PUB SINGAPORE'S NATIONAL WATER AGENCY

ANNUAL REPORT
2017/2018

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PUB, Singapore's National Water Agency
Annual Report for the year ended 31 March 2018

In the opinion of the directors, the annual report of the PUB, Singapore's National Water Agency is drawn up so as to present fairly the state of affairs of the PUB, Singapore's National Water Agency as at 31 March 2018.

On behalf of the Board of Directors,

Chiang Chie Foo
Chairman

Ng Joo Hee
Chief Executive Officer

OUR MISSION

To ensure an efficient, adequate & sustainable supply of water.

OUR VISION

Water for All:
Conserve, Value, Enjoy.

MAJOR SHAREHOLDER OF SUBSIDIARY COMPANIES

S/N	NAME OF SUBSIDIARY COMPANY	% SHAREHOLDINGS IN COMPANY
1	PUB Consultants Private Limited	100%
2	Singapore International Water Week Pte Ltd	100% owned by PUB Consultants Private Limited

ORGANISATIONAL STRUCTURE

BOARD
CHIANG CHIE FOO
Chairman

Internal Audit reports to the Board

Enterprise Risk Management reports to the Board

- **NG JOO HEE** — *Chief Executive*
  - **CHAN YOON KUM** — *Senior Consultant*
  - **TAN YOK GIN** — *Deputy Chief Executive (Operations)*
    - MECHANICAL, ELECTRICAL, INSTRUMENTATION, CONTROLS & AUTOMATION — **YAHYA ABD GHANI**, *Director*
    - JOINT OPERATIONS — **PENG KAH POH**, *Director*
    - WATER QUALITY — **LIM MONG HOO**, *Director*
    - CENTRALISED SERVICES — **GEORGE MADHAVAN**, *Director*
    - SPECIAL PROJECTS & PROCUREMENT — **YOUNG JOO CHYE**, *Director*
    - DEEP TUNNEL SEWERAGE SYSTEM PHASE 2 — **YONG WEI HIN**, *Director*
    - CATCHMENT & WATERWAYS — **YEO KENG SOON**, *Director*
    - WATER SUPPLY (PLANTS) — **BERNARD KOH**, *Director*
    - WATER SUPPLY (NETWORK) — **RIDZUAN ISMAIL**, *Director*
    - WATER RECLAMATION (PLANTS) — **OOI KIAN ENG**, *Director*
    - WATER RECLAMATION (NETWORK) — **MAURICE NEO**, *Director*
  - **RICHARD HOO** — *Deputy Chief Executive (Policy & Development)*
    - **TAN NGUAN SEN**, *Chief Sustainability Officer*
    - INFOTECH & DIGITAL TRANSFORMATION — **MICHAEL TOH**, *Chief Information Officer*
    - FINANCE — **CHEW SIOW NEE**, *Chief Financial Officer*
    - ORGANISATIONAL EXCELLENCE — **TAN CHIAN CHERN**, *Director*
    - POLICY & PLANNING — **WILLIAM YEO**, *Director*
    - ENTERPRISE RISK MANAGEMENT — **TAN THAI PIN**, *Chief Risk Officer*
    - HUMAN RESOURCES — **ANGELA KOH**, *Director*
    - 3P NETWORK — **CINDY KENG**, *Director*
    - SINGAPORE WATER ACADEMY — **CHEW CHEE KEONG**, *Director*
  - **HARRY SEAH** — *Assistant Chief Executive (Future Systems & Technology)*
    - TECHNOLOGY — **HARRY SEAH**, *Chief Engineering & Technology Officer*
    - INDUSTRY DEVELOPMENT — **PANG CHEE MENG**, *Director*
- INTERNAL AUDIT OFFICE — **LAWRENCE FONG**, *Head*

The key management personnel are listed in the organisation structure above.

BOARD OF DIRECTORS

MR CHIANG CHIE FOO
Chairman, PUB

MR NG JOO HEE
Chief Executive, PUB

MR ABU BAKAR BIN MOHD NOR
Managing Director,
Keppel Singmarine Pte Ltd
Keppel Offshore & Marine Limited
(Gas & Specialised Vessels)

MR S THIAGARAJAN
General Manager,
Workplace Safety and
Health Council

MR TAN SIONG LENG
Deputy Chief Executive,
URA (retired)

MS JANET ANG
Vice President,
Industry Solutions,
IBM Asia Pacific,
Systems of Engagement
& Smarter Cities

PROF QUEK TONG BOON
Chief Executive,
National Robotics Programme

MS RACHEL ENG
Deputy Chairman,
WongPartnership LLP

MR TAN WAH YEOW
Board Director,
KPMG Singapore (retired)

MR CHAN BENG SENG
Group Director,
Financial Resource Management,
Healthcare Finance (Subvention)
and Sector Development &
Commissioning Divisions
Ministry of Health

PROF CHAN ENG SOON
Provost's Chair Professor,
Faculty of Engineering,
National University
of Singapore

KEY HIGHLIGHTS AND ACHIEVEMENTS

PUB has had an eventful year filled with significant milestones that mark our growing efforts to continue supplying good and clean water, reclaiming used water, and taming stormwater. The past year has also seen efforts invested in new programmes and technologies to manage water demand and boost productivity. Beyond expanding our water infrastructure and network, we continue to build the capabilities of our workforce and the water industry, and engage the community as advocates for the water cause.

Here are the key highlights from the past year.

STRENGTHENING WATER SUPPLY

June 2017: Ground-Breaking Ceremony of Keppel Marina East Desalination Plant

September 2017: Awarded project for Jurong Island Desalination Plant

ENCOURAGING COMMUNITY OWNERSHIP

March 2018: Garnered over 110,000 water-saving pledges from the community throughout the month of the Singapore World Water Day 2018 celebrations

RECLAIMING USED WATER

June 2017: Signed a Memorandum of Understanding (MOU) with the National Environment Agency (NEA) for the integration of Tuas Water Reclamation Plant (WRP) with the NEA's Integrated Waste Management Facility

September 2017: Commenced Construction Works for The Deep Tunnel Sewerage System (DTSS) Phase 2 Project

October 2017: Commenced Phase 5 of the ongoing comprehensive asset renewal programme to rehabilitate another 200km of sewers progressively from 2017 to 2024

WATER PRICE REVISION

July 2017: Commenced First Phase of the Water Price Revision

MANAGING WATER DEMAND

DOMESTIC EFFORTS

April 2017: Introduced a 4-tick water efficiency rating for washing machines

June 2017: Commenced the Water Closet (WC) Replacement Programme for eligible households to replace their non water-efficient 9-litre WCs for free

June 2017: Implemented trial of WaterGoWhere mobile application as part of Automated Meter Reading (AMR) for over 500 households in Punggol to allow prompt identification of leaks

NON-DOMESTIC EFFORTS

March 2018: Launched 'Best Practice Guide in Water Efficiency – Buildings'

BUILDING CAPABILITIES

SINGAPORE WATER ACADEMY

July 2017: Commenced key training programmes accredited under the Singapore Workforce Skills Qualifications

January 2018: Rolled out PUB's engineering competency frameworks

SINGAPORE INTERNATIONAL WATER WEEK SPOTLIGHT 2017

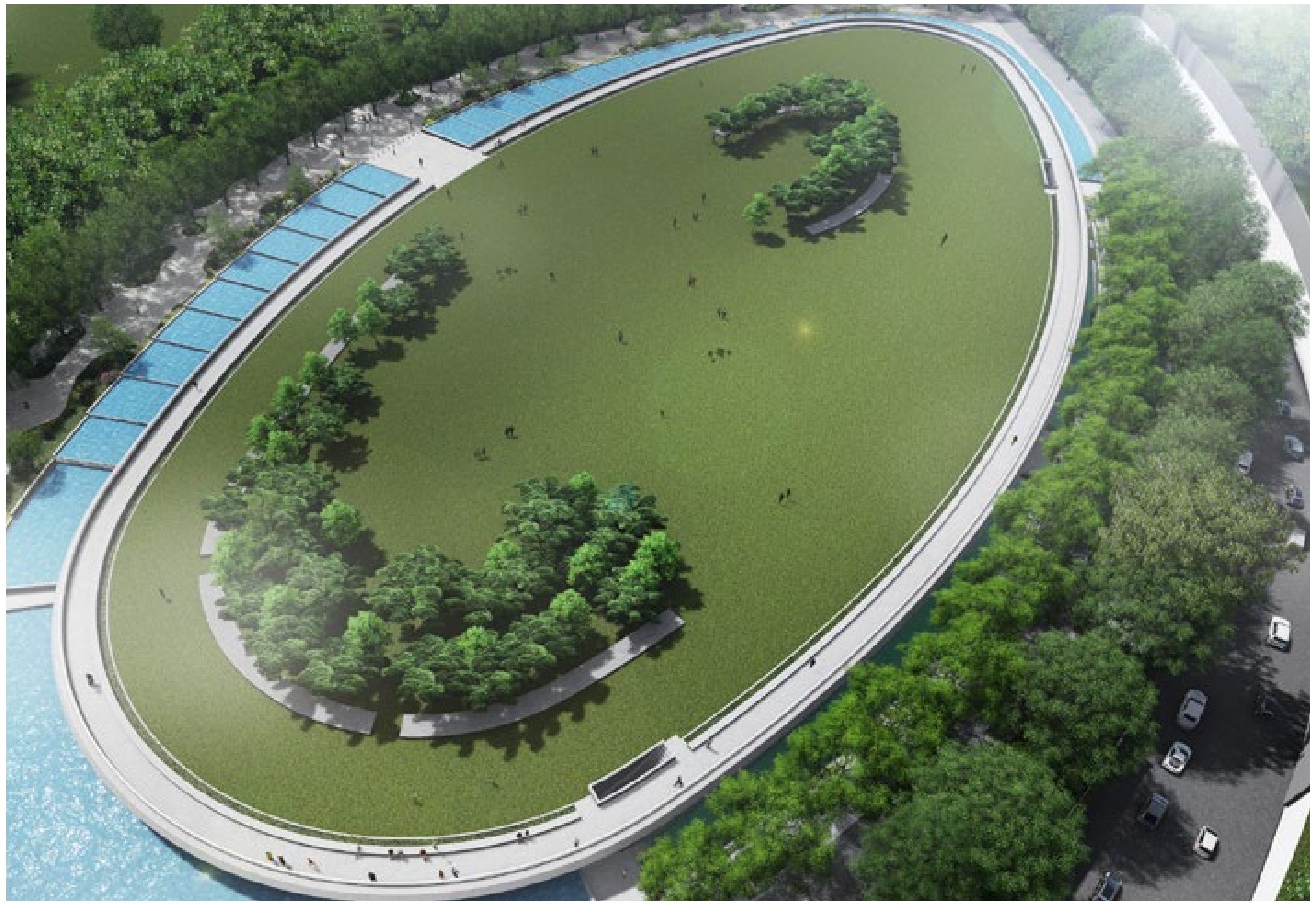
July 2017: Signed two Memorandum of Understanding (MOU) with Saudi Arabia's Saline Water Conversion Corporation and Western Australia's Water Corporation

July 2017: Launched the Kurita R&D Centre in Singapore

April 2018: Implemented the new Licensed Plumber scheme

STRENGTHENING WATER SUPPLY

As we experience climate change, Singapore's water supply faces a myriad of challenges. Over the years, PUB has strived to diversify Singapore's water supply to ensure that the nation's water needs are not solely dependent on rainfall. Alternative water sources such as NEWater and Desalinated Water serve as key pillars in Singapore's water strategy, making our water supply more resilient and sustainable.



KEPPEL MARINA EAST DESALINATION PLANT

The ground-breaking ceremony on 29 June 2017 signalled the start of construction works on Keppel Marina East Desalination Plant, Singapore's fourth desalination plant. The plant is due for completion in early 2020 and will be the first large-scale dual-mode desalination plant that can treat both freshwater from the Marina Reservoir and seawater. Water can be channelled from either source depending on weather conditions.

The Keppel Marina East Desalination Plant will also be the first to feature a green rooftop that can serve as a recreational area for the public, with a capacity for 700 people. Built on a three-hectare plot of land, the plant will be integrated with the Eastern Coastal Park Connector Network which connects East Coast Park and Gardens by the Bay East.

JURONG ISLAND DESALINATION PLANT

PUB is developing a plant on Jurong Island, which is expected to be operational by 2020. It will add 30 million gallons (mgd) or approximately 137,000 cubic metres of water per day to the nation's water supply.

The project was awarded in September 2017 to Tuas Power-Singapore Technologies Marine consortium, with the water purchase agreement signing ceremony held on 6 November 2017.

RECLAIMING USED WATER

As part of PUB's efforts to build resilience, we are continually exploring improvements to processes pertaining to maintenance and operations for reclaiming used water. Upgraded and expanded water networks and operational capabilities ensure that the daily supply of water stays reliable and sustainable.

WATER RECLAMATION: SEWER NETWORK EXPANSION AND REHABILITATION

PUB must expand its sewer network to continue conveying used water from domestic and commercial users to water reclamation facilities for treatment and production into NEWater. Currently, there are 42 sewer network expansion construction contracts ongoing, including major sewerage schemes such as the construction of sewers at North Woodlands, Lim Chu Kang and Upper Changi Road East areas. These schemes employ the latest technologies and innovations in underground construction that allow PUB to overcome the difficult conditions within Singapore's highly urbanised terrain.

PUB has an ongoing comprehensive asset renewal programme to inspect and rehabilitate aged and defective public sewers to restore their structural integrity and performance. Since 1996, about 1,900km (or 54%) of public sewers has been rehabilitated under Phases 1 to 4. Phase 5 of the programme has been rolled out in October 2017 to rehabilitate another 200km of sewers progressively from 2017 to 2024.

Since 2006, PUB has also put in place a rehabilitation programme for private sewers. Approximately 240km of private sewers in the catchments of Marina, Punggol-Serangoon and Jurong Lake Reservoirs have since been rehabilitated. PUB plans to extend this programme to the rest of Singapore.

DEEP TUNNEL SEWERAGE SYSTEM (DTSS) PHASE 2

As of 2017, construction works for the DTSS Phase 2 project have commenced. The project completes the super highway for used water management by extending the existing deep tunnels to serve the western part of Singapore. DTSS Phase 2 consists of a conveyance system of deep tunnels and link sewers, and will be connected to the water reclamation facility within the Tuas Nexus. Once the DTSS Phase 2 project is completed in 2025, existing water reclamation plants at Jurong and Ulu Pandan, as well as intermediate pumping stations, will be progressively phased out, releasing land for higher-value developments.

TUAS NEXUS

Tuas Nexus – the integration of PUB's Tuas Water Reclamation Plant (Tuas WRP) with NEA's Integrated Waste Management Facility (IWMF) – is the first of its kind in the world planned from the ground up. It marks Singapore's first initiative to harness potential synergies of the water-energy-waste nexus by integrating used water and solid waste treatment processes and allows us to maximise energy and resource recovery, while maintaining a small footprint. With an initial treatment capacity of 800,000 cubic metres per day, Tuas WRP will be the largest membrane bioreactor facility in the world.

WATER PRICE REVISION

As Singapore continues to strive towards a sustainable future, more must be done to ensure water is a readily available resource. With that, heavy investments in water infrastructure and rising operational costs have made the increase in water prices necessary.

WATER PRICE REVISION

In February 2017, the Government announced that water prices would be increased in two steps, on 1 July 2017 and 1 July 2018. To help households manage the price hike, the Government provides eligible HDB households with permanent additional U-Save rebates, ranging from $40 to $120 per annum.

The price increase goes towards meeting the cost of water treatment, reservoir operations, NEWater production, desalination, used water collection and treatment, as well as the maintenance and expansion of the island-wide network of water pipelines.

Key Changes to the Water Price Revision

1

Sanitary Appliance Fee and Waterborne Fee (WBF) restructured into a single volume-based fee to provide a more direct link between water usage and charges.

2

A second tier WBF introduced for households with monthly consumption above 40m³ to further discourage excessive use of water.

MANAGING WATER DEMAND

DOMESTIC EFFORTS

PUB is constantly looking to promote use of water-efficient home appliances and tap on behavioural insights to boost water savings within the domestic sector.

