



**ava**tion PLC

Environmental  
Social and  
Governance  
Report  
2023

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## **1. Management ESG overview**

Avation considers itself to be near the forefront of ESG developments in the aircraft leasing industry. Not only did we receive an award for the first ever green loan for aircraft finance, but the majority of our fleet is comprised of low CO2 emission aircraft.

When we consulted with some of our stakeholders it was clear that GHG emissions and aircraft fuel consumption were amongst the issues considered to be of very high importance. We recognise that working towards aircraft certified with sustainable aviation fuel is a near term solution and that hydrogen or electric aircraft are probably the longer term solution.

Our major aircraft supplier ATR is well advanced in developing aircraft with improved engines that can use SAF's with a view to bringing down CO2 emissions towards net zero before 2050. We are improving our fleet with younger new technology aircraft progressively that will increase the proportion of low emission aircraft and aim to bring down the overall fleet CO2 emissions progressively.

Our electrical power, water and waste usage has been directly affected by the Covid pandemic over the last few years and as employees progressively return to our office and reduce their working from home we continue to look for ways to improve our usage.

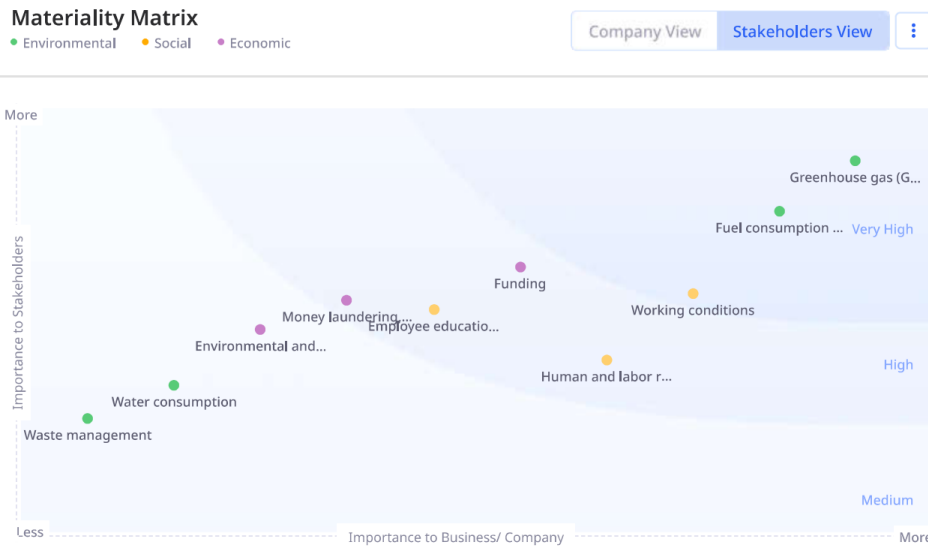
We continue to aim to improve our employee diversity, training and development as we recognise the importance of the strength and well being of our human capital which is of particular importance in our industry. We work hard to attract the best candidates to work for Avation and once the best talents are employed we then have attractive retention tools and incentives to keep our employees engaged as much as possible. With typical staff turnover rates of 15% or lower it indicates staff service lengths average between 6-7 years.

Avation also reaches out to support educational, aviation industry and sporting activities which help to enrich and give back to those communities by sharing our knowledge, expertise and sponsorship of beneficial activities.

As a company listed on the London Stock Exchange, Avation plc takes governance seriously and we now have 80% of our Board of Directors comprising Non-Executive Directors. We also have separate sub-committees to oversee the audit, risk and remuneration functions. We have not had any compliance breaches over the last few years. We realise that making progress on ESG is a multi-year pathway and the Board and our employees are committed to making the ESG improvements necessary for our industry.

## **2. Material factors**

We conducted a materiality assessment with some of our stakeholders to assess the perception of relative importance of various ESG factors. As can be seen below there was good alignment between the company and stakeholders on factors such as greenhouse gases and fuel consumption of our aircraft fleet. As we're also mostly office based there was also relative alignment on water and waste being medium considerations while employee factors such as education and working conditions were considered to be of high importance:



We understand that the relative importance of ESG factors is an evolving area of ESG reporting and we will continue to monitor the relative importance of these factors to our stakeholders and the company.

