

INNOVATING SUSTAINABLE FOOTPRINTS SUSTAINABILITY REPORT 2016





DRIVEN BY PASSION AND INNOVATION, NEW IDEAS AND Solutions are being developed For a sustainable future

The journey from source to the waste management centre is supported by key solutions and technologies. Our green revolution is ongoing. By piecing together the multi-dimensional puzzle of sustainability, we are seeing greener footprints. We will continue this journey by ensuring that every footprint we leave is greener than the last.

Our Reporting Journey

This sustainability report is not just a record of our progress and priorities but also a baseline for us to measure movement towards our goal of transforming our whole business into a truly sustainable future, one that is green and circular.

EVOLVING

TOWARDS

SUSTAINABLE

A TRULY

FUTURE

A sustainable future for us is one where our green and holistic solutions enable our communities to thrive. We are still evolving in developing this strategy but we can now truly mark the beginning of greener footsteps which are positively impacting community well-being.

Our initial steps towards change were fraught with challenges and difficulties. By persevering and striving forward, our journey is not just greener but has started to galvanise the community as a whole towards a shared sustainability goal.

A clear drive and vision to improve underlines our efforts. We are supported by passionate colleagues who embrace sustainability with integrity across all areas of the business. Recognition of our efforts fuels our passion further to soldier on.

ABOUT OUR INDUSTRY pg 26

OUR OPERATIONS AND THE ENVIRONMENT

Cenviro has taken an active role in working with the authorities and supporting their efforts in regulations related to scheduled waste and municipal solid waste, as well as raise awareness on best practices in the industry.



With a long-term plan to create sustainable value for a globally competitive Malaysia, we are committed to developing and commercialising cutting-edge technologies and contributing to the capacity of our workforce. Excellence in environmental management is at the heart of our vision to become the leader in integrated environmental solutions.



EMPOWERED 990

Cenviro's future lies in people with skills, passion and innovative minds. We continue to motivate employees to contribute to our shared mission and vision through solid people policies, development programmes, a caring culture and appropriate benefits.





Our business contributes to the wellbeing of our nation and revitalises the local economy. We also contribute actively in social development through our community, environment and education programmes.



A strong Corporate Governance framework has established Cenviro's credibility, enhanced value, strengthened customers' trust in our business as well as improved the Group's overall competitiveness.

Key Highlights In 2016 G4-9

Revenue

RM189.56

The largest integrated environmental solutions provider in Malaysia

We operate on 140 acres of land – one of the largest facilities for integrated waste management in the world

Over **8,000**industrial and commercial customers

140,136 tonnes of scheduled waste treated

Ongoing projects:

- Malaysia's first
 Scheduled Waste-to-Energy Plant (SWTE)
- Cenviro Eco-Park, a central zone for waste residue from different operators
- Establishment of Environmental Preservation and Innovation Centre (EPIC) – the first centre of excellence for waste management in Malaysia
- Appointed as scheduled waste management contractor in Pengerang Integrated Complex (PIC), Johor

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Launched **Recycle for Life** programme in Kedah

- Establishment of Cenviro Johor, Cenviro Green
 Energy and Cenviro
 Green Energy Melaka
- Acquired Shan Poornam Metals to strengthen our waste management portfolio in the country

Customer satisfaction rate results above

80% with 79% response rate

97% suppliers were local and

99% of total spending was on local suppliers Total workforce

2,10

11.3% Female

88.7%

Recorded 944,787 man-hours with zero-Lost Time Injury (LTI), an improvement of

42.06%

from 2015

Carbon footprint

29,239.49 tonnes

Electricity consumption*

16,927,943 kWh

Conducted

155 employee training programmes

at a total cost of

RM509,360

Average 34.29 hours of training, compared to 27 hours in 2015 – 27% increment

HSE GOALS:

zero injuries at workplace

Number of recorded injuries **decreased** by

33.96%

in 2016, the lowest since 2010

6 key environmental indicators were monitored and benchmarked against both local and international guidelines:

- Surface water quality
- Groundwater quality
- Wastewater quality
- Air and stack emissions monitoring
- Noise monitoring
- Biodiversity

The employee engagement score was

72% with nearly 99% response rate

Establishment of Anti-Alcohol and Drugs Policy

to maintain a safer and healthier working environment

* Data covers WMC, solar panel system at WMC, the Corporate HQ and Kualiti Khidmat Alam Regional Offices.

About this Report



About this Report G4-5, G4-6, G4-17, G4-28, G4-29, G4-30, G4-31, G4-32, G4-33

Guidelines

This Sustainability Report has been prepared 'In Accordance' with the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines – Core option and Amendments to Bursa Malaysia Securities Berhad Main Market Listing Requirements relating to Sustainability Statement in Annual Reports.

Scopes

The report covers Cenviro's sustainability activities for 2016 and its subsidiaries, joint venture and associate companies, all of which are in Malaysia.

Details of scope:

- Cenviro Sdn. Bhd. (Cenviro) and its subsidiaries Kualiti Alam Sdn. Bhd. (KASB), Kualiti Khidmat Alam Sdn. Bhd. (KKA), Kualiti Kitar Alam Sdn. Bhd. (KKI), Kualiti Alam (Lahat) Sdn. Bhd. (KAL), Cenviro Special Builders Sdn. Bhd. (CSB), Cenviro (Johor) Sdn. Bhd. (CJ), Cenviro Green Energy Sdn. Bhd. (CGE), Cenviro Green Energy Melaka Sdn. Bhd. (CGE Melaka), Environmental Preservation and Innovation Centre Sdn. Bhd. (EPIC).
- E-Idaman Sdn. Bhd. (EISB) is a Joint-Venture Company (JVC). Environment Idaman Sdn. Bhd. (ENVI), Environment Idaman (Kedah and Perlis), Green Resource Recovery Sdn. Bhd. (GRRSB) and Environment Idaman (Perak) Sdn. Bhd. are subsidiaries of EISB.

Shan Poornam Metals Sdn. Bhd. (SPM) is an associate company.

Subsidiaries are companies in which Cenviro holds a majority stake or has direct management control. A JVC refers to a contractual agreement between Cenviro and a third-party company for executing a particular business undertaking. References to 'Cenviro', 'the Cenviro Group', 'the Company', 'the Organisation' and 'we' refer to Cenviro and/or its affiliates and subsidiaries.

Reporting Period

All data is for the year ended 31 December 2016, unless otherwise specified. We have been publishing sustainability reports since 2005 and are committed to transparency and discussion of our progress through the publication of annual sustainability reports and ongoing disclosure.

Assurance and Verification

This Sustainability Report has been independently verified by Bureau Veritas Certification (M) Sdn. Bhd. and the assurance statement can be found on pages 128-131.

Audience

This Report is available to all our stakeholders in hard copy upon request or it can be downloaded from Cenviro's corporate website.

For further enquiries, kindly contact our Headquarters:

Feedback

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This Report was submitted for the GRI Content Index Service, and GRI confirmed the accuracy of the GRI G4 Content Index.

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G4-56



VISION The leader in integrated environmental solutions

MISSION To provide innovative and

sustainable waste management and renewable energy solutions



G4-56

POSITIONING STATEMENT Leading the Green Revolution

CORE VALUES Q-TAPS = Quality **T**eamwork **A**ccountability Passion **S**afety

Financial G4-9, G4-EC1, G4-EC3 Performance

2014	2015	2016
RM'000	RM'000	RM'000
150,579	193,341	189,560
57,382	71,079	66,530
55,785	95,097	86,834
44,277	78,964	75,575
291,219	414,567	535,968
194,041	325,195	450,889
25.74%	30.42%	19.48%
0.08	0.03	0.07
63.78%	62.03%	66.19%
24.71%	26.62%	25.94%
11.37%	10.57%	7.15%
0.14%	0.78%	0.72%
	2014 RM'000 150,579 57,382 55,785 44,277 291,219 194,041 25.74% 0.08 63.78% 24.71% 11.37% 0.14%	2014 2015 RM'000 RM'000 150,579 193,341 57,382 71,079 55,785 95,097 44,277 78,964 291,219 414,567 194,041 325,195 25,74% 30.42% 0.08 0.03 63.78% 62.03% 24.71% 26.62% 11.37% 10.57% 0.14% 0.78%

Financial Performance G4-9



Revenue (RM'000)

Profit Before Taxation (RM'000)



Shareholder's Equity (RM'000)



Total Assets (RM'000)



Awards and Recognitions







ACCA Malaysia Sustainability Reporting Awards (MaSRA) 2016 Winner

Best Sustainability Reporting for Non-PLCs

Awards and Recognitions



Malaysian Society for Occupational Safety and Health (MSOSH) Silver Award for Good 2015 OSH Performance



Institut Kimia Malaysia (IKM) Laboratory Excellence Award



FMM Negeri Sembilan SHE Excellence Award Year 2015/2016

Gold, Fire Safety & Emergency Response Code

About Cenviro G4-3, G4-4, G4-8

Cenviro, a subsidiary of Khazanah Nasional Berhad (Khazanah), stands for 'Clean Environment'. We are the largest integrated environmental solutions provider in Malaysia and our aim is to be a regional champion in our field. Cenviro has been operating Malaysia's first integrated Waste Management Centre (WMC) in Negeri Sembilan since 1998.

Through our subsidiaries, KASB, KKA, KKI, CJ, CGE, CGE Melaka, CSB and KAL – we offer a wide array of innovative environmental products and services. Our core expertise are collecting, treating, recycling, recovering and disposing of scheduled wastes.

We are also involved in municipal solid waste management and public cleansing through our joint venture company, EISB and electronic waste management via our associate company, SPM.