MORE WATER-EFFICIENT HOME APPLIANCES

To help households make more water-efficient choices when selecting home appliances, PUB introduced a 4-tick water efficiency rating for washing machines in April 2017. 0-tick taps and mixers were also phased out at the same time, which means only those with 1-tick or more can be sold or supplied. From 1 October 2018, PUB will also require dishwashers for household use to be labelled with their water efficiency ratings (1-tick to 4-tick).

WATER CLOSET REPLACEMENT PROGRAMME

In June 2017, PUB rolled out the Water Closet (WC) Replacement Programme to help eligible households on community assistance and residing in HDB flats built between 1987 and 1992 replace their non water-efficient 9-litre WCs for free. Through the programme, households can save up to five litres of water per flush and lower their monthly water usage by as much as 10%. As of end June 2018, PUB has replaced water-efficient WCs for almost 2,800 households and will continue to do so over the next two years.

AUTOMATED METER READING

The implementation of Automated Meter Reading (AMR) will allow prompt detection of leaks. As part of a trial for some 530 households in Punggol, customers were presented with their daily water consumption information and engaged in gamification activities via the WaterGoWhere mobile app to challenge themselves in reducing water consumption.

Using the hourly meter readings, coupled with data analytics, leak detection has been improved. Smaller leaks that would have escaped detection using bi-monthly meter readings can now be detected with AMR.

The trial had elicited positive responses from the customers with 50% of customers signing up for the app since its introduction in June 2017. The participating households were able to achieve water savings of up to 5% of their monthly usage through early leak detection and water-saving behaviours.

MANAGING WATER DEMAND

NON-DOMESTIC EFFORTS

PUB has implemented mandatory practices for non-domestic water users as part of its holistic efforts towards water conservation. Since January 2015, more than 600 large non-domestic water users (or 'qualifying consumers') now have to install private meters to monitor water consumption and submit their Water Efficiency Management Plan (WEMP) annually to PUB.

BETTER INDUSTRY PRACTICES

With the data collected from WEMP and through consultations with the industry, PUB has developed water efficiency benchmarks and documented best practices for the building sector and published the 'Best Practice Guide in Water Efficiency – Buildings' in March 2018. PUB will continue to progressively develop water efficiency benchmarks and guidelines of good practices for the other sectors so that water-efficient practices become a norm across various industries in Singapore. The 'Best Practice Guides' for the wafer fabrication and semiconductor sector, and the refineries, petrochemicals and chemicals sector were launched in July 2018.

From 2019 onwards, at least one WEMP representative for each qualifying consumer will be required to be certified as a Water Efficiency Manager. This further emphasises the high water efficiency standards that industries should work towards.

BUILDING CAPABILITIES

PUB works together with government organisations, private companies and research institutes to grow Singapore into a thriving global hydrohub. To extend efforts in this area, PUB must take on an integrated response to urban challenges in order to provide holistic support of Singapore's future growth, liveability and resilience.

ENHANCED ENGINEERING COMPETENCY FRAMEWORKS

PUB set up the Singapore Water Academy (SgWA) in February 2016 with the mission to build current and future organisational capabilities through competency-based training and development for PUB staff and the water industry.

As part of growing efforts to build capabilities and competency within the workforce, PUB's engineering competency frameworks which document the skills and knowledge required for engineering jobs in PUB were rolled out in January 2018. These frameworks guide the implementation of structured training plans to systematically develop engineering competencies for over 2,500 PUB engineers.

Key training programmes include structured on-the-job training as well as customised technical courses curated and accredited under the Singapore Workforce Skills Qualifications. PUB also organised the Singapore Water Management Series (SgWM) on Sustainable Urban Stormwater Management in July 2017, attended by 25 participants.

SINGAPORE INTERNATIONAL WATER WEEK

The SIWW Spotlight 2017 was held from 17 to 19 July 2017. Over 200 utility leaders attended the event. The key highlights included the signing of two Memorandum of Understanding (MOU) by PUB with Saudi Arabia's Saline Water Conversion Corporation and Western Australia's Water Corporation respectively, as well as the launch of the Kurita R&D Centre in Singapore.

LICENSED PLUMBER SCHEME

Under the new Licensed Plumber scheme that was implemented on 1 April 2018, sanitary plumbers are required to be licensed under PUB's revised licensing scheme. Aimed at enhancing standards in the industry, both water service plumbers and sanitary plumbers will operate under a common license and need to be competent in carrying out both types of plumbing work.

Through training, licensing and enforcement against non-compliance with PUB's rules and regulations, PUB looks to streamline the operations of water service and sanitary plumbing.

ENCOURAGING COMMUNITY OWNERSHIP

Engineering for a sustainable future is not limited to building infrastructure and innovating new technologies. By partnering with the people, public and private sectors, we are able to better value, save and enjoy water as a precious resource.

SINGAPORE WORLD WATER DAY

Alongside World Water Day, held annually on 22 March, Singapore World Water Day (SWWD) was celebrated throughout the month of March. The theme for 2018 was "Make Every Drop Count", which highlighted the active role each of us can play to show our care for water.

More than 3,000 participants attended the SWWD Opening Ceremony, held on 3 March 2018, with Guest-of-Honour President Halimah Yacob kicking off the celebration. Throughout the month of March, more than 110,000 water-saving pledges were rallied from the community to practise the five water-saving tips at home. This strengthens the efforts made by over 700 organisations that joined in the celebrations with water conservation activities and outreach initiatives.

OUTLOOK FOR THE NEXT FISCAL YEAR

By 2060, Singapore's water use is projected to double from today's 430 million gallons per day. Other threats such as extreme weather conditions and climate change are also looming. PUB will continue to plan long-term and invest ahead of time and demand by building the capacity of our NEWater and Desalinated Water, pursuing mega infrastructural projects to enhance our used water management while maintaining existing water infrastructure. PUB will also continue to tap on research, technology and innovation to unlock potential water solutions for Singapore.

Beyond expanding our water network, we will continue our engagement with the community to conserve water and use this precious resource more efficiently through our targeted outreach programmes and campaigns.

STRENGTHENING WATER SUPPLY

June 2018: Tuas Desalination Plant begins operations

Ongoing: Continuous improvement to the water supply infrastructure

RECLAIMING USED WATER

May 2018 & 2019: Increased treatment capacity at Jurong Water Reclamation Plant and Changi Water Reclamation Plant

TAMING STORMWATER

September 2018: Completion of key drainage projects at Stamford Diversion Canal and Stamford Detention Tank

December 2018: Completion of key drainage project at Bukit Timah First Diversion Canal

GEARING TOWARDS A SUSTAINABLE / SMART PUB

First Quarter of 2018: Implementation of smart shower devices for 10,000 new HDB Build-To-Order flats under a demonstration project

Fourth Quarter of 2019: Deployment of floating solar photovoltaic systems at Bedok and Lower Seletar Reservoirs to power PUB's operational needs

BUILDING CAPABILITIES

July 2018: Over 24,000 participants from 110 countries participated in the Singapore International Water Week 2018

WATER PRICE REVISION

July 2018: Commencement of second phase of the Water Price Revision

ENCOURAGING COMMUNITY OWNERSHIP

March to October 2018: Celebrated Marina Barrage's 10th anniversary with 10 iconic events

Third Quarter to Fourth Quarter of 2018: Opening of five new sites under the Active, Beautiful, Clean Waters (ABC Waters) Programme

STRENGTHENING WATER SUPPLY

To strengthen water security, we are progressively building up NEWater and Desalinated Water supply capacities.

TUAS DESALINATION PLANT

Singapore's third desalination plant at Tuas was opened in June 2018, and is the first desalination plant to be owned and operated by PUB. It is also the first desalination plant in Singapore to combine dissolved air floatation with ultrafiltration pre-treatment processes to treat seawater, extending the lifespan of the treatment membranes.

WATER SUPPLY NETWORK

PUB plans ahead of time to ensure that investment in our water supply infrastructure keeps up with the rising water demand alongside increasing urbanisation. New pipelines are laid to meet development needs. There are currently 30 ongoing network expansion projects. PUB will also be expanding the water network in tandem with the development of new desalination plants and NEWater factories.

RECLAIMING USED WATER

One of PUB's key strategies for water management is to reuse water endlessly. PUB will continue to invest to develop our NEWater capacities further to meet the nation's growing water demands.

INCREASED TREATMENT CAPACITY

As part of its Phase 4 expansion for the management of industrial used water, treatment capacity at Jurong Water Reclamation Plant was increased from 45 to 57 million gallons per day (mgd) in May 2018. The project involves the installation of a thermal hydrolysis process facility, with a treatment capacity of 53 tons of dried solids per day, to improve the facility's sludge management capability.

At Changi Water Reclamation Plant, treatment capacity will be increased from 202 to 224 mgd by 2019 using membrane bioreactors which produce better treated effluent quality.

TAMING STORMWATER

From 2012 to end June 2018, drainage improvement works in some 338 locations have been completed. There are ongoing works in another 74 locations. In 2018, the following three key drainage projects will be completed: Stamford Diversion Canal, Stamford Detention Tank and Bukit Timah First Diversion Canal.

STAMFORD DIVERSION CANAL & STAMFORD DETENTION TANK

The Stamford Diversion Canal, together with the Stamford Detention Tank, is part of a holistic "source-pathway-receptor" approach to strengthen flood protection for the Stamford Canal Catchment. The new 2km-long canal will run underneath the road, from Tanglin to the Singapore River. The 6m to 14m wide diversion canal will channel stormwater from the upstream section of Stamford Canal catchment towards Singapore River and eventually into the Marina Reservoir.

The Stamford Detention Tank project, built beneath a nursery and coach bay of the Tyersall Learning Forest, will temporarily hold excess stormwater from the drains in Holland Road, which is upstream of the Stamford Canal catchment. The water will be pumped back into the drains for subsequent discharge into the Marina Reservoir after rain subsides.

BUKIT TIMAH FIRST DIVERSION CANAL

The Bukit Timah First Diversion Canal involves the widening and deepening of a section of the canal to enhance flood protection in the Upper Bukit Timah Catchment, which includes areas such as Ngee Ann Polytechnic, Beauty World Plaza, Bukit Timah Shopping Centre and Sime Darby Centre.

GEARING TOWARDS A SUSTAINABLE / SMART PUB

Over the years, PUB has been continually investing in technology to meet growing challenges of the future ahead with confidence. Board-wide solutions such as Intelligent Water Management System, Geographic Resource & Information and Catchment and Waterways Operation System have been enhanced to bring together real-time water quality and quantity, used water, and drainage operational data onto centralised platforms for better situational awareness and decision-making.

THE SMART PUB ROADMAP

The SMART PUB roadmap is aimed at identifying new applications of smart technologies for piloting, as well as to scale-up successful pilots to full scale implementation. The roadmap will also be complemented by the Digitalisation Plan, which identifies digital platforms and solutions to serve our internal and external customers better.

SMART SHOWERS

A NUS-PUB study showed that smart shower devices that indicated real-time water usage during showers help residents save water. Building on the positive findings, PUB is installing smart shower devices for 10,000 new HDB BTO flats under a demonstration project starting from 2018. This could help households save up to 3% of their monthly water bill.

FLOATING SOLAR PHOTOVOLTAIC SYSTEMS

Solar Photovoltaic (PV) systems provide a potential source of clean and renewable energy and contribute to Singapore's climate change mitigation efforts. Building on the 1 megawatt peak (MWp) floating solar PV test-bed system at Tengeh Reservoir that was launched in October 2016, comprehensive environmental and engineering studies are ongoing to assess the feasibility of deploying a 6.7 MWp system at Upper Peirce Reservoir and a 50 MWp system at Tengeh Reservoir.

To accelerate efforts for the integration of renewable energy, PUB has called a tender to conduct engineering studies for the deployment of floating solar PV systems of 1.5 MWp and 1 MWp at Bedok Reservoir and Lower Seletar Reservoir respectively. These two systems are expected to be deployed by 2019 and will generate renewable solar energy to support the power demand of PUB installations in the proximity.

BUILDING CAPABILITIES

To further expand industry knowledge and competencies, PUB has been reaching out not just locally but to experts and leaders overseas. By learning best practices, PUB ensures that our knowledge and skills will always remain relevant.

SINGAPORE INTERNATIONAL WATER WEEK

The biennial Singapore International Water Week (SIWW) is a leading platform for global water industry players to showcase innovations, share policy developments, and form partnerships in research and development. The SIWW welcomes the world's top leaders in the international organisations, industry and academia, and offers an unprecedented networking opportunity to interact and confer with high officials, heads of industry and opinion makers.

SIWW 2018 was held from 8 to 12 July 2018. It welcomed over 24,000 participants from 110 countries, with over S$23 billion worth of business announcements being made. PUB also took the opportunity to announce Memorandum of Understanding (MOU)s with Budapest Waterworks and Grundfos, the SMART PUB roadmap, Tuas Water Reclamation Plant projects and launched the Singapore Water Exchange. SIWW 2018 focused on areas such as advanced wastewater treatment and smart water systems, commercialisation and innovation, and integrated water management.

Professor Rita Colwell was awarded the 2018 Lee Kuan Yew Water Prize Award for her pioneering insights into microbial water quality surveillance, and her pivotal contributions in translating these insights into concrete practices and policies to better manage waterborne diseases and protect public health.

ENCOURAGING COMMUNITY OWNERSHIP

Beyond expanding our water infrastructure and network, we continue to call upon the community to take ownership of water. With the community working with us as water advocates, Singaporeans and our future generations will continue to enjoy a robust, sustainable and resilient water supply despite the environmental constraints that Singapore is naturally predisposed to.

MARINA BARRAGE'S 10TH ANNIVERSARY

Built across the mouth of Marina Channel, Marina Barrage serves as Singapore's 15th reservoir, and the first in the heart of the city. Officially opened to the public in October 2008, Marina Barrage has welcomed close to 15 million people from all over the world. A decade on, Marina Barrage is key to Singapore's water management. The barrage has secured an important source of water supply and alleviated floods in low-lying city areas including Jalan Besar, Boat Quay and Shenton Way. With its iconic location in the Marina Bay, the Marina Barrage has endeared itself to the young and old, transforming into a popular hangout for locals and tourists.

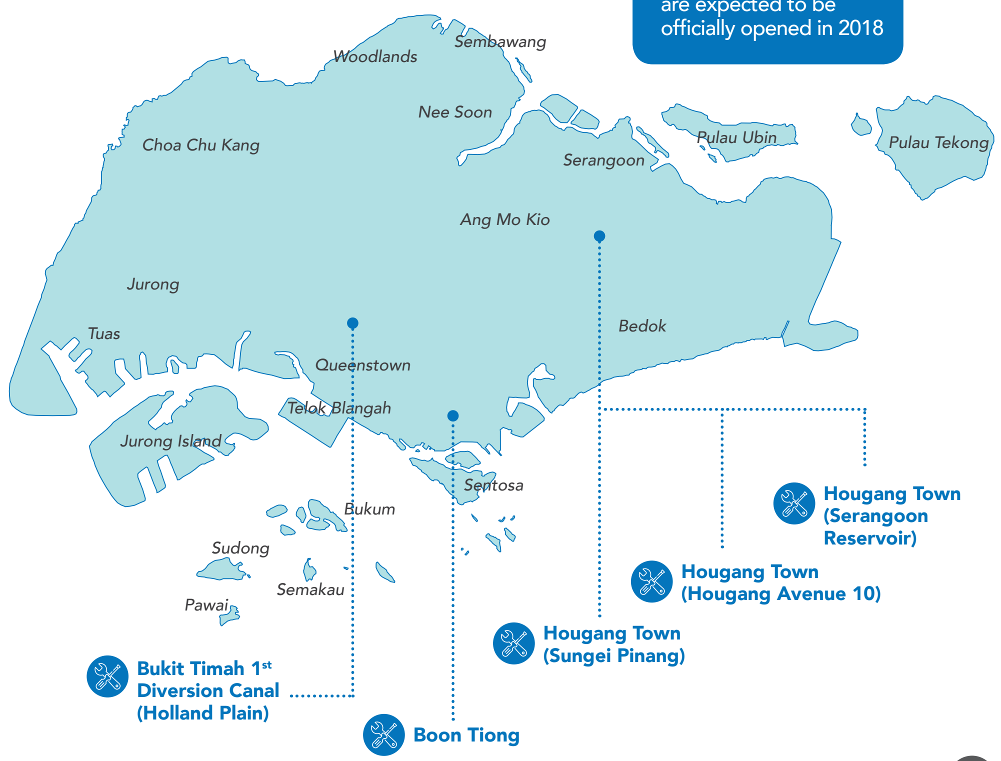
This year, the nation celebrates the 10th anniversary of the Marina Barrage with ten signature events held throughout the year, culminating in a grand finale in October 2018. A specially-curated tour of the barrage was also conducted for engineering students to provide technical insights to behind-the-scenes operations.

