

ENVIRONMENT

Protecting the Environment



OBJECTIVE

The protection and preservation of the environment is integral to the Group's corporate policy and philosophy.



INITIATIVE HIGHLIGHTS

- 46% of IJM Group's energy use is from renewable sources
- The Industry Division's Nilai Industrial Concrete Products ("ICP") factory is the sixth to be installed with rooftop solar photovoltaic system
- The Industry Division saw reduced carbon emissions of 33,189 tCO₂e from the utilisation of Polycarboxylic Ether ("PCE") additives in the manufacturing process
- LED lights are installed throughout the Toll Division's Besraya Highway and New Pantai Expressway
- Toll Division was certified with the ISO 14001:2015 in June 2020



GRI STANDARDS SPECIFIC TOPICS

- GRI 302: Energy
- GRI 303: Water
- GRI 304: Biodiversity
- GRI 305: Emissions
- GRI 306: Waste

SDGs



IJM is committed to protecting the environment and ensuring that our commitment is shared by our business partners and our supply chain, as guided by our Policy Statement on Environment. Every year, all our business operations strive to reduce pollution and the amount of waste we generate, maintain sustainable consumption of electricity and water, reduce carbon emissions and protect biodiversity in the areas where we operate. We implement our Environmental Management System (“EMS”) to streamline environmental best practices across the Group.

In FY2021, the Construction, Property and Industry Divisions have maintained their ISO 14001:2015 certification, while our Toll Division was certified with the ISO 14001:2015 in June 2020.



RESPONDING TO CLIMATE CHANGE

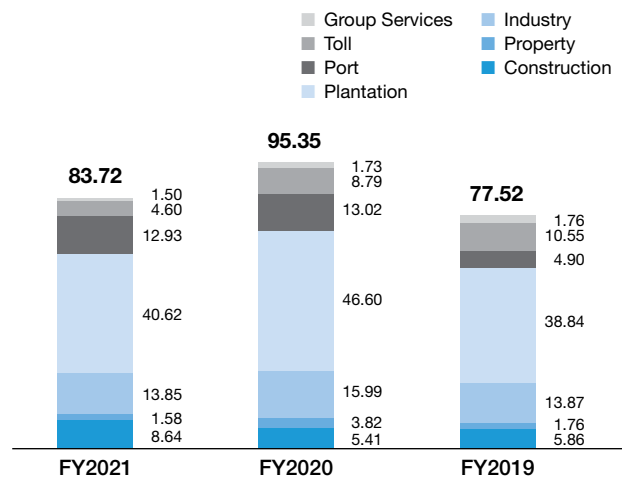
The World Economic Forum’s Global Risk Report 2021 continues to list climate change and environmental degradation as a top global risk. Extreme weather, climate action failure, human environmental damage and biodiversity loss remain among the top global risks by likelihood and impact. The Malaysian Government has formed the Malaysia Climate Change Action Council (MyCAC) as its main platform for setting the direction, discussing climate change policies and actions, driving green economic growth, catalysing green technology and low-carbon growth at all levels. The Joint Commission on Climate Change (“JC3”) was formed in 2019 with the intention of pursuing collaborative actions for building climate resilience within the Malaysia financial sector. JC3 is co-chaired by the Securities Commission and Bank Negara Malaysia and comprises Bursa Malaysia and 19 other industry participants.

We recognise that the current CO₂ emission pathways present risks and opportunities to the Group’s various businesses. We have been building internal capacity to address the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and will be deliberating to address climate risks and opportunities as part of our update to the Group’s Sustainability Roadmap. Our climate risk exposure is addressed in the *Statement on Risk Management and Internal Control* on page 124.

