



NATIONAL ARTS COUNCIL
SINGAPORE

ENVIRONMENTAL SUSTAINABILITY DISCLOSURE



Images courtesy of Arts House Limited

FY2023

MISSION

We champion an arts sector that inspires society, sparks creativity and connects Singapore to the world.

VISION

A creative city that inspires.

CORE VALUES

We are **PASSIONATE**

Strongly committed to enrich lives and impact society

We are **CREATIVE**

Innovate to inspire & create opportunities

We are **COLLABORATIVE**

Develop strong partnerships to advocate excellence and vibrancy



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INTRODUCTION

About NAC

The National Arts Council (NAC) is a statutory board under the Ministry of Culture, Community, and Youth that champions the arts in Singapore. The Council promotes artistic excellence by providing diverse opportunities for artists and arts organisations while expanding access for audiences to appreciate the impact of the arts in enriching lives. By working closely with the arts community and partners, the Council seeks to build a connected society, creative economy and distinctive city through the arts. For more information, visit www.nac.gov.sg.

On 5 September 2023, NAC launched Our SG Arts Plan (2023 - 2027), a strategic roadmap guiding Singapore's arts and culture policies over the next five years. This masterplan focuses on three key pillars: a connected society, a distinctive city, and a creative economy. Please refer to **Page 14-16** of our annual report for more information.

About This Report

Our inaugural Environmental Sustainability Disclosure (otherwise referred to as the “Report”) outlines our approach, performance, and efforts in addressing greenhouse gas (GHG) emissions, energy consumption, water usage, and waste management for the financial year from April 2023 to March 2024 (FY2023). The Report includes the environmental performance of all arts centres¹ under NAC’s financial control², which best reflects our approach to sustainability management and transparency within our operations.

As a statutory board under the Ministry of Culture, Community, and Youth, NAC aligns our strategic plans with the Singapore Green Plan 2030 and GreenGov.SG framework to contribute meaningfully to Singapore’s long-term environmental objectives.

We welcome feedback from our stakeholders as we continually improve on our sustainability processes and performance. Please send all feedback to nac_feedback@nac.gov.sg.

¹ The arts centres under NAC’s financial control include Goodman Arts Centre, Stamford Arts Centre, Aliwal Arts Centre, Victoria Theatre and Concert Hall, The Arts House, 42 Waterloo Street, and the Drama Centre located within the National Library Building.

² For the purposes of this Report, “financial control” refers to arts centres where NAC has the authority to govern financial and operating policies.





A MESSAGE FROM OUR
CHIEF EXECUTIVE OFFICER



**MR LOW ENG TEONG**

Chief Executive Officer

Dear Friends of the Arts,

The arts have always been a reflection of our society, shaped by the diverse and vibrant cultures and lives of our people. As we embark on our sustainability journey, guided by the Singapore Green Plan 2030 and the GreenGov.SG movement, we recognise the link between our artistic endeavours and the natural environment that sustains us.

This inaugural Environmental Sustainability Disclosure embodies NAC's commitment to transparency and sustainable practices across our operations. We are pleased to report a 16% absolute reduction in water consumption in FY2023 compared to FY2022. Additionally, we achieved a Water Efficiency Index (WEI) of 15.91, representing a 73.88% reduction from the baseline average (FY2018-FY2020).

Looking ahead, we will establish a taskforce to better drive strategic sustainability initiatives and further unite stakeholders in our shared vision for environmental stewardship. With the inclusion of 42 Waterloo Street in FY2021 in our portfolio and an increase in events at various arts centres, we observed a 15.88% increase in Energy Utilisation Index (EUI) in FY2023 compared to the baseline average (FY2018-FY2020). Despite this, our arts events will serve as platforms for promoting sustainability even as we implement and finetune event guidelines that are focused on energy conservation, for a start.

Together with our arts community, we aim to achieve our sustainability targets by 2030 while fostering an environment where the arts continue to thrive. Thank you for your support on this important journey.

OUR SUSTAINABILITY JOURNEY

Over the years, we have gradually integrated sustainable practices across our operations — whether small or significant, each action counts. Starting with simple measures like transitioning to energy-efficient LED lighting in our arts centres to launching recycling initiatives, and promoting energy conservation, we have taken humble yet measurable steps to reduce our environmental impact. While these efforts began some time ago, we have continued to track their performance and are pleased to see that, over the years, they have contributed to tangible reductions and positive outcomes.

**2014**

Partial upgrading to LED lighting was completed in selected arts centres, including Victoria Theatre & Concert Hall (VTVCH) and The Arts House (TAH).

2015

Motion sensor taps, flushing systems, and corridor lighting introduced, along with timers for exterior and common indoor area lighting.

2021

Full transition to LED lighting achieved in several arts centres, including VTVCH, TAH, Stamford Arts Centre (SAC), 42 Waterloo Street (42WS), and the Drama Centre (DC).

