,862	$5,893	$3,591	$3,117	$9,908
2020	$66,003	$58,432	$9,280	$5,275	$3,746	$3,625	$8,981
2022	$69,085	$67,626	$11,816	$7,807	$1,737	$10,709	$5,750
2023	$68,850	$62,202	$15,988	$5,711	$-	$6,391	$7,989

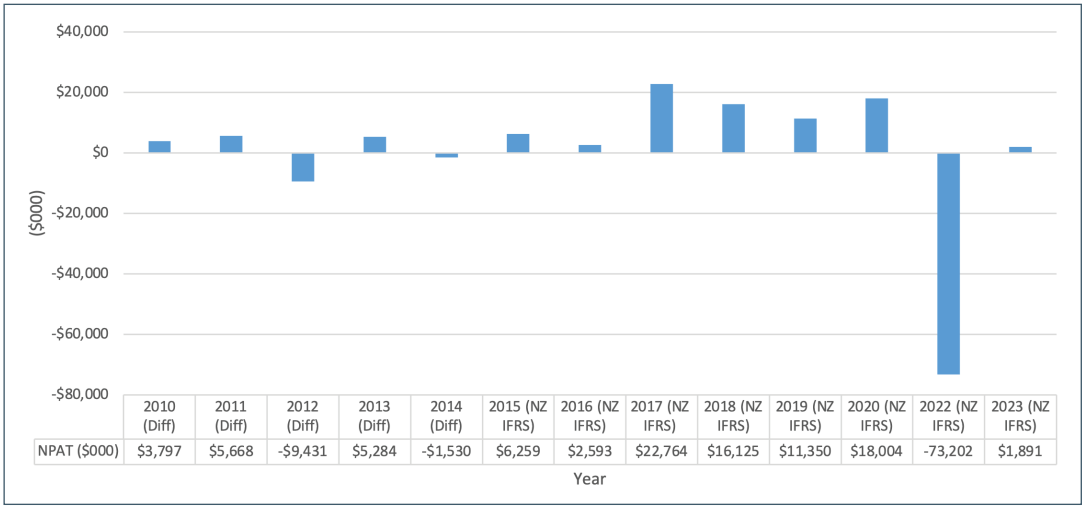
Infographic 6: An overview of NZKS's operations – By the numbers, Graphs 15–17

Graph 15: Freight costs to market



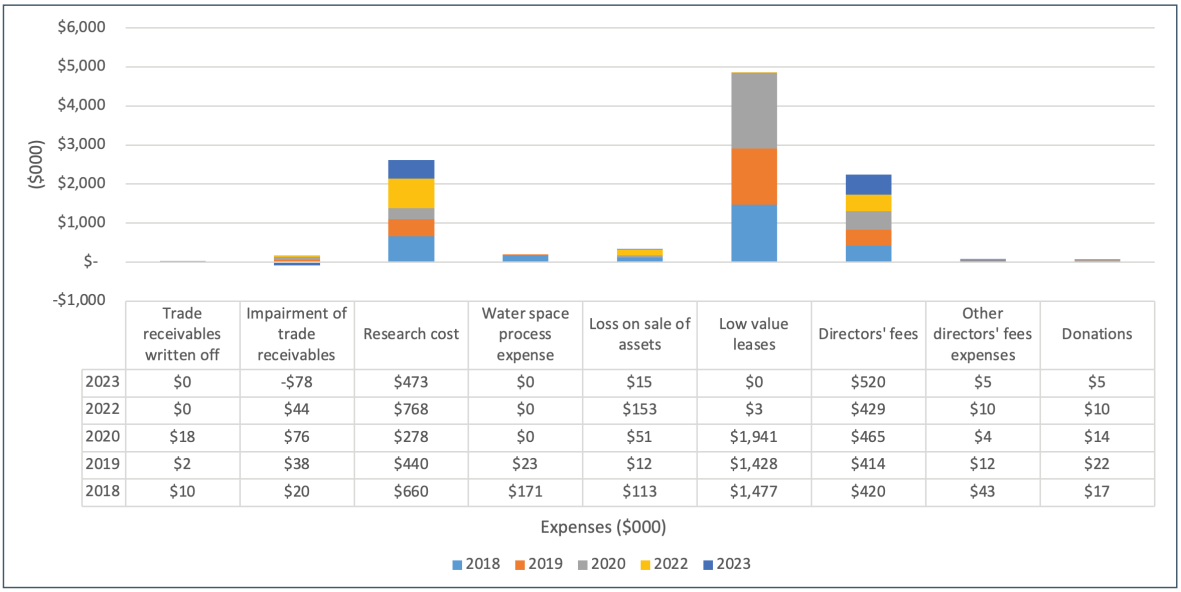
	2015	2016	2017	2018	2019	2020	2022	2023
Freight costs to market ($000)	$8,814	$10,134	$13,360	$15,212	$15,642	$15,351	$25,275	$21,479