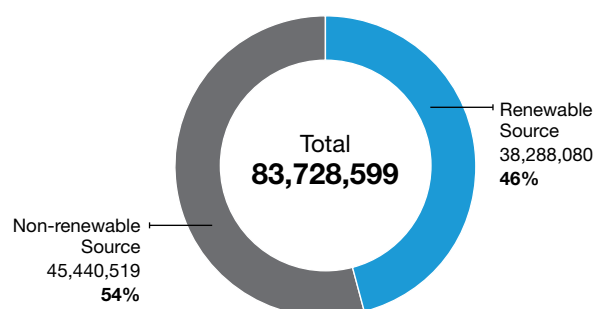
Driving energy efficiency (GRI 302-1, GRI 305-1, GRI 305-2, GRI 305-3, GRI 305-5)

In FY2021, we continued to promote the efficient use of energy throughout our operations as a means of climate mitigation and to reduce greenhouse gas (“GHG”) emissions, despite the nationwide MCO. As a Group, we consumed 83.7 million kWh of energy, where the Plantation, Industry and Port Divisions collectively constituted 81% of the total consumption. Our main sources of energy are from the power utility, biomass and solar whereby renewable and non-renewable sources constituted 46% and 54% of our total energy consumption respectively.

Total Energy Consumption by Division (kWh)



Total Renewable and Non-renewable Energy Consumption in FY2021 (kWh)

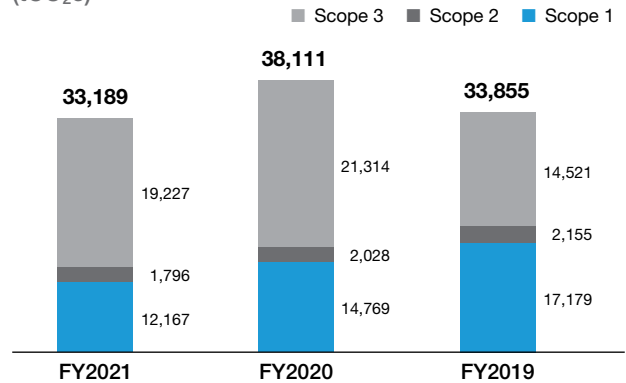


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In FY2009, the Industry Division started utilising PCE additives in the manufacturing process of piles, which resulted in a reduction in fuel consumption and an increase in productivity due to the faster curing time. In addition, the use of PCE additives also resulted in a reduction of cement consumption, which is a major raw material. Including the emissions reduction of 33,189 tCO₂e in the current year, the cumulative emissions reduction since the baseline year of FY2008 amounts to 329,355 tCO₂e.

The Industry Division has also progressively installed rooftop solar photovoltaic (“PV”) systems at six of our ICP factories since 2016. This has resulted in a cumulative total of 7,554 tCO₂e avoided since then, mainly arising from Scope 2 emissions reduction.

Total CO₂ Reduction by Source for Industry Division (tCO₂e)



Note:

- Scope 1: Direct CO₂ emissions that are emitted from sources owned or controlled by our organisation such as from stationary combustion of light fuel oil, diesel and natural gas to produce steam
- Scope 2: Indirect CO₂ emissions that are consumed by our organisation such as purchased electricity for factory use, that may be offset by using renewable energy such as solar PV systems
- Scope 3: Other CO₂ emissions by related activities not owned or controlled by our organisation such as cement purchased for our consumption

Solar energy generated by Industry Division’s factories

Factories	Kapar	Jawi	Senai	Ulu Choh	Lumut	Nilai
Solar capacity (kWp)	445	700	666	900	776	297
Total solar energy generated in FY2021 (kWh)	406,986	631,340	182,772	772,604	560,830	32,971



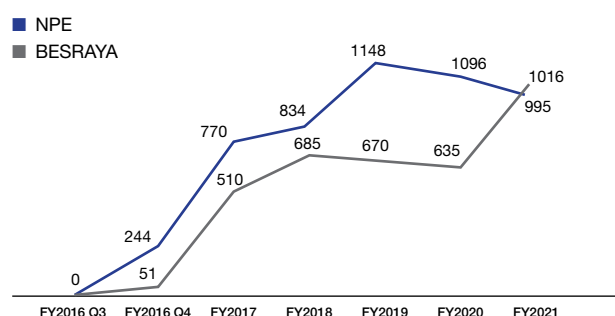
The Plantation Division utilises toolkits aligned to the EU Renewable Energy Directive and guidelines from the ISCC 205-Greenhouse Gas Emissions 3.0 and the Greenhouse Gas Protocol accounting standard to monitor and manage GHG emissions at their operations. In FY2021, the division generated a total of 230,096 tCO₂e from both its Malaysian and Indonesian operations. Further carbon emissions and reduction strategies and efforts are elaborated in the IJM Plantations Berhad Annual Report 2021.