2024

Air-conditioning temperature set to a sustainable 25°C at all arts centres to promote energy conservation.

2023

Earth Hour campaign was launched across all arts centres as a symbolic action to encourage staff and the public to take responsibility for their energy consumption.

2022

Multi-stream recycling and waste bins were introduced at all arts centres to encourage better waste management.

2025 and beyond

As part of NAC's environmental sustainability roadmap, we are focused on:

- Developing our Environmental Sustainability Vision
- Creating an implementation roadmap for our initiatives
- Establishing a GHG inventory for Scope 1 and 2 emissions
- Identifying opportunities for GHG reduction

KEY HIGHLIGHTS FROM FY2023



Scope 2 Emissions and Energy Use

In FY2023, NAC's Scope 2 emissions totalled 2,175.79tCO₂e. We will continue with the transition to energy-efficient LED lighting in our arts centres.



Water Consumption

Total water consumption for FY2023 was 25,060,656.90 litres, down 16% from the previous year, with the implementation of water-saving devices like motion sensor taps.



Waste Management

In FY2023, NAC generated a total of 91,258.28 kg of waste, marking a 51% absolute reduction compared to the FY2022 baseline.*

* It should be noted that the majority of the waste data for the FY2022 baseline was estimated using an extrapolation method, based on comparable months from other financial years with available data. This approach was necessitated due to insufficient data collection for FY2022.

Moving forward, we need to advance our sustainability efforts by exploring additional initiatives aimed at reducing our environmental impact. This may include implementing rainwater harvesting and greywater recycling, minimising disposable items at our arts festivals and events, and enhancing composting programmes for our restaurant tenants as well as for landscaping maintenance at our arts centres to improve waste diversion rates. Through targeted training of staff and stakeholders, we believe this can amplify awareness and generate new ideas, engaging the arts community in our journey toward a sustainable future that balances the needs of both current and future generations.





GOVERNANCE OVER ENVIRONMENTAL SUSTAINABILITY

This is our first step in establishing sustainability governance, and we understand that there is a lot of work ahead. We need a solid structure to ensure we have the right skills and people in place to develop and implement our sustainability initiatives.

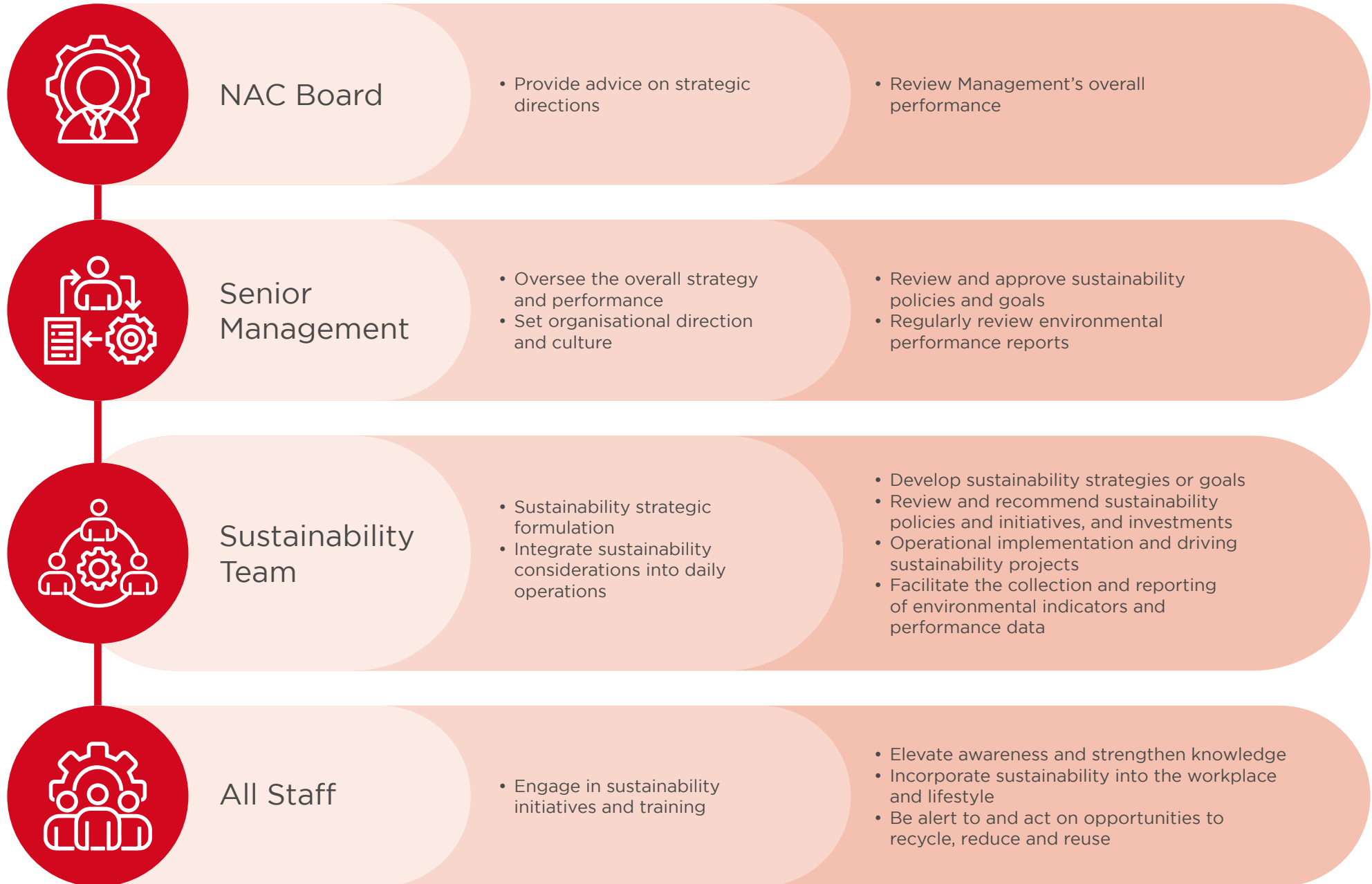
Our Sustainability Team acts as a link between all the arts centres, facilitating the collection of environmental performance data and understanding the initiatives being rolled out. However, this is just the beginning; to truly push our sustainability agenda forward, we need to embrace a proactive approach to leadership and encourage ownership from the ground up. With the right education and support, we can steer our movement in a positive direction.