ACTIVE, BEAUTIFUL, CLEAN WATERS

PUB launched the Active, Beautiful, Clean Waters (ABC Waters) Programme in 2006 which aims to integrate beautiful and clean streams, rivers, and lakes into community spaces for all to enjoy. 36 projects have officially opened under the ABC Waters Programme since its launch. In addition, there are another 75 ABC Waters certified projects by other agencies and private developers where the ABC Waters design concept is incorporated as part of their developments.

More than 100 locations across Singapore have been identified as potential ABC Waters sites to be implemented by 2030.

5 ABC Waters sites are expected to be officially opened in 2018



PUB SINGAPORE'S NATIONAL WATER AGENCY

FINANCIAL REPORT
2017/2018

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FINANCIAL HIGHLIGHTS

FINANCIAL HIGHLIGHTS

For the financial year ended 31 March 2018

OPERATING RESULTS	Group[1] FY 2017 $ million	Group[1] FY 2016 $ million
Operating Income	1,286.2	1,222.4
Net Non-Operating Income	71.4	73.4
Operating Expenses	(1,324.0)	(1,270.2)
Finance Expenses	(84.0)	(84.8)
Net Loss before Government Grants	**(50.4)**	**(59.2)**
Government Operating Grants	332.9	298.8
Net Income after Government Grants and before Contribution to GCF and Taxation	**282.5**	**239.6**
Contribution to GCF	(48.4)	(40.3)
Taxation	-	(0.4)
Net Income after Government Grants and after Contribution to GCF and Taxation	**234.1**	**198.9**

FINANCIAL POSITION	Group[1] FY 2017 $ million	Group[1] FY 2016 $ million
Property, Plant and Equipment	7,854.3	7,147.4
Cash	513.4	683.3
Other Assets	278.9	243.4
Total Assets	**8,646.6**	**8,074.1**
Capital Account	5,571.3	5,335.2
Retained Earnings	1.3	3.4
Water Efficiency Fund	6.0	6.0
Borrowings	1,400.0	1,400.0
Other Liabilities	1,668.0	1,329.5
Total Equity and Liabilities	**8,646.6**	**8,074.1**
Average Total Assets ($ billion)	8.4	8.0
Return on Total Assets[2] %	3.6	3.4
Gearing Ratio[3] %	24.3	25.7

[1] Group is a consolidated account of Public Utilities Board, its wholly owned subsidiary, PUB Consultants Private Limited (PUBC) and PUBC's wholly owned subsidiary, Singapore International Water Week Pte. Ltd.

[2] Return on Total Asset = Return before Interest and after Contribution to GCF and Tax / Average Total Assets

[3] Gearing Ratio = Borrowings (include Finance Lease Payables)/Average Total Assets

PERFORMANCE OVERVIEW

The Group recorded a net income after Government grants and Contribution to GCF and Taxation of $234.1 million this year (prior year: $198.9 million). The increase in operating expenses was offset by the increase in operating income and Government operating grant bringing about a higher return by $35.2 million over the previous year and a Return on Total Assets of 3.6% (prior year: 3.4%).

OPERATING INCOME AND GOVERNMENT GRANTS

The Group's operating income of $1,286.2 million (prior year: $1,222.4 million) was from its water supply and used water operations. The Group's other major source of income of $332.9 million (prior year: $298.8 million) is from the Government operating grants for the operations and maintenance of the drainage systems, the Active, Beautiful, Clean Waters (ABC Waters) Programme as well as other government-funded activities.

OPERATING EXPENSES

The Group's operating expenses[4] totalled $1,324.0 million in FY2017 (prior year: $1,270.2 million). Operating expenses of the Group comprise largely of depreciation of property, plant and equipment, maintenance, manpower, electricity, research & development, administrative and other miscellaneous expenses incurred related to the collection, production, distribution and reclamation of water in Singapore.

FINANCIAL POSITION

As at 31 March 2018, the Group's total assets stood at $8,646.6 million (prior year: $8,074.1 million). The increase of $572.5 million was largely due to an increase in property, plant and equipment.

90.8% of the Group's total assets or $7,854.3 million (prior year: 88.5%, $7,147.4 million) are accounted for by property, plant and equipment which comprise land, pipelines, plant, equipment and buildings (to house the plant and equipment).

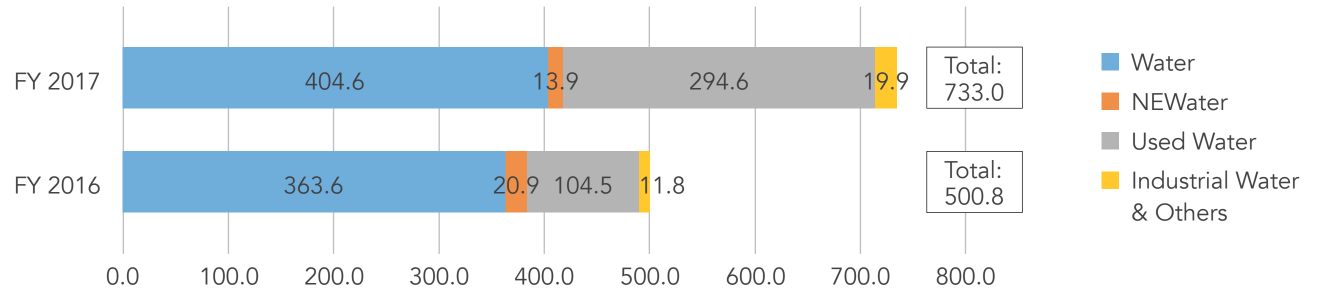
[4] The Group's operating expenses do not include depreciation expense for the drainage and used water reticulation network belonging to the Government.

FINANCIAL HIGHLIGHTS
For the financial year ended 31 March 2018

CAPITAL EXPENDITURE

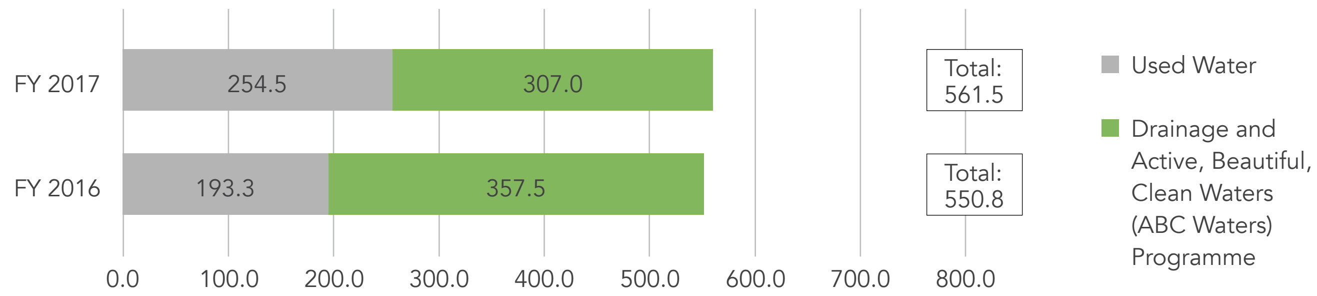
During the year, the capital expenditure of the Group was $1,294.5 million (prior year: $1,051.6 million). This comprises PUB-funded capital expenditure of $733.0 million and government-funded capital expenditure of $561.5 million as shown in the following charts:

PUB-Funded ($ million)



PUB spent $733.0 million (prior year: $500.8 million) in capital expenditure as part of its continual efforts to replace, improve and expand water and used water infrastructure to cater for future water needs of the nation. These infrastructure are funded from cash generated from revenue collected (net of expenses) and borrowings.

Government-Funded ($ million)



Government-funded capital expenditure of $561.5 million (prior year: $550.8 million) were for drainage network, used water reticulation network and the Active, Beautiful, Clean Waters (ABC Waters) Programme projects. These assets belong to the Government.

TEN-YEAR SUMMARY OF OPERATING RESULTS AND FINANCIAL POSITION

	FY 2017 12 months $'000	FY 2016 12 months $'000	FY 2015 12 months $'000	FY 2014[4] 12 months $'000	FY 2013 12 months $'000	FY 2012 12 months $'000	FY 2011 12 months $'000	FY 2010 12 months $'000	FY 2009 12 months $'000	FY 2008 12 months $'000
GROUP										
OPERATING RESULTS										
Operating Income	1,286,167	1,222,432	1,201,313	1,182,495	1,143,538	1,090,013	1,037,549	1,010,737	963,530	932,944
Operating Expenses	(1,323,969)	(1,270,242)	(1,239,334)	(1,193,636)	(1,138,645)	(1,064,474)	(1,037,056)	(998,773)	(849,155)	(799,196)
Net Operating (Loss)/Income	(37,802)	(47,810)	(38,021)	(11,141)	4,893	25,539	493	11,964	114,375	133,748
Net Non-Operating Income	71,411	73,459	56,345	49,842	47,686	30,252	26,000	19,768	21,152	22,380
Finance Expenses	(84,014)	(84,844)	(87,660)	(95,926)	(97,407)	(92,261)	(108,030)	(103,608)	(88,007)	(85,391)
Net (Loss)/Income before Government Grants	(50,405)	(59,195)	(69,336)	(57,225)	(44,828)	(36,470)	(81,537)	(71,876)	47,520	70,737
Government Grants	332,868	298,826	270,431	276,992	296,378	215,514	199,035	185,218	184,506	180,369
Net Income after Government Grants and before GCF and Tax*	282,463	239,631	201,095	219,767	251,550	179,044	117,498	113,342	232,026	251,106
Contribution to GCF and Tax*	(48,392)	(40,691)	(34,258)	(37,378)	(42,530)	(30,425)	(20,230)	(19,269)	(39,334)	(45,012)
Net Income after Government Grants and after Contribution to GCF and Tax*	234,071	198,940	166,837	182,389	209,020	148,619	97,268	94,073	192,692	206,094

* *Government Consolidated Fund and Corporate Tax*

	FY 2017	FY 2016	FY 2015	FY 2014[4]	FY 2013	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008
FINANCIAL POSITION										
Property, Plant and Equipment	7,854,348	7,147,445	6,793,808	6,778,733	6,855,671	6,652,223	6,649,186	6,561,603	6,407,977	4,254,573
Investment in Bonds	–	–	90,945	98,745	–	–	–	–	–	–
Financial Assets at Fair Value through Profit or Loss	–	–	–	–	–	–	–	–	50,452	63,793
Cash	513,438	683,301	830,546	780,255	1,088,925	888,985	750,624	1,056,169	400,523	114,877
Other Current Assets	270,042	236,746	220,954	215,554	203,059	182,107	166,636	169,663	333,720	2,195,992[5]
Other Non-Current Assets	8,778	6,572	5,743	9,012	195	196	265	376	524	669
Total Assets	8,646,606	8,074,064	7,941,996	7,882,299	8,147,850	7,723,511	7,566,711	7,787,811	7,193,196	6,629,904
Borrowings[1]	1,400,000	1,400,000	1,650,000	1,750,000	2,100,000	2,100,000	2,100,000	2,500,000	2,100,000	1,850,000
Deferred Income[1]	549,467	225,831	243,117	246,641	248,161	243,001	253,190	158,032	160,431	155,346
Finance Lease Payable[1]	629,320	658,882	512,793	535,317	556,558	399,223	415,284	430,472	323,209	277,312
Provision for Asset Restoration Obligations	12,345	12,613	13,829	14,577	27,047	26,517	26,157	–	–	–
Other Current Liabilities	476,915	432,163	376,767	355,537	418,246	365,952	331,881	356,376	360,698	291,080
Total Liabilities	3,068,047	2,729,489	2,796,506	2,902,072	3,350,012	3,134,693	3,126,512	3,444,880	2,944,338	2,573,738
Share Capital	1	1	1	1	1	1	1	1	1	1
Capital Account	5,571,307	5,335,175	5,138,057	4,972,795	4,790,787	4,582,817	4,057,458	4,057,458	4,057,458	3,475,605
Water Efficiency Fund	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Retained Earnings[2]	1,251	3,399	1,432	1,431	1,050	–	376,740	279,472	185,399	574,560
Total Equity	5,578,559	5,344,575	5,145,490	4,980,227	4,797,838	4,588,818	4,440,199	4,342,931	4,248,858	4,056,166
Total Liabilities and Equity	8,646,606	8,074,064	7,941,996	7,882,299	8,147,850	7,723,511	7,566,711	7,787,811	7,193,196	6,629,904
Net (Liabilities)/Assets of Trust Funds[3]	(59,179)	(52,403)	(36,939)	(38,115)	634	3,220	3,792	717	3,738	–

Notes:

1 *Borrowings, Deferred Income and Finance Lease Payable comprises current and non-current portion.*

2 *Retained earnings was set aside to meet the Board's capital commitments in accordance with Section 14 of the Public Utilities Act 2002.*

3 *From FY2009, assets and liabilities belonging to trust funds are excluded and presented separately from the Group's assets and liabilities.*

4 *With effect from FY2014, PUB took over the industrial water operations from the Government.*

5 *Current assets included PUB's prepayment for purchase of a water reclamation plant in FY2008.*

TEN-YEAR SUMMARY OF STATISTICAL DATA

	FY 2017	FY 2016	FY 2015	FY 2014	FY 2013	FY 2012	FY 2011	FY 2010	FY 2009	FY 2008
EMPLOYEES										
Number of employees as at end of period/year										
– PUB	**3,425**	3,442	3,421	3,382	3,229	3,196	3,129	3,125	3,095	3,099
– PUBC	**–**	–	–	–	–	–	–	5	29	41
Group	**3,425**	3,442	3,421	3,382	3,229	3,196	3,129	3,130	3,124	3,140
CUSTOMERS										
Number of accounts as at end of period/year ('000)	**1,567**	1,527	1,463	1,424	1,363	1,333	1,312	1,294	1,267	1,241
PERFORMANCE INDICATORS										
As at end of period/year										
– Number of accounts served per PUB employee	**458**	444	428	421	422	417	419	414	409	400
– Net Operating Income after grant per employee (S$'000)	**83**	73	68	79	93	75	64	63	96	100
For period January – December										
– Flood Prone Areas (hectare)[1]	**30**	31	32	34	36	40	48	56	66	79
– Number of Disruptions per month per 1,000 km of Sewers	**10**	11	11	11	12	13	14	15	17	19
– Per capita Household Water Consumption (litres/day)[2]	**143**	148	149	149	–	–	–	–	–	–
– Per capita Domestic Water Consumption (litres/day)[2]	**–**	–	151	150	151	152	153	154	155	156
– % of Unaccounted for Potable Water	**5.1**	5.0	5.0	5.2	5.2	4.7	5.0	5.2	4.6	4.4
– % of tests meeting WHO Guidelines for Drinking-Water Quality 2011 and EPH (Quality of Piped Drinking Water) Regulations 2008	**100**	100	100	100	100	100	100	100	100	100

	FY 2017 $ million	FY 2016 $ million	FY 2015 $ million	FY 2014 $ million	FY 2013 $ million	FY 2012 $ million	FY 2011 $ million	FY 2010 $ million	FY 2009 $ million	FY 2008 $ million
CAPITAL EXPENDITURE[3]										
FUNDED BY AND BELONGING TO PUB										
Water	**404.6**	363.6	157.6	102.0	135.5	117.7	82.2	123.1	132.5	144.5
NEWater	**13.9**	20.9	50.6	65.1	81.8	120.3	142.0	246.2	314.1	261.4
Used Water	**294.6**	104.5	94.7	51.0	64.2	20.2	28.1	21.0	72.9[5]	99.1
Industrial Water & Others[4]	**19.9**	11.8	17.0	4.2	0.1	7.2	14.1	21.1	4.9	5.0
Total	**733.0**	500.8	319.9	222.3	281.6	265.4	266.4	411.4	524.4	510.0
FUNDED BY AND BELONGING TO GOVERNMENT										
Used Water	**254.5**	193.3	193.7	140.3	142.6	161.5	169.5	241.0	132.5	129.2
Drainage	**307.0**	357.5	300.7	215.2	161.7	187.3	193.4	209.8	202.4	170.5
	561.5	550.8	494.4	355.5	304.3	348.8	362.9	450.8	334.9	299.7
Total	**1,294.5**	1,051.6	814.3	577.8	585.9	614.2	629.3	862.2	859.3	809.7

Notes:

1 *From FY2013 onwards, flood prone area (hectare) was reported based on calendar year. It was reported based on financial year previously.*

2 *From FY2016 onwards, the indicator was revised from "Per capita Domestic Water Consumption" to "Per capita Household Water consumption", which refers to water consumption within household premises only (i.e. usage in purpose built dormitories and common areas excluded).*

3 *Excluded capital expenditure funded by Government and belonging to PUB.*

4 *With effect from FY2014, PUB took over the industrial water operations from the Government.*

5 *FY2009 capital expenditure excluded the purchase of a water reclamation plant during the financial year.*

FINANCIAL STATEMENTS

To Members of the Board

Report on the Audit of the Financial Statements

Our opinion

In our opinion, the accompanying consolidated financial statements of Public Utilities Board (the "Board") and its subsidiaries (the "Group") and the statement of comprehensive income, statement of financial position and statement of changes in equity of the Board are properly drawn up in accordance with the provisions of the Public Utilities Act, Chapter 261 (the "Act") and Statutory Board Financial Reporting Standards in Singapore ("SB-FRSs") so as to present fairly, in all material respects, the state of affairs of the Group and the Board as at 31 March 2018 and the consolidated financial performance, consolidated changes in equity and consolidated cash flows of the Group and the financial performance and changes in equity of the Board for the financial year ended on that date.