Graph 16: Net profit/loss after tax (NPAT/NLAT)



	2010 (Diff)	2011 (Diff)	2012 (Diff)	2013 (Diff)	2014 (Diff)	2015 (NZ IFRS)	2016 (NZ IFRS)	2017 (NZ IFRS)	2018 (NZ IFRS)	2019 (NZ IFRS)	2020 (NZ IFRS)	2022 (NZ IFRS)	2023 (NZ IFRS)
NPAT ($000)	$3,797	$5,668	-$9,431	$5,284	-$1,530	$6,259	$2,593	$22,764	$16,125	$11,350	$18,004	-73,202	$1,891

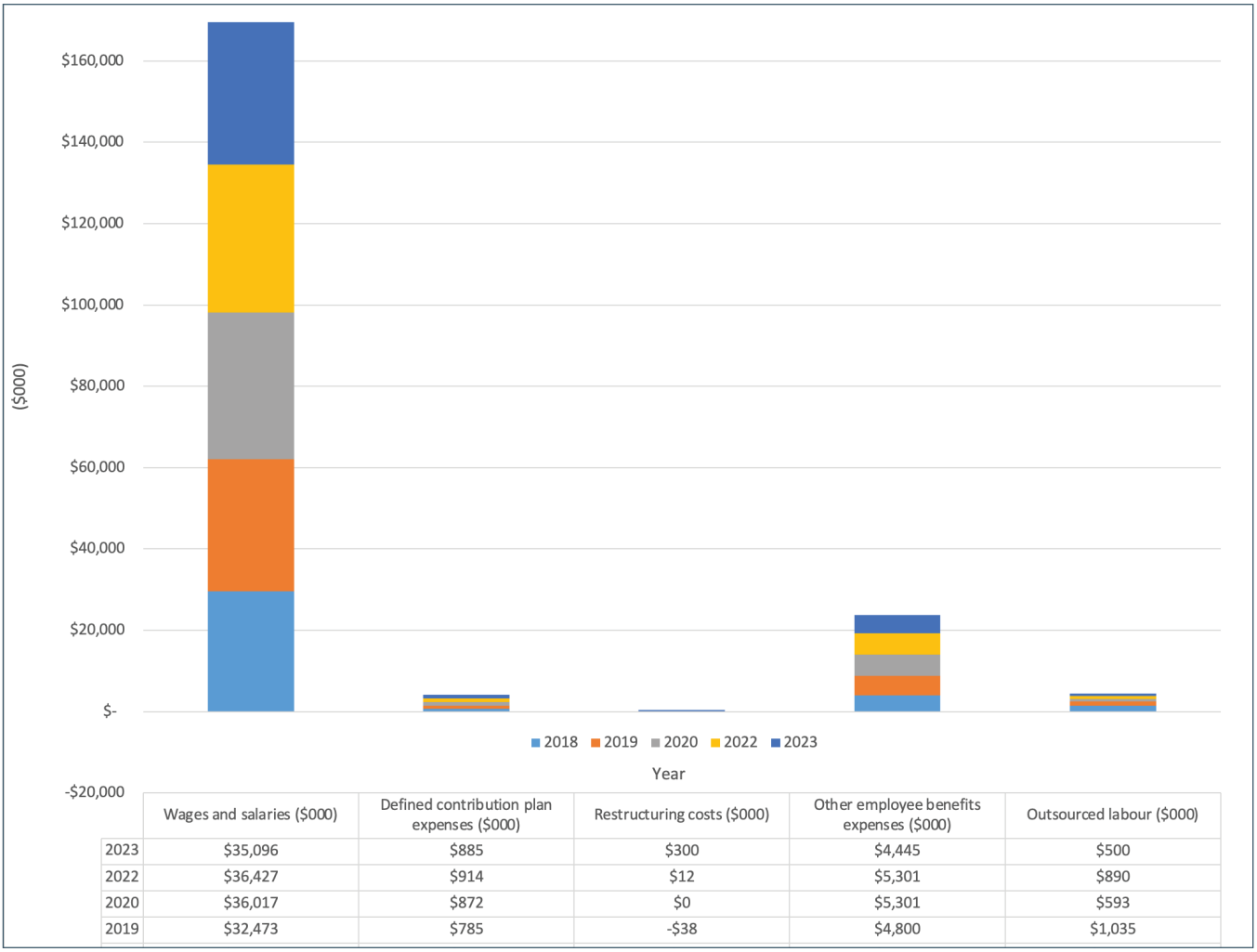
Graph 17: Corporate and other expenses



	Trade receivables written off	Impairment of trade receivables	Research cost	Water space process expense	Loss on sale of assets	Low value leases	Directors' fees	Other directors' fees expenses	Donations
2023	$0	-$78	$473	$0	$15	$0	$520	$5	$5
2022	$0	$44	$768	$0	$153	$3	$429	$10	$10
2020	$18	$76	$278	$0	$51	$1,941	$465	$4	$14
2019	$2	$38	$440	$23	$12	$1,428	$414	$12	$22
2018	$10	$20	$660	$171	$113	$1,477	$420	$43	$17