### 3. Environmental

#### i. Aircraft:

##### 1. Industry decarbonisation

According to the Air Transport Action Group (“ATAG”) Waypoint 2050 report they indicate that technological advances in the aviation industry are expected to take some time to develop. For commuter to short haul aircraft this could take up to 2035:

	2020	2025	2030	2035
<b>Commuter</b> 9-50 seats <60 minute flights <1% of industry CO2	SAF	SAF and/or Electric or Hydrogen fuel cell	SAF and/or Electric or Hydrogen fuel cell	SAF and/or Electric or Hydrogen fuel cell
<b>Regional</b> 50-100 seats 30-90 minute flights ~3% of industry CO2	SAF	SAF	SAF and/or Electric or Hydrogen fuel cell	SAF and/or Electric or Hydrogen fuel cell
<b>Short haul</b> 100-150 seats 45-120 minute flights ~24% of industry CO2	SAF	SAF	SAF	SAF and potentially some Hydrogen

They expect medium haul (100+ seats) and long haul (250+ seats) to use sustainable aviation fuel (“SAF”) initially but other technologies such as electric or hydrogen to be after 2035.









Currently SAF’s are being used in the commuter and regional aircraft segments with a number of companies working towards developing Hydrogen or Electric power solutions for the aviation industry.

SAF’s reduce the emissions of CO2 to be close to zero, but Hydrogen or Electric would potentially reduce the CO2 emission to zero. SAF’s may need to be accompanied by CO2 offset or carbon capture and storage

scheme's to reduce net CO2 emissions to zero if the Hydrogen or Electric solutions take longer than expected to develop.

## 2. Fleet young / efficient aircraft

Avation's fleet of aircraft at the end of January 2023 is as follows:

Fleet Portfolio				
Aircraft Type		Current Fleet	Orders	Options
<b>Regional</b>				
ATR 72-600		16	2	28
ATR 72-500		5	-	-
<b>Narrow-body</b>				
A321-200		6	-	-
A320-200		2	-	-
A220-300		5	-	-
B737-800NG		1	-	-
<b>Wide-body</b>				
A330-300		1	-	-
B777-300ER		1	-	-
<b>Total</b>		<b>37</b>	<b>2</b>	<b>28</b>

The ATR72-600 are younger and more efficient than the previous model the ATR72-500. This can be seen below under section 7 in terms of their carbon emissions per hour per passenger.

We have also invested in new aircraft models such as the A220-300 which is also a more modern aircraft and has lower carbon emissions per hour per passenger than most other narrowbody aircraft.

We continue to invest in new or young aircraft that are more efficient than older aged aircraft, this way we continue to modernise our fleet and invest in the most efficient aircraft.

## 3. Fuel efficient aircraft orders

As can be seen in section 2 above our orders and options are for ATR72-600 aircraft which per section 7 below have CO2 emissions of 31.0kg per hour per customer. The ATR72-600 is the aircraft in our fleet with the lowest level of CO2 emissions per hour per customer.

The ATR manufacturer is also intending to drive these emissions even lower going forward with the introduction of the new PW127XT engine on the ATR aircraft which will replace the current PW127M engine:

## PW127XT benefits



**40%** Extended **time on wing**



**Engine DMC** reduction  
**20%** over PW127M



**Fuel burn savings**  
**-3%** over PW127M




**Unscheduled engine removal** reduction  
**-12%** over PW127M




### 4. Future aircraft more efficient

Existing ATR aircraft are certified to use 50% sustainable aviation fuel. Sustainable aviation fuel is fossil free fuel. One of Avation’s existing airline customers, Braathens, is already using a blend of sustainable aviation fuel in its operation.


As Aircraft manufacturers improve their aircraft and engine capabilities they are also aiming to have the capability of using 100% sustainable aviation fuel (“SAF”) which would significantly reduce the CO2 emissions. When using SAF the emissions of CO2 will be close to zero. Avation’s order book for aircraft delivered 2023 or later will include this engine type or their technological successors. These aircraft with the PW127XT engines are expected to have a significant impact on reducing the CO2 emissions of the Avation fleet of aircraft and should mark significant steps on the path to net zero emissions.