What we have audited

The financial statements of the Board and the Group comprise:

- the statements of comprehensive income of the Group and the Board for the financial year ended 31 March 2018;
- the statements of financial position of the Group and the Board as at 31 March 2018;
- the consolidated statement of changes in equity of the Group and the statement of changes in equity of the Board for the financial year then ended;
- the consolidated statement of cash flows of the Group for the financial year then ended; and
- the notes to the financial statements, including a summary of significant accounting policies.

Basis for Opinion

We conducted our audit in accordance with Singapore Standards on Auditing ("SSAs"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We are independent of the Group in accordance with the Accounting and Corporate Regulatory Authority Code of Professional Conduct and Ethics for Public Accountants and Accounting Entities ("ACRA Code") together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code.

Our Audit Approach

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the accompanying financial statements. In particular, we considered where management made subjective judgments; for example, in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls, including among other matters consideration of whether there was evidence of bias that represented a risk of material misstatement due to fraud.

Report on the Audit of the Financial Statements *(continued)*

Our Audit Approach *(continued)*

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements for the financial year ended 31 March 2018. These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key Audit Matter	How our audit addressed the matter
Carrying values of property, plant and equipment ("PPE") and assessment of useful lives of PPE ***Refer to note 2.9(b), note 3 and note 13 to the financial statements*** As of 31 March 2018, the carrying value of PPE of the Group amounted to S$7,854.3 million. We had focused our audit on the carrying value of PPE because PPE accounts for the majority of the Group's total assets and significant management judgement is involved in determining the useful lives of PPE. Given the significance of PPE to the Group's financial statements, errors in estimating the useful lives of PPE could result in a material misstatement to the financial statements. Accordingly, we have identified this as a key audit matter.	Our audit procedures included the following: • We obtained understanding and validated the key controls over the Group's processes for accounting of property, plant and equipment, and noted that the determination of useful lives of PPE takes into consideration asset utilisation rate, internal technical evaluation, operational plans and technological developments. • We reviewed the appropriateness of management's estimates of the useful lives of PPE as follows: (i) Discussed with management on the operational plans of the PPE; (ii) Assessed management's estimate for the useful lives of new PPE acquired by tracing to underlying documentary support such as project documentation, technical assessment and vendor's specifications; (iii) Reviewed management's analysis of estimated useful lives of the PPE including the identification of conditions that may indicate significant changes to estimated useful lives such as expected usage of the asset, expected physical wear and tear, technical or commercial obsolescence and legal or similar limits on the use of the asset such as the expiry dates of related lease; and (iv) Compared the useful lives of the PPE against entities in the utilities industry based on published information of these entities. Based on our audit procedures performed, we found management's estimates of the useful lives of PPE to be reasonable.

Report on the Audit of the Financial Statements *(continued)*

Other Information

Management is responsible for the other information. The other information refers to all the sections of the annual report but does not include the financial statements and our auditor's report thereon. The other information is expected to be made available to us after the date of this auditor's report.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

When we read the other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions in accordance with SSAs.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements with the provisions of the Act and SB-FRSs, and for such internal controls as management determines is necessary to enable the presentation of financial statements that are free from material misstatement, whether due to fraud or error.

A statutory board is constituted based on its Act and its dissolution requires Parliament's approval. In preparing the financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless there is intention to wind up the Group or for the Group to cease operations.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Report on the Audit of the Financial Statements *(continued)*

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SSAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on other Legal and Regulatory Requirements

Opinion

In our opinion:

(a) the receipts, expenditure, investment of moneys and the acquisition and disposal of assets by the Board during the financial year are, in all material respects, in accordance with the provisions of the Act; and

(b) proper accounting and other records have been kept, including records of all assets of the Board and of those subsidiaries incorporated in Singapore of which we are the auditors whether purchased, donated or otherwise.

Basis for Opinion

We conducted our audit in accordance with SSAs. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Compliance Audit* section of our report. We are independent of the Group in accordance with the ACRA Code together with the ethical requirements that are relevant to our audit of the financial statements in Singapore, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ACRA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on management's compliance.

Responsibilities of Management for Compliance with Legal and Regulatory Requirements

Management is responsible for ensuring that the receipts, expenditure, investment of moneys and the acquisition and disposal of assets are in accordance with the provisions of the Act. This responsibility includes implementing accounting and internal controls as management determines are necessary to enable compliance with the provisions of the Act.

Auditor's Responsibilities for the Compliance Audit

Our responsibility is to express an opinion on management's compliance based on our audit of the financial statements. We planned and performed the compliance audit to obtain reasonable assurance about whether the receipts, expenditure, investment of moneys and the acquisition and disposal of assets are in accordance with the provisions of the Act.

Our compliance audit includes obtaining an understanding of the internal control relevant to the receipts, expenditure, investment of moneys and the acquisition and disposal of assets; and assessing the risks of material misstatement of the financial statements from non-compliance, if any, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Because of the inherent limitations in any accounting and internal control system, non-compliances may nevertheless occur and not be detected.

The engagement partner on the audit resulting in this independent auditor's report is Lee Kok Hooi.

PricewaterhouseCoopers LLP

Public Accountants and Chartered Accountants

Singapore, 5 July 2018

STATEMENTS OF COMPREHENSIVE INCOME

For the financial year ended 31 March 2018

	Note	GROUP 31 March 2018 $'000	GROUP 31 March 2017 $'000	BOARD 31 March 2018 $'000	BOARD 31 March 2017 $'000
Operating income	4	**1,286,167**	1,222,432	**1,285,786**	1,212,869
Operating expenses	5	**(1,323,969)**	(1,270,242)	**(1,323,440)**	(1,262,989)
Net operating loss		**(37,802)**	(47,810)	**(37,654)**	(50,120)
Net non-operating income	6	**71,411**	73,459	**73,411**	73,459
Net income before finance expenses and operating grants		**33,609**	25,649	**35,757**	23,339
Finance expenses	7	**(84,014)**	(84,844)	**(84,014)**	(84,844)
Net loss before operating grants		**(50,405)**	(59,195)	**(48,257)**	(61,505)
Operating grants from government		**332,868**	298,826	**332,868**	298,826
Net income after government grants and before contribution to government consolidated fund and taxation		**282,463**	239,631	**284,611**	237,321
Contribution to government consolidated fund	8(a)	**(48,392)**	(40,348)	**(48,392)**	(40,348)
Taxation	8(b)	**–**	(343)	**–**	–
Net income after government grants and after contribution to government consolidated fund and taxation		**234,071**	198,940	**236,219**	196,973
Other comprehensive income					
Items that will not be reclassified to profit or loss					
Net re-measurement gain/(loss) on pension obligation		**(87)**	145	**(87)**	145
Total comprehensive income		**233,984**	199,085	**236,132**	197,118
Attributable to:					
Shareholder of the Board		**233,984**	199,085	**236,132**	197,118

Chiang Chie Foo
Chairman

5 July 2018

Ng Joo Hee
Chief Executive

5 July 2018

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

STATEMENTS OF FINANCIAL POSITION

As at 31 March 2018

		GROUP		BOARD	
	Note	31 March 2018 $'000	31 March 2017 $'000	31 March 2018 $'000	31 March 2017 $'000
ASSETS					
Current assets					
Cash and cash equivalents	9	**513,438**	683,301	**512,153**	680,981
Inventories	10	**66,496**	66,849	**66,496**	66,849
Trade and other receivables	11	**201,050**	168,524	**197,730**	164,979
Prepaid and deferred expenses	12	**2,496**	1,373	**1,001**	1,358
		783,480	920,047	**777,380**	914,167
Non-current assets					
Property, plant and equipment	13	**7,854,348**	7,147,445	**7,854,348**	7,147,445
Investment in subsidiaries	14	**–**	–	**100**	100
Other receivables	11	**7**	21	**7**	21
Prepaid and deferred expenses	12	**8,771**	6,551	**8,771**	6,359
		7,863,126	7,154,017	**7,863,226**	7,153,925
Total assets		**8,646,606**	8,074,064	**8,640,606**	8,068,092
LIABILITIES					
Current liabilities					
Trade and other payables	15	**233,802**	220,981	**233,146**	219,513
Other liabilities	16	**194,721**	170,506	**194,692**	170,506
Provision for contribution to government consolidated fund and taxation		**48,392**	40,676	**48,392**	40,348
Finance lease payables	17	**31,261**	29,562	**31,261**	29,562
Deferred income	18	**21,281**	13,324	**17,267**	13,309
Borrowings	19	**400,000**	–	**400,000**	–
		929,457	475,049	**924,758**	473,238
Non-current liabilities					
Finance lease payables	17	**598,059**	629,320	**598,059**	629,320
Deferred income	18	**528,186**	212,507	**528,136**	211,745
Borrowings	19	**1,000,000**	1,400,000	**1,000,000**	1,400,000
Provision for asset restoration obligations	20	**12,345**	12,613	**12,345**	12,613
		2,138,590	2,254,440	**2,138,540**	2,253,678
Total liabilities		**3,068,047**	2,729,489	**3,063,298**	2,726,916
NET ASSETS		**5,578,559**	5,344,575	**5,577,308**	5,341,176
Equity					
Share capital	21	**1**	1	**1**	1
Retained earnings		**1,251**	3,399	**–**	–
Capital account	22	**5,571,307**	5,335,175	**5,571,307**	5,335,175
Water efficiency fund	23	**6,000**	6,000	**6,000**	6,000
		5,578,559	5,344,575	**5,577,308**	5,341,176
Supplementary information					
Net liabilities of trust funds	24	**(59,179)**	(52,403)	**(59,179)**	(52,403)

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

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the financial year ended 31 March 2018

		GROUP				
	Note	Share capital $'000	Retained earnings $'000	Capital account $'000	Water efficiency fund $'000	Total $'000
31 March 2018						
Beginning of financial year		**1**	**3,399**	**5,335,175**	**6,000**	**5,344,575**
Net income after government grants and after contribution to government consolidated fund and taxation for the year		–	234,071	–	–	234,071
Other comprehensive income for the year		–	(87)	–	–	(87)
Total comprehensive income for the year		**–**	**233,984**	**–**	**–**	**233,984**
Transfer to retained earnings upon utilisation	23	–	1,312	–	(1,312)	–
Transfer to top up water efficiency fund	23	–	(1,312)	–	1,312	–
Transfer to capital account	22	–	(236,132)	236,132	–	–
Total transactions with owners, recognised directly in equity		**–**	**(236,132)**	**236,132**	**–**	**–**
End of financial year		**1**	**1,251**	**5,571,307**	**6,000**	**5,578,559**
31 March 2017						
Beginning of financial year		**1**	**1,432**	**5,138,057**	**6,000**	**5,145,490**
Net income after government grants and after contribution to government consolidated fund and taxation for the year		–	198,940	–	–	198,940
Other comprehensive income for the year		–	145	–	–	145
Total comprehensive income for the year		**–**	**199,085**	**–**	**–**	**199,085**
Transfer to retained earnings upon utilisation	23	–	3,098	–	(3,098)	–
Transfer to top up water efficiency fund	23	–	(3,098)	–	3,098	–
Transfer to capital account	22	–	(197,118)	197,118	–	–
Total transactions with owners, recognised directly in equity		**–**	**(197,118)**	**197,118**	**–**	**–**
End of financial year		**1**	**3,399**	**5,335,175**	**6,000**	**5,344,575**

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

STATEMENT OF CHANGES IN EQUITY

For the financial year ended 31 March 2018

		BOARD				
	Note	Share capital	Retained earnings	Capital account	Water efficiency fund	Total
		$'000	$'000	$'000	$'000	$'000
31 March 2018						
Beginning of financial year		**1**	**–**	**5,335,175**	**6,000**	**5,341,176**
Net income after government grants and after contribution to government consolidated fund and taxation for the year		–	236,219	–	–	236,219
Other comprehensive income for the year		–	(87)	–	–	(87)
Total comprehensive income for the year		**–**	**236,132**	**–**	**–**	**236,132**
Transfer to retained earnings upon utilisation	23	–	1,312	–	(1,312)	–
Transfer to top up water efficiency fund	23	–	(1,312)	–	1,312	–
Transfer to capital account	22	–	(236,132)	236,132	–	–
Total transactions with owners, recognised directly in equity		**–**	**(236,132)**	**236,132**	**–**	**–**
End of financial year		**1**	**–**	**5,571,307**	**6,000**	**5,577,308**
31 March 2017						
Beginning of financial year		**1**	**–**	**5,138,057**	**6,000**	**5,144,058**
Net income after government grants and after contribution to government consolidated fund and taxation for the year		–	196,973	–	–	196,973
Other comprehensive income for the year		–	145	–	–	145
Total comprehensive income for the year		**–**	**197,118**	**–**	**–**	**197,118**
Transfer to retained earnings upon utilisation	23	–	3,098	–	(3,098)	–
Transfer to top up water efficiency fund	23	–	(3,098)	–	3,098	–
Transfer to capital account	22	–	(197,118)	197,118	–	–
Total transactions with owners, recognised directly in equity		**–**	**(197,118)**	**197,118**	**–**	**–**
End of financial year		**1**	**–**	**5,335,175**	**6,000**	**5,341,176**

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

PUBLIC UTILITIES BOARD AND ITS SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS

For the financial year ended 31 March 2018

		GROUP	
	Note	31 March 2018	31 March 2017
		$'000	$'000
Cash flows from operating activities			
Net loss before operating grants		**(50,405)**	(59,195)
Adjustments for:			
– Impairment loss on property, plant and equipment	5(c)	**14,550**	1,815
– Allowance for doubtful receivables, net	5(c)	**3,257**	906
– Allowance for inventory obsolescence	5(c)	**623**	277
– Depreciation of property, plant and equipment	5(c)	**316,871**	312,713
– Investment income from bonds		**–**	(504)
– Amortisation of bond premium		**–**	195
– Loss on disposal of property, plant and equipment	6	**3,530**	1,191
– Amortisation of deferred income	6	**(16,019)**	(13,506)
– Interest income from fixed deposits	6	**(8,301)**	(12,519)
– Finance expenses	7	**84,014**	84,844
		348,120	316,217
Change in working capital, net of effects from acquisition and disposal of subsidiaries:			
– Trade and other receivables		**(36,137)**	(10,281)
– Prepaid and deferred expenses		**(3,343)**	97
– Trade and other payables, and other liabilities		**20,863**	26,252
– Deferred income		**29,904**	(3,780)
– Inventories		**(270)**	(7,834)
		359,137	320,671
Payment for government consolidated fund and tax		**(40,676)**	(34,205)
Net cash provided by operating activities		**318,461**	286,466
Cash flows from investing activities			
Additions to property, plant and equipment		**(733,173)**	(497,102)
Maturity of investments		**–**	90,750
Disposal of property, plant and equipment		**500**	953
Interest and investment income received		**12,285**	13,526
Net cash used in investing activities		**(720,388)**	(391,873)

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

CONSOLIDATED STATEMENT OF CASH FLOWS

For the financial year ended 31 March 2018

	Note	GROUP 31 March 2018	GROUP 31 March 2017
		$'000	$'000
Cash flows from financing activities			
Grants received from government		**345,109**	319,570
Repayment of borrowings		**–**	(250,000)
Payment for finance lease		**(63,977)**	(56,139)
Interest expense on fixed rate bonds		**(49,068)**	(55,269)
Net cash used in financing activities		**232,064**	(41,838)
Net decrease in cash and cash equivalents		**(169,863)**	(147,245)
Cash and cash equivalents			
Beginning of financial year	9	**683,301**	830,546
End of financial year	9	**513,438**	683,301

Reconciliation of liabilities arising from financing activities

	1 April 2017	Cash changes			Non-cash changes	31 March 2018
		Principal and interest payments	Grants received from government	Government grant utilised	Interest expense	
	$'000	$'000	$'000	$'000	$'000	$'000
Advances received for government grant	23,727	–	345,109	(329,592)	–	39,244
Borrowings	1,400,000	(49,068)	–	–	49,068	1,400,000
Finance lease payables	658,882	(63,977)	–	–	34,415	629,320

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

NOTES TO THE FINANCIAL STATEMENTS

For the financial year ended 31 March 2018

These notes form an integral part of and should be read in conjunction with the accompanying financial statements.