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 18

Graph 18: Employee benefit expenses

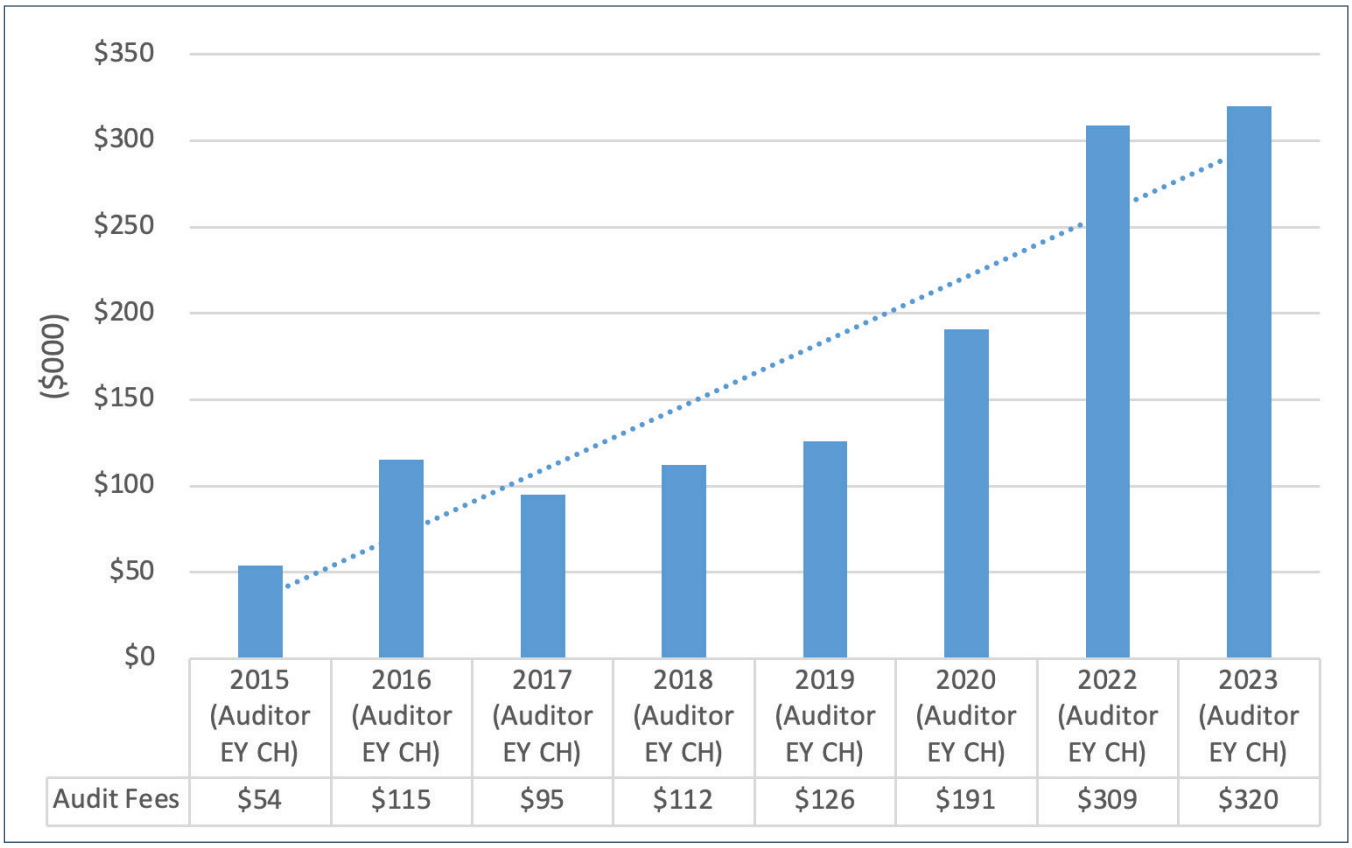


	Wages and salaries ($000)	Defined contribution plan expenses ($000)	Restructuring costs ($000)	Other employee benefits expenses ($000)	Outsourced labour ($000)
2023	$35,096	$885	$300	$4,445	$500
2022	$36,427	$914	$12	$5,301	$890
2020	$36,017	$872	$0	$5,301	$593