The Port Division uses hybrid rubber-tired gantry cranes to reduce emissions and cut cost and noise while ensuring containers are handled in a safer, more productive and reliable manner. The Division will be

replacing conventional bulbs with energy saving LED lighting for all high masts within the operation to further conserve energy. The replacement, which will be carried out in stages and scheduled to be completed by the end of this year, is expected to see 15% in energy savings.

The Toll Division’s Besraya Highway (“BESRAYA”) and New Pantai Expressway (“NPE”) are fully illuminated with LED lights and have seen cost savings of 53% and 50% respectively for the reporting year with a cumulative emission reduction of 8,655 tCO₂e since its base year of FY2016.

Annual CO₂ Emissions Reduction Following Installation of LED Lighting (tCO₂e)



Our involvement with industry and stakeholders

Through our partnerships and collaborations, we continue to promote low-carbon and sustainable practices among developers and construction industry players in Malaysia. IJM is part of working groups and committees to advance sustainability rating tools in the areas of environmental management and green technology such as the CIDB’s Sustainable Infrastructure Rating Tool (“Sustainable INFRASTAR”). The rating tool addresses environmental concerns and covers infrastructure construction, water and wastewater treatment plants, airports rail links, jetties and marinas, sewerage pipe networks and telecommunication networks. The Sustainable INFRASTAR addresses environmental concerns for the construction industry, and complements other existing tools such as CIDB’s Malaysian Carbon Reduction and Environmental Sustainability Tool (MyCREST) for building construction and the MyGHI by the Malaysian Highway Authority.

Mitigating through green buildings

We recognise that green building designs and development help mitigate climate change and improve the environment and public health. In line with SDG 9

Industry, Innovation and Infrastructure, we work with clients and incorporate energy and resource efficient features into our green building projects, building resilient infrastructures, promoting sustainable industrialisation and fostering innovation.

List of IJM’s completed green building projects

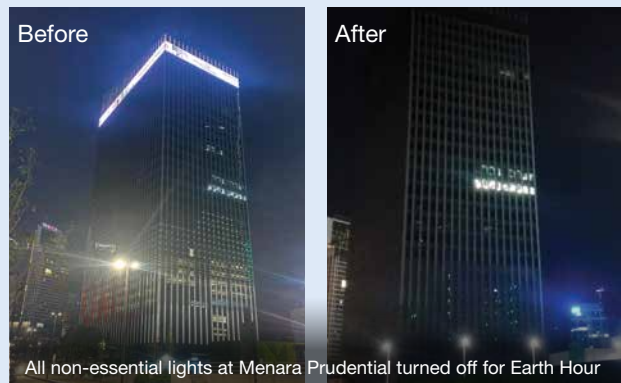
Green Building Index (GBI)	
• The Address	• The Light Collection III
• Bandar Rimbayu	• The Light Collection IV
• G Tower	• Menara Binjai
• Altitude 236	• Platinum Park Phase 3 – Naza Tower
• The Light Linear	• Somerset Damansara Uptown
• The Light Point	• The Starling Damansara Utama
• The Light Collection I	
• The Light Collection II	

Green Real Estate (GreenRE)
• Pantai Sentral Park (Secoya Residences)

Leadership in Energy and Environmental Design (LEED)
• Menara Prudential

Earth Hour 2021

IJM Group’s investment property, Menara Prudential, is a green building that has several sustainable features such as smart meters for energy efficiency, a rainwater harvesting system, advanced security features as well as being disabled friendly. In support of Earth Hour on 27 March 2021, all non-essential lights at Menara Prudential were turned off for an hour to raise awareness and inspire people to take action on environmental issues.