1. General information

Public Utilities Board (the "Board") is a statutory board continued under the Public Utilities Act (Chapter 261), which came under the purview of the Ministry of Environment and Water Resources ("MEWR") on 1 April 2001. The address of its registered office is 40 Scotts Road, Environment Building, #22-01, Singapore 228231.

The principal activities of the Board established under the Public Utilities Act (Chapter 261) are to supply water to the public, and act as agent to the Singapore Government (the "Government") in the construction, management and maintenance of the public sewerage systems, public sewers, and storm water drainage systems belonging to the Government. The principal activities of its subsidiaries are set out in Note 14 to the financial statements.

2. Significant accounting policies

2.1 Basis of preparation

These financial statements have been prepared in accordance with the historical cost convention and are drawn up in accordance with the provision of the Public Utilities Act (Chapter 261) and Statutory Board Financial Reporting Standards ("SB- FRSs").

SB-FRSs include Statutory Board Financial Reporting Standards, Interpretations of SB-FRSs and SB-FRS Guidance Notes as promulgated by the Accountant- General. The Accountant-General is appointed as the legal authority to prescribe accounting standards for statutory boards under the Accounting Standards Act 2007 (No 39 of 2007) which came into effect on 1 November 2007.

As at 31 March 2018, the Group's and the Board's current liabilities exceeded their current assets by $146.0 million and $147.4 million respectively.

The Group and the Board will be able to pay their debts as and when they fall due, based on the cash flow projections for the financial year ending 31 March 2019 which has been approved by the board members. In addition, the Group and the Board will also tap the capital market to meet its funding requirements.

The preparation of financial statements in conformity with SB-FRSs requires management to exercise its judgment in the process of applying the Group's accounting policies. It also requires the use of certain critical accounting estimates and assumptions. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 3.

Interpretations and amendments to published standards effective in 2017

On 1 April 2017, the Group adopted the new or amended SB-FRS and Interpretations to SB-FRS ("INT SB-FRS") that are mandatory for application for the financial year. Changes to the Group's accounting policies have been made as required, in accordance with the transitional provisions in the respective SB-FRS and INT SB-FRS.

The adoption of these new or amended SB-FRS and INT SB-FRS did not result in substantial changes to the accounting policies of the Group and the Board and had no material effect on the amounts reported for the current or prior financial years.

2. Significant accounting policies *(continued)*

2.2 Revenue recognition

Revenue is recognised to the extent that it is probable that the economic benefits will flow to the Group and the revenue can be reliably measured, regardless of when the payment is made. Revenue is measured at the fair value of consideration received or receivable, taking into account contractually defined terms of payment and excluding taxes or duty. The Group assesses its revenue arrangement to determine if it is acting as principal or agent. The following specific recognition criteria must also be met before revenue is recognised:

(a) Revenue from water sales and used water services are recognised upon billing, which is based on customers' consumption of water and used water services.

Revenue from used water services comprises waterborne fee, sanitary appliance fee and trade effluent fee.

(b) Rental income is recognised on a straight-line basis over the period of the lease.

(c) Interest income is recognised on an accrual basis using the effective interest method.

(d) Dividend income is recognised when the shareholder's right to receive payment is established.

(e) Project management fee is recognised when the services are rendered.

2.3 Government grants

Grants are received for the operations and maintenance of drainage systems, the Active, Beautiful, Clean Water Programme and other government-funded activities.

Grants from the government are recognised as a receivable at their fair values when there is reasonable assurance that the grant will be received and the Group will comply with all the attached conditions.

Government grants receivable are recognised as income over the periods necessary to match them with the related costs which they are intended to compensate, on a systematic basis.

Government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred income in the statement of financial position, and are amortised and charged to profit or loss over the period necessary to match the annual depreciation charge of these assets or when the assets are disposed or written off.

2.4 Group accounting

Subsidiaries

Consolidation

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

In preparing the consolidated financial statements, intercompany transactions and balances and unrealised gains on transactions between group entities are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment indicator of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

2. Significant accounting policies *(continued)*

2.5 Contribution to government consolidated fund and income taxes

(a) Contribution to government consolidated fund

In lieu of income tax, the Board is required to make contribution to the Government Consolidated Fund in accordance with the Statutory Corporations (Contributions to Consolidated Fund) Act, Chapter 319A.

(b) Income taxes

The Group's income tax expense comprises current and deferred tax of the subsidiaries. Current income tax liabilities for current and prior periods are recognised at the amounts expected to be paid to the tax authorities, using the tax rates (and tax laws) that have been enacted or substantially enacted by the reporting date.

Deferred income tax assets/liabilities are recognised for all deductible/ taxable temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements except when the deferred income tax assets/liabilities arise from the initial recognition of an asset or liability in a transaction that is not a business combination and at the time of the transaction, affects neither accounting nor taxable profit or loss.

Deferred income tax asset is recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax assets and liabilities are measured at:

(i) the tax rates that are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled, based on tax rates (and tax laws) that have been enacted or substantially enacted by the reporting date; and

(ii) the tax consequence that would follow from the manner in which the Board's subsidiaries expect, at the reporting date, to recover or settle the carrying amounts of its assets and liabilities.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realised simultaneously.

Current and deferred income taxes are recognised as income or expenses in profit or loss for the period, except to the extent that the tax arises from a transaction which is recognised directly in statement of changes in equity.

2.6 Cash and cash equivalents

For the purpose of presentation in the consolidated statement of cash flows, cash and cash equivalents include cash at bank and deposits with financial institutions which are subject to an insignificant risk of change in value. These include cash with the Accountant-General's Department ("AGD"), that is managed by the AGD under the Centralised Liquidity Management as set out in the Accountant-General's Circular No. 4/2009 Centralised Liquidity Management for Statutory Boards and Ministries.

2.7 Inventories

The Group's inventories are consumables and spares used primarily for the treatment of water and used water; and maintenance of plant and equipment but not held for trading.

Inventories are stated at the lower of cost and net realisable value. Cost is determined on the weighted average method, and includes expenditure incurred in acquiring the inventories and other costs incurred in bringing them to their existing location and condition.

Inventories which are considered obsolete, deteriorated or damaged are recorded in the allowance for write-down of inventories before the inventories are authorised to be written off.

2. Significant accounting policies *(continued)*

2.8 Financial assets

(a) Classification

Financial assets are recognised when, and only when, the Group becomes a party to the contractual provisions of the financial instrument. The Group determines the classification of its financial assets at initial recognition and re-evaluates this designation at every reporting date, with the exception that the designation of financial assets at fair value through profit or loss is irrevocable.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are presented as current assets, except for those expected to be realised later than 12 months after the statements of financial position date which are presented as non-current assets. Loans and receivables are presented as "trade and other receivables" (Note 11) and "cash and cash equivalents" (Note 9) on the statements of financial position.

(b) Recognition and derecognition

Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership. On disposal of a financial asset, the difference between the carrying amount and the sale proceeds is recognised in profit or loss. Any amount previously recognised in other comprehensive income relating to that asset is reclassified to profit or loss.

(c) Initial measurement

Loans and receivables are initially recognised at fair value plus transaction costs.

(d) Subsequent measurement

Loans and receivables are subsequently carried at amortised cost using the effective interest method.

(e) Impairment

The Group assesses at each reporting date whether there is objective evidence that loan and receivables are impaired and recognises an allowance for impairment when such evidence exists. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy and default or significant delay in payments are objective evidence that these financial assets are impaired.

2.9 Property, plant and equipment

(a) Measurement

(i) Owned assets

On 1 May 1963, with the establishment of the Board, property, plant and equipment of the former City Council were vested in the Board at net book value. Property, plant and equipment are stated at historical cost less accumulated depreciation and accumulated impairment losses. The cost of an item of property, plant and equipment includes its purchase price, cost of replacing part of the property, plant and equipment and any cost that is directly attributable to the acquisition, construction, production or bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management.

When significant parts of property, plant and equipment are required to be replaced in intervals, such parts are capitalised and depreciated over their useful lives. The parts that are being replaced are written off. All other repair and maintenance costs are recognised in profit or loss as incurred.

The projected cost of dismantlement, removal or restoration is also included as part of the cost of property, plant and equipment if the obligation for dismantlement, removal or restoration is incurred as a consequence of acquiring or using the asset.

2. Significant accounting policies *(continued)*

2.9 Property, plant and equipment (continued)

(a) Measurement (continued)

(ii) Leased assets

Property, plant and equipment under finance lease is capitalised at an amount equal to the lower of its fair value and the present value of the minimum lease payments at the inception of the lease, less subsequent accumulated depreciation and impairment losses. Lease payments are allocated between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are taken to profit or loss.

(b) Depreciation

Depreciation of property, plant and equipment is charged from the month of acquisition of the asset or available for use as intended by management and is calculated on the straight-line method to allocate the depreciable amounts over their estimated useful lives.

The estimated useful lives of depreciable property, plant and equipment are as follows:

	Useful lives
Leasehold land	18 to 99 years, or the remaining lease period
Land development and buildings[1]	30 to 100 years
Plant and equipment	5 to 25 years
Pipelines	50 to 70 years
Others (mainly meters, vehicles and computer systems)	4 to 15 years

(1) Building comprise mainly civil structure to house plant and equipment.

No depreciation is charged on freehold land.

Capitalised leased assets are depreciated over the shorter of the estimated useful life of the assets and the lease term.

Assets under construction included in property, plant and equipment are not depreciated as these assets are not yet available for use.

Depreciation method, useful lives and residual values are reviewed and adjusted prospectively as appropriate, at each reporting date. The Group regularly reviews the useful lives of its property, plant and equipment. Arising from such reviews, property, plant and equipment which are obsolete, unserviceable or unidentifiable are written off.

(c) Disposal of assets

An item of property, plant and equipment is derecognised when no future economic benefits are expected from its use or disposal. Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with its carrying amount, and are recognised net in profit or loss.

2.10 Investments in subsidiaries

Investments in subsidiaries are carried at cost less accumulated impairment losses in the Board's statements of financial position. On disposal of an investment in subsidiary, the difference between disposal proceeds and the carrying amounts of the investment is recognised in profit or loss.

2. Significant accounting policies *(continued)*

2.11 Impairment of non-financial assets

Property, plant and equipment

Investments in subsidiaries

Property, plant and equipment and investments in subsidiaries are tested for impairment whenever there is any objective evidence or indication that these assets may be impaired.

For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less cost to sell and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash inflows that are largely independent of those from other assets. If this is the case, the recoverable amount is determined for the cash-generating-unit ("CGU") to which the asset belongs.

If the recoverable amount of the asset (or CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or CGU) is reduced to its recoverable amount.

The difference between the carrying amount and recoverable amount is recognised as an impairment loss in profit or loss.

An impairment loss for an asset (or CGU) is reversed if, and only if, there has been a change in the estimates used to determine the asset's (or CGU's) recoverable amount since the last impairment loss was recognised. The carrying amount of an asset (or CGU) is increased to its revised recoverable amount, provided that this amount does not exceed the carrying amount that would have been determined (net of any accumulated amortisation or depreciation) had no impairment loss been recognised for the asset (or CGU) in prior years.

A reversal of impairment loss for an asset (or CGU) is recognised in profit or loss.

2.12 Trade and other payables

Trade and other payables represent liabilities for goods and services provided to the Group prior to the end of the financial year which are unpaid. They are classified as current liabilities if payment is due within one year or less. Otherwise, they are presented as non-current liabilities.

Trade and other payables are initially recognised at fair value, and subsequently carried at amortised cost using the effective interest method.

2.13 Provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation and the amount has been reliably estimated.

Changes in the estimated timing or amount of the expenditure or discount rate are recognised in profit or loss when the changes arise.

2.14 Employee compensation

Employee benefits are recognised as an expense, unless the cost qualifies to be capitalised as an asset.

(a) *Central Provident Fund ("CPF") contributions*

Contributions to the Group's employees' salaries are made to the CPF as required by law. The CPF contributions are recognised as expenses in the period when the employees rendered their services.

(b) *Short-term employee benefits*

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed in the period when the employees rendered their services.

Employee entitlements to annual leave and performance bonus are recognised when they accrue to employees. A provision is made for the estimated liability for non-vesting annual leave and performance bonus as a result of services rendered by employees up to the reporting date.

PUBLIC UTILITIES BOARD AND ITS SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS
For the financial year ended 31 March 2018

2. Significant accounting policies *(continued)*

2.14 Employee compensation (continued)

(c) *Pension benefits*

The Group's net obligation in respect of long-term employee benefits is the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any related assets is deducted. The discount rate is the yield at the reporting date on Singapore Government Securities that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid. The calculation is performed using the projected unit credit method.

The Board, apart from the legally required contribution plans such as the Central Provident Fund, operates pension plans for pensionable employees transferred from the former Ministry of Environment. The Board's obligation is from 1 April 2001 to the earlier of the day of retirement and death of these employees. The provision for pension is recognised based on the hypothetical gratuity for each pensionable employee accrued from 1 April 2001 up to the reporting date. The hypothetical gratuity for each pensionable officer and Board's share of the gratuity is computed based on existing guidelines found in the Pension Act and circulars issued by the Public Service Division.

2.15 Borrowings costs

Borrowing costs are expensed in the period they occur. Borrowing costs consist of interest that the Group incurs in connection with its borrowings.

2.16 Leases – when the Group is the lessee

(a) *Finance leases*

Finance leases are capitalised at the inception of the lease at the fair value of the leased asset or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between the finance charges and reduction of the lease liability so as to achieve a constant rate of interest on the remaining balance of the liability. Finance charges are taken to profit or loss.

(b) *Operating leases*

Operating lease payments are recognised as an expense in profit or loss on a straight-line basis over the lease term. The aggregate benefit of incentives provided by the lessor is recognised as a reduction of rental expense over the lease term on a straight-line basis.

2.17 Currency translation

(a) *Functional and presentation currency*

Items included in the financial statements of each entity in the Group are measured using the currency of the primary economic environment in which the entity operates ("functional currency"). The financial statements are presented in Singapore Dollar, which is the functional currency of the Board.

(b) *Transactions and balances*

Transactions in a currency other than the functional currency ("foreign currency") are translated into the functional currency using the exchange rates at the dates of the transactions. Currency exchange differences resulting from the translation of monetary assets and liabilities denominated in foreign currencies at the closing rates at the reporting date are recognised in profit or loss.

Non-monetary items measured at fair values in foreign currencies are translated using the exchange rates at the date when the fair values are determined.

2. Significant accounting policies *(continued)*

2.18 Water Efficiency Fund

The Water Efficiency Fund was launched by the Board to encourage implementation of water conservation initiatives. The fund belongs to the Board and is reviewed periodically by the Board for adequacy. Additional contributions or refunds will be made to or from the fund as appropriate. Receipts and expenditure relating to the fund are accounted for directly in this fund on an accrual basis. Any utilisation of the fund during the financial year will be matched by transfers from the Board's retained earnings. Assets and liabilities of these funds are pooled with those of the Board in the statement of financial position.