Cenviro provides innovative and sustainable waste management and renewable energy solutions through our EPIC, Scheduled Waste-to-Energy (SWTE) Plant, Vertical Secured Landfill and Recycle for Life Programme.

We are committed to being a responsible member of the waste management community and recognise that operational integrity and reputation are the keys to success.

GOODS LIFT

Sustainability R





Kualiti Alam Sdn. Bhd. (KASB)

With more than 20 years of expertise and experience, KASB continues to offer a comprehensive range of waste management services, from logistics, analysis, treatment, recycling and recovery, to final disposal of scheduled waste.

Through KASB, Cenviro owns and operates Malaysia's only integrated Waste Management Centre (WMC), which is located in Negeri Sembilan. The centre is licensed to handle 76 of the 77 categories of scheduled wastes listed under the Environmental Quality (Scheduled Wastes) Regulations 2005. The centre covers an area of 140 acres and is one of the largest facilities for integrated waste management in the world. The facility has an annual capacity to store, treat and dispose of more than 100,000 tonnes of scheduled waste.

Kualiti Kitar Alam Sdn. Bhd. (KKI)

Recycling and recovery services of scheduled waste.

Kualiti Khidmat Alam Sdn. Bhd. (KKA)

Marketing, collection, transportation and packaging of scheduled waste.

Cenviro (Johor) Sdn. Bhd. (CJ)

Satellite facility for collection, treatment and disposal of scheduled waste for the southern region.

Cenviro Green Energy Sdn. Bhd. (CGE)

An investment holding company for waste-to-energy projects.

Cenviro Green Energy (Melaka) Sdn. Bhd. (CGE Melaka)

Satellite facility for renewable energy.

Cenviro Special Builders Sdn. Bhd. (CSB)

Project management consultancy, engineering, procurement, construction and commissioning services.

Kualiti Alam (Lahat) Sdn. Bhd. (KAL)

A satellite facility that will undertake collection, treatment and disposal of scheduled waste for the northern region.

Environmental Preservation and Innovation Centre Sdn. Bhd. (EPIC)

A centre of excellence that aims to develop national institutional knowledge and provide innovative and reliable solutions for the complete spectrum of waste management and renewable energy.

E-Idaman Sdn. Bhd. (EISB)

Integrated municipal solid waste management involving the collection, public cleansing, treatment, recycling and final disposal of municipal solid waste.

Shan Poornam Metals Sdn. Bhd. (SPM)

Solution provider for scheduled and non-scheduled waste, recovery, refining and asset management including household e-waste recycling and chlorofluorocarbon (CFC) recovery, secondary aluminium, alloy, ingot and copper manufacturing.

Message from the Managing Director

Waste and the environment are no longer just the concern of tree-hugging activists; today it is on the agenda of nations, corporations and organisations worldwide. Beyond business, the management of waste is a great responsibility and one that we take seriously. Supporting the well-being of the nation through our services is the raison d'etre for Cenviro, and our business directly contributes to the environmental sustainability of the country.

Cenviro was founded on the core values of quality, teamwork, accountability, passion and safety (Q-TAPS). These values underpin our mission: to provide innovative and sustainable waste management and renewable energy solutions. Our core values compel us to view environmental and societal performance as equal to our financial performance.

As we continue to evolve and grow, we are cognisant of the stress on global resources including energy, water and waste. Society now has higher expectations of organisations, not just to be accountable, but to be part of the solution. We respond to these expectations by Leading the Green Revolution.

This Sustainability Report gives an overview of the steps that Cenviro has taken towards sustainability in 2016 with indicators to measure progress. We believe that the non-financial and financial performances feed off each other, and our commercial success of 2016 indicates that this is true. Our solutions help protect resources and enable communities and cities to become more resource-efficient.

The Circular Future

A circular economy is imperative for protecting the environment for future generations. Our one-stop solution with state-of-the-art facilities and cutting-edge technologies supports the cradle-to-cradle concept, where waste can become a resource. In 2016, we continued to piece together the multi-dimensional puzzle of introducing and implementing innovative technologies and solutions to the various waste streams.

Providing access to waste services and supporting new models that embrace a cradle-to-cradle approach are a priority to Cenviro. We are turning our attention towards reinventing waste and contributing to a circular economy where more waste has a chance to be reclaimed, re-entering the supply chain as recycled material, electricity or fuel. Our Scheduled Waste-to-Energy (SWTE) plant is an example of this strategy. The construction of Malaysia's first SWTE progressed according to plan in 2016, and the plant is expected to be completed by the third quarter of 2017. It will treat up to 33,000 MT of all types of incinerable scheduled waste annually and produce 3.4 MWe of green power – enough to power approximately 9,700 households.

Technologies such as the REnescience highlight how we are moving towards reinventing waste. Cenviro signed a Memorandum of Understanding (MoU) with DONG Energy in April 2016, to develop an integrated waste management concept in Malaysia that incorporates REnescience technology. A REnescience mobile demo unit was installed at Kualiti Alam (KASB) to examine the Malaysian waste characteristics, and we hope to utilise this innovative technology in the future. 'The construction of Malaysia's first SWTE progressed according to plan in 2016, and the plant is expected to be completed by the third quarter of 2017. It will treat up to 33,000 MT of all types of incinerable scheduled waste annually and produce 3.4 MWe of green power – enough to power approximately 9,700 households.'

KHALID BAHSOON

Managing Director



2015 Commitments	2016 Achievements
To carry out viability test of the Malaysian waste characteristics with the REnescience technology.	Installation of onsite Mobile Demonstration Unit at the KASB plant to study the Malaysian waste characteristics. Further feasibility studies are planned moving forward.
Construction of Environmental Preservation and Innovation Centre Sdn. Bhd. (EPIC), our centre of excellence, is to begin in 2016 and scheduled for completion in early 2017.	As at December 2016, 39% of the construction work was completed and full completion of construction of the centre was scheduled in the third quarter 2017.
To launch Recycle for Life (RFL) programme – a cash reward through smartcards to encourage the public to undertake waste recycling activities.	Piloted the programme in Kedah with the assistance of EISB in two schools. Moving forward, we plan to expand the programme nationwide especially in schools.
To ensure we have a competent team.	The second Certified Environmental Professional in Scheduled Waste Management (CEPSWAM) programme, conducted in 2016, was open to all employees. 14 employees passed both the theory and practical examinations at the end of the course and received the CEPSWAM certificate. To date, we have 36 certified employees.
Expand our portfolio in waste management and gain recognition as an industry leader in sustainable business practices.	Acquisition of Shan Poornam Metals (SPM) completed. With the acquisition, Cenviro expanded its portfolio and services into household e-waste recycling and metals recovery management.
Investment in renewable energy as a part of our commitment towards reinventing waste and contributing to the circular economy.	Construction of Malaysia's first SWTE progressed according to plan and is expected to be completed by the third quarter of 2017.

Extracting maximum value from waste requires exploring new technologies and enabling cooperation throughout the value chain, as well as providing education and learning opportunities, all of which Cenviro hopes to achieve with the Eco-Park. It will be a central zone for waste residue from different operators, thus minimising disposal to landfill. It will also host EPIC, which will showcase our innovations. Construction of EPIC started in mid-2016, and we have pledged to plant a new tree for each of the 432 trees that were cut in this location. We aim to achieve this within 3 years. Furthermore, we have already conducted training sessions here and the first training participants were from Oman Environmental Services Holdings Company, Be'ah (Be'ah, Oman). In 2016, we organised four training sessions, with 19 participants in total.

In 2016, we incorporated Cenviro Johor Sdn. Bhd. (CJ), a company responsible for the satellite waste management facility in the southern region of Malaysia. The upcoming scheduled waste management facility in Johor will collect waste from the Pengerang Integrated Complex (PIC) and other parts of Johor. This facility, located 14km from Pengerang's site, will be Cenviro's first incinerator for scheduled waste outside of Negeri Sembilan – we will be able to report on its progress next year. Another satellite facility, Kualiti Alam Lahat (KAL), is planned in Perak and will be involved in the collection, treatment and disposal of scheduled waste in the northern region of Malaysia. In line with our stakeholder engagement practices, we organised a public dialogue in 2016 regarding the planned site to engage with the local community and ask for their feedback on our plans.

We acquired Shan Poornam Metals (SPM) in 2016. With the acquisition, Cenviro expanded its portfolio and our services. SPM invests in the latest technology and has been appointed by the Department of Environment (DOE) to manage the household e-waste recycling programme. This positive development takes us one step closer to supporting the circular economy.

Communicate and Collaborate

One of the key enablers critical to our business strategy is a clear licence to operate – fulfilling our stakeholders' expectations for our corporate behaviour. Cenviro strives to act responsibly and create value for all stakeholders. This means we need to fully understand the impact of our operations and ensure we are doing everything we can to optimise the impact across our operations. Our materiality matrix identifies 21 key issues for our business that have been highlighted in this Report.

This Report is a tool for dialogue with our stakeholders, and was prepared with their help: 312 people responded to our materiality survey, which was supplemented by qualitative interviews. Cenviro believes in dialogue at all stages of the value chain, and wherever we operate. It is through ongoing dialogue that we have been able to build common solutions with our communities as we continue to improve.

I am happy to see progress in our community programme, Recycle for Life (RFL), which encourages the public to undertake waste recycling activities. The programme provides cash rewards via smartcards. The pilot was undertaken in Kedah with the assistance of E-Idaman (EISB) in two schools.

We have been working closely with the authorities to dispose of illegal drugs and ivory. In 2016, KASB crushed and incinerated 9.55 tonnes of seized ivory, worth about RM80 million, in the first disposal event of its kind in the country. The ivory was seized by the Ministry of Natural Resources and Environment (NRE) and Department of Wildlife and National Parks (PERHILITAN) between 2011 and 2015. In addition, Cenviro assisted the Malaysian police in disposing 16.136 tonnes of confiscated drugs as well as disposable crime investigation documents. The event was strictly secured, with police personnel monitoring the entire process, from weighing the items right up to the disposal at the landfill. Cenviro provides this service for free as part of our community activities. The drugs disposal takes place on average twice a year, and all drugs are incinerated.