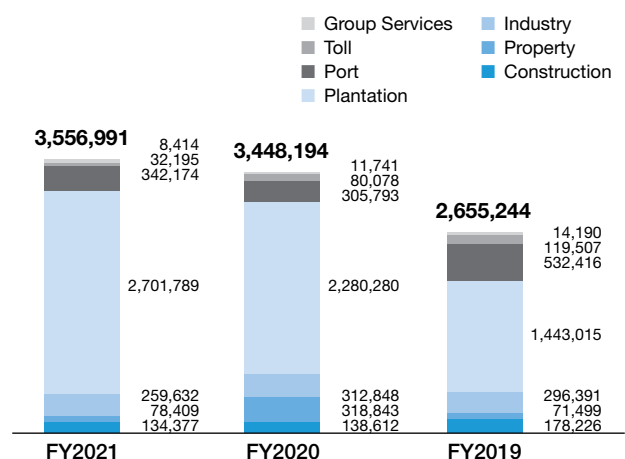
All non-essential lights at Menara Prudential turned off for Earth Hour

RESPONSIBLE WATER USE (GRI 303-1, GRI 303-2, GRI 303-5)

Water is essential for our businesses and we utilise water responsibly and in a sustainable manner. In FY2021, IJM Group consumed 3.56 million m³ of water where the Plantation and Port Divisions accounted for 86% of our total water consumption.

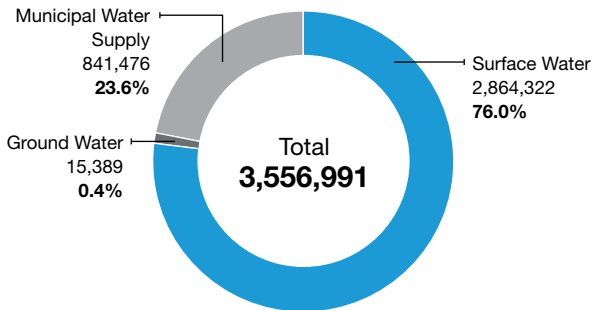
The increase in water consumption by the Divisions is due to the operation of a new palm oil mill in Indonesia and an increase in dust control due to increased cargo volume at the cargo yard. During the reporting year, we adhered to water quality and quantity permits, standards and regulations.

Total Water Consumption by Division (m³)



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Total Water Consumption by Source in FY2021 (m³)



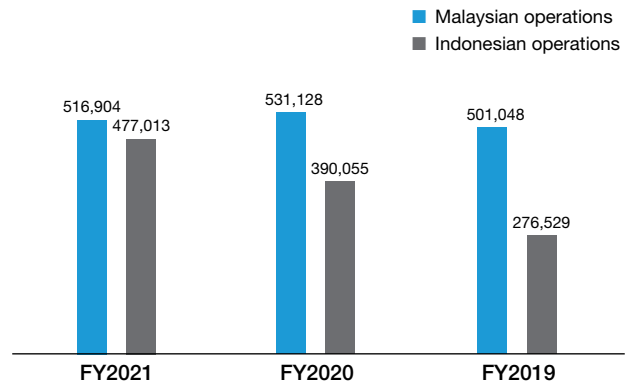
We invest in water treatment systems at projects with high water discharge to manage our water footprint and meet environmental standards. Chemical agents are added into water that passes through the treatment systems to reduce suspended solids content to below 50 mg/litre. Treated water is then discharged into the public drainage system or recycled for further use at our project sites. This process is implemented at appropriate stages of the construction cycle, while at project sites with low water discharge, conventional water treatment methods such as silt traps and sedimentation ponds are implemented.