2.19 Trust funds

The Board, in its role as an agent of the Government for the sewerage and drainage functions, receives funds from the Ministry of Environment and Water Resources ("MEWR") to defray the development costs of drainage networks and used water reticulation networks owned by the Government. In addition, it receives funds from MEWR and Singapore Totalisator Board for construction of projects under the Active, Beautiful, Clean Waters Programme, also owned by the Government. These funds are held in trust by the Board.

The funds received are accounted for separately under a trust fund as set out in Note 24. All transactions pertaining to activities supported by the funds are accounted for directly in the trust fund. Annual excess or shortfall in the funds after disbursing all development expenditure for MEWR will be refunded to or recovered from MEWR accordingly. The surplus funds received from Singapore Totalisator Board are returned when the construction of assets is completed.

The net assets or liabilities of the fund do not form part of the Board's assets and liabilities but are shown separately in the Group's Statement of financial position. The fund is accounted for on an accrual basis.

3. Critical accounting estimates, assumptions and judgements

The preparation of the Group's financial statements in conformity with SB-FRS requires management to make judgements, estimates and assumptions that affect the application of accounting policies, the reported amounts of assets, liabilities, income and expenses.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimates are revised and in any future periods affected. In particular, information about significant areas of critical judgements and estimation uncertainty in applying accounting policies that have the most significant effect on the amounts recognised in the financial statements are described below:

Depreciation of property, plant and equipment

Property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives. The Group reviews annually the estimated economic useful lives and residual values of property, plant and equipment based on factors that include asset utilisation rate, internal technical evaluation, operational plans and technological developments. If the estimated useful lives of property, plant and equipment were decreased/increased by 5%, the Group's depreciation charge would increase/decrease by $16.7 million (2017: $16.5 million).

4. Operating income

	GROUP		BOARD	
	31 March 2018	31 March 2017	31 March 2018	31 March 2017
	$'000	$'000	$'000	$'000
Water sales	**787,943**	790,281	**787,943**	790,281
Used water services	**497,843**	422,588	**497,843**	422,588
Other operating income	**381**	9,563	**–**	–
	1,286,167	1,222,432	**1,285,786**	1,212,869

5. Operating expenses

	Note	GROUP		BOARD	
		31 March 2018	31 March 2017	31 March 2018	31 March 2017
		$'000	$'000	$'000	$'000
Direct operating expenses:					
– electricity		**82,247**	82,454	**82,247**	82,454
– manpower		**281,244**	267,556	**281,040**	267,790
– depreciation		**313,737**	309,955	**313,737**	309,955
– impairment loss		**14,550**	1,815	**14,550**	1,815
– plant rental		**2,266**	1,828	**2,266**	1,828
– property tax		**17,151**	16,754	**17,151**	16,754
– maintenance and others	5(a)	**441,199**	432,895	**440,874**	425,408
		1,152,394	1,113,257	**1,151,865**	1,106,004
Indirect operating expenses:					
– service departments' costs	5(b)	**171,575**	156,985	**171,575**	156,985
	5(c)	**1,323,969**	1,270,242	**1,323,440**	1,262,989

(a) Included in maintenance and others are expenses related to the purchase of raw water from the Government of the State of Johor. Price for the purchase of raw water from and treated water sold to the Government of the State of Johor in accordance with the 1962 Water Agreement are based on the rate of 3 sen and 50 sen per thousand gallons respectively. In August 2002, the Johor Government had sought a review of the price of raw water. The Singapore Government's position is that Malaysia has lost the right of review.

(b) Service departments' costs comprise manpower, depreciation, maintenance, administrative and other expenses.

(c) Included in direct and indirect operating expenses are:

	Note	GROUP		BOARD	
		31 March 2018	31 March 2017	31 March 2018	31 March 2017
		$'000	$'000	$'000	$'000
Board members' allowance		**280**	236	**276**	236
Salaries and overtime allowances		**315,373**	300,019	**314,745**	299,982
Central/Employee Provident Fund		**40,186**	36,101	**40,185**	36,099
Pension current service cost	16(a)	**242**	278	**242**	278
Other employee benefits		**10,399**	8,192	**10,399**	8,167
Electricity		**82,381**	82,636	**82,381**	82,636
Maintenance Expenses		**236,033**	247,531	**236,033**	247,531
Net foreign exchange (loss)/gain		**(1,075)**	565	**(1,074)**	565
Research and development expenses		**19,742**	17,842	**19,742**	17,842
Allowance for inventory obsolescence	10	**623**	277	**623**	277
Allowance for doubtful receivables	27(b)	**3,257**	906	**3,257**	970
Depreciation of property, plant and equipment	13	**316,871**	312,713	**316,871**	312,713
Impairment loss of property, plant and equipment	13	**14,550**	1,815	**14,550**	1,815

6. Net non-operating income

	GROUP		BOARD	
	31 March 2018	31 March 2017	31 March 2018	31 March 2017
	$'000	$'000	$'000	$'000
Net investment income	–	309	–	309
Rental income	**11,827**	12,143	**11,827**	12,143
Amortisation of deferred income	**16,019**	13,506	**16,019**	13,506
Interest income from fixed deposits	**8,301**	12,519	**8,301**	12,519
Project management fees	**18,166**	16,375	**18,166**	16,375
Disbursement from recoverable jobs	**5,170**	7,058	**5,170**	7,058
Other sundry income	**15,458**	12,740	**15,458**	12,740
Dividend income	–	–	**2,000**	–
Loss on disposal of property, plant and equipment	**(3,530)**	(1,191)	**(3,530)**	(1,191)
	71,411	73,459	**73,411**	73,459

7. Finance expenses

		GROUP AND BOARD	
	Note	31 March 2018	31 March 2017
		$'000	$'000
Pension interest expense	16(a)	**238**	230
Finance charge on finance lease payables		**34,415**	30,963
Interest expense on fixed rate bonds		**49,068**	53,361
Accretion expense on asset restoration obligations		**293**	290
		84,014	84,844

8. Contribution to Government Consolidated Fund and taxation

(a) Contribution to government consolidated fund

The contribution to the Government Consolidated Fund ("GCF") is made in accordance with Section 3(a) of the Statutory Corporations (Contributions to Consolidated Fund) Act (Chapter 319A).

	BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Net income after government grants and before contribution to GCF and taxation	**284,611**	237,321
Contribution to GCF calculated at rate of 17% (2017: 17%)	**48,384**	40,345
Effects of:		
– Non-deductible donations	**8**	3
	48,392	40,348

8. Contribution to Government Consolidated Fund and taxation *(continued)*

(b) Income tax

Subsidiaries of the Board are subject to tax under the Singapore Income Tax Act.

	GROUP	
	31 March 2018	31 March 2017
	$'000	$'000
Tax expense attributable to profit is made up of:		
– Current income tax	–	338
Over provision in prior financial years:		
– Deferred income tax	–	5
	–	343

The tax on the Group's net income after government grants and before tax differs from the theoretical amount that would arise using the Singapore standard rate of income tax as follows:

	GROUP	
	31 March 2018	31 March 2017
	$'000	$'000
Net (loss)/income before tax of subsidiaries	**(2,148)**	2,310
Excluding intra group transaction	**2,000**	–
	(148)	2,310
Tax calculated at tax rate of 17% (2017: 17%)	**(25)**	393
Effects of:		
– expenses not deductible for tax purposes	**1**	3
– tax incentives	**(1)**	(42)
– utilisation of previously unutilised capital allowances	–	(16)
– overprovision of deferred tax in prior financial years	–	5
– deferred tax assets not recognised	**25**	–
	–	343

(c) Deferred tax assets have not been recognised in respect of the following items:

	GROUP	
	31 March 2018	31 March 2017
	$'000	$'000
Unutilised tax losses and capital allowances	**865**	717

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the subsidiaries of the Group could utilise the benefits there from.

9. Cash and cash equivalents

	Note	GROUP 31 March 2018 $'000	GROUP 31 March 2017 $'000	BOARD 31 March 2018 $'000	BOARD 31 March 2017 $'000
Cash with AGD					
– Singapore Dollar	9(a)	**487,049**	669,957	**487,049**	669,957
Fixed and ACU deposits					
– Malaysia Ringgit	9(b)	**21,367**	9,220	**21,367**	9,220
Cash at bank	9(c)				
– Singapore Dollar		**2,465**	3,110	**1,196**	807
– Malaysia Ringgit		**2,541**	997	**2,541**	997
– United States Dollar		**16**	17	**–**	–
		513,438	683,301	**512,153**	680,981

(a) Cash with AGD refers to cash that is managed by the Accountant-General's Department ("AGD") under the Government's Centralised Liquidity Management Framework for Statutory Boards and Ministries. The effective interest rate for cash with AGD for the financial year ended 31 March 2018 for the Group is 1.23% (2017: 1.37%) per annum.

(b) The effective interest rate per annum relating to fixed and Asian Currency Unit ("ACU") deposits for the financial year ended 31 March 2018 for the Group is 3.27% (2017: 3.25%).

(c) Cash at bank earns interest at floating rates based on daily bank rates.

10. Inventories

	Note	GROUP AND BOARD 31 March 2018 $'000	GROUP AND BOARD 31 March 2017 $'000
Pipes and fittings		**1,153**	937
Chemicals		**1,604**	1,066
Spare parts and accessories		**59,878**	60,331
Fuel and lubricants		**4,227**	4,580
Sundries and others		**324**	324
		67,186	67,238
Less: Allowance for inventory obsolescence	10(a)	**(690)**	(389)
		66,496	66,849

10. Inventories *(continued)*

(a) *Allowance for inventory obsolescence*

	Note	GROUP AND BOARD 31 March 2018 $'000	GROUP AND BOARD 31 March 2017 $'000
Beginning of financial year		**389**	2,798
Allowance made		**628**	282
Reversal of write-down of inventories		**(5)**	(5)
	5(c)	**623**	277
Allowance utilised		**(322)**	(2,686)
End of financial year		**690**	389

The amount of inventories recognised as an operating expense for the financial year ended 31 March 2018 was $24.0 million (2017: $39.0 million).

11. Trade and other receivables

	Note	GROUP 31 March 2018 $'000	GROUP 31 March 2017 $'000	BOARD 31 March 2018 $'000	BOARD 31 March 2017 $'000
Current					
Trade receivables	11(a)	**119,491**	90,997	**115,522**	87,442
Less: Allowance for impairment of trade receivables	27(b)	**(5,581)**	(5,405)	**(5,581)**	(5,405)
Trade receivables – net		**113,910**	85,592	**109,941**	82,037
Sundry receivables	11(b)	**72,859**	70,721	**72,859**	70,721
Less: Allowance for impairment of sundry receivables	27(b)	**(2,146)**	(13)	**(2,146)**	(13)
Sundry receivables – net		**70,713**	70,708	**70,713**	70,708
Other receivables		**1,277**	712	**1,277**	712
Deposits		**170**	191	**170**	191
Amounts due from government		**14,980**	11,321	**14,980**	11,321
Amounts due from subsidiaries		**–**	–	**649**	10
		201,050	168,524	**197,730**	164,979
Non-current					
Other receivables		**7**	21	**7**	21
Total trade and other receivables		**201,057**	168,545	**197,737**	165,000
Reconciliation to loans and receivables					
Add: Cash	9	**513,438**	683,301	**512,153**	680,981
Less: Net Goods and Services Tax receivables		**–**	(3,155)	**–**	(3,152)
Total loans and receivables	27(f)	**714,495**	848,691	**709,890**	842,829

11. Trade and other receivables *(continued)*

(a) Trade receivables mainly represent receivables from customers with respect to water supply and used water services. These amounts are unsecured and are generally on credit terms of 14 days. They are recognised at the billed amounts which represent their fair values on initial recognition.

(b) Sundry receivables comprise the revenue and customer deposits collected by the Board's billing and collection agent, SP Services Limited, which have not been remitted to the Board, and other receivables for disbursement recoverable jobs billed and collected by the Board. These amounts are unsecured and are short-term in nature.

12. Prepaid and deferred expenses

Current prepaid expenses are payments made in advance for operating expenditure.

Non-current prepaid expenses comprise mainly payments made for property, plant and equipment where risk and title has not yet been transferred to the Group as at the reporting date.

Deferred expenses relate mainly to expenses incurred in the preparation and organisation of the Singapore International Water Week event which will be held in July 2018.

13. Property, plant and equipment

	Properties – Land	Properties – Land develop-ment and buildings[2]	Properties – Leasehold land	Plant and equipment	Pipelines	Others	Assets under construction	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Group and Board								
31 March 2018								
Cost								
Beginning of financial year	981	2,852,088	413,258	3,867,142	2,625,061	165,215	480,173	10,403,918
Additions	–	–	–	116	2,585	6,099	1,034,124	1,042,924
Adjustments	–	(561)	–	–	–	–	–	(561)
Transfers	–	29,698	415,425	123,816	120,868	10,519	(700,326)	–
Disposals	–	(3,774)	–	(32,474)	(2,421)	(5,508)	–	(44,177)
End of financial year	981	2,877,451	828,683	3,958,600	2,746,093	176,325	813,971	11,402,104
Accumulated depreciation and impairment losses								
Beginning of financial year	–	931,393	76,707	1,527,944	619,893	100,536	–	3,256,473
Depreciation charge	–	60,353	10,458	191,646	42,003	12,411	–	316,871
Adjustments	–	9	–	–	–	–	–	9
Impairment	–	1,344	–	6,148	7,058	–	–	14,550
Disposals	–	(3,378)	–	(29,696)	(1,802)	(5,271)	–	(40,147)
End of financial year	–	989,721	87,165	1,696,042	667,152	107,676	–	3,547,756
Net book value								
End of financial year	981	1,887,730	741,518	2,262,558	2,078,941	68,649	813,971	7,854,348

(2) Buildings comprise mainly civil structure to house plant and equipment.

13. Property, plant and equipment *(continued)*

	Properties – Land	Properties – Land develop-ment and buildings[2]	Properties – Leasehold land	Plant and equipment	Pipelines	Others	Assets under construction	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Group and Board								
31 March 2017								
Cost								
Beginning of financial year	981	2,818,369	353,237	3,580,413	2,557,956	170,885	311,549	9,793,390
Additions	–	–	–	171,684	–	4,296	495,778	671,758
Adjustments	–	(1,507)	–	–	–	–	–	(1,507)
Transfers	–	37,907	60,021	148,315	76,637	4,274	(327,154)	–
Disposals	–	(2,681)	–	(33,270)	(9,532)	(14,240)	–	(59,723)
End of financial year	981	2,852,088	413,258	3,867,142	2,625,061	165,215	480,173	10,403,918
Accumulated depreciation and impairment losses								
Beginning of financial year	–	869,460	69,200	1,373,591	586,540	100,791	–	2,999,582
Depreciation charge	–	64,192	7,507	185,417	42,019	13,578	–	312,713
Adjustments	–	(746)	–	(1,026)	(4,987)	–	–	(6,759)
Impairment	–	–	–	958	857	–	–	1,815
Transfers	–	3	–	(12)	9	–	–	–
Disposals	–	(1,516)	–	(30,984)	(4,545)	(13,833)	–	(50,878)
End of financial year	–	931,393	76,707	1,527,944	619,893	100,536	–	3,256,473
Net book value								
End of financial year	981	1,920,695	336,551	2,339,198	2,005,168	64,679	480,173	7,147,445

(2) Buildings comprise mainly civil structure to house plant and equipment.

The cash outflow for acquisition of property, plant and equipment amounts to $733.2 million (2017: $497.1 million).

The carrying amount of plant and equipment held under finance leases at the reporting date was $564.5 million (2017: $587.4 million). These relate to the water purchase agreements with private entities for the supply of desalinated water and NEWater to the Group under the Design-Build-Own-Operate arrangements. The Group has recognised these Design-Build-Own-Operate projects as finance leases and at initial recognition, recorded these as plant and equipment with a corresponding finance lease payable as set out in Note 17.