**PW127XT Engine Entry Into Service**

Status	
	Engine Transport Canada certified August 2022.
	Aircraft Mod EASA certified September 2022
	12 ATRs to be delivered by end of 2022 (including one ATR42-600)

Foreign certification on going



## 5. Fleet transformation / upgrading

In addition to the ATR aircraft manufacturer who are making good progress in reducing the CO2 emissions of their aircraft using SAF's, the other two main manufacturers Airbus and Boeing are both engaging in significant research and development to develop aircraft that can use SAF compatible engines. Due to the technology complexity and larger size of their aircraft compared to the ATR72 turboprop aircraft the certification of Airbus and Boeing aircraft is expected to take a longer period of time. As over half of the Avation fleet comprises ATR aircraft which are expected to reduce their CO2 emissions before Airbus and Boeing, we are expecting Avation to make significant progress on reducing CO2 emissions earlier than our other lessor peers.

## 6. New tech aircraft increasing % of fleet

We consider our 16 ATR72-600 aircraft and our 5 A220-300 aircraft as new technology aircraft which in terms of aircraft numbers form a majority of 57% of the aircraft in our fleet. Our intention is to continue to add new technology aircraft and over time dispose of the old technology aircraft so that the proportion of new technology aircraft in our fleet continues to increase towards 100% over time.

## 7. Fleet emissions:

We calculate the CO2 emissions of the aircraft fleet using the AWG carbon calculator. For the year ended 30<sup>th</sup> June 2022 the aggregate CO2 emissions is 418.9 kilotonnes per the following table:

<b>Fleet metrics at 30 June 2022 based on AWG Carbon Calculator:</b>						
<b>Aircraft Type</b>	<b>Aircraft OEM</b>	<b>Number in Fleet</b>	<b>Aggregate CO2 emissions per annum (kilotonnes)</b>	<b>CO2 per aircraft per hour flown (tonnes)</b>	<b>Number of seats (Fleet average)</b>	<b>CO2 per hour per passenger (kg)</b>
A220-300	Airbus	5	65.3	5.7	148	38.4
A320-200	Airbus	2	38.4	7.3	178	40.7
A321-200	Airbus	6	122.4	9.1	225	40.3
A330-300	Airbus	1	26.9	16.8	309	54.4
ATR 72-500	ATR	5	11.4	2.3	68	33.5
ATR 72-600	ATR	18	39.1	2.2	70	31.0
B737-800	Boeing	1	15.0	6.7	162	41.1
B777- 300ER	Boeing	1	100.4	23.3	370	63.1
		39	418.9			
		Total	Total			

This is reduced from the year ended 30<sup>th</sup> June 2021 due to a reduction in the size of the fleet from 44 aircraft to 39 aircraft and a reduction in the estimated hours flown during the pandemic period. It can be clearly seen that the fleet CO2 emissions is affected by the composition of the fleet between turboprops, narrowbody and widebody aircraft. It can also be seen that later generation aircraft (72-600) is more efficient than older generation aircraft (72-500). As the fleet modernises we should see further improvements in efficiency.

## 8. Target of net zero by 2050

Avation has a target of achieving net zero carbon emissions by 2050. We are constantly assessing the latest aircraft technologies that are being developed by the aircraft manufacturers to see if this target can be achieved at an earlier date.

We are continuously tracking the progress that is being made by some aircraft manufacturers in the area of sustainable aviation fuels (“SAF”) and we are encouraged by the rapid progress that is being made with test flights proving that aircraft can be flown using 100% SAF.

We are also monitoring the progress made in the area of hydrogen powered aircraft. In particular we are tracking the progress made with hydrogen electric propulsion systems and initial test flight success of companies such as ZeroAvia.

While we are driven by the needs and requirements of our customers, we also do not shy away from being early adopters of new technology that can help us achieve reducing our carbon emissions to net zero by 2050.

### ii. Energy usage

Avation’s energy usage is primarily from the headquarters office at 65 Kampong Bahru Road in Singapore. The power consumption increased from 28,012 KWh in 2021 to 32,596 KWh in 2022 per:

Environment Category	Unit	2022	2021	2020	2019
Power consumption	kWh	32,596	28,012	35,364	43,848
Staff number	Employees (avg)	20	21	22	21
Power consumption efficiency per employee	kWh/Employee	1,630	1,334	1,607	2,088

There was lower power consumption efficiency per employee of 1334 kWh per employee in 2021 as the practice of working from home and limitations and restrictions on visiting the corporate office were still in force at the time. The 1,630kWh per employee in 2022 was still reduced due to the continued flexible working arrangements enjoyed by our staff where they tend to work less hours per week on-site in the office and some hours outside the office by their own arrangements. This is still below the pre-covid level of 2,088kWh per employee in 2019.

