

Data Tables

GRI 102-8 Employment

	FY19			FY18			FY17		
	Male	Female	Australia	Male	Female	Australia	Male	Female	Australia
Permanent employees	184	57	241	191	52	243	181	46	227
Temporary employees	9	1	10	9	9	18	0	0	0
Full-time employees	184	50	234	188	48	236	181	46	227
Part-time employees	0	7	7	3	4	7	0	0	0

Note 1 - Sandfire classifies temporary employees as casual workers employed for a specific time period.

Note 2 - Sandfire reclassified its part-time employees in FY2018. These employees work on average less than 30 hours per week.

Note 3 - A significant proportion of our work is undertaken by non-employees (contractors). This includes, but is not limited to, mining labour services, haulage and freight services, camp management services, and labour hire. The figures in 102-8 reflect Sandfire's direct employees only.

MM1 Land disturbed and rehabilitated (hectares)

LAND AREA USED FOR PRODUCTIVE PURPOSE	CY18	CY17	CY16
Total disturbance and not yet rehabilitated opening balance (hectares)#%	428	381	340
Total amount of land newly disturbed during the reporting period	94	47	41
Land under rehabilitation (hectares)#%&	42	37	39
Total amount of land newly rehabilitated within the reporting period to the agreed end use (hectares)	0	0	0
Total land disturbed and not yet rehabilitated closing balance(hectares)	522	428	381

Disturbance record from Western Australian leases only.

% Total disturbance is by calendar year.

& Land under rehabilitation includes areas of mine activities on which rehabilitation earthworks have been completed in accordance with closure obligations.

Rehabilitation has not progressed or been verified from earthworks towards the agreed post-mining land use.

Note 1 - Balances restated fro CY17 and CY16 to align with GRI definitions.

Note 2 - Reporting based on calendar year.

GRI 303-3 (a&c) Water withdrawal by source (ML)

	FY19		FY18		FY17	
	Volume	Quality	Volume	Quality	Volume	Quality
Volume of water withdrawn from:						
Ground water	1,630	fresh/ brackish	1,288	fresh/ brackish	1,218	Fresh
Surface water	12	fresh/ brackish	86	fresh/ brackish		
Total water withdrawn	1,642		1,374			

Note 1 - Sandfire has no sources of sea water, produced water or third party water.

Note 2 - In FY2018 Sandfire refined its understanding of the inputs into the DeGrussa water balance which includes rain water. This is represented as surface water.

Note 3 - Sandfire has not withdrawn water from areas with water stress.

Data Tables

KEY N/A

GRI 303-4 Water discharge (ML)

	FY19				FY18				FY17			
	Volume	Areas with water stress	Freshwater or other	Treatment level	Volume	Areas with water stress	Freshwater or other	Treatment level	Volume	Areas with water stress	Freshwater or other	Treatment level
Surface water	190		Freshwater	Treated	116		Freshwater	Treated	185		Freshwater	Treated

Note 1 - Quality is treated or untreated

Note 2 - Water settles in settlement ponds before it is discharged to a fresh water ephemeral water course.

Note 3 - Sandfire does not discharge water to areas with water stress.

Note 4 - No priority substances of concern have been identified.

GRI 303-5 Water consumption

	FY19	FY18	FY17
	Volume	Volume	Volume
Total water consumption from all areas	1,452	1,258	1,033
Total water consumption from all areas with water stress			
Changes in water storage, if this has a significant water related impact			

MM3 Total overburden, rock, tailings and sludges

	FY19	FY18	FY17	RISKS ASSOCIATED	DEFINITIONS
Process wates					
Waste rock - DeGrussa (tonnes)	263,114	147,905	429,402	Waste rock has the potential to be acid forming which can have negative impacts on the environment if managed incorrectly	Process wastes: wasted generated directly from the process flow.
Waste rock - Monty (tonnes)	273,489	181,260			Waste rock: barren rock in a mine, or mineralised material that is too low in grade to be mined and milled at a profit.
Total waste rock produced (tonnes)	536,603	329,165	429,402		
Tailings placed in the DeGrussa tailings facility (dmt)	498,318	636,572	701,791	Inadequate management of tailings can have significant impacts to the environment	"Tailings: the waste material from ore after the economically recoverable metals and minerals have been extracted."
Tailings reused as paste backfill in the underground mine (dmt)	834,060	736,579	647,083		
Total Tailings produced (dmt)	1,332,378	1,373,151	1,348,874		
TOTAL WASTE ROCK AND TAILINGS	1,868,981	1,702,316	1,778,276		

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KEY N/A

GRI 306-1 Water discharge by quality and destination

	FY19	FY18		
		Volume	Quality of water	Was the water reused by another
North Creek Discharge Point (DeGrussa)	64	116	Settled in transfer ponds	No
Central Drainage Discharge Point (DeGrussa)	6			
North Creek Discharge Point (Monty)	120			
Total	190	116		