Message from the Managing Director G4-1, G4-2

Capacity and Capability

Meeting current and future business needs will require the best talent. We want to inspire, engage and develop tomorrow's leaders. Employee engagement emerged as one of the key issues in our materiality survey and we will continue to focus on improving engagement levels.

We are proud to say that every employee received an average of 34.29 hours of training in 2016, through our 155 training programmes, compared to 27 hours and 86 training programmes in 2015.

We have also recognised the need to automate and consolidate our systems and to run our business more efficiently and in real time. We have embarked on an Enterprise Resource Planning (ERP) project for integrated management of core business processes, assisted by software and technology. The ERP implementation will focus on 10 business areas. The software is expected to optimise commerce, service, logistics, billing and customer engagement activities while improving operational performance monitoring throughout the Group. We will implement the ERP solution in phases over the next few years.

Safety has always been a high priority for our business. We recorded 944,787 man-hours with zero-Lost Time Injury (LTI) in 2016, an improvement of 42.06% from 665,036 man-hours in 2015. To maintain a zero-accident record in our operations, we have identified a number of top priority sites. I am confident I will be able to report further progress next year.

This Sustainability Report also describes the mechanisms of governance and the principles that we abide by. Our solid governance structure ensures that we conduct our business responsibly and in a transparent manner. Our values provide the foundation for our practices and standards. We are deeply saddened by the passing of our Chairman, YBhg Dato' Seri Ismail Shahudin, in July 2016 after a short illness. He was a well-respected member of the Board and his strong international perspective and extensive experience were highly valued by all of us. On behalf of the Board, management and employees of the Cenviro Group, I would like to express our heartfelt appreciation and gratitude to our late Chairman for his invaluable contributions to the Group during his tenure.

With Cenviro Leading the Green Revolution, we are strengthening the Cenviro brand. Our dream is to maximise the resource value of waste while making sure its environmental impact is minimised – or even eliminated. We would like to think of ourselves as pioneers and practical innovators, constantly looking for ways to take steps towards the circular economy. We also see our role as leaders for change, and hope more companies join us on the path towards a sustainable Malaysia. After all, it is our responsibility and motivation to leave the country and our world in better condition than before for the benefit of the next generation.



KHALID BAHSOON Managing Director

<u>Cenviro</u> Facts

SCHEDULED waste

Market leader in the scheduled waste segment in Malaysia, with a market share of 25%

140,136 tonnes of waste treated

Operating the only **Secured Landfill** in Peninsular Malaysia since 1991, and a **Vertical Secured Landfill** since 2015

Over **8,000** industrial and commercial customers

1 scheduled waste platform (satellite facilities)

MUNICIPAL SOLID waste

632,568 tonnes of municipal solid waste treated ANNUALLY

2.3 million (Kedah and Perlis) households are covered by the waste collection services of **EISB***

EISB's **313** municipal solid waste collection vehicles collect an average of **1,727** tonnes of municipal solid waste per day, produced by more than **310,056** premises

2 composting platforms Cowtec[®] in Pulau Tuba and Kulim

Operating **3 landfills** in Kedah and Perlis, approximately **639,377 m**²

1 sorting station (EISB), Green Resource Recovery Sdn. Bhd. (GRRSB)

* Anggaran Penduduk Semasa, Malaysia 2014-2016 (Jabatan Perangkaan Malaysia)



ABOUT OUR INDUSTRY

Malaysia's economic development and growth of urban population have been rapid. This, together with a lack of infrastructure and expertise in waste management, has made solid waste one of our most critical environmental issues.

After the introduction of the Solid Waste and Public Cleansing Management Act 2007, the federal government took over municipal waste management in certain states in Peninsular Malaysia and concessionaire agreements were made with Alam Flora (centre – Kuala Lumpur and Putrajaya and Pahang), E-Idaman (Northern – Kedah and Perlis) and SWM Environment (Southern – Melaka, Negeri Sembilan and Johor) for the collection and disposal of household and public institutions' solid and other waste. Scheduled waste has been managed by the DOE since the 1990s.

The existing legislative framework aims to protect the environment and local communities from the negative impacts of waste. However, waste management is not yet effectively coordinated and irregularities are prevalent. Cenviro has taken an active role in working with the authorities and supporting their efforts to improve the implementation of regulations as well as raise awareness on best practices in the industry.

At a	Glance		
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Waste Challenges

MALAYSIA generates generous amounts of

Waste — anything from food and agricultural waste to construction and industrial waste. The amount of waste is directly linked to our consumption and production patterns. The wide variety of waste types and complex waste-treatment needs make it difficult to estimate the real amount of waste generated, but according to the World Bank, waste volumes worldwide will increase as much as 70% by 2025, compared to 2012.¹

Municipal solid waste consists of everyday items we use and then throw away. In Malaysia, we throw away **33,000 tonnes** of municipal solid waste per day. Of that:



RECYCLING RATE in Malaysia

In 2016, the Government of Malaysia introduced a waste separation programme, requiring all households and business owners in two federal territories and seven states to separate their waste into recyclables and non-recyclables.

2012 - **10.5%**⁵

2007 **- 4%**4





Weight of recyclables (kg)

 Amount of money generated from the sale of recyclables (RM)

*Note: Data in 2015 is from January to May only.⁶

Waste Challenges

PROJECTION OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE) IN MALAYSIA (METRIC TONNES)⁷

Year	Televisions	Personal computers	Mobile phones	Refrigerators	Air conditioners	Washing machines	Mobile phone rechargeable batteries
2013	231,750	328,479	1,514	60,889	145,559	29,497	191
2014	242,320	379,142	1,726	62,554	148,226	31,205	211
2015	261,837	418,897	1,892	64,100	146,878	33,153	229

A small proportion of hazardous waste is difficult to safely dispose of without special facilities. This is referred to as scheduled waste. In Malaysia, the management of scheduled waste is regulated by the Environmental Quality (Scheduled Wastes) Regulations 2005.

Year	Scheduled Waste Generated ('000 tonnes)	Clinical Waste Generated (*000 tonnes	
2013	1,387.98	18.2 ⁸	
2014	1,665.39	22.0 ⁹	
2015	2,918.510	25.510	

¹ http://scandasia.com/dong-energy-and-cenviro-to-test-technologyin malaysian/

- ² http://www.swcorp.gov.my/index.php/value-food-no-waste
- ³ Cenviro Sustainability Report 2014, page 9
- ⁴ http://www.cenviro.com/our-business.php
- ⁵ http://jpspn.kpkt.gov.my/resources/index/user_1/Sumber_Rujukan/ kajian/slaid_lab/WORKSTREAM_1.pdf

http://jpspn.kpkt.gov.my/resources/index/user_1/Sumber_Rujukan/kajian/Final_Report_REVz.pdf

- ⁶ http://www.swcorp.gov.my/index.php/en/data-kutipan-bagi-program 3r-negeri
- ⁷ The E-Wastes Inventory Project in Malaysia, 2010
- ⁸ Malaysia Environmental Quality Report 2013
- ⁹ Malaysia Environmental Quality Report 2014
- ¹⁰ Malaysia Environmental Quality Report 2015

Towards a Circular Economy G4-4

The concept of a circular economy means a systematic approach that aims to eradicate waste, both from the manufacturing processes and throughout the life cycles and uses of products and their components. At Cenviro, we see waste as a resource for the circular economy of the future. Our solutions improve managing waste, optimise waste disposal and produce new resources from waste. We design and implement new strategies to take on the resource challenges of today and tomorrow – this is how Cenviro delivers value.



Towards a Circular Economy G4-4

Waste management facilities are at the core of Cenviro. Cenviro collects, treats, recycles, recovers and disposes of scheduled waste, clinical waste, municipal solid waste and e-waste. Cenviro operates diverse types of waste management facilities:



Incineration Plant

Scheduled organic waste is treated at a temperature of over 1000°C to achieve a maximum destruction efficiency, before being sent to the landfill.

Physical and Chemical Treatment Plant

Before being transferred to the landfill:

· Inorganic liquid waste, contaminated acids, alkalines, wastewater and spent plating solutions are treated here using various chemical processes such as neutralisation, oxidation and reduction.





Solidification Treatment Plant

Toxic constituents of scheduled waste are immobilised by mixing them with cement and sand to prevent leaches from waste. Residue from other processes is treated before the waste is transferred to the landfill.

Clinical Waste Treatment Centre

Clinical waste is sterilised through a microwave sterilisation system before being sent to the landfill.

A small-scale scheduled waste-to-energy plant, based on Korea technology, that produces energy for export to national grid while incinerating scheduled waste.

Scheduled Waste-to-Energy Plant



Recycling and Recovery

We provide the latest technologies in recycling and recovering of various categories of scheduled waste based on the 4R concept of Reduce, Reuse, Recycle and Recover.

Vertical Secured Landfill

All complying external waste, inert waste and incinerated ashes from scheduled waste treatment are buried in the landfill.



Sustainability Report 2016 Innovating Sustainable Footprints

Towards a Circular Economy G4-4



Journey of scheduled waste from the waste generator to WMC:

The scheduled waste is packaged according to regulations and safely transported to the WMC. Global Positioning System (GPS) technology ensures we know when the consignment has reached its destination. After the waste is received at the WMC, the laboratory needs to be quick in confirming the types of waste in the package. The types of waste treatment is identified, and the waste is stored while waiting for disposal or treatment.