Flexible working has been encouraged by the Singapore government as a way to help reduce the physical contact interactions post covid and hence reduce the speed of any spread of health issues. With the pandemic receding we do not know how long flexible working will continue to be encouraged and we may return to pre-covid work practices before too long.

### iii. Water usage

Water consumption per employee in 2021 was low at 3.4 CuM per employee for the year largely due to employees spending the majority of their time working from home. During 2022 employees started to increase the amount of time they would spend in the Singapore office and reduce the amount of time that they would



spend working at home. This has seen an increase in the water consumption per employee to 4.6 CuM per employee which is still relatively low for daily office use:

<b>Environment Category</b>	<b>Unit</b>	<b>2022</b>	<b>2021</b>
Water consumption	CuM	91.8	72.0
Staff number	Employees (avg)	20	21
Power consumption efficiency per employee	CuM/Employee	4.6	3.4

#### iv. Waste management

The majority of our office waste is predominantly waste paper products. A lot of our work involves legal contracts, lease agreements, loan agreements and other legal documents. We already have policies in place setting default office printing to be double sided on pieces of paper. Where there are pieces of paper that are only printed on one side we aim to re-use the second blank side of the paper for purposes such as note taking. Once pieces of paper have been fully used we aim to dispose of the paper separately to paper recycling processors.

## 4. Social

#### i. Diversity

We constantly strive to increase the diversity that we have in our workforce. One area this can be seen is in our hiring and improving gender balance per below:

<b>Diversity of workforce</b>	<b>Unit</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>
Proportion of females in the workforce (%)	%	30.0%	29.0%	27.3%

The proportion of our workforce that is female is slowly improving but we clearly still have some progress to make to bring this closer to an equal balance. While we actively encourage women to apply for roles at Avation the overriding criteria will continue to be skills and experience that a candidate can bring with them. In the event that we have two similar candidates based on skills and experience we will then look at the diversity that they can add to the organisation.

#### ii. Anti-discrimination

Avation supports anti-discrimination measures in all it's HR, hiring and personnel practices. We believe it treating everyone equally regardless of race, religion, gender, age or other characteristic protected by applicable laws. Avation also supports increased diversity and inclusion practices in all it's operations as such

practices are seen to strengthen and improve the views, perspectives and resources which enrich the way we operate and interface with our customers and suppliers.

### iii. Employee training and development

Avation provides training and development courses periodically on a variety of subjects including:

- Anti-bribery
- Anti money laundering
- Ethics
- First Aid

We also have a rotation training program that we have in place for university graduate entry level associates who are aiming to work their way up in the leasing industry from the bottom up. This program rotates the employees through our different functions so that they can learn and gain experience in all the functions within a leasing company, they can see the activities that each function engage in and the crucial importance of each function within the aircraft leasing business as a whole.

### iv. Employee attraction and retention

The aircraft leasing industry is an attractive industry to work in. It provides a wide range of interesting facets and draws upon a wide range of expertise from legal, financial, technical, sales and marketing across global jurisdictions with all the variety of implications that provides. We rely on a small number of well trained experts in their fields to manage and transact multi-million dollars worth of aircraft.

Avation provides its staff with a variety of incentives to stay with the business in the longer term, these include flexible working arrangements, performance related bonus schemes and longer term equity warrant schemes which typically vest over 3 year periods. In periods of strong growth these warrant schemes can act as strong staff retention tools as staff can see the progress of the company having a direct benefit for them.

Pre-covid in 2019 our staff turnover rate was relatively low at 14%. During the Covid pandemic the staff turnover rate dropped to below 5% as there was much uncertainty in the aviation industry and most aviation industry participants were spending the majority of their time dealing with the issues presented by the pandemic. In FY2022 the turnover rate rose back to 15% as the aviation market returned towards more normal operations. Our staff turnover data can be seen below:

People category	Unit	FY2022	FY2021	FY2020	FY2019
Staff number (average)	Employees	20	21	22	21
Turnover rate	%	15.0%	4.8%	4.5%	14.0%

We regard this level of staff turnover as relatively low as it equates to a typical staff service length of between 6-7 years on average.





v. Employee health and safety

Avation cares about the health and safety of its employees as employee well-being is linked to the success of Avation, this includes physical and mental health. We are committed to maintaining a productive working environment where all employees are treated with dignity and respect. Employees have the right to work free from harassment, bullying and sexual prejudice. We have a complaints system which leads to disciplinary action as appropriate.