Although our progress may be gradual, it is meaningful and deliberate. Taking small, consistent steps is more important than rushing ahead and losing sight of our original purpose of pursuing sustainability.

GOVERNANCE

RESPONSIBILITY

KEY ACTIVITIES





FY2023 ENVIRONMENTAL DISCLOSURE



GREENHOUSE GAS EMISSIONS AND ENERGY

Arts centres require substantial amounts of energy for lighting, cooling, and various operational needs. Our energy consumption and greenhouse gas emissions (specifically, Scope 2), come from our lighting, sound, and air conditioning systems. By optimising energy usage and implementing energy-efficient measures, we aim to lower our carbon footprint and contribute to the Singapore Green Plan 2030.

Our transition to energy-efficient technologies, such as LED lighting, along with partnerships that promote sustainable practices, has minimised our emissions while ensuring our operations and events remain environmentally responsible. These simple decisions — such as switching from fluorescent to LED lights and installing motion sensors — have demonstrated that small changes can directly contribute to reduction.

OUR PROGRESS	OUR TARGET
FY2023 Energy Utilisation Index (EUI): 141.60 kWh/m ² , a 15.88% increase compared to the baseline (FY2018 - FY2020)	Reduce EUI by 10% from the baseline (FY2018 - FY2020) by FY2030

OUR STRATEGIES

Managing Energy Consumption

- Motion sensor corridor lightings
- Timers for exterior and indoor common area lightings
- Smart LED lighting upgrade
- Test bedding solar LED lighting fixtures along selected walkways and corridors
- Practised Earth Hour across our arts centres

Prioritising Climate Control

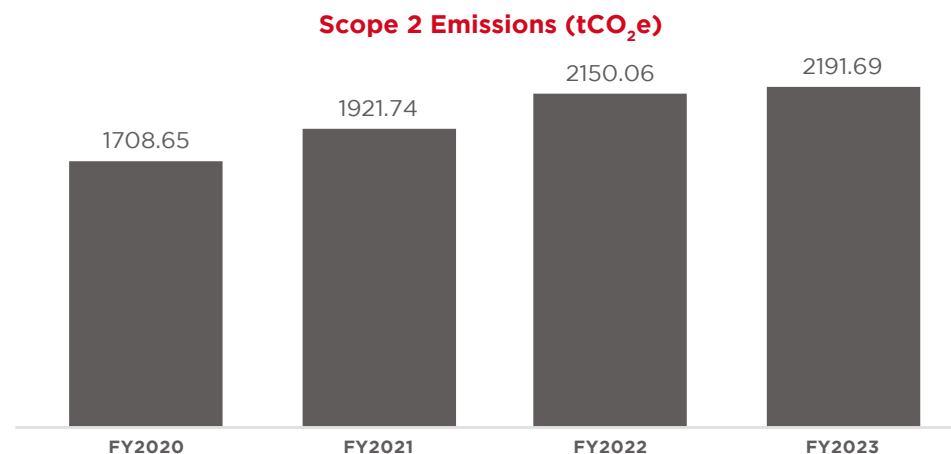
- Sustainable temperature control
- Retrofitting of existing air handling units
- Replacement of air conditioning units

OUR CARBON FOOTPRINT

Our emission levels are closely tied to our energy consumption. In FY2023, we recorded 2191.69 tCO₂e in Scope 2 emissions from purchased electricity, reflecting a 1.94% increase compared to FY2022, which was 2150.06 tCO₂e.