2019	$32,473	$785	-$38	$4,800	$1,035

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 19

H. Audit report fees and auditor

Graph 19: Auditor fees and name of auditor



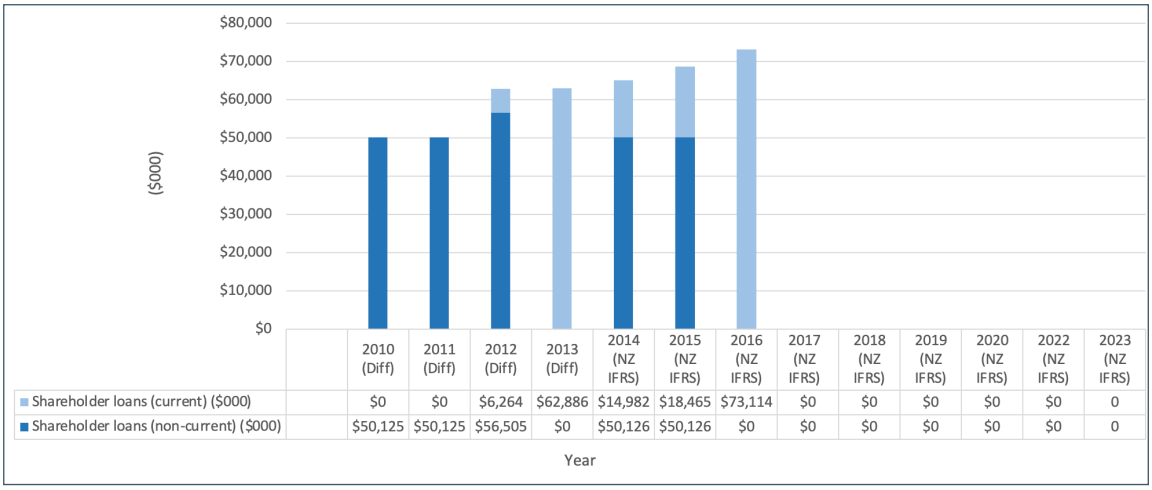
	2015 (Auditor EY CH)	2016 (Auditor EY CH)	2017 (Auditor EY CH)	2018 (Auditor EY CH)	2019 (Auditor EY CH)	2020 (Auditor EY CH)	2022 (Auditor EY CH)	2023 (Auditor EY CH)
Audit Fees	$54	$115	$95	$112	$126	$191	$309	$320