14. Investment in subsidiaries

	BOARD 31 March 2018 $'000	BOARD 31 March 2017 $'000
Equity investments at cost		
Beginning and end of financial year	**100**	100

The Group had the following subsidiaries as at 31 March 2018 and 2017:

Name	Principal activities	Country of business/ incorporation	Proportion of ordinary shares directly held by parent 2018	Proportion of ordinary shares directly held by parent 2017	Proportion of ordinary shares directly held by the Group 2018	Proportion of ordinary shares directly held by the Group 2017
Held by the Board						
PUB Consultants Private Limited ("PUBC")[3]	Note 14(a)	Singapore	**100%**	100%	**100%**	100%
Held by PUBC						
Singapore International Water Week Pte. Ltd. ("SIPL")[3]	Note 14(b)	Singapore	**100%**	100%	**100%**	100%

(3) *Audited by PricewaterhouseCoopers LLP, Singapore*

(a) PUBC was incorporated on 2 August 1991. Its principal activity is to serve as the commercial arm of the Board and play the facilitative role in assisting the Board to achieve its roles to grow the Singapore water industry and to develop Singapore into a Global Hydrohub. PUBC harnesses the Board's operational experience and resources to support the Singapore-based companies in their overseas ventures in water related projects.

(b) SIPL was incorporated on 24 September 2007. Its principal activity is to organise the Singapore International Water Week ("SIWW"), a water event that serves as a global platform to share and co-create innovative water solutions. Stakeholders from the global water industry gather at SIWW to share business opportunities and showcase the latest water technologies. SIWW is part of the strategic programme of the Singapore Government to grow the water industry in Singapore and develop water technologies and solutions.

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15. Trade and other payables

	Note	GROUP 31 March 2018 $'000	GROUP 31 March 2017 $'000	BOARD 31 March 2018 $'000	BOARD 31 March 2017 $'000
Current					
Trade and other payables to:					
– non-related parties		**111,986**	113,788	**111,330**	112,305
– government[4]		**39,970**	24,335	**39,970**	24,335
– subsidiaries		**–**	–	**–**	15
		151,956	138,123	**151,300**	136,655
Customer deposits		**81,846**	82,858	**81,846**	82,858
Total trade and other payables		**233,802**	220,981	**233,146**	219,513
Reconciliation to financial liabilities carried at amortised cost					
Less: Net Goods and Services Tax payables		**(3,351)**	–	**(3,351)**	–
		230,451	220,981	**229,795**	219,513
Accruals	16	**181,966**	156,773	**181,937**	156,773
Borrowings	19	**400,000**	–	**400,000**	–
Finance lease payables	17	**31,261**	29,562	**31,261**	29,562
		843,678	407,316	**842,993**	405,848
Non-current					
Borrowings	19	**1,000,000**	1,400,000	**1,000,000**	1,400,000
Finance lease payables	17	**598,059**	629,320	**598,059**	629,320
Total financial liabilities carried at amortised cost	27(f)	**2,441,737**	2,436,636	**2,441,052**	2,435,168

(4) *Included in the Group's trade and other payables to government is advances received for government grant which amounted to $39.2 million (2017: $23.7million).*

Trade and other payables and other liabilities are unsecured and are short-term in nature. Trade payables are normally settled on credit terms of 21-30 days (2017: 21 – 30 days).

16. Other liabilities

	Note	GROUP 31 March 2018	GROUP 31 March 2017	BOARD 31 March 2018	BOARD 31 March 2017
		$'000	$'000	$'000	$'000
Accruals		**181,966**	156,773	**181,937**	156,773
Provision for pension	16(a)	**12,755**	13,733	**12,755**	13,733
		194,721	170,506	**194,692**	170,506

(a) Provision for pension

The Group's pension obligation is a defined benefit plan, which relates to pensionable employees transferred from the former Ministry of Environment. The Board and the government jointly finance the pension payments to pensionable employees upon their retirement.

The proportion of pension benefits payable to pensionable employees prior to their transfer to the Board on 1 April 2001, which is to be borne by the government, is excluded from the amount stated above.

The movement in the defined benefit obligation is as follows:

	Note	GROUP AND BOARD 31 March 2018	GROUP AND BOARD 31 March 2017
		$'000	$'000
Beginning of financial year		**13,733**	14,584
Current service cost	5(c)	**242**	278
Interest expense	7	**238**	230
Re-measurement loss/(gain)		**87**	(145)
Liability extinguished on settlement		**(1,545)**	(1,214)
End of financial year		**12,755**	13,733

The significant actuarial assumptions used were as follows:

(i) All pensionable employees will retire at age of 62 years (2017: 62 years).

(ii) Pensionable employees are entitled to select one of the following state-managed pension schemes upon retirement:

(a) Monthly pension payments;

(b) Reduced monthly pension payments together with gratuity payment upon retirement; or

(c) Lump sum gratuity payment upon retirement

(iii) The discount rate for the pension obligation is 2.05% (2017: 1.80%) per annum, which is based on the market yields on the Government bonds.

(iv) The Board's average share of pension obligation is estimated at a factor of 0.66 (2017: 0.66).

16. Other liabilities *(continued)*

(a) Provision for pension (continued)

The sensitivity of the defined benefit obligation to changes to each of above significant assumptions at the reporting date, assuming all other assumptions were held constant is:

	Change in assumption	Impact on defined benefit obligation 31 March 2018	Impact on defined benefit obligation 31 March 2017
		$'000	$'000
Discount rate	5.0%	**(57)**	(62)
	(5.0)%	**58**	62
Retirement age	1.6%	**(152)**	(165)
	(1.6)%	**150**	163
Ratio of PUB and MEWR shares of pension	5.0%	**481**	521
	(5.0)%	**(481)**	(521)

As at 31 March 2018, the average duration of the pension obligation is 5.0 years (2017: 5.4 years).

17. Finance lease payables

The Group leases certain plant and machinery under finance leases.

	GROUP AND BOARD 31 March 2018	GROUP AND BOARD 31 March 2017
	$'000	$'000
Minimum lease payments due		
– Not later than one year	**63,976**	63,976
– Between one and five years	**256,080**	256,080
– Later than five years	**626,646**	690,622
	946,702	1,010,678
Less: Future finance charges	**(317,382)**	(351,796)
Present value of finance lease payables	**629,320**	658,882

The present values of finance lease payables are analysed as follows:

	GROUP AND BOARD 31 March 2018	GROUP AND BOARD 31 March 2017
	$'000	$'000
Not later than one year	**31,261**	29,562
Later than one year		
– Between one and five years	**144,388**	136,443
– Later than five years	**453,671**	492,877
	598,059	629,320
Total	**629,320**	658,882

17. Finance lease payables *(continued)*

The imputed finance expenses on the finance lease payables were determined based on the interest rates implicit in the leases. The effective annual interest rate is 5.34% (2017: 5.29%) for the financial year ended 31 March 2018. These finance leases are in relation to the Group's water purchase agreements under Design- Build-Own-Operate arrangement as set out in Note 13.

18. Deferred income

Deferred income pertains to:

(i) Operating lease income received in advance in respect of 6 land leases with periods ranging from 20 to 30 years (2017: 5 land leases with periods ranging from 20 to 30 years);

(ii) Amounts received from government bodies and private developers towards the capital outlay for the provision of water facilities that were completed in and after 1998;

(iii) Capital grant received from government relating to acquisition of fixed assets; and

(iv) Billings made in advance for the Singapore International Water Week ("SIWW") event which will be held in July 2018.

19. Borrowings

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Current		
Bonds	**400,000**	–
Non-current		
Bonds	**1,000,000**	1,400,000
Total borrowings	**1,400,000**	1,400,000

Total borrowings comprise unsecured fixed-rate bonds and the details are as follows:

Currency	Tenure (years)	Interest rate (% per annum)	Issue date	Maturity date	GROUP AND BOARD 31 March 2018	31 March 2017
					$'000	$'000
Singapore Dollar	12	3.900	**31/08/2006**	31/08/2018	**400,000**	400,000
Singapore Dollar	15	3.520	**26/10/2005**	26/10/2020	**300,000**	300,000
Singapore Dollar	12	3.012	**12/07/2010**	12/07/2022	**400,000**	400,000
Singapore Dollar	20	3.620	**12/10/2007**	12/10/2027	**300,000**	300,000
					1,400,000	1,400,000

Fair value of non-current borrowings

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Bonds	**1,046,027**	1,482,662

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20. Provision for asset restoration obligations

A provision of $12.3 million (2017: $12.6 million) was made to recognise the Board's asset restoration obligations. The provision was estimated based on the latest available demolition costs of comparable assets and discounted at the market government bond yield rate ranging from 2.05% to 2.76% (2017: 1.76% to 2.47%) which is commensurate with the estimated number of years to restoration.

21. Share capital

	No. of ordinary shares	Amount
		$'000
Group and Board		
31 March 2018		
Beginning and end of financial year	**1,000**	**1**
31 March 2017		
Beginning and end of financial year	1,000	1

All issued ordinary shares are fully paid. There is no par value for these ordinary shares.

The shares are held by the Minister for Finance, a body corporate incorporated by the Minister for Finance (Incorporation Act (Chapter 183, 1985 Revised Edition)) and who is a shareholder of the Board. The shares do not carry any voting rights.

The holder of ordinary shares is entitled to receive dividends as and when declared annually, in accordance with Finance Circular Minute No. M26/2008 issued by Ministry of Finance. No dividends were declared for the financial years ended 31 March 2018 and 31 March 2017 as the net income after government grants and after contribution to government consolidated fund and taxation will be utilised for capital expenditure.

22. Capital account

The capital account comprises the accumulated transfers from retained earnings which had been utilised for the Board's property, plant and equipment such as plants and pipelines. It also includes the amounts paid by government bodies and private developers towards the capital outlay for the provision of utility facilities completed before 1998. The movement of the capital account represents the retained earnings set aside for the year to meet the Board's capital commitments in accordance with Section 14 of the Public Utilities Act (Chapter 261).

23. Water Efficiency Fund

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Beginning and end of financial year	**6,000**	6,000

During the financial year ended 31 March 2018, $1.3 million (2017: $3.1 million) of co-funding was incurred. The co-funding amount incurred was drawn from the Water Efficiency Fund and recognised as operating expenses during the financial year. The same amount was transferred from retained earnings to the Water Efficiency Fund to maintain the fund at $6.0 million (2017: $6.0 million) as at the reporting date.

24. Net liabilities of trust funds

The trust funds comprise funds received from Ministry of Environment and Water Resources ("MEWR") and Singapore Totalisator Board for the construction of assets owned by the Government as set out in Note 2.19.

The funds remaining as at the reporting date are as follows:

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Ministry of Environment and Water Resources	**(61,174)**	(53,117)
Singapore Totalisator Board	**1,995**	714
	(59,179)	(52,403)

The funds are accounted for as follows:

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Beginning of financial year	**(52,403)**	(36,939)
Receipts:		
– funds received	**595,013**	585,458
– interest income	**698**	468
– liquidated damages	**5,435**	418
– recovery of development expenditure	**1,363**	667
	602,509	587,011
Amount returned to Government	**(296)**	–
	549,810	550,072
Expenditure:		
– development expenditure	**(569,680)**	(563,920)
– Goods and Services Tax	**(39,309)**	(38,555)
	(608,989)	(602,475)
End of financial year	**(59,179)**	(52,403)
Represented by:		
Assets:		
– cash at bank	**33,891**	22,563
– sundry receivables	**369**	320
	34,260	22,883
Liabilities:		
– sundry creditors and others	**(93,375)**	(74,991)
– tender deposits	**(64)**	(295)
	(93,439)	(75,286)
Net liabilities of trust funds	**(59,179)**	(52,403)

The assets and liabilities of the trust funds are excluded from the assets and liabilities of the Group and the Board.

25. Related party transactions

(a) *Nature and amount of individually significant transactions*

Except as already disclosed elsewhere in the financial statements, there are no individually significant transactions with related parties.

The Board supplies water and provides used water services to all entities in Singapore which also includes its subsidiaries and Government agencies (comprising Ministries, Organs of State and other Statutory Boards). These transactions are conducted in the ordinary course of business.

(b) *Key management personnel compensation*

Key management personnel compensation is as follows:

	GROUP		BOARD	
	31 March 2018	31 March 2017	31 March 2018	31 March 2017
	$'000	$'000	$'000	$'000
Wages, salaries and post-employment benefits	**9,596**	8,558	**9,587**	8,531
Employer's contribution to CPF	**428**	387	**427**	384
	10,024	8,945	**10,014**	8,915

(c) *Board members' compensation*

Board members' compensation is as follows:

	GROUP		BOARD	
	31 March 2018	31 March 2017	31 March 2018	31 March 2017
	$'000	$'000	$'000	$'000
Board Members' allowance	**278**	236	**274**	236
Other benefits	**2**	–	**2**	–
	280	236	**276**	236

26. Commitments

(a) *Operating lease commitments – where the Group is a lessee*

The Group leases a number of government-owned assets from the government under non-cancellable operating lease agreements.

As at reporting date, non-cancellable operating leases contracted for at the reporting date but not recognised as liabilities are as follows:

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Not later than one year	**11,940**	14,384
Later than one year but not later than five years	**6,411**	3,693
	18,351	18,077

Expenses amounting to $15.3 million (2017: $14.9 million) was recognised in profit or loss during the financial year ended 31 March 2018.

(b) *Capital commitments*

Capital expenditures contracted for as at the reporting date but not recognised in the financial statements are as follows:

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Development projects belonging to the Board	**1,318,481**	1,589,488
Development projects belonging to the Government (funded by trust fund)	**3,612,459**	1,354,207
	4,930,940	2,943,695

27. Financial risk management

Financial risk factors

The Group is exposed to foreign currency risk, interest rate risk, credit risk and liquidity risk.

The board members have overall responsibility for the establishment and oversight of the Group's risk management framework.

The Group's overall financial risk management approach focuses on the state and the unpredictability of the financial and capital markets and seeks to minimise the potential adverse effects from the exposures to these risks on the financial performance of the Group.

There has been no change to the Group's exposure to these financial risks or the manner in which it manages and measures the risks.

PUBLIC UTILITIES BOARD AND ITS SUBSIDIARIES
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27. Financial risk management *(continued)*

(a) *Market risk*

(i) *Foreign currency risk*

The Group's exposure to foreign currency risk arises from its foreign currency contracts for purchase of goods and services and its operations in Malaysia.

The Group's exposures to foreign currencies at the reporting date are as follows:

	USD	MYR
	$'000	$'000
Group		
At 31 March 2018		
Financial assets		
Cash and cash equivalents	**16**	**23,908**
Trade and other receivables	**–**	**397**
	16	**24,305**
Financial liabilities		
Trade and other payables	**(81)**	**(5,169)**
Currency exposure of financial (liabilities)/assets	**(65)**	**19,136**
At 31 March 2017		
Financial assets		
Cash and cash equivalents	17	10,217
Trade and other receivables	–	378
	17	10,595
Financial liabilities		
Trade and other payables	(32)	(811)
Currency exposure of financial (liabilities)/assets	(15)	9,784

27. Financial risk management *(continued)*

(a) *Market risk (continued)*

(i) *Foreign currency risk (continued)*

The Board's exposures to foreign currencies at the reporting date are as follows:

	USD $'000	MYR $'000
Board		
At 31 March 2018		
Financial assets		
Cash and cash equivalents	**–**	**23,908**
Trade and other receivables	**–**	**397**
	–	**24,305**
Financial liabilities		
Trade and other payables	**(81)**	**(5,169)**
Currency exposure of financial (liabilities)/assets	**(81)**	**19,136**
At 31 March 2017		
Financial assets		
Cash and cash equivalents	–	10,217
Trade and other receivables	–	378
	–	10,595
Financial liabilities		
Trade and other payables	(32)	(811)
Currency exposure of financial (liabilities)/assets	(32)	9,784

27. Financial risk management *(continued)*

(a) *Market risk (continued)*

(i) *Foreign currency risk (continued)*

Sensitivity analysis

If the USD and MYR strengthen/weaken against the SGD by 5% with all other variables including tax rate being held constant, the effects arising from the net financial liability/asset that are exposed to currency risk will be as follows:

	Increase/(Decrease)	
	31 March 2018	31 March 2017
	Net income (after government grants before contribution to government consolidated fund and taxation)	Net income (after government grants before contribution to government consolidated fund and taxation)
Group		
USD against SGD		
– Strengthened	**4**	1
– Weakened	**(4)**	(1)
MYR against SGD		
– Strengthened	**(957)**	(489)
– Weakened	**957**	489
Board		
USD against SGD		
– Strengthened	**5**	2
– Weakened	**(5)**	(2)
MYR against SGD		
– Strengthened	**(957)**	(489)
– Weakened	**957**	489

This analysis is based on foreign currency exchange rate variances that the Group considered to be reasonably possible at the end of the reporting period.