OUR PROGRESS	OUR TARGET
FY2023 Scope 2 emissions ³ : 2191.69 tCO ₂ e, a 1.94% increase compared to FY2022	Achieve net zero by 2045

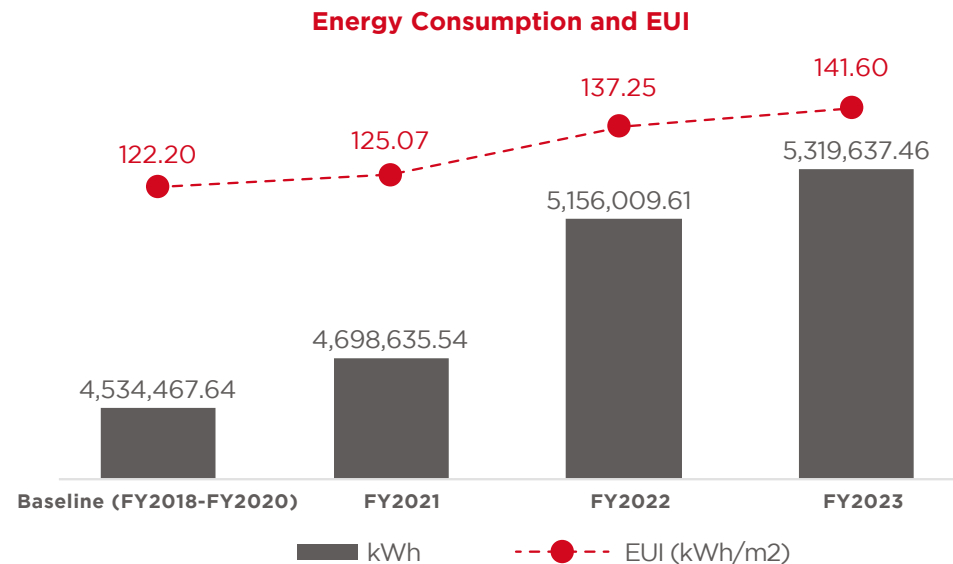
³ The emission factor used to calculate NAC's Scope 2 emissions references data from the Singapore Energy Market Authority.



OUR PERFORMANCE

Since FY2022, our energy consumption has fluctuated due to the reopening of arts centres, festivals, and events following the easing of COVID-19 restrictions, resulting in a gradual increase over recent years. In FY2023, our Energy Utilisation Index (EUI) of 141.60 kWh/m² reflects an increase of 15.88% compared to the baseline period of FY2018-FY2020, as well as an increase of 3.17% from FY2022.

For VTVCH and TAH — we maintain a constant temperature of 21°C to 22°C at TAH Playden and VTVCH theatres and the rest of the premises at 25°C hours to preserve the integrity of these historic buildings. Fluctuations in temperature can lead to mold growth, deterioration of materials, and damage to artworks, jeopardising the visitor experience and operational efficiency.



A CLOSER LOOK AT SOME OF OUR INITIATIVES

Water Cooling System Reduce AC Energy Consumption

At the VTVCH, we have implemented a water-cooling system designed to significantly reduce air conditioning energy consumption. This system uses a more efficient cooling method that not only lowers energy usage but also helps us to minimise our greenhouse gas emissions and create a more environmentally friendly space for our visitors and performers.



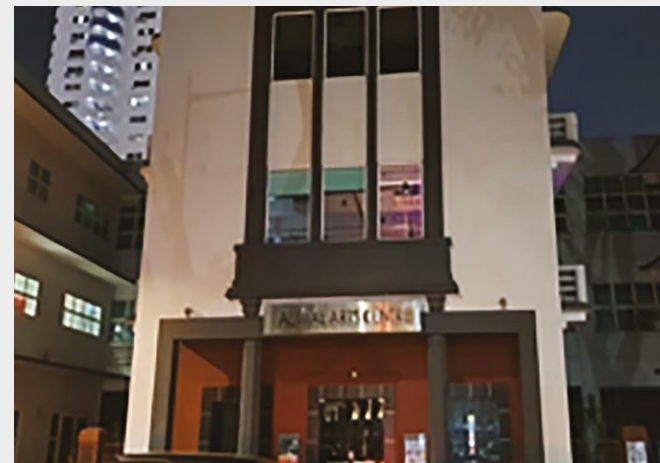
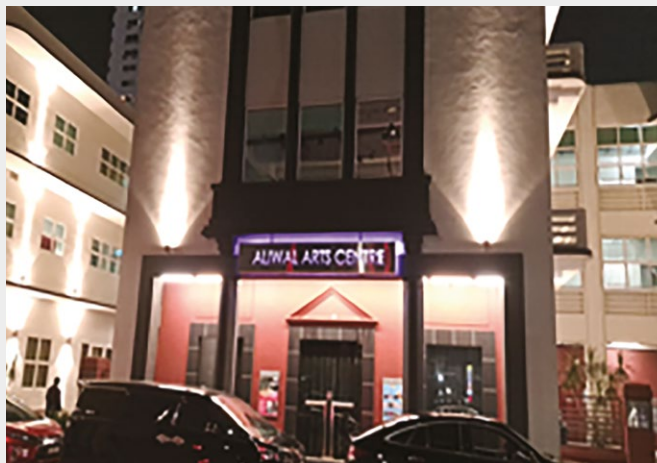
Earth Hour Campaign