GRI 306-2 Waste by type and disposal method

	Units	FY19	FY18	FY17	Disposal method
		Total volumes	Total volumes	Total volumes	
Non-hazardous waste					
Class A Water	KL	52,308	50,540		Sprinkler fields
General Waste to off site landfill	m ³	1,234	1,058	1,036	Landfill
General waste to onsite landfill	Tonnes	176	171	146	Landfill
Glass	Tonnes	23	5	8	Recycled
Plastic	Tonnes	29	3	3	Recycled
Cardboard	Tonnes	47	9	30	Recycled
Printer cartridges	KGs	68	59	92	Recycled
Steel	Tonnes	801	1,525	2,915	Recycled
Aluminium	Tonnes	1	1	3	Recycled
Hazardous waste					
Oil	Litres	160,826	110,815	124,945	Licensed waste service
Tyres	Count	641	341	304	Licensed waste service
Grease	Litres	2,058	3,600	0	Licensed waste service
Batteries	Count	233	86	63	Licensed waste service
Hydrocarbon contaminated waste	m ³	289	153	120	Licensed waste service

Note 1 - In the process of quality reviewing FY2019 data, we identified an error in previous reporting. FY2018 and prior numbers will be restated in our FY2020 Sustainability Report.

Note 2 - Class A Water was previously reported in kg. This was updated to KL in FY2019 and FY2018 figure restated. Glass previously reported as litres, now reported as kilograms.

Note 3 - General waste to onsite landfill includes the following assumption:

One manday = 1.46kg of general waste (including food waste). This factor was informed by a waste weight trial run from December 2018 to March 2019.

Note 4 - Waste to onsite landfill restated for FY2017 and FY2018 and reported in tonnes.

Data Tables

GRI 306-3 Significant spills

FY19					
	Number of spills	Location of spill	Volume of spill (litres)	Impact of spills	Action taken
Waste water	2	DeGrussa	1000 litres and 2000 litres	Short term impact to the area at spill site in both cases. Less than 2 days for remediation.	Spills were cleaned up when dry and taken to topsoil stockpile. Spills reported to the Department of Water and Environmental Regulation. There will be increased maintenance of float sensor switches in the waste treatment plant and sump pumps.
Totals			7,500		

GRI 302: Energy consumption

	FY19	FY18	FY17
302-1			
Diesel - electricity	1,004,383	918,471	966,632
Diesel - non-transport	235,608	251,156	189,260
Diesel - transport	22,294	31,354	20,256
Diesel - total	1,262,285	1,200,981	1,176,148
Solar	77,858	68,766	30,155
Electricity consumption	359	652	680
Other	17,804	14,500	16,515
Total energy consumption inside the organisation (GL)	1,358,306	1,284,899	1,223,498
302-3			
Energy from non renewable sources (GJ)	1,280,090	1,215,481	1,192,663
Energy from renewables sources (GJ)	77,858	68,766	30,155
Total electricity consumed (GJ)	359	652	680
Energy intensity ratio (inside organisation - GJ/ tonne copper concentrate produced)	19.57	19.79	18.24
302-4			
Reduction in fossil fuel energy from using renewables (GJ)	209,785	184,597	81,696

Note 1 - Methods for calculating 302-1, 302-2 and 302-3 from the NGER Determination as applicable for the relevant reporting year.

Note 2 - 302-4 baseline year FY2015. Energy savings estimated by using the GJ/MWhr rate for the diesel power station.

Note 3 - 1,619,714 tonnes of ore milled for FY2019.

Note 4 - Other includes oils, greases, mineral oil, LPG, gasoline, Jet A1 and acetylene.

Note 5 - Definitions for diesel - electricity is as defined under NGERs.

Note 6 - Electricity consumption excludes self generated electricity consumed on site to avoid double counting.

Note 7 - Excludes self generated electricity consumed on site to avoid double counting.

Note 8 - In FY2019 Energy intensity ratio recalculated as GJ per tonne of copper concentrate produced.

Data Tables

GRI 305: Emissions

	FY19	FY18	FY17
305-1			
Diesel - electricity	70,508	64,477	67,858
Diesel - non-transport	16,540	17,631	13,286
Diesel - transport	1,572	2,210	1,428
Diesel - total	88,619	84,318	82,572
Other - total	434	584	595
Total Scope 1 emissions (t CO2-e)	89,053	84,902	83,167
305-2			
Energy purchased	71	129	138
Total Scope 2 emissions (t CO2-e)	71	129	138
305-4			
GHG emissions intensity ratio (t CO2-e/ tonne copper concentrate)	1.28	1.31	1.24
305-5			
Reduction in emissions from using renewables (t CO2-e)	14,727	12,959	5,735

Note 1 - All methods from the NGER Determination as applicable for the relevant reporting year.

Note 2 - Gases included in the Scope 1 & Scope 2 GHG emission calculation for 305-1&2 and 305-4&5 include CO2, CH4, N2O, HFCs, PFCs, SF6.

Note 3 - The approach for calculating emissions includes those under operational control.

Note 4 - Reduction of emissions due to renewables estimated using the CO2-e per kWh that would have been emitted if the power were generated using the diesel power station.

Note 5 - Base year for calculation is 2012.

Note 6 - GWP as per NGERs.

Note 7 - Other includes oils, greases, mineral oil, LPG, gasoline, Jet A1, WWTP emissions, SF6 leakage and acetylene.