Municipal solid waste:

EISB collects municipal solid waste in the northern region. Their duties set by the federal government also include related public works such as grass cutting, drain cleaning and street cleaning. The Government has established a 2+1 waste collection schedule (2 days for waste to landfill and 1 day for recyclable waste collection in a week).

Future of Landfills G4-EC7

Landfills were originally designed to protect communities from the risks associated with unsanitary conditions. Today, they embody the challenge of the increasing amount of waste generated by humankind and pose significant risks to the environment. At Cenviro, we continuously explore realistic alternatives to piling our natural resources into landfills – and when it cannot be avoided, we find solutions to do it safely.

Faced with the reality of our existing landfill running out of space in 2015, we challenged ourselves to find new alternatives. Our aim was to continue business without involving new land – a seemingly insurmountable idea at first.

Our team conceptualised a strategic vision to create more air space at our existing landfill. The Vertical Secured Landfill Project was born and construction commenced in March 2015. The landfill will now have 30 more years of extended life. The project is an example of how we have integrated the concept of the circular economy into our business. We have also taken important steps towards more efficient recovery and recycling.

With the construction of the new recycling and recovery Eco-Park, we expect to catalyse recycling activities, leading to less waste sent to the Vertical Secured Landfill.

Our Vertical Secured Landfill is the final place of disposal for all residue from the recovery of scheduled waste by recyclers. Operating the landfill gives us a unique perspective of the innovative technology and processes that will enhance collection, treatment and the final disposal of waste.

In 2016, 70% of construction of Phase 1 was completed, which will now provide an additional space for 1.5 million tonnes waste disposal.

For Phase 2 of the construction, we are expecting a 24 metre geogrid wall to be in place. This will eventually entail land savings of 45 acres.



What Sustainability Means to US G4-18

Our business relies on stakeholders working together. As an active member of the communities where we live and work, we have a stake in strengthening the well-being of our communities. By pooling the expertise and passion of various organisations and individuals, we have developed solutions that have more impact on economic, environmental and social issues than we could have achieved by working alone. Ongoing engagement helps us deliver our commitments and succeed as a business. For example, we conducted roadshows for schools and industrials surrounding our WMC in Seremban. The purpose of the roadshow is to educate the local community about the role of Cenviro.

Another example of multi-stakeholder collaboration is the Joint Safety Committee, known as Sendayan Tanah Merah Emergency Mutual Aid (SETMA). Cenviro established this body in 2015 to respond to safety, health and environmental emergencies with other industry players surrounding our operations. SETMA is a multistakeholder initiative that cooperates and shares information on HSE issues in the Sendayan TechValley.

"We are proud to be part of SETMA as we are all invested in the well-being of this area. Cenviro has taken the lead to set up SETMA which now has 20 members. Members share industry-based information, knowledge and tools to prepare for unforeseen or unfortunate incidents, especially focused on our industrial area, the Sendayan TechValley. Our priority is to improve the area and provide the necessary support to the local community. In addition to meeting regularly, SETMA organises several activities, such as Disaster Management Exercise or DMEX and Occupational Health, Safety, Environmental and Management Day or OHSEM Day, which sees the participation of committee members. Moving forward, SETMA will be organising more occupational safety and environmental-related seminars and training for all."

Zarinah Binti Shakri Akashi Kikai Industry (M) Sdn. Bhd.

WE LISTEN

We listen to stakeholders: individuals and organisations who are impacted by our activities, programmes and policies.

WE ENGAGE

Our stakeholders often have differing priorities. For the surrounding community for example, the immediate focus may be on how we manage the potential impacts of our activities and how they may be affected, while for a local council, how we support their activities may be the priority.

WE REPORT

We have structured the report based on our material issues. We assess issues as low, medium or high materiality in terms of stakeholder concern and business impact.

OUR STAKEHOLDERS have diverse needs and backgrounds

WHAT OUR STAKEHOLDERS WANT TO KNOW

How do you ensure safety requirements are met at the WMC? Empowered People, **pg90**

Why are there new construction and buildings at the WMC? Integrated Solutions, **pg42** How has the local community benefited from your presence? Community, **pg112**

How do you ensure that your employees are not just engaged but invested to stay in the organisation? Empowered People, **pg90** How do you ensure that your operations do not affect the surrounding environment? Our Operations and the Environment, **pg64**

> How do you ensure that the local economy benefits from your presence? Integrated Solutions, **pg42**

Our Stakeholders and How We Engage with Them

Our Stakeholders and How We Engage with Them G4-24, G4-26, G4-27

Details of our main stakeholder groups, their expectations and importance to us are summarised in the table below.

Stakeholder group	Engagement activities	Frequency	Issues and concerns
Government authorities such as the Ministry of Natural Resources and Environment (NRE) and the Ministry of Urban Wellbeing, Housing and Local Government (KPKT)	 Meetings Seminars and Forums Collaboration Programmes 	 Regularly Ad hoc Quarterly 	 Compliance with rules and regulations Assist government agencies to resolve environmental issues Support the Government's efforts to appreciate, conserve and protect the environment
Khazanah National Berhad	 Board Meetings Corporate Responsibility (CR) initiatives and Engagement Materiality Survey 	 Quarterly Regularly Ad hoc Upon request Annually 	Ongoing updates of Cenviro's business plans and strategies, financial performance, project updates and community impact
Local authorities and regulators such as the Department of Environment (DOE), Solid Waste Corporation (SWCorp), and Municipal Councils	 Regular Meetings Progress Updates Compliance Reports Visits and Inspections Materiality Survey 	 Regularly Ad hoc Monthly Annually 	 Compliance with rules and regulations Support local authorities and regulators in managing and resolving environmental issues Leadership in environmental strategies
Our Stakeholders and How We Engage With Them G4-24, G4-26, G4-27

Stakeholder group	Engagement activities	Frequency	Issues and concerns
Business Partners	 Committee and Members Meetings Seminars, Forums and Workshops Collaboration Programmes Materiality Survey 	 Regularly Ad hoc Upon request Annually 	 Conduct operations and services in a responsible manner Commitment to integrity and accountability Management of health and safety issues
Local Community	 Dialogue Sessions Local Community Visits by the Cenviro Team Targeted Local Community Outreach Programmes Philanthropic Activities Roadshows Educational Excellence Activities Materiality Survey 	 Regularly Quarterly Upon request Ad hoc Annually Monthly 	 Responsible operations, including management of environmental hazards Cenviro's current nature of business and services as well as expansion plans Odour and safety addressed through phone help, supported by employee medical check-up, and performing thorough inspections
Public	Awareness ProgrammesBrand Engagement Campaign	RegularlyUpon request	 Responsible operations, including management of environmental hazards Waste collection efficiency
Employees	 Q&A Sessions Safety Briefings Induction Trainings Townhall Sessions Employee Long Service Awards Scheduled Waste Management Trainings Brand Engagement Campaigns Joint Consultative Committee (JCC) Kelab Sukan Kualiti Alam (KESUKA) Programmes Employee Sustainability Survey Materiality Survey 	 Regularly Each new hire Quarterly Annually Regularly 	 Employee benefits and rights Workplace safety Career development opportunities Work-life balance Equal workplace opportunities Gauge the effectiveness of sustainability initiatives

Our Stakeholders and How We Engage With Them G4-24, G4-26, G4-27

Stakeholder group	Engagement activities	Frequency	Issues and concerns
Customers	 Customer Satisfaction Survey Customer Hotline Materiality Survey 	 Annually EISB's Active Hotline available 7 days a week from 8am - 8pm Annually 	 Fair pricing Quality of service Credibility of Cenviro Level of assurance when dealing with Cenviro
Suppliers and Contractors	 Meetings with the Security, Safety, Health, Environment, Fire & HAZMAT (HSE) and Procurement Departments Contractor Management Programme Vendor Development Programme e-bidding Materiality Survey 	 Quarterly Annually Upon request 	 Fair procurement practices Informative tendering process Vehicle training for contractors Updates on Cenviro's business standing
Media	 Interviews Media Briefings Press Releases 	 Upon request Ad hoc 	Announcement of Cenviro's new business and initiatives, as well as significant events
Strategic Partners	 International Solid Waste Association (ISWA) Department of Occupational, Safety and Health (DOSH) DONG Energy CH Green Sdn. Bhd. 	 Planned engagements Exhibitions Meetings 	 New technologies Networking opportunities

Engaging with Industry and Relevant Authorities

Engaging with Industry and Relevant Authorities

Cenviro's long-standing tradition of industry engagement is a natural extension of its core values. We seek to educate policymakers and industry influencers, both directly and indirectly, through various engagements. These events provide an opportunity to share information about our integrated scheduled waste management practices.



Waste Management Conference and Exhibition organised by DOE Selangor



Visit by Federation of Malaysian Manufacturers (FMM) Negeri Sembilan Branch Committee Members



International Solid Waste Association (ISWA) Beacon Conference 2016

Cenviro has continued supporting the DOE's environmental initiatives by sharing its expertise and knowledge, at both state and national levels.



What is ISWA? G4-15, G4-16

The International Solid Waste Association (ISWA) is a non-governmental, independent and non-profit association with a mission to promote and develop professional and sustainable waste management worldwide. ISWA emphasises sharing experiences, knowledge and information within its network of waste professionals. ISWA's members have an enormous amount of expertise and knowledge on various aspects of waste management. Cenviro is a Gold member of ISWA. For Cenviro, ISWA is not just an opportunity for global collaboration and partnerships but also a platform for thought leadership and growth in the area of waste management.

Material Matters

Material Matters G4-19, G4-20, G4-21

Cenviro performed a materiality analysis as part of the development of this report, consistent with the requirements of the GRI G4 Guidelines. A materiality analysis allows us to take a close look at the sustainability issues that are of the highest concern to our stakeholders and which could significantly affect the company's ability to execute its sustainability plans. An objective materiality analysis highlights areas of opportunity and risk. The results are also useful for refining our overall reporting and improving performance.