As a symbolic action in support of Earth Hour on 23 March 2024, the façade lightings and corridor lights were turned off at our arts centres. Advisories were placed on-site to raise awareness and promote participation in Earth Hour.

At 42WS, power was turned off in approximately 60% of the space, including the inner courtyard and side façade. However, lights at the front façade and reception areas remained on for safety due to ongoing events.

Earth Hour posters were displayed at the front reception of 42WS to further promote the campaign. Our team also proactively informed tenants and event hirers about the venue's participation in this initiative.

Aliwal Arts Centre (AAC)



Stamford Arts Centre (SAC)





WATER

Our arts centres serve a diverse range of individuals from the arts community, including teachers, students, local artists, and small businesses, all of whom rely on water for daily activities like washing tools and equipment. While water is a shared resource, it is important that we prioritise responsible consumption, especially as visitor numbers have increased in recent years.

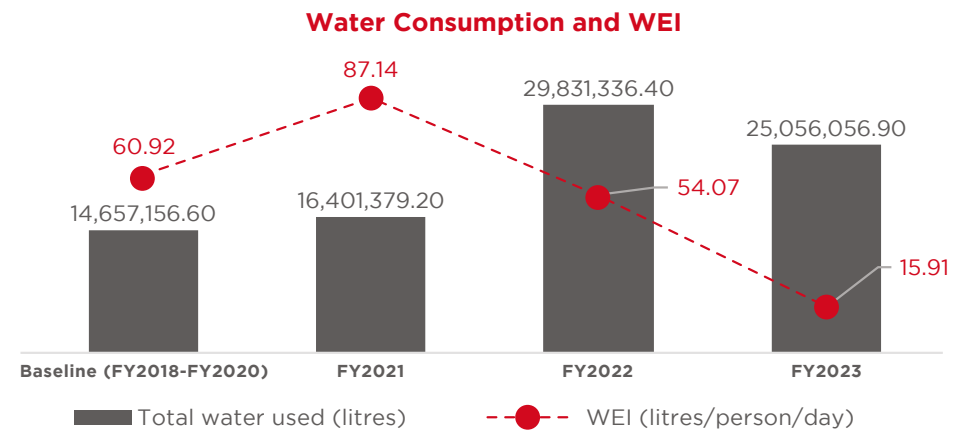
The rise in attendance has led to higher water usage, particularly due to the demand for cooling systems. Our water-cooling towers, which are essential for regulating comfortable temperatures in large spaces, significantly contribute to this usage. To address this, we are exploring ways to optimise water efficiency in these systems and throughout our operations, ensuring that we manage water resources responsibly even as our audience continues to grow.

OUR STRATEGIES

- Installed motion sensor taps and flushing systems in the restrooms
- Sub-metering systems installation

OUR PERFORMANCE

In FY2023, NAC achieved a Water Efficiency Index (WEI) of 15.91 litres per person per day, representing a 73.88% decrease compared to our baseline (FY2018-FY2020). Despite the rise in water consumption over the past two years, the overall WEI decreased due to higher visitor numbers and efforts to address previously undetected underground water leaks.