27. Financial risk management *(continued)*

(a) Market risk (continued)

(ii) Interest rate risk

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates.

The Group's exposure to interest rate risk relates mainly to the cash with AGD which refers to cash managed by the Accountant- General's Department under the Centralised Liquidity Management as set out in the Accountant-General's Circular No. 4/2009 Centralised Liquidity Management for Statutory Boards and Ministries. The interest rates for cash with AGD are based on deposit rates determined by the financial institutions with which the deposits are placed and are expected to move in tandem with market interest rate movements.

The Board's borrowings are limited to fixed rate bonds and accordingly, the Board is not exposed to fluctuations in interest rates. The carrying amounts and effective interest rates of investments in fixed deposits are as follows:

	Note	Effective interest rate per annum 31 March 2018 %	Effective interest rate per annum 31 March 2017 %	Carrying amount 31 March 2018 $'000	Carrying amount 31 March 2017 $'000
Group					
Fixed-rate instruments					
Fixed deposits	9	**3.27**	3.25	**21,367**	9,220
Variable-rate instruments					
Cash (including cash with AGD)	9	**1.23**	1.37	**492,071**	674,081
				513,438	683,301
Board					
Fixed-rate instruments					
Fixed deposits	9	**3.27**	3.25	**21,367**	9,220
Variable-rate instruments					
Cash (including cash with AGD)	9	**1.23**	1.37	**490,786**	671,761
				512,153	680,981

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27. Financial risk management *(continued)*

(a) Market risk (continued)

(ii) Interest rate risk (continued)

Sensitivity analysis

An increase/decrease of 50 basis point ("bps") in the interest rates at the reporting date would have increased/decreased the net income (after government grants before contribution to government consolidated fund and taxation) by the amounts shown below:

	Increase/(Decrease) 31 March 2018 Net income (after government grants before contribution to government consolidated fund and taxation) $'000	Increase/(Decrease) 31 March 2017 Net income (after government grants before contribution to government consolidated fund and taxation) $'000
Group		
Variable-rate instruments		
Cash (including cash with AGD)		
– Increase	**2,460**	3,370
– Decrease	**(2,460)**	(3,370)
Board		
Variable-rate instruments		
Cash (including cash with AGD)		
– Increase	**2,454**	3,359
– Decrease	**(2,454)**	(3,359)

This analysis assumes that all other variables, in particular foreign currency rates, remain constant.

(b) Credit risk

Credit risk is the risk of financial loss if a customer or counterparty to a financial instrument defaults on its contractual obligations.

The Group's exposure to credit risk arises mainly from trade and other receivables. Cash which mainly comprised of cash managed by Accountant- General's Department under the Centralised Liquidity Management are placed in Singapore dollar deposits with banks (and cash is made available to the Board upon request) while foreign currency deposits (these are denominated in Malaysian Ringgit) are placed with licensed commercial banks in Malaysia. For trade receivables, the Group has policies in place to ensure that customers maintain deposits with the Group.

The Group establishes an allowance account that represents its estimate of incurred losses in respect of trade and other receivables. The main components of this allowance are a specific loss component that relates to individually significant exposures, and a collective loss component established for groups of similar financial assets in respect of losses that have been incurred but not yet identified. The collective loss allowance is determined based on historical data of payment statistics for similar financial assets. The allowance account in respect of trade and other receivables is used to record impairment losses unless the Group is satisfied that no recovery of the amount owing is possible. At that point, the financial asset is considered irrecoverable and the amount charged to the allowance account is written off against the carrying amount of the impaired financial asset.

27. Financial risk management *(continued)*

(b) *Credit risk (continued)*

Excessive risk concentration

There is no concentration of credit risk relating to trade receivables due to the large customer base.

Exposure to credit risk

The gross carrying amounts of these financial assets recorded in the financial statements represent the Group's maximum exposure to credit risk.

Financial assets that are past due and/or impaired

The carrying amount of trade receivables determined to be impaired and the movement in the related allowance for impairment are as follows:

	Gross receivables	Allowance (collective)	Allowance (individual)	Total allowance	Net receivables
	$'000	$'000	$'000	$'000	$'000
Group					
31 March 2018					
Current	99,462	–	–	–	99,462
Past due < 3 months	15,534	(1,239)	(327)	(1,566)	13,968
Past due 3 to 6 months	1,312	(620)	(310)	(930)	382
Past due over 6 months	3,183	–	(3,085)	(3,085)	98
	119,491	**(1,859)**	**(3,722)**	**(5,581)**	**113,910**
31 March 2017					
Current	73,615	–	–	–	73,615
Past due < 3 months	13,097	(1,206)	(284)	(1,490)	11,607
Past due 3 to 6 months	1,184	(604)	(210)	(814)	370
Past due over 6 months	3,101	–	(3,101)	(3,101)	–
	90,997	**(1,810)**	**(3,595)**	**(5,405)**	**85,592**
Board					
31 March 2018					
Current	96,526	–	–	–	96,526
Past due < 3 months	14,593	(1,239)	(327)	(1,566)	13,027
Past due 3 to 6 months	1,312	(620)	(310)	(930)	382
Past due over 6 months	3,091	–	(3,085)	(3,085)	6
	115,522	**(1,859)**	**(3,722)**	**(5,581)**	**109,941**
31 March 2017					
Current	70,219	–	–	–	70,219
Past due < 3 months	13,022	(1,206)	(284)	(1,490)	11,532
Past due 3 to 6 months	1,100	(604)	(210)	(814)	286
Past due over 6 months	3,101	–	(3,101)	(3,101)	–
	87,442	**(1,810)**	**(3,595)**	**(5,405)**	**82,037**

27. Financial risk management *(continued)*

(b) *Credit risk (continued)*

Financial assets that are past due and/or impaired (continued)

	GROUP		BOARD	
	31 March 2018	31 March 2017	31 March 2018	31 March 2017
	$'000	$'000	$'000	$'000
Beginning of financial year	**(5,405)**	(5,557)	**(5,405)**	(5,493)
Allowance made	**(1,114)**	(970)	**(1,114)**	(970)
Allowance utilised	**938**	1,058	**938**	1,058
Written back	**–**	64	**–**	–
End of financial year	**(5,581)**	(5,405)	**(5,581)**	(5,405)

The carrying amount of sundry receivables individually determined to be impaired and the movement in the related allowance for impairment are as follows:

	Gross receivables	Allowance (individual)	Net receivables
	$'000	$'000	$'000
Group and Board			
31 March 2018			
Current	70,420	–	70,420
Past due < 3 months	290	–	290
Past due 3 to 6 months	1,939	(1,937)	2
Past due over 6 months	210	(209)	1
	72,859	**(2,146)**	**70,713**
31 March 2017			
Current	70,479	–	70,479
Past due < 3 months	46	–	46
Past due 3 to 6 months	–	–	–
Past due over 6 months	196	(13)	183
	70,721	**(13)**	**70,708**

27. Financial risk management *(continued)*

(b) *Credit risk (continued)*

Financial assets that are past due and/or impaired *(continued)*

	GROUP AND BOARD	
	31 March 2018	31 March 2017
	$'000	$'000
Beginning of financial year	**(13)**	(17)
Allowance made	**(2,143)**	–
Allowance utilised	**10**	4
End of financial year	**(2,146)**	(13)

No collective impairment allowance is made for sundry receivables during the financial years ended 31 March 2018 and 31 March 2017.

(c) *Liquidity risk*

Liquidity risk refers to the Group's ability to meet its financial obligations as and when they fall due.

The Group's exposure to liquidity risk is minimal as it adopts prudent liquidity risk management by regularly reviewing its cash flow needs, maintaining sufficient cash from its internally generated cash flow and putting in place adequate financing arrangements.

The cash flow needs in respect of operation, maintenance and construction of Government assets or projects approved and funded by the Government are based on forecasted payment schedule.

	Less than 1 year	Between 1 and 5 years	Over 5 years
	$'000	$'000	$'000
Group			
At 31 March 2018			
Trade and other payables	**230,451**	**–**	**–**
Accruals	**181,966**	**–**	**–**
Finance lease payables	**63,976**	**256,080**	**626,646**
Borrowings	**439,964**	**399,621**	**749,242**
At 31 March 2017			
Trade and other payables	220,981	–	–
Accruals	156,773	–	–
Finance lease payables	63,976	256,080	690,622
Borrowings	49,068	825,358	763,469

27. Financial risk management *(continued)*

(c) *Liquidity risk (continued)*

	Less than 1 year	Between 1 and 5 years	Over 5 years
	$'000	$'000	$'000
Board			
At 31 March 2018			
Trade and other payables	**229,795**	**–**	**–**
Accruals	**181,937**	**–**	**–**
Finance lease payables	**63,976**	**256,080**	**626,646**
Borrowings	**439,964**	**399,621**	**749,242**
At 31 March 2017			
Trade and other payables	219,513	–	–
Accruals	156,773	–	–
Finance lease payables	63,976	256,080	690,622
Borrowings	49,068	825,358	763,469

(d) *Capital management*

The Group's policy is to ensure that it maintains sufficient capital to carry out its statutory functions. To achieve this, the Group reviews its sufficiency of capital as appropriate, taking into consideration its capital expenditure needs, government policies, regulatory requirements and its ability to access capital markets. The Group defines capital as its share capital, retained earnings, capital account and borrowings.

There were no changes in the Group's approach to capital management during the financial years ended 31 March 2018 and 31 March 2017. The Group is not subject to any externally imposed capital requirements.

(e) *Fair value measurements*

The Group categorises fair value measurements using a fair value hierarchy that is dependent on the valuation inputs used as follows:

Level 1 – Quoted prices (unadjusted) in active market for identical assets or liabilities that the Group can access at the measurement date,

Level 2 – Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly, and

Level 3 – Unobservable inputs for the asset or liability.

Fair value measurements that use inputs of different hierarchy levels are categorised in its entirety in the same level of the fair value hierarchy at the lowest level input that is significant to the entire measurement.

27. Financial risk management *(continued)*

(e) *Fair value measurements (continued)*

Assets and liabilities not carried at fair value but for which fair value is disclosed

The following table shows an analysis of the Group's and Board's assets and liabilities not measured at fair value as at the reporting date but for which fair value is disclosed:

	Level 1	Level 2	Level 3	Total
	$'000	$'000	$'000	$'000
Group and Board				
31 March 2018				
Liabilities				
Borrowings	–	**1,449,147**	–	**1,449,147**
31 March 2017				
Liabilities				
Borrowings	–	1,482,662	–	1,482,662

Determination of fair value

The fair values of the assets and liabilities, for disclosure purposes, are calculated based on prices at reporting date obtained from Bloomberg (2017: Thomson Reuters).

Fair value of financial instruments by classes that are not carried at fair value and whose carrying amounts are not reasonable approximation of fair value

		GROUP AND BOARD	
	Note	Carrying amount	Fair value
		$'000	$'000
Group and Board			
31 March 2018			
Liabilities			
Borrowings	19	**1,400,000**	**1,449,147**
31 March 2017			
Liabilities			
Borrowings	19	1,400,000	1,482,662

(f) *Financial instruments by category*

The carrying amount of the different categories of financial instruments is as disclosed on the face of the statement of financial position, except for the following:

	GROUP		BOARD	
	31 March 2018	31 March 2017	31 March 2018	31 March 2017
	$'000	$'000	$'000	$'000
Loans and receivables	**714,495**	848,691	**709,890**	842,829
Financial liabilities at amortised cost	**2,441,737**	2,436,636	**2,441,052**	2,435,168

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28. New or revised accounting standards and interpretations

Below are the mandatory standards, amendments and interpretations to existing standards that have been published, and are relevant for the Group's accounting periods beginning on or after 1 April 2018 and which the Group has not early adopted:

(a) SB-FRS 109 *Financial instruments* (effective for annual periods beginning on or after 1 January 2018)

The complete version of SB-FRS 109 replaces most of the guidance in SB-FRS 39. SB-FRS 109 retains but simplifies the mixed measurement model and establishes three primary measurement categories for financial assets: amortised cost, fair value through Other Comprehensive Income (OCI) and fair value through Profit or Loss. The basis of classification depends on the entity's business model and the contractual cash flow characteristics of the financial asset. Investments in equity instruments are required to be measured at fair value through profit or loss with the irrevocable option at inception to present changes in fair value in OCI (FVOCI). Gains and losses realised on the sale of financial assets at FVOCI are not transferred to profit or loss on sale but reclassified from the FVOCI reserve to retained earnings.

Under SB-FRS 109, there were no changes to the classification and measurement requirements for financial liabilities except for the recognition of fair changes arising from changes in own credit risk. For liabilities designed at fair value through profit or loss, such changes are recognised in OCI.

SB-FRS 109 relaxes the requirements for hedge effectiveness by replacing the bright line hedge effectiveness tests. It requires an economic relationship between the hedged item and hedging instrument and for the 'hedged ratio' to be the same as the one management actually use for risk management purposes.

There is also now a new expected credit losses model that replaces the incurred loss impairment model used in SB-FRS 39. It applies to financial assets classified at amortised cost, debt instruments measured at fair value through OCI, contract assets under SB-FRS 115 *Revenue from contracts with customers*, lease receivables, loan commitments and certain financial guarantee contracts.

The new standard also introduces expanded disclosure requirements and changes in presentation.

The following financial assets will be subject to the expected credit losses impairment model under FRS 109:

– Trade and other receivables

The Group does not expect a significant impact on the Financial Statements with the adoption of SB-FRS 109 *Financial instruments.*

(b) SB-FRS 115 *Revenue from contracts with customers* (effective for annual periods beginning on or after 1 January 2018)

SB-FRS 115 replaces SB-FRS 11 *Construction contracts*, SB-FRS 18 *Revenue*, and related interpretations.

Revenue is recognised when a customer obtains control of a good or service. A customer obtains control when it has the ability to direct the use of and obtain the benefits from the good or service. The core principle of SB- FRS 115 is that an entity recognises revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. An entity recognises revenue in accordance with that core principle by applying the following steps:

- Step 1: Identify the contract(s) with a customer
- Step 2: Identify the performance obligations in the contract
- Step 3: Determine the transaction price
- Step 4: Allocate the transaction price to the performance obligations in the contract
- Step 5: Recognise revenue when (or as) the entity satisfies a performance obligation

28. New or revised accounting standards and interpretations *(continued)*

(b) SB-FRS 115 *Revenue from contracts with customers* (effective for annual periods beginning on or after 1 January 2018) *(continued)*

SB-FRS 115 also includes a cohesive set of disclosure requirements that will result in an entity providing users of financial statements with comprehensive information about the nature, amount, timing and uncertainty of revenue and cash flows arising from the entity's contracts with customers.

The Group does not expect a significant impact on the Financial Statements with the adoption of SB-FRS 115 *Revenue from contracts with customers*.

(c) SB-FRS 116 *Leases* (effective for annual periods beginning on or after 1 January 2019)

SB-FRS 116 will result in almost all leases being recognised on the balance sheet, as the distinction between operating and finance leases is removed. Under the new standard, an asset (the right to use the leased item) and a financial liability to pay rentals are recognised. The only exceptions are short-term and low-value leases. The accounting for lessors will not change significantly.

Some of the commitments may be covered by the exception for short-term and low-value leases and some commitments may relate to arrangements that will not qualify as leases under SB-FRS 116.

The new standard also introduces expanded disclosure requirements and changes in presentation.

The Group is currently assessing the extent of the commitments as at the reporting date that will result in the recognition of an asset and a liability for future payments and how this will affect the Group's profit and classification of cash flows.

29. Segment reporting

The Group's chief operating decision-maker comprises the senior management. The Group has only one reportable operating segment as it operates in the water industry as one business segment in the provision of water and related facilities for the public and majority of its activities are located in Singapore. The reportable segment is reviewed regularly by the chief operating decision-maker.

30. Authorisation of financial statements

These financial statements were authorised for issue by the board members on 5 July 2018.

SINGAPORE'S NATIONAL WATER AGENCY

40 Scotts Road #22-01
Environment Building
Singapore 228231

www.pub.gov.sg

www.facebook.com/PUBsg

pub_one@pub.gov.sg