The materiality analysis was carried out by an independent consultant and has been verified by Bureau Veritas. We also took into consideration the criterion on accountability in the GRI G4 Guidelines. A total of 312 respondents answered the survey online and offline. Employees represented the largest stakeholder group. 10 Board members and representatives of senior management represented the views of Cenviro.



Material Matters G4-23

This year, we reassessed the key issues and grouped the previously disclosed 35 material matters into 21. The most important points arising from the analysis in 2016 were:

- Safety, health and well-being at workplace remains a top priority for Cenviro. We also continue to emphasise our engaging with industry and relevant authorities, as well as ensure compliance with laws and regulations in all operations.
- Assessment of our business operations led us to include an additional material aspect, termed as innovation-driven growth. Innovation to improve our product and service delivery is viewed as a key factor for the growth and success of the company, as reflected in the materiality matrix. This new material aspect encompasses information previously disclosed under Cenviro's services, marketing and communications.
- 3. **Operational efficiency** was included because it can impact and/or is impacted by our business operations, along with **noise monitoring and biodiversity**.
- 4. Employee related aspects such as enhanced employee training and knowledge sharing, as well as career development are now encompassed under **developing next generation workforce**. A new term, **maintaining an engaged workforce**, is used to discuss our commitment to engage with our employees and ensure that our benefits are competitive.
- Commitment to the environment, and our approach to managing climate change is reflected by the grouping of previous labels such as energy consumption, environmental impact from transportation, and emissions to managing emissions and addressing climate change to allow for a more comprehensive analysis and disclosure of our environmental impact.
- Issues such as anti-corruption, corporate governance, quality management system and ethical business practices are now grouped under good governance and ethical business practices. Forced labour, child labour, discrimination and employee and local community rights are now covered under human rights.

Notes on Methodology

- Respondents represented internal and external stakeholder groups: employees, customers, local communities, government and business associates, regulatory bodies, suppliers and contractors, and visitors to the WMC.
- Stakeholders were asked to rate the importance of 21 matters related to Cenviro's sustainability performance.

INTEGRATED SOLUTIONS G4-DMA

We are committed to adding value to the economy, both directly and indirectly. As an industry, waste management is at the core of sustainability. Cenviro's innovative and sustainable waste management and renewable energy solutions tackle the environmental challenges that our planet is facing today. With a long-term plan to create sustainable value for a globally competitive Malaysia, we are committed to developing and commercialising cutting-edge technologies and contributing to the capacity of our workforce.

We are proud to lead the way in integrated waste management.

At a Glance

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Performance Overview____

140,136 tonnes of scheduled waste treated

Operates more than

50

specialised trucks

Over **8,000**industrial and commercial customers

Customer satisfaction rate results above

80% with 79% response rate 7,708 tonnes clinical waste treated and disposed

EISB has more than

1,600 employees in Kedah and Perlis

313 municipal solid waste collection vehicles

collect an average of 1,727 tonnes of municipal solid waste per day, produced by more than 310,056 premises **5,800** tonnes of waste recycled and recovered at our Recycling and Recovery facility

632,568 tonnes of municipal solid waste treated

Recycled

180,936.7 tonnes of municipal solid waste

Our facilitators conducted over

100 training sessions

for more than 2,000

participants – customers and potential customers – from various industries across the country and region

Performance Overview

Integrated Scheduled Waste Management G4-EC8

Specialising in downstream scheduled waste management involving the treatment and final disposal of scheduled waste, KASB owns and operates Malaysia's first integrated WMC in Bukit Nanas, Negeri Sembilan. The facilities at the WMC include an incineration plant, physical and chemical treatment plant, solidification treatment plant, clinical waste treatment plant, vertical secured landfill and clinical waste treatment centre.

	Waste	e Treated (to	onnes)
Treatment facilities	2014	2015	2016
Incineration plant For all organic waste that require thermal treatment.	35,470	49,488	40,962
Physical and chemical treatment plant For all types of inorganic liquid waste such as acid, alkaline oxidiser, chromate, and cyanide.	1,504	4,921	2,605
Solidification treatment plant Immobilises toxic constituents of hazardous waste to prevent them leaching from the waste once disposed of. Often used to treat residues from other treatment processes such as fly ash from incineration or sludge from heavy metal precipitation. Also effective in treating a variety of difficult to manage inorganic waste.	14,450	9,806	11,054

- Incineration Plant: Incinerator 1 low collection rates, resulting in lower total waste incinerated in 2016.
- Physical and chemical treatment plant: The amount of physical and chemical treatment plant waste was 12% lower compared to 2015.
- Solidification Treatment Plant: More scheduled waste collected in 2016 led to 29% increase from 2015.

Integrated Scheduled Waste Management G4-EC8



Ozone-Depleting Substances (ODS)

Cenviro supports the Malaysian government's commitment to adopt the Montreal Protocol on Substances that Deplete the Ozone Layer, that has set targets for phasing out the consumption and production of hydrochlorofluorocarbons (HFCs) by 2040. Cenviro supports the global efforts by providing ODS treatment and disposal services. ODS are typically found in equipment used for air-conditioning or refrigeration, but also in foams and solvents. We treated 13.673 MT of ODS in 2016.





Drugs Disposal

Cenviro assists the Malaysian police in disposing confiscated drugs and disposable crime investigation documents. The process is strictly secured, with police personnel monitoring the entire process from weighing to landfill. Cenviro provides this service for free as a part of our community contribution activities. The drugs disposal takes place on average twice a year, and all drugs are incinerated. In 2016, Cenviro assisted the Malaysian police in disposing 16.136 tonnes of confiscated drugs as well as disposable crime investigation documents.



Integrated Scheduled Waste Management G4-EC8

Ivory Disposal

Malaysia, together with other countries, fights to end wildlife poaching and smuggling. Cenviro supports efforts to combat illegal wildlife trafficking, especially the ivory trade. According to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the poaching rates of African elephants remain higher than the normal growth rate of the elephant population, meaning the population is likely to have continued to decline in 2016. Smugglers use Malaysia as a transit country for illegal ivory, which is being transported between Africa and the Middle East.

In a ceremony held on 14 April 2016 and officiated by NRE at KASB, 9.55 tonnes of ivory seized by PERHILITAN Peninsular Malaysia was disposed of using a Striker crushing machine. The ivory, confiscated between 2011 and 2015, was estimated to be worth about RM80 million. The tusks that were crushed and incinerated were estimated to be 60% of Malaysia's seized ivory stockpile. The ivory disposal was done for free as part of our community contribution activities.



Integrated Scheduled Waste Management G4-EC8

Scheduled Waste-to-Energy Plant (SWTE)

The construction of Malaysia's first SWTE progressed according to plan in 2016, and the plant is expected to be completed by the third quarter of 2017. Unlike a standard incinerator plant, the SWTE is designed to simultaneously dispose of scheduled waste and generate a supply of steam to a turbine generator.

Cenviro's SWTE is designed to incinerate 100 tonnes of waste daily with the steam generation of 20 tonnes per hour at a pressure of 30 bar and temperature of 350°C. Once fully operational, it will treat up to 33,000 MT of all types of incinerable scheduled waste annually and produce 3.4 MWe of green power, exported to the grid. This amount is enough to power approximately 9,700 households.

The plant is an important investment in renewable energy. It will improve the treatment of scheduled waste in Malaysia and is expected to boost the local economy. The plant will replace our old incinerator, which has been in use for more than 15 years and needs appropriate repair, maintenance, retrofitting and refurbishment. The new plant is aligned with the company's direction of moving towards the circular economy.

The plant will be able to treat a wide variety of waste including scheduled waste in solid form, clinical waste, drummed waste and liquid waste with low operation and maintenance cost. The emissions comply with Malaysia's Environment Quality (Clean Air) Regulations 2014. To sell renewable energy at the Feed-in Tariff (FiT) rate, a Feed-in Approval (FiA) will have to be applied for and granted by SEDA Malaysia. We plan to seek Feed-in Approval (FiA) in 2017.



Integrated Scheduled Waste Management G4-EC8

Satellite Waste Management Facilities

Having a satellite waste management facility provides the assurance of our continuous service and meets local demand. Having only one waste management facility site is by no means sufficient and poses a risk to our business. Hence, we are in the process of opening satellite waste management facilities in other regions within Malaysia. The upcoming scheduled waste management facility in Johor will collect waste from the PIC and other parts of Johor. This facility will be Cenviro's first incinerator outside Negeri Sembilan that handles scheduled waste. We have secured 40 acres of land to build the facility and will be able to report on its progress next year.



Existing site of Cenviro Johor

Cenviro is also developing a special waste management facility in Perak – KAL. An Environmental Impact Assessment (EIA) is currently being conducted for the selected land area and construction will begin after the approval in 2017. This landfill will be the first special waste landfill in Malaysia. A public dialogue was held in November 2016 to explain scheduled waste and the objectives of this development.

Managing Clinical Waste

Managing Clinical Waste G4-EC8

We pioneered Malaysia's first non-incineration clinical waste treatment centre (CWTC), in line with Malaysia's Environmental Quality (Scheduled Wastes) Regulations 2005 for appropriate handling and disposal of clinical wastes generated from hospitals and other healthcare facilities to mitigate the adverse health and environmental consequences. In our clinical waste treatment centre, the waste is either incinerated or passed through a microwave system for sterilisation before being taken to the landfill.

The microwave technology we use is a zero-emission technology that does not use water and produces no harmful effects. It also uses a minimum amount of electricity. The residues from the process are inert and landfill-ready. This service is currently available for medical industry clients from the private sector – 87 private hospitals and clinics are already using it. In 2016, we increased our capacity by installing another unit at the CWTC.