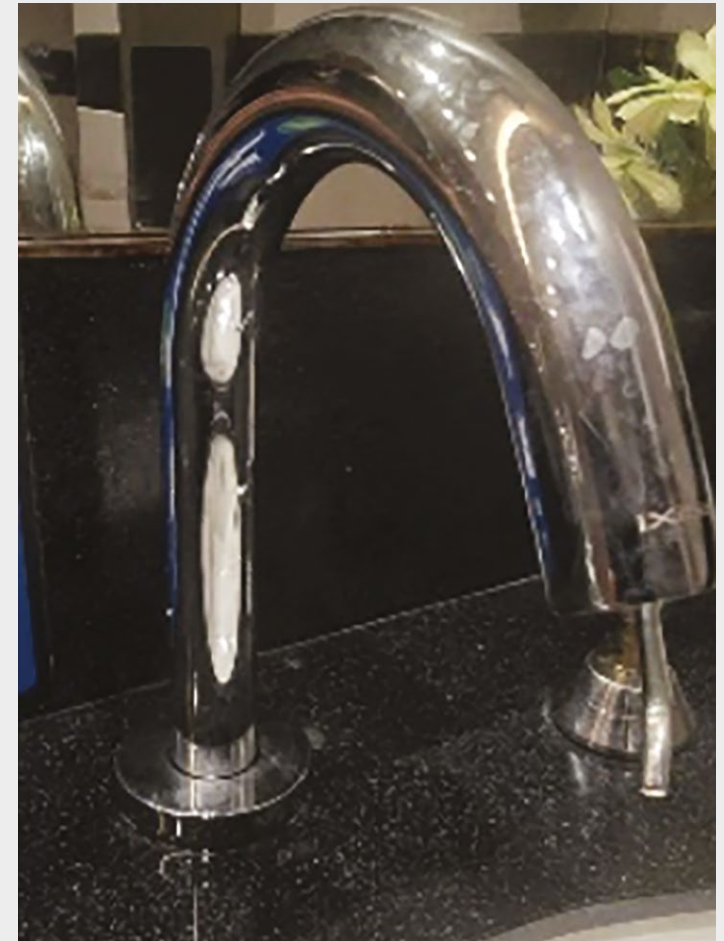
A CLOSER LOOK AT SOME OF OUR INITIATIVES

Motion Sensor Taps and Flushing System

At SAC, we have upgraded all our washrooms with motion sensor taps and flushing systems during the renovation in 2021.

This ensures that water is not wasted when the tap is left running. This leads to a more efficient, controlled flow of water, reducing overall usage.

Additionally, the automatic flushing systems ensure toilets are flushed based on need, preventing excessive or multiple flushes.





WASTE

Each year, NAC commissions three major events: Singapore Writers Festival (SWF), Singapore International Festival of the Arts (SIFA), and Singapore Art Week (SAW). Over the years, we have observed that vendors and event managers have increasingly incorporated sustainable practices. Initiatives such as BYO (Bring Your Own) options, reducing single-use plastic and disposable packaging, using compostable cutlery, implementing modular and reusable stages, and distributing event tickets via digital applications or QR codes are becoming the norm.

While some of these efforts may be adopted subconsciously to minimise waste, they have also shaped our approach to sustainable waste management within our corporate offices and tenanted art spaces across all our arts centres.

We actively communicate these sustainability expectations to our tenants – whether they are art studio managers, restaurant owners, or other stakeholders. Due to the diversity of activities and events, each tenant generates different types of waste, including food and beverage remnants, packaging, and general waste. Nevertheless, they have successfully implemented simple strategies to reduce waste disposal and improve recycling efforts.

OUR STRATEGIES

Corporate Space

- Eliminated single-use plastic or paper cups
- Monthly collaboration with Primary Waste Collectors (PWCs) to verify recyclable versus non-recyclable waste and identify areas for improvement

Art Studios

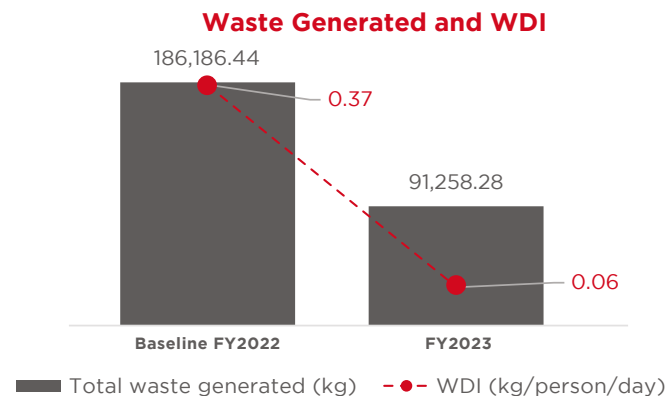
- Single-stream recycling bins located in key areas of each arts centre
- Multi-stream recycling bins strategically placed along common corridors of each level of the arts centre
- Electronic waste collection bin stationed at GAC to promote responsible disposal

Common Spaces

- Urban landscaping with recycled foliage at GAC
- LED and solar-powered lights used for outdoor setups
- Stages and stands designed to be reusable and modular

OUR PERFORMANCE

In FY2023, NAC generated a total of 91,258.28 kg of waste, resulting in a Waste Disposal Index (WDI) of 0.06 kg per person per day. As the actual FY2022 waste data was unavailable, estimates indicate an 83.81% reduction in total waste generated, primarily due to decreased food wastage from Food and Beverage (F&B) tenants. *Please note that the baseline waste data is an estimated figure based on the data available.*



Arts Festivals & Events

- Launched the BYO initiative at the event, *CITRUS fest: Who Cares?* in June 2024
- BYO options
- Plant-based protein meal options
- Events have shifted away from single-use plastic and disposable packaging, opting for reusable or refillable containers
- Compostable cutlery
- Designated stations for recycling, composting, and waste separation set up at all events
- Online advertising and digital banners have replaced printed posters
- Locally sourced, plant-based menus are more common, supporting both sustainability and local farmers
- Events feature locally made, handcrafted goods stalls, supporting small businesses and craftsmanship

A CLOSER LOOK AT SOME OF OUR INITIATIVES

CITRUS Fest: Who Cares?