Infographic 6: An overview of NZKS's operations – By the numbers, Graphs 20–22

I. Statement of financial position

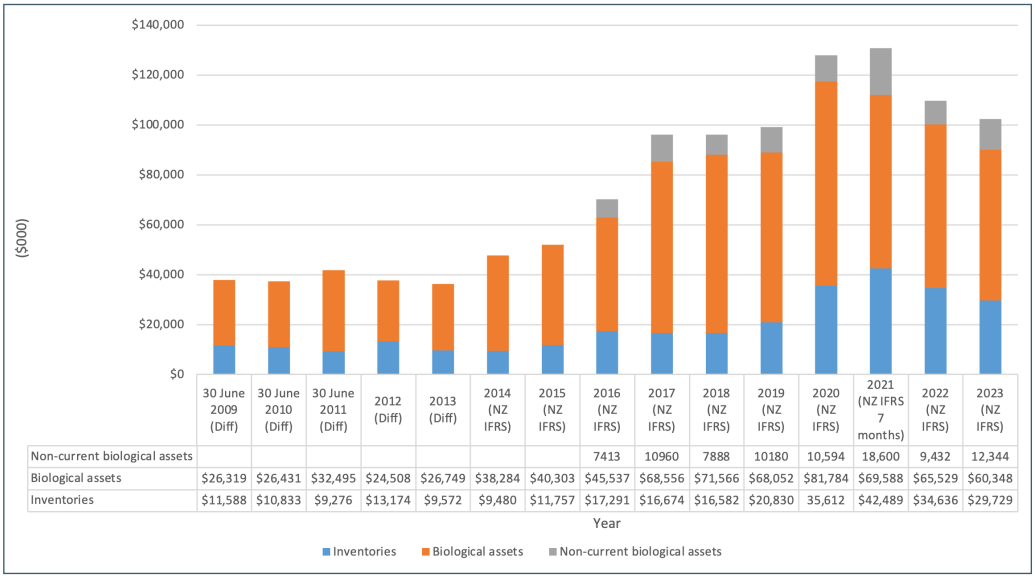
Graph 20: Shareholder loans

Note: See Note 28 Related Party Disclosures in the 2017 financial statements: 'On 19 September 2016, shareholder loans of $70,202k were converted to shares with one share issued for each $2.6058 of shareholder loan converted.'