ADVANTAGES & KEY FEATURES



Vertical Secured Landfill

Vertical Secured Landfill G4-EC8

In response to the old secured landfill at WMC becoming close to full capacity, we commenced the construction of a vertical secured landfill in March 2015, and this continued in 2016.

The vertical secured landfill will create more air space to the existing landfill. Over the next four years, a 24m high geogrid wall will be built along the 1.7 km perimeter of the existing secured landfill. This first phase will provide 1.5 million MT of additional capacity and increase the lifespan of the landfill initially by 15 years, without using new land. We use a green geogrid wall that is durable and fast to construct, and works as soil reinforcement. When ready, the vertical secured landfill will increase the lifespan of the landfill to 30 years.



Our landfill site is managed in a way that minimises the impact of scheduled waste on the local and regional environment. The site adheres to best management practices, such as:

- Screening incoming loads to ensure that only acceptable scheduled waste is placed in the landfill.
- Using double-liner systems to capture leachate, the moisture that percolates out of the waste mass, so that it can be properly treated.
- Optimising waste compaction rates so we can use existing landfill space as efficiently as possible.
- Installing landfill gas collection systems to capture and control air emissions.



In 2016, the amount of scheduled waste disposed of at the landfill increased by 11% compared to 2015 because more waste was collected.

Recycling and Recovery Facilities

Recycling and Recovery Facilities G4-EC8

Our expertise in waste recycling and recovering activities has progressively expanded in the last two decades, and is supported by a professional team of experienced management employees, research scientists, chemists, process engineers as well as production and marketing personnel. We now offer our customers recycling solutions whilst maximising the efforts in reducing environmental impact.

Through our recycling and recovery arm, KKI, we provide the latest technologies in recycling and recovery for various categories of scheduled waste, based on the 4R concept of Reduce, Reuse, Recycle and Recover.

Our procedures ensure that all scheduled wastes that arrive at the WMC are conformity-tested by KKA, and are then segregated accordingly (treat, recycle, recover or dispose of). In 2016, we recycled and recovered 5,800 tonnes of waste. Quote from customer:

"The KASB team is always available to advise on waste packaging. This is very helpful for us and helps us ensure that the packaging meets regulatory requirements, is secure and cost-efficient. We have found it to be a win-win strategy to have KASB develop our solutions."

Mohamad Jomhori Bin Hj. Yasin Perusahaan Otomobil Nasional Berhad (PROTON) Solutions for Waste Generators

Solutions for Waste Generators

As the leader in logistics and marketing services for scheduled waste management, KKA provides holistic services that meet the needs of waste generators – any persons or sites whose acts or processes produce scheduled waste. Our range of services includes transportation and packaging of scheduled waste.

Proper packaging is vital for the safe transportation and handling of scheduled waste. Waste generators can do the packaging themselves or opt for KASB's service. We also advise customers on proper waste packaging and labelling to prepare waste for delivery to the WMC and coordinate transportation vehicles to deploy waste from the site.

All trucks operated by KKA are designed to be compliant with legal requirements and are licensed by DOE Malaysia. Our trucks are also fully equipped with GPS tracking systems and our drivers are fully licensed and trained in packaging and labelling, as well as emergency response plans. We operate more than 50 specialised trucks.



"I have been a truck driver for 17 years. I shadowed a more experienced driver when I started and now it is my turn to guide new drivers. Our training is intense but methodical. For our licence, we need to not just understand packaging and labelling, but also the relevant laws and regulations. We need to renew our licence every year."

Roslan bin Jalil, 49

Integrated Municipal Solid Waste Management

Integrated Municipal Solid Waste Management

EISB specialises in the collection, cleansing, treatment, recovery and final disposal of municipal solid waste. Our solutions meet strict environmental regulations and provide greener solutions to support healthy living environments.

Municipal Solid Waste Collection Services

With the strength of 313 municipal solid waste collection vehicles, EISB can handle an average of 1,727 tonnes of municipal solid waste per day, produced by more than 310,056 premises. EISB collects domestic waste, bulk waste and recyclable materials to be disposed of at the disposal sites or materials recovery facilities for processing. In 2016, we disposed of 632,568 tonnes of municipal solid waste.

Breakdown by state:

Total 632 E68 topp	26
Kedah 570,563 tonne	S
Perlis 62,005 tonnes	

Public Cleansing Services

With more than 3,650 employees in Kedah and Perlis, EISB runs public cleaning services. In addition, EISB provides related cleaning services such as cleaning the markets, public places and streets, public toilets, beaches and drains.

Recycling Services

In line with the country's aspiration towards 3R, EISB plays a vital role as a concessionaire appointed by the Government to increase the recycling rate from 4% in 2007 to 22% by 2020. In 2016, EISB launched the 'Rethink Recycling' campaign to reinvigorate recycling activities among the public. All collected recyclable materials are delivered to materials recovery facilities for separation and processing.

In 2016, we recycled 180,936.7 tonnes of municipal solid waste.

Breakdown by type:

Paper	69,628.2 tonnes
Aluminium	3,470.3 tonnes
Plastic	70,790.6 tonnes
Glass	6,167.5 tonnes
Iron	26,059.1 tonnes
E-Waste	3,404.9 tonnes
Others	1,416.2 tonnes

Integrated Municipal Solid Waste Management

DONG REnescience – Municipal Solid Waste to Energy G4-EC8

The volume of waste is increasing in Malaysia and worldwide. Most of the waste in Malaysia ends up in landfill sites. Not only does this create an enormous environmental challenge, but the waste which ends up in the landfill can be viewed as wasted resources.

Municipal solid waste is one of the key problems Cenviro has been trying to resolve. We have been working with DONG Energy, one of the leading energy groups in Northern Europe, headquartered in Denmark. We have worked together since 2014 on REnescience technology, which converts unsorted municipal solid waste to energy. The technology uses enzymes to liquefy the biodegradable (organic) fractions in household waste and enables separation of cleaned recyclable materials like plastic and metals. The bioliquid produced is suitable for achieving high biogas production, which can be used to generate heat and power, or as transportation fuel. Refuse Derived Fuel (RDF) or Solid Recovered Fuel (SRF) are also recovered from the waste and can be used for power generation and cement production. REnescience technology is suitable for the Malaysian environment because our municipal solid waste contains a lot of moisture.

In 2016, we collaborated to test the viability of Malaysian waste with the REnescience process by using an onsite Mobile Demonstration Unit at the KASB plant. Further feasibility studies are planned. We signed an MoU on 15 April 2016 and organised an Open Day for government officials and other stakeholders to view a demonstration of the REnescience technology at KASB WMC in June 2016. The REnescience mobile demo unit has been installed at KASB since early June to examine the Malaysian waste characteristics.

Moving forward, Cenviro and DONG Energy intend to develop a pipeline of projects using REnescience technology across Malaysia. This collaboration is part of Cenviro's vision of developing new, sustainable models for competitive waste treatment in Malaysia.



Integrated Municipal Solid Waste Management

COWTEC® Composting Solution G4-EC8

Malaysian municipal solid waste contains between 35% and 60% organic material, depending on the area. Anaerobic digestion, not currently common in Malaysia, is a simple method to turn this waste into nutrient-rich liquid fertiliser which fuels plant growth and restores vitality to depleted soil.

In 2015, we introduced the COWTEC® anaerobic digester that accelerates the food waste decomposition process, from what used to take months, to just a matter of days. The system converts organic waste to energy anaerobically, with methanogenic bacteria breaking down the waste. The resulting gas contains 60% methane, and can be used for cooking, generating electricity, charging batteries for LED lights, and the leftover materials can be used as fertiliser. As part of our community contribution, we started piloting the use of this technology and installed COWTEC[®] units in Pulau Tuba and Kulim in 2016.

The COWTEC[®] anaerobic digestion system is automated and self-sustaining – the digesting bacteria do not need to be replenished. In the future, we aim to form multi-stakeholder partnerships with regulators, ministries and municipalities and install small-scale anaerobic digesters in schools, hotels, hospitals and producers of organic or food waste.

There are three sizes for the COWTEC® system – they can treat waste up to 100 kg per day, 300 kg per day and 500 kg per day. Currently there are approximately 25 systems in use in Malaysia, located at factories, wet markets, food courts, shopping malls, housing estates, recycling centres, colleges and schools.

Source of waste for **COWTEC**®



Integrated Municipal Solid Waste Management

Pilot Study on Food Waste Dewatering

Problems faced by restaurant operators include the volume of food wastage, odour and hygiene. For example, the café at Mercu UEM generates approximately 150 kg of food waste per day. As a specialist solutions provider, we offered to carry out a pilot study to introduce a system known as Ecofast SC-1 dewatering as a solution to the problems at Mercu UEM. The study is expected to be completed in one year and we hope it will provide useful information on practical applications for our latest technologies.

Ecofast SC-1 is a food waste disposer innovated by Ecofast Italia S.r.I. The equipment grinds food scraps using a special centrifugal electrical motor which squeezes the liquid pulp out and separates the solid from water. This dewatering system can be used as a support system and complements both COWTEC® and biofertiliser systems.



Disposing School Laboratory Waste

The Ministry of Education (MOE) has appointed Cenviro to dispose of school laboratory waste in government schools. We worked with 49 schools in Peninsular Malaysia in 2016. Laboratory waste must be handled properly as chemicals used by schools can be harmful. In the past, Cenviro has addressed several explosions at school labs, largely due to chemical spills.