The vast majority of work conducted by Avation staff is office based. As a result this is considered to be a low risk and relatively safe environment without the use of machinery or moving processes. Our workplace accidents rate of zero over the last 4 years therefore reflects the safe working environment that our employees enjoy:

Compliance	Unit	2022	2021	2020	2019
Number of workplace accidents	Number	0	0	0	0

vi. Supporting education, industry and community

	<p>Avation supports educational colleges such as Embry Riddle Aeronautical University. As part of their degree programs they invite industry participants to present lectures to their students on their areas of expertise. We always have lively discussions on the role and progress of the aircraft leasing sector within aviation and help to expand the students views of the aviation industry.</p>
	<p>The Aviation Working Group is a long established aviation industry body that works on topics and subjects of importance to the aircraft leasing sector. Avation is a full corporate member of the AWG and we have been engaged with AWG on numerous topics such as ESG, GATS and the impact of the Ukraine war on the recovery of aircraft from Russia.</p>
	<p>ISTAT is the International Society of Transport Aircraft Trading. It is a global body that focuses on all aspects of commercial aircraft trading and leasing that are of concern to the industry. Topics of interest include aircraft supply and demand, valuations, the impact of new models, interest rates, technical issues and lease rates. It is a forum where the latest industry ideas can be discussed.</p>
	<p>Avation has supported community sporting events such as the Rugby Sevens held in central Singapore on an annual basis. Such events promote active balanced lives in young and middle-aged residents. It serves to remind participants and spectators of the benefits of regular exercise and sport along with promoting fair competition.</p>

## 5. Governance





### i. Board independence

As can be seen on our website (<https://www.avation.net/directors.html>) we have four Non-Executive Directors on our Board and one Executive Director as per the following:

Executive:

	<b>JEFF CHATFIELD</b> Executive Chairman
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Non-Executive:

	<b>RODERICK DOUGLAS MAHONEY</b> Non-Executive Director
	<b>MARK SHELTON</b> Non-Executive Director
	<b>DR STEPHEN FISHER PHD</b> Non-Executive Director
	<b>DEREK SHARPLES</b> Non-Executive Director

With 80% of our Board comprising Non-Executive Directors the Board represents effective oversight of the executive functions.

### ii. Board committees

The Board operates the following Board committees:

Committee:	Board Members:	Non-Board Members:
Audit Committee	Jeff Chatfield Stephen Fisher Derek Sharples	
Risk Committee	Stephen Fisher Derek Sharples	Iain Cawte (CFO) Duncan Scott (Group Counsel)
Remuneration Committee	Jeff Chatfield Roderick Mahoney Stephen Fisher Derek Sharples	

### iii. Risk management

Avation assesses market and operational risks as industry risk, asset value risk, legal and political risk, regulatory risk, lessee risk and climate-related risk on a regular basis. Financial risks include credit risk, interest rate risk, Forex risk, liquidity risk and capital risk.

While these risks are constantly under review the Risk Committee meet 4 times a year, every quarter, to review the risks in more detail and consider whether the assessments are reasonable, up to date and consistent with the latest market information.

### iv. Compliance

Our legal, secretarial and transaction management teams ensure they are aware of the laws that apply to Avation in the jurisdictions that we operate and those that are specific to the aircraft leasing business that we focus on. These teams have succeeded in being diligent and ensuring that we have not had any violations of any applicable laws over the last 4 years:

<b>Compliance</b>	<b>Unit</b>	<b>2022</b>	<b>2021</b>	<b>2020</b>	<b>2019</b>
Number of violations of applicable laws	Number	0	0	0	0

### v. Tax transparency

Avation is fully transparent about its tax position in terms of charges, liabilities and enrolment in the specific Aircraft Leasing Scheme arrangement with the Singapore Economic Development Board. These details are set out in the notes to the annual report which is available at: <https://www.avation.net/reports.html>

### vi. Ethics

Avation hires qualified professionals who have high ethical standards as part of their professional training. We also conduct regular external courses on maintaining ethical standards and we ensure that we adhere to the ethical standards set down by the London Stock Exchange and other professional bodies. We have no recorded ethical breaches in the last few years.