Water treatment system used at our The Light City project

Water management plans and audits are implemented to manage wastewater generated from palm oil milling activities at the Plantation Division. In FY2021, 993,917m³ of POME was treated to meet permissible quality limits before being channelled for reuse to irrigate the fields. Water discharge samples are collected and sent for third-party laboratory testings to ensure that the Biochemical Oxygen Demand (“BOD”) and Chemical Oxygen Demand (“COD”) contents are within stipulated limits before being reused to avoid pollution and contamination.

Total POME Generated from Oil Palm Mill Operations (m³)



Environmental monitoring programme across our Plantation operations

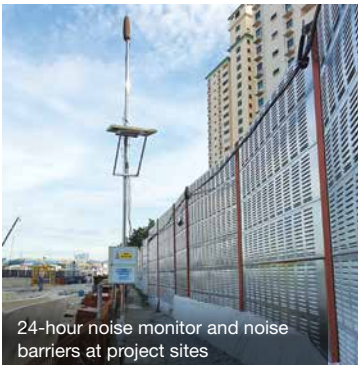
Several Divisions have implemented rainwater harvesting systems to reduce our consumption of water.

Division	Examples of Harvested Water Usage
Property	Landscaping at Menara Prudential at TRX, Kuala Lumpur; The Arc at Bandar Rimbayu, Selangor; The Light Waterfront, Penang; and residential projects in Sandakan
Industry	Road cleaning at all quarries and factories
Plantation	Mill processing, nursery irrigation and domestic use
Port	Washing bays
Toll	Landscaping and road cleaning at Loke Yew

The Plantation Division ensures treated water samples are tested and its quality is in compliance with the World Health Organisation drinking water standards. Treated water is then supplied to all employees within the operations.

PREVENTING POLLUTION

At IJM, we manage our environmental risks and aim to prevent pollution at our work sites. Through our Environmental Management Plan, we regularly monitor the quality of water discharge, air, noise and vibration levels at all our sites to ensure compliance with regulatory limits. In addition, measures and procedures are in place to prevent operational spills. In FY2021, no significant spills were reported.



24-hour noise monitor and noise barriers at project sites

Our Erosion and Sedimentation Control Plan ensures we implement best management practices to control erosion and sedimentation impacts from our construction activities. Groundcover, turfing, vegetation and hydroseeding are some of the measures used to prevent slope erosion. In addition, we use silt traps and fences, temporary check dams at drainage systems and slope protection that prevents surface runoff and avoid the pollution of water sources.



Silt trap used to prevent surface runoff and avoid water pollution

The Property Division carries out an Environment Impact Assessment (“EIA”) for all on-going and new projects that are more than 50 hectares. The Division also adopts the Environmental Quality Monitoring Programme that monitors and minimises pollution risks at our projects, in compliance with the EIA requirements.

For the Industry Division, quarrying is a prescribed activity under the Environmental Quality Act 1974, Act 127, which mandates EIA as a prerequisite prior to approval by the Department of Environment. In addition, the Division complies with all requirements as needed by other regulatory bodies such as the DOSH, Department of Mineral and Geoscience Malaysia, Land Office and the Forestry Department. The Division also monitors

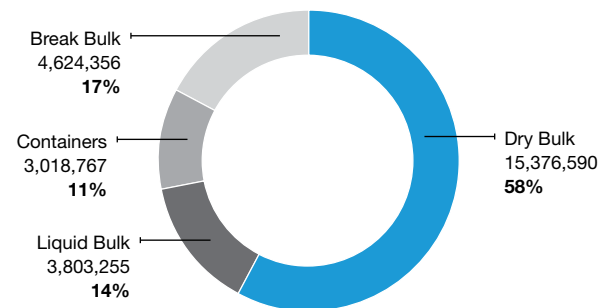
air, water and noise quality on a quarterly basis. At the quarries, best practices are incorporated to reduce air, water and noise pollution such as through the use of water sprinklers, sediment basins and sound level meters. Kelat Paya trees are used as dust barriers to protect the surrounding environment. In addition, the Division implements hydroseeding on slopes to control soil erosion on hillsides.