Safety measures adopted include:

- Individual packing of concentrated nitric acid and other acids in bubble wrap
- Filling the drums with sand to prevent bottles from moving during loading
- Equipping the packers with fire extinguishers
- Setting aside sand for use in the event of spillage
- Retraining the team to handle chemicals safely
- Providing the team with first aid kits



Integrated Municipal Solid Waste Management/Integrated E-Waste Management

Recycle for Life

Since 1 September 2015, it has been mandatory in Malaysia to separate solid waste at source. To raise public awareness on 4R, Cenviro initiated Recyle for Life (RFL), a recycling programme that rewards cash through the use of a smartcard.

We have piloted the programme in two schools in Kedah. Through EISB's 2+1 collection schedule, the recycled waste is weighed and cash is credited into the RFL smartcard based on the amount of recycled waste. The students can use the card at their school canteen or bookshop. The public can use the smartcard at selected outlets in Kedah such as two GIANT and C-mart stores which have joined the programme.

We hope this initiative will instil the habit of recycling from young and encourage communities to start recycling, which in the long term will reduce our dependency on landfills. Moving forward, we plan to expand the programme nationwide, especially in schools.



Integrated E-Waste Management



In 2016, Cenviro acquired SPM, a Penang-based company that manages electronic waste. With the acquisition, Cenviro now covers the entire waste value chain and can offer services in recycling electronic and metal waste. We see this move as another step towards supporting the circular economy.



Integrated E-Waste Management





From the recycled e-waste, aluminium ingots are generated that can be used, for example in car engines. In future, Shan Poornam will also explore recycling materials from mobile phones.

What

What happens to old refrigerators?

The dismantling and disposal of old refrigerators at dumpsites or landfills is not a good environmental practice: the insulating foams of refrigerators contain ozone-depleting chlorofluorocarbons (CFCs) that contribute to climate change when released into the atmosphere.

We have identified the need for a specialised facility for treating ODS in Malaysia and started further exploring how to dismantle old refrigerators and recover recyclable materials in 2016. With our partners from Germany, we are planning to develop techniques to remove CFC insulating foams and ensure the proper disposal of remaining parts. This cooperation is supported by the Malaysian Investment Development Authority (MIDA) and a facility in the Eco-Park utilising this new technology is expected to be operational in 2018.

In July 2016, SPM was officially appointed by DOE to manage the national household e-waste recycling programme. In line with SPM's commitment to the disposal of e-waste, the company invested 2 million euros in German technology from ANDRITZ MeWa GmbH to control the release of CFC from old refrigerators. The machine will be installed at SPM's plant.



Achieving Customer Satisfaction at KASB g4-DMA, g4-PR5

Achieving Customer Satisfaction at KASB

At Kualiti Alam, customer satisfaction e-surveys have been conducted since 2013. The results are analysed, compiled and presented to the management at the end of each year. In 2016, we invited selected customers to take part in a comprehensive online survey. The new survey allowed customers to provide feedback in a quick, transparent and flexible way. In 2016 the response rate was 79% – exceeding our target of 75%. 463 out of 585 targeted customers (25% of 2,339 active customers in 2015) responded.



The issues highlighted by customers included moving from manual consignment notes to e-consignment notes, challenges in e-billing and concerns regarding waiting time, truck condition, inadequate Personal Protective Equipment (PPE) and customers' safety and environmental requirements. We have cascaded the comments to various departments and will be taking the necessary steps to address them.

Achieving Customer Satisfaction at KASB

Raising Awareness Amongst Our Customers

The Environmental Quality (Scheduled Wastes) Regulations 2005 – Regulation 15: Conduct of Training states that every waste generator shall ensure that all employees involved in the identification, handling, labelling, transportation, storage and spillage or discharge response of scheduled wastes attend training programmes.

The regulation also requires that service providers educate customers through seminars, trainings programmes, dialogue sessions with the DOE and surrounding communities, exhibitions, website information and brochures. The topics cover waste collection, transportation, packaging, storing, e-waste guidelines, Scheduled Waste Management Guideline, Environmental Quality (Scheduled Wastes) Regulations 2005, spills, industrial effluent, Electronic Scheduled Waste Information System (eSWIS) and the safe handling, storage and disposal of chemicals.

We provide training for our customers to ensure proper handling of scheduled waste up to the point of collection by us. In 2016, we conducted 11 scheduled waste trainings for customers across different industries. 207 people took part in these sessions.

Competency Training Programme

As the leader and trusted partner in environmental solutions, Kualiti Alam has been providing training and consultation services in various fields, including scheduled waste management, for over a decade. Our flagship programme is the Scheduled Waste Management Training for Waste Handlers, designed specifically for waste generators and waste handlers involved in the identification, handling, labelling, transportation, storage and spillage or discharge response of scheduled wastes in compliance with the Environmental Quality (Scheduled Wastes) Regulations 2005 – Regulation 15: Conduct of Training.

In 2016, our facilitators conducted over 100 training sessions for over 2,000 participants – customers and potential customers – across the country and the region, from various industries such as oil and gas, wood, rubber, waste management concession companies, logistics services and government agencies.



Future-focused Integrated Solutions

Future-focused Integrated Solutions G4-EC7

Ours is a rapidly evolving field and we need to be able to quickly adopt the latest technologies and regulations. These changes affect our engineering decisions, operating practices, staffing levels and general facility management. We are constantly working to improve our end-to-end solutions.

Cenviro Eco-Park

The upcoming Cenviro Eco-Park will be a step towards our vision of a circular economy. It will be an area that offers innovative models that address future challenges in using technology to convert multiple types of waste into spin-off products.

The Cenviro Eco-Park will provide 15 industrial plots that investors, organisations or technology companies can rent. The plots are designed for optimum operational activities such as waste recycling facilities. Tenants can conduct their own recycling activities or propose joint ventures with Cenviro on new recycling technologies. They are expected to allow public visits and the sharing of knowledge on their recycling activities. By bringing together different actors in the field, we can leverage on each other's strengths, encourage local innovation, introduce new products and mainstream innovative technologies at our facilities – and encourage others to do the same.

The Waste Eco-Park has been identified as part of the National Waste Grid and Circular Economy initiatives of the Malaysian Government. The Government has approved a special Tax Incentive Scheme for the industry, and Cenviro Eco-Park stands to benefit from it.

The Cenviro Eco-Park will be established in two phases, including the main environmental sub-clusters downstream, midstream and upstream. KASB will also build infrastructures for power and water supplies, sewage treatment systems, drainages and trunk road to facilitate potential tenants and investors.

EPIC

In 2016, we took important steps towards turning our concept of a Centre of Excellence into reality. We started the construction of EPIC – the first integrated training centre and focal point dedicated to waste management in Malaysia. It will develop national institutional knowledge and provide innovative and reliable solutions for the complete spectrum of waste management and renewable energy.

Our objective is to raise the standards and capabilities of the industry in Malaysia through EPIC. By nurturing local expertise in waste management, we can reduce the reliance on international expertise. EPIC's activities will also enhance awareness and advocacy for holistic waste management issues in Malaysia, and will include public outreach initiatives.

EPIC is located in Cenviro Eco-Park, adjacent to the existing WMC. The EPIC building is planned to be completed in the third quarter of 2017, and is targeted to have the Platinum Green Building Index (GBI) rating. Its construction is based on a bioclimatic design with green features. Construction of the centre started in mid-2016, and marked the beginning of Cenviro Eco-Park's Phase 1. As at December 2016, 39% of the construction work was completed and is scheduled for full completion in the third quarter of 2017. EPIC will play an important part in facilitating the development of the Cenviro Eco-Park.

"432 trees were cut during the site clearing for EPIC. Cenviro has pledged to plant a new tree for every tree felled within three years."

Future-focused Integrated Solutions

Establishing the Operating Model for EPIC

A careful planning process indicated that EPIC needs to be an independent body to attract full participation from regulators and industry players. EPIC is proposed to be governed by an independent board that will consist of key stakeholders from the research and training community, Government and industry. EPIC will be supported by an Advisory Board and will be operated by an independent management team. We have been working with an independent advisor to establish the Operating Model.

Upon approval by the board of directors of Cenviro in October 2016, a legal entity, Centre of Excellence (COE), was established. Consequently, EPIC was incorporated on 1 December 2016. We expect EPIC to become a growth catalyst for Cenviro Eco-Park, and to achieve financial sustainability – ultimately covering its operational expenditures.

Training on Hazardous Waste Management for Be'ah, Oman

EPIC's first training activities were conducted in 2016. We designed a training programme to provide awareness on the risks of hazardous waste, compliance with regulations as well as practical approaches to ensure effective management of scheduled waste. Cenviro specialists with different expertise are used as resource persons.

The first training participants in 2016 were from Be'ah, Oman. Be'ah specialises in solid waste management and plans to develop its own Centre Of Excellence. The training was divided into two modules, a 5-day module for the management team and a 9-day module for the technical team. Four trainings were held in 2016 with 19 participants in total. We received positive feedback and the fifth training was scheduled for January 2017.

Cenviro is currently formalising an MoU to collaborate with Be'ah Oman on joint training programmes, the exchange of resources and information, research and development projects and events. We wish to finalise and sign the MoU by early 2017.



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Our environmental commitment is evident every day: it governs how we work, the materials we buy and the decisions we make. Excellence in environmental management is at the heart of our vision to become the leader in integrated environmental solutions. We have the necessary systems, processes and metrics for continuous improvement in environmental management. They help us reduce greenhouse gases, energy, noise and water consumption and improve air quality. We also have ongoing initiatives to improve waste management and conserve biodiversity.