Organised by CITRUS Practices in partnership with the NAC’s Arts Resource Hub, *CITRUS fest: Who Cares?* was a three-day festival dedicated to communal dinners, workshops, and conversations for arts workers, held at 42 Waterloo Street from 28 to 30 June 2024⁴.

Participants were encouraged to bring their own reusable cutlery. The opening dinner service featured a vegetarian menu showcasing locally grown, sustainably sourced produce, including a selection of rescued vegetable pickles and condiments.

⁴ Although this falls outside the reporting boundary of this report, we wish to highlight it as a special event that embodies the essence of social inclusivity. The CITRUS marks the beginning of many more of such festivals to take place in our arts centres.

Landscaping at GAC

At GAC, we manage an urban farming space that is tenanted out, where plant trimmings and dried leaves are recycled into fertilisers for on-site use.

Originally part of our landscaping contract with the cleaning company for landscape maintenance, we soon recognised that initiative is a meaningful step toward promoting sustainability. Given that many tenants and visitors pass through this space seeking rest and respite, it is essential to show care for this shared area, enhancing the environment for everyone.



Figure 1. Urban garden at GAC



Figure 2. Sample of wood chips supplied after collection of dried leaves

2023
singapore
international
festival of
arts
19 MAY - 4 JUNE



Realm of Silk
SOUJIN CHUNG (CA)
23 MAY
VICTORIA THEATRE
\$38, \$48
FOR FULL FESTIVAL
LINE-UP AND TO BOOK
TICKETS, VISIT SIFA.SG

2023
singapore
international
festival of
arts
19 MAY - 4 JUNE



Me, You, Then, Now
MUNA TSENG (US)
27 MAY
VICTORIA THEATRE
\$38
FOR FULL FESTIVAL
LINE-UP AND TO BOOK
TICKETS, VISIT SIFA.SG

2023
singapore
international
festival of
arts
19 MAY - 4 JUNE



We Will Slam You With Our Wings
JOANNA DUDLEY (AU)
INSTALLATION:
19 MAY - 4 JUN
PERFORMANCES: 20 MAY
ATRIUM, VTVCH
FREE
FOR FULL FESTIVAL
LINE-UP AND TO BOOK
TICKETS, VISIT SIFA.SG

**PRESERVING
OUR PAST**



Victoria Theatre & Victoria Concert Hall (VTVCH)



The Arts House (TAH)



Stamford Arts Centre (SAC)



Aliwal Arts Centre (AAC)

SAFEGUARDING HERITAGE FOR FUTURE GENERATIONS

In the heart of the city are four iconic landmarks: AAC, VTVCH, TAH and SAC.

Each represents Singapore's history and culture. In addition, VTVCH and TAH are our National Monuments registered with the National Heritage Board (NHB). These heritage galleries, known collectively as "Monuments to Our History," are not just buildings; they are living records of the past, each with a story to tell about the people and events that shaped our nation.

Preserving these buildings is vital because they serve as a tangible link to our shared heritage. Their architecture and design reflect the craftsmanship and values of a different time, and conserving them allows future generations to experience that legacy firsthand. Heritage conservation goes beyond maintenance — it is about protecting the integrity of the structure and ensuring that its history remains accessible and authentic.

At AAC, VTVCH, TAH, and SAC, high-quality assurance is essential. Every decision, from material choice to restoration techniques, must respect the original design and historical significance of the building. These sites are more than just physical spaces; they're a testament to the country's cultural identity. By preserving them, we ensure that the stories they hold continue to inspire and educate those who come after us.



GREENING THE ARTS

SUSTAINABILITY AT THE HEART OF SINGAPORE'S ARTS SCENE

Throughout the year, NAC supports a diverse lineup of flagship arts events that unite artists, creators, and audiences from around the world. Key highlights include SWF, SIFA and SAW.

As these events grow in both size and influence, more vendors and event partners have begun adopting eco-friendly practices to manage their environmental footprint (refer to **Page 20** of this Report for more details on such initiatives).

In the future, we look forward to discovering new ideas and innovation in untapped opportunities where we can leverage these events to drive and accelerate environmental progress across the arts sector.