	2010 (Diff)	2011 (Diff)	2012 (Diff)	2013 (Diff)	2014 (NZ IFRS)	2015 (NZ IFRS)	2016 (NZ IFRS)	2017 (NZ IFRS)	2018 (NZ IFRS)	2019 (NZ IFRS)	2020 (NZ IFRS)	2022 (NZ IFRS)	2023 (NZ IFRS)
Shareholder loans (current) ($000)	$0	$0	$6,264	$62,886	$14,982	$18,465	$73,114	$0	$0	$0	$0	$0	0
Shareholder loans (non-current) ($000)	$50,125	$50,125	$56,505	$0	$50,126	$50,126	$0	$0	$0	$0	$0	$0	0

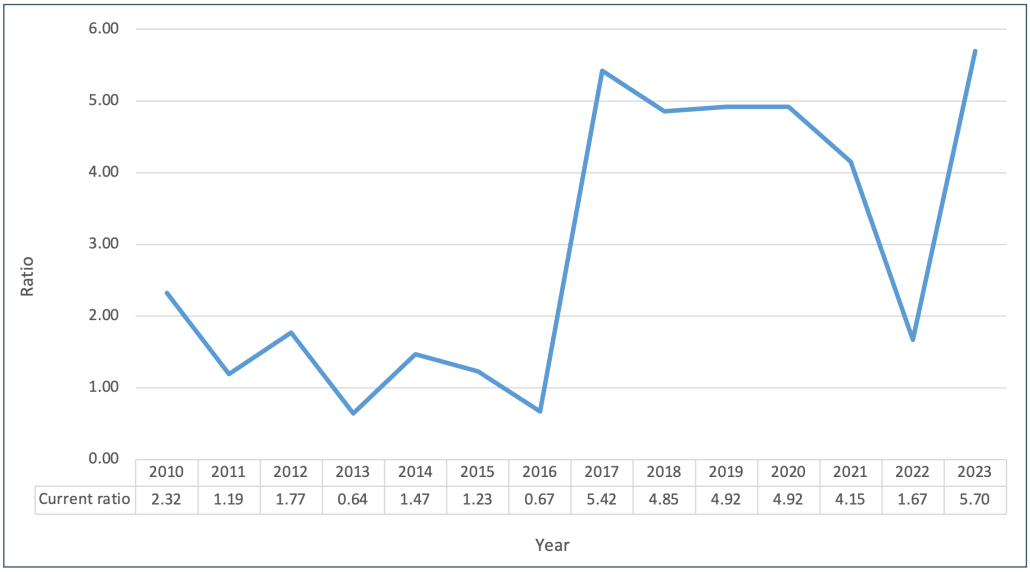
Graph 21: Inventories, biological and non-current biological assets



	30 June 2009 (Diff)	30 June 2010 (Diff)	30 June 2011 (Diff)	2012 (Diff)	2013 (Diff)	2014 (NZ IFRS)	2015 (NZ IFRS)	2016 (NZ IFRS)	2017 (NZ IFRS)	2018 (NZ IFRS)	2019 (NZ IFRS)	2020 (NZ IFRS)	2021 (NZ IFRS 7 months)	2022 (NZ IFRS)	2023 (NZ IFRS)
Non-current biological assets								7413	10960	7888	10180	10,594	18,600	9,432	12,344
Biological assets	$26,319	$26,431	$32,495	$24,508	$26,749	$38,284	$40,303	$45,537	$68,556	$71,566	$68,052	$81,784	$69,588	$65,529	$60,348
Inventories	$11,588	$10,833	$9,276	$13,174	$9,572	$9,480	$11,757	$17,291	$16,674	$16,582	$20,830	35,612	$42,489	$34,636	$29,729

Graph 22: Current ratio (current assets divided by current liabilities)