Gabion mattress used for temporary slope protection

The Port Division uses a conveyor system that helps reduce cargo spillage at port roads, berth areas, trenches and the sea. The Division also maintains efforts to reduce air pollution through the use of fog cannons, sprinklers and washing bays on cargo trucks at the yard area and exit gate before they go on public roads.

Port Division’s Throughput by Cargo Type in FY2021 (Freight Weight Tonnes)



Our Toll Division has proper measures in place and works with relevant parties to minimise the impact of flash floods. During the reporting year, flash floods occurred at BESRAYA and NPE areas due to neighbouring construction works and drainage capacity issues respectively. The Division engaged with the Kajang Municipal Council, the Department of Irrigation and Drainage and the Petaling Jaya City Council to ensure mitigation plans are in place and the existing drainage system is improved, maintained and regularly monitored.



Dust control via the automated wash trough

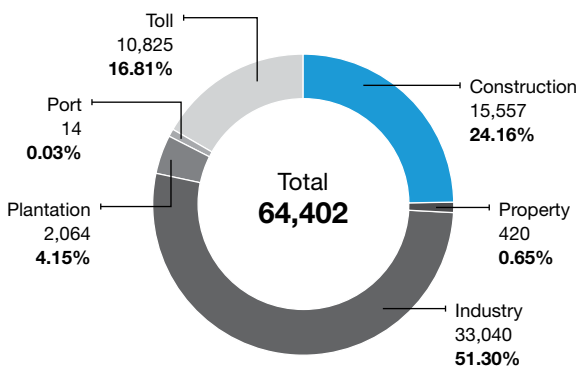
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REDUCING AND MANAGING WASTE (GRI 306-1, GRI 306-2, GRI 306-3, GRI 306-4, GRI 306-5)

IJM remains committed in managing our waste according to local waste regulations to minimise impacts on the environment and the communities where we operate. We generate different types of waste that includes scheduled and non-scheduled waste, municipal waste and e-waste.

In FY2021, IJM Group generated a total of 64,402 tonnes of scheduled and non-scheduled wastes, mainly from Construction, Industry and Toll Divisions. About 13% of our waste footprint was reused or recycled.

Total Scheduled and Non-Scheduled Waste Generated in FY2021 (MT)



Recycling and reusing waste

Responsible management of waste is an essential aspect for sustainable management of resources. The Construction Division implements waste management practices in line with requirements of the law and industry certifications such as the Green Building Index. Wastes such as timber, steel and concrete are segregated at designated collection points and disposed of by a licensed contractor from our project sites.

In FY2021, the Division recycled and reused more than 7,900 tonnes of waste for other practical implementations at project sites. Moving forward, we intend to work on identifying the sources of waste and explore measures to reduce waste across the different stages of construction including at the design and planning stage.

Reused or Recycled Construction Wastes

Waste Type	Reused (MT)	Recycled (MT)
Timber	0.25	717
Steel	0.30	206
Concrete	2,700	4,301

The Industry Division uses the concrete reclaimer that segregates sand, aggregates and slurry effluents from unused concrete to effectively manage wastes and increase cost efficiency. In FY2021, the system reclaimed 273 tonnes of sand and 305 tonnes of aggregates that were reused for production instead of being disposed in the landfill. Recycled water that is separated from the slurry effluents was reused for concrete batching, sprinkler systems and cleaning purposes.



The Plantation Division generates oil palm biomass from milling processes. This includes palm fibres and kernel shells, empty fruit bunches and fronds that are reused as renewable energy and recycled as nutrients for its fields. In FY2021, a total of 595,949 tonnes of biomass were generated from mill operations where an average of 99% was recycled as a source of fuel.