**01.**

Event Management And Vendor Selection

Setting clear sustainability criteria during the planning stages of events, including vendor selection, leasing agreements, and venue requirements, can have a significant impact on reducing the carbon footprint of these festivals.

02.

Sustainability Tracking

Maintaining a record of vendors who already incorporate sustainability elements in their setups can help promote eco-friendly practices. By partnering with these vendors, events can inspire others to adopt similar standards.

03.

Public Awareness And Influence

Events serve as a platform for raising public awareness about sustainability. The more organisers emphasise eco-conscious choices, the more the public will embrace these practices, creating a ripple effect that leads to broader environmental action.



APPENDIX



LIST OF ARTS CENTRES

The list of arts centres included in the scope of NAC's FY2023 environmental disclosures are as follows:

- 1 42 Waterloo Street (42WS)
- 2 Aliwal Arts Centre (AAC)
- 3 Drama Centre (DC)
- 4 Goodman Arts Centre (GAC)
- 5 Stamford Arts Centre (SAC)
- 6 The Arts House (TAH)
- 7 Victoria Theatre and Concert Hall (VTVCH)





Images courtesy of Arts House Limited

TECHNICAL ANNEX

GREENHOUSE GAS EMISSIONS

Organisation Boundary

NAC adopts the financial control approach, with reference to the Greenhouse Gas Protocol (“GHGP”). Financial control refers to arts centres where NAC has the authority to govern financial and operating policies. This includes situations where NAC holds the ability to influence financial and operational decisions, even without full ownership. Such control enables NAC to dictate the budget, resource allocation, or strategic direction of the arts centres included in this Report.

Scope 2 Emissions Factor

The emission factor used to calculate NAC’s Scope 2 emissions references data from the Singapore Energy Market Authority.

ENERGY

Scope and Methodology

Energy use includes electricity consumed from the grid, excluding solar energy generated and utilised on-site.

All reported energy data is based on electricity bills provided by NAC’s electricity service provider and covers all arts centres within the scope defined in NAC’s annual environmental sustainability disclosure.

Calculation of Energy Utilisation Index (EUI)

CALCULATION OF BASELINE EUI:

$$\frac{\sum \text{Total electricity consumed at arts centres between FY2018 and FY2020 (kWh)}}{\sum \text{Total gross floor area of arts centres between FY2018 and FY2020 (m}^2\text{)}}$$

CALCULATION OF ANNUAL EUI:

$$\frac{\sum \text{Electricity consumed at arts centres during the financial year (kWh)}}{\sum \text{Gross floor area of arts centres during the financial year (m}^2\text{)}}$$



Images courtesy of Arts House Limited

WATER

Scope and Methodology

Water consumption includes potable water sourced from Singapore’s Public Utilities Board and non-potable NEWater but excludes recycled water.

All reported water data is based on waste bills provided by NAC’s water service provider and covers all arts centres within the scope defined in NAC’s annual environmental sustainability disclosure.

Calculation of Water Efficiency Index (WEI)

CALCULATION OF BASELINE WEI:

$$\frac{\Sigma \text{ Total water consumed at arts centres between FY2018 and FY2020 (litres)}}{\text{Average number of operational days of arts centres per year between FY2018 and FY2020} * \Sigma [\text{Average number of staff per day across arts centres} + 0.25 * (\text{Average number of visitors per day across arts centres}) \text{ between FY2018 and FY2020}]}$$

CALCULATION OF ANNUAL WEI:

$$\frac{\text{Total water consumed at arts centres during the financial year (litres)}}{\text{Average number of operational days of arts centres during the financial year} * [\text{Average number of staff per day across arts centres} + 0.25 * (\text{Average number of visitors per day across arts centres}) \text{ during the financial year}]}$$

WASTE

Scope and Methodology

Waste disposed includes non-recycled waste only.

All reported waste data is based on waste bills provided by NAC’s waste collector and covers all arts centres within the scope defined in NAC’s annual environmental sustainability disclosure, excluding those under renovation or where NAC operates as a tenant.

Calculation of Waste Disposal Index (WDI)

CALCULATION OF BASELINE WDI:

$$\frac{\text{Total waste disposed in FY2022 (kg)}}{\text{Average number of operational days of arts centres in FY2022} * \Sigma [\text{Average number of staff per day across arts centres} + 0.25 * (\text{Average number of visitors per day across arts centres}) \text{ in FY2022}]}$$

CALCULATION OF ANNUAL WDI:

$$\frac{\text{Total waste disposed during the financial year (kg)}}{\text{Average number of operational days of arts centres during the financial year} * [\text{Average number of staff per day across arts centres} + 0.25 * (\text{Average number of visitors per day across arts centres}) \text{ during the financial year}]}$$

Contact Details

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