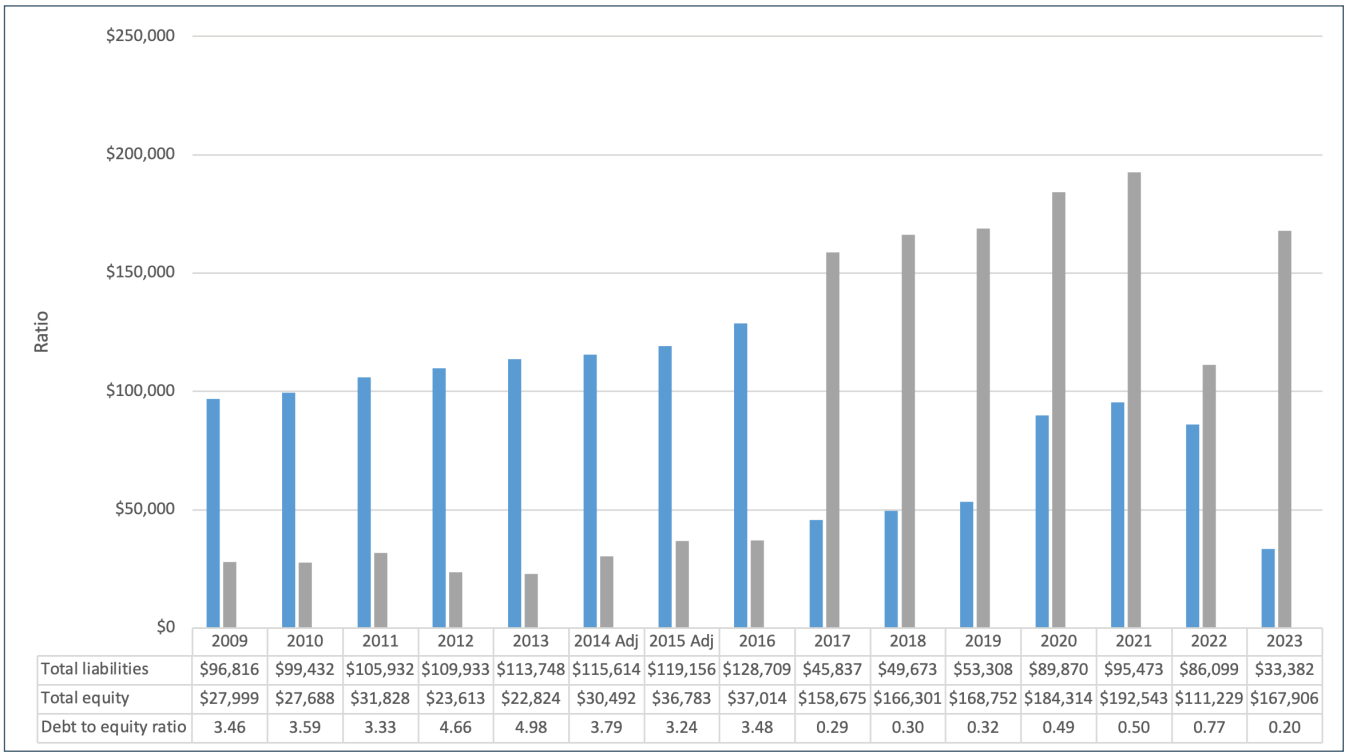
Note: This indicates the ratio is decreasing, largely due to the shareholders' loans (e.g. 2009 was better at 2.64).



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Current ratio	2.32	1.19	1.77	0.64	1.47	1.23	0.67	5.42	4.85	4.92	4.92	4.15	1.67	5.70

Infographic 6: An overview of NZKS's operations – By the numbers, Graph 23

Graph 23: Debt to equity ratio



	2009	2010	2011	2012	2013	2014 Adj	2015 Adj	2016	2017	2018	2019	2020	2021	2022	2023
Total liabilities	$96,816	$99,432	$105,932	$109,933	$113,748	$115,614	$119,156	$128,709	$45,837	$49,673	$53,308	$89,870	$95,473	$86,099	$33,382
Total equity	$27,999	$27,688	$31,828	$23,613	$22,824	$30,492	$36,783	$37,014	$158,675	$166,301	$168,752	$184,314	$192,543	$111,229	$167,906
Debt to equity ratio	3.46	3.59	3.33	4.66	4.98	3.79	3.24	3.48	0.29	0.30	0.32	0.49	0.50	0.77	0.20

Graph 24: NZX price history

Source: NZX (as at 29 August 2023)