By-products Generated from Mill Operations

Raw Material	Percentage Recycled from Raw Materials	Usage
Fibre	100%	Fuel
Shell	100%	Fuel
Empty fruit bunches	97%	Mulch and fuel

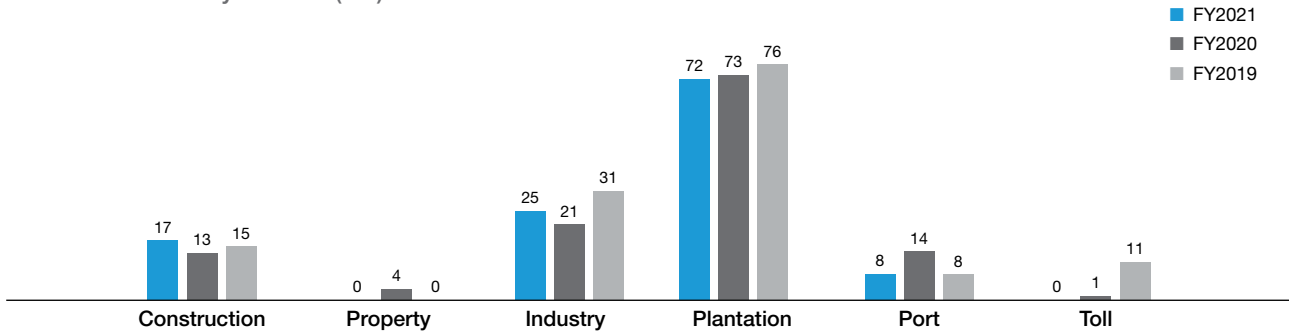
Managing scheduled wastes and e-wastes

We comply with stipulated legislations on managing scheduled wastes and have a designated storage area at all construction sites in accordance with available guidelines and specifications. We aim to reduce scheduled waste from its source through best management practices on chemical and material handling such as conducting machinery and equipment inspections to avoid spillage and leakage. All scheduled wastes are transported to a treatment facility by licensed contractors.

In FY2021, the Property Division received notifications of non-compliance with environmental laws and regulations relating to the storage of scheduled wastes exceeding the allotted time limit of 180 days. The

Industry Division received fines of RM9,000 due to non-compliance at one of our quarries. We have reviewed our processes and enhanced the standard operating procedures to ensure compliance within our operations.

Scheduled Waste by Division (MT)



Centralised and fully equipped storage for scheduled waste

We continue to practice the disposal of e-waste or electrical and electronic equipment wastes as set under the Environment Quality (Scheduled Wastes) Regulations 2005 where the disposal is carried out by contractors registered with the state environmental department.

Electrical and Electronic Equipment Wastes (by number of units)

E-waste type	FY2021	FY2020	FY2019
Monitors	81	80	50
Desktop computers	130	80	101
Notebook computers	42	24	39
Printers	40	47	31
Servers	24	-	27
Others i.e. scanner, fax machine, AVR, UPS, keyboard, hard disk, projector, network equipment	90	2	122

CONSERVING BIODIVERSITY (GRI 304-1)

We recognise that it is our duty to minimise our operational impact on biodiversity and the surrounding areas where we operate. We use natural resources effectively and responsibly and, where applicable, conduct initiatives

to conserve biodiversity. At IJM, our projects undergo an Environmental Impact Assessment (“EIA”) prior to project approval and implementation.

We incorporated a variety of marine life in our development of the 1.5-acre waterway at The Light Collection project, Penang. The waterway is regularly protected and maintained by marine aquatic professionals, and overseen by the residents’ association.

The Plantation Division is committed to No Deforestation, No Peat and No Exploitation (“NDPE”) at all its operations. In addition, the NDPE commitment is extended to our supply chain and is monitored through supplier assessments that ensures conservation of High Conservation Value (“HCV”) and High Carbon Stock (HCS) areas.

The Division has set aside over 6,000 hectares of HCV areas in our Malaysian and Indonesian operations for conservation, biodiversity protection and rehabilitation purposes. The Division continues to adhere to a strict zero burning policy and anti-poaching practices and regularly monitors illegal activities and fire hotspots within its concession. Our Minat Teguh estate has a demarcation and buffer zone along its boundary with the Kabili-Sepilok Forest Reserve that acts as a wildlife transition zone. Further information of our efforts is elaborated in the IJM Plantations Berhad’s Annual Report 2021.



Conservation areas in Belidan Estate, Indonesia