Note 8 - In FY2019 GHG emissions intensity ratio recalculated as t CO2-e per tonne of copper concentrate produced.

GRI 401-1 Employee hires and turnover

	FY19						FY18						FY17					
	Male	Female	<30	30 - 50	>50	Aus	Male	Female	<30	30 - 50	>50	Aus	Male	Female	<30	30 - 50	>50	Aus
Employee hires	39	15	21	25	8	54	40	21	18	34	9	61	39	10	13	27	9	49
Rate of employee hires	0.16	0.06	0.08	0.10	0.03	0.22	0.16	0.09	0.07	0.14	0.04	0.5	0.15	0.04	0.06	0.12	0.04	0.22
Employee turnover	54	16	17	37	16	70	32	12	10	30	4	44	69	27	13	52	31	96
Rate of employee turnover	0.22	0.06	0.07	0.15	0.06	0.28	0.13	0.05	0.04	0.12	0.02	0.36	0.38	0.57	0.06	0.23	0.014	0.42

Data Tables

KEY N/A

GRI 403-9 Work related injuries

	FY19		FY18		FY17	
	Target	Actual	Target	Actual	Target	Actual
Total Recordable Injury Frequency Rate	4.5	6.2	4.5	7.1	5	5

Note 1 - Frequency rates are calculated by adding the total injury numbers by total hours worked, divided by a million hours.

Note 2 - Total contractor hours worked in FY2019 was 964,153.

Note 3 - Total employee hours worked in FY2019 was 486,103.

Note 4 - Total hours includes direct employees and contract personnel who perform work at DeGrussa and exploration sites.

	FY19				FY18				FY17					
	Contractors	Employees	All workers	Aus	Contractors	Employees	All workers	Aus	Male	Female	Contractors	Employees	All workers	Aus
Recordable injury	7	2	9	9	10	0	10	10	7	0	5	2	7	7
Recordable injury rate	7.3	4.1	6.2	6.2										
Lost time injury	2	1	3	3	0	0	0	0	1	0	0	1	1	1
Medically treated injury	3	0	3	3	2	0	2	2	2	0	2	0	2	2
Restricted duties injury	2	1	3	3	8	0	8	8	4	0	3	1	4	4
Occupational disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Work-related fatalities	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note 1 - Recordable injury: injuries that result in classification as lost time injury, restricted duties injury or medically treated injury.

Note 2 - Lost time injury: any injury or illness that results in one or more shifts away from work, excluding the day of the incident.

Note 3 - Medically treated injury: any injury or illness that results in a loss of consciousness or requires medical treatment, but does not result in any lost or restricted shifts.

Note 4 - Restricted duties injury: any injury or illness that results in a person not being physically or mentally able to perform their normal duties or the majority of their normal duties.

GRI 403-10 Work-related ill health

	FY19		FY18		FY17	
	Number	Rate	Number	Rate	Number	Rate
Fatalities as a result of work-related ill health for employees	0	0	0	0	0	0
Cases of recordable work-related ill health for employees	0	0	0	0	0	0
Fatalities as a result of work-related ill health for non-employee workers	0	0	0	0	0	0
Cases of recordable work-related ill health for non-employee workers	0	0	0	0	0	0

Data Tables

KEY N/A

GRI 404-1 Average hours of training

	FY19	FY18	FY17
Male	11	21	5.1
Female	11.2	10	3.6
Executive	8	2	
Senior executive	8	4	1.5
Management	7.8	11	2.12
Non-management	11	19	5.3
Total hours	3,221	4,622	1,090

Note 1 - This does not cover employees who were undertaking further education under sponsorship.

Note 2 - Executive and senior executive category combined in FY2017.

Note 3 - The increase in hours in FY2018 can be attributed to improvements in data captured.

Note 4 - In FY2019, external training hours were unable to be captured. We are working to improve data capture.

Note 5 - FY2018 data was restated.

GRI 404-3 Percentage of employees receiving performance reviews


	FY19	FY18	FY17
Male	86%	100	100
Female	81%	100	100
Total number of employees	85%	100	100

GRI 405-1 Diversity of governance bodies and employees

	FY19					FY18					FY17				
	M	F	<30	30 - 50	>50	M	F	<30	30 - 50	>50	M	F	<30	30 - 50	>50
% Board	83	17	0	17	83	83	17	0	0	100	83	17	0	0	100
% Senior Executive	100	0	0	60	40	100	0	0	80	20	100	0	0	50	50
% Senior Management															
% Management	78	22	0	83	17	79	21	3	72	24	80	20	0	64	36
% Non-management	76	24	21	53	25	78	22	20	57	23	79	21	20	61	19

Note 1 - Sandfire's CEO is a member of the Board and Senior Executive. For reporting purposes, the CEO is counted as a member of the Board.

Data Tables

KEY  N/A

GRI 406-1 Discrimination incidents and actions taken

	FY19	FY18	FY17
No. Incidents	0	0	0
No. incidents reviewed	0	0	0
Remediation plans implemented			
Remediation plans implemented with results reviewed			
Incidents no longer subject to action			