At a Glance

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Performance Overview____

83,742_{m³} effluent treated,

37,983m³ leachate treated

97% suppliers were local and

99% of total spending was on local suppliers

Total spend on suppliers **RM105,416,672**

6 key environmental indicators were monitored and benchmarked against both local and international guidelines:

- Surface water quality
- Groundwater quality
- Wastewater quality
- Air and stack emissions monitoring
- Noise monitoring
- Biodiversity

Total water consumption **213,200**m³

Collected 204.2 kg of cartridges from our offices compared to

178 kg in 2015

Carbon footprint

29,239.49 tonnes

Electricity consumption* **16,927,943** kWh

* Data covers WMC, solar panel system at WMC, the Corporate HQ and KKA Regional Offices.

Operational Efficiency

Operational Efficiency

Plant Downtime

Plant downtime consists of both planned and unplanned periods when the plant is not operational. To ensure productivity and efficiency of the waste treatment process, plant downtime is monitored closely. We allocate one day a month for maintenance and three weeks for the annual incinerator plant shutdown.

In 2016, Incineration Plant 1 experienced less downtime than 2015, thanks to an effective preventive maintenance programme. The Physical and Chemical Treatment Plant experienced more downtime due to higher volumes of problematic waste. The Solidification Treatment Plant's increased downtime was due to the preparation for the annual shutdown in 2016.



Escility	Downtime (Hours)				
Facility	2014	2015	2016		
INC1	2,505	1,479	1,066		
INC4	2,299	1,071	882		
SOLI	1,683	540	819		
РСТ	1,843	507	937		

Note: Incineration Plant 1 (INC1), Incineration Plant 4 (INC4), Solidification Treatment Plant (SOLI) and Physical and Chemical Treatment Plant (PCT).

In 2016, we redesigned the Ram feeder unit, contributing to plant downtime. We also paid attention to the effectiveness of preventive maintenance activities. In 2016, we emphasised monthly internal inspections at both INC1 and INC4 that helped us identify issues before they caused plant downtime. We also added manpower in both preventive and corrective maintenance.



Operational Efficiency G4-EN1

Materials Management

We source materials that are more eco-friendly at the point of extraction. These materials are processed efficiently in accordance with environmental regulations. Hydrated lime, activated carbon and caustic soda are the three most commonly used materials in treating scheduled waste. These chemicals are used to neutralise the flue gas at the incineration plant, and the quantity of the chemicals used is directly related to the amount and types of waste treated. Different wastes have different chemical properties. For example, waste with a high content of sulphur and chloride needs a higher dosage of chemicals to neutralise it.

Fuel

The WMC uses diesel as fuel for the incineration process. In 2004, diverse options were explored to replace diesel with waste oil or reconstituted oil (RO). The RO process uses only one-third of the energy of refining crude oil to lubricant quality, thus it is deemed to be more environmentally friendly. RO is also more cost efficient. Currently diesel is only used to start the plant when the temperature needs to be ramped up rapidly. After the desired temperature is achieved, RO is used. However, a higher frequency of plant start-ups resulted in higher diesel consumption in 2016. We will be exploring ways to reduce this trend.

-	Quantity (MT) Vear		Quantity (MT)		Patio		
Material	2014	2015	2016	Teal	RO	Diesel	Katio
Hvdrated Lime	1.453	1.290	1.548	2014	4,322	836	5.2:1
Activated Carbon	12	8	10	2015	3,126	693	4.5:1
Caustic Soda	40	50	115	2016	2,164	966	2.2:1

Materials used in scheduled waste treatment:

Operational Efficiency

Water Management G4-EN8

The WMC purchases water from Syarikat Air Negeri Sembilan Sdn. Bhd. (SAINS) in all its operations.

Water Usage Summary

Year	Volume (m³)
2014	140,318*
2015	212,695*
2016	213,200**

Note:

*The data covers:

- WMC
- Corporate HQ (Mercu UEM) based on an estimation (total bill for the whole building over the number of floors occupied)
- KKA Regional Offices

**The data covers the following buildings:

- WMC
- Mercu UEM (HQ)
- KKA Regional Offices

Effluent Treated and Discharged G4-EN22

We have implemented a zero-discharge policy. Effluents channelled from the Effluent Treatment Plant (ETP) and Leachate Treatment Plant (LTP) are treated through physical, chemical, biological and advanced oxidation treatment processes. The treated effluent is reused as quench water for the incineration plant.

T	Quantity (litre/m³)		
гуре	2016		
ETP	83,742		
LTP	37,983		



Nitrification process at Leachate Treatment Plant for ammonia removal

Operational Efficiency

Domestic Waste Management G4-EN23

Reducing waste is fundamental to our business and we make every effort to reduce domestic waste: our internal waste comprises waste from process plants as well as corporate office waste.

Management of domestic waste guided by principles of sustainable waste management

Avoidance and reduction of waste

Resource recovery including reusing and recycling

Disposal in an environmentally responsible way

Turne	Quantity (MT)				
гуре	2014	2015	2016		
Waste treated (external)	111,315*	141,414*	140,136		
Waste incinerated (internal)	13,101	7,239	2,360		

Note:

- 1. Data covers INC1, INC4, SOLI, PCT, PCT ETP facilities, CWTC and landfill.
- 2. *Revised figures for 2014 and 2015 due to inclusion of CWTC and landfill waste.
- 3. External waste: waste that is received from waste generators that needs to be treated and disposed of at KASB.
- Internal waste: Waste residue generated by KASB treatment facilities.

Operational Efficiency G4-EN23

Internal Waste – Domestic Waste

We collect, recycle and reuse as much of the internal waste from our offices as possible. Newspapers are collected and employees can take them home to read at the end of the day. Plastic bottles are sent to our recycling and recovery facility and other waste from the offices and plants is collected by the appointed contractor. Food waste from the administrative building's pantry and canteen is segregated and processed in a COWTEC[®] machine.

Internal Waste – Scheduled Waste

Internally generated scheduled waste is collected and sent to the incinerator for disposal. We conduct internal recycling programmes at our offices. Empty cartridges are collected and refilled by an external service provider. Those that are not usable are collected for recycling. In 2016, we collected 204.2 kg of cartridges compared to 178 kg in 2015.

Type of waste	Amount of waste (kg)	
	2015	2016
Empty cartridges recycled*	178	204.2
Internal waste – scheduled waste treated internally and landfilled ^{* 1}	485	337
Internal waste – appointed domestic contractors collect and send waste to approved landfill* ²	61,120	54,680

* Note: data covers KASB

¹ Code SW 410 Contaminated uniform (Operations employee uniform i.e. the green jacket and pants)

² Miscellaneous office waste, canteen and food waste



Operational Efficiency G4-12, G4-EC8, G4-DMA

Sustainable Procurement Practices

Cenviro is committed to building and supporting a sustainable supply chain. We procure materials, equipment and services. Materials typically include raw materials for waste treatment, such as pumps and motors, and consumables such as jumbo bags and personal protective equipment. The services we use are mainly equipment maintenance and other services related to expansion projects such as the new landfill.

Our vendor evaluation assesses environmental, health and safety commitments. Part of our sourcing concerns is that our company's wastes, emissions and environmental risks are often directly linked to the quantity and quality of the goods and raw materials we buy. While the implementation process can be challenging, environmentally-preferable purchasing can offer long-term business benefits.

We engage with our suppliers on key sustainability issues such as energy use, greenhouse gas emissions and waste reduction. The environmental impact of using raw materials in products and responsible sourcing are key focus areas. Occupational Safety and Health (OSH) systems, certifications, recycling and aspects of social compliance are also checked. To ensure that suppliers comply with our requirements, we offer consistent guidance and assistance. We invite our contractors to join in-house training programmes organised by KASB on topics such as environmentally sound and efficient practices. We also run a compulsory Contractor Management Programme. Only upon completion of the programme is a one-year Contractor Pass offered, and it must be renewed by attending a refresher course. We also encourage our contractors to take part in the awareness programmes organised by KASB, such as tree planting activities and OHSEM Day.

Our e-bidding system serves to promote fairness, transparency and a competitive environment. We support our suppliers who are not technology savvy and have dedicated employees to help vendors register and ensure the appropriate documentation is in place.

We strive to maintain a diverse supplier base that reflects the markets and communities in which the company operates. We target 30% bumiputera participation and procure products and services locally whenever possible.


Operational Efficiency G4-EC8, G4-EC9

Breakdown of suppliers by type:

	2015	2016
No. of suppliers;		
• Local	312	419
 Foreign 	10	12
• Total	322	431
Percentage of suppliers;		
• Local	97%	97%
 Foreign 	3%	3%
• Total	100%	100%
Percentage of spending		
on suppliers by type;		
• Local	84%	99%
 Foreign 	16%	1%
• Total	100%	100%
Total amount spent on suppliers (RM)	116,016,073	105,416,672

Our supplier rating system ensures registered vendors perform as per requirements as well as maintain their capability to provide goods and services. We have developed a rating that covers 20 evaluation criteria, such as vendor meeting expectations in terms of product specifications, labour supply, after sales service, safety and health requirements and environmental requirements. Underperforming vendors (with total points below 45 in Desk Audit) are notified in writing to improve their performance. Vendors who do not improve their ranking during the subsequent review are classified as Non-Performing Vendors.

Supplier Management	2014	2015	2016
Performance of suppliers relative to environmental components of programmes and procedures	60	67	67

Contractor Development Programme

Our contractors contribute to our business success. They are also expected to adopt the same safety standards as those found in our operations, and receive regular training for that purpose. The suppliers who are actively involved in plant operations and maintenance receive induction training. Those operating forklift trucks, working at height or in confined spaces must attend mandatory training.

Our Vendor Assessment Report includes the following:

- Compliance with environmental and safety and health requirements
- Corrective and/or preventive actions about
 environmental and safety and health issues
- Quality, Environment, Occupational Health and Safety Management System Evaluation
- Health and Safety Policy (not required for enterprise companies)
- Environmental Policy (not required for enterprise companies)
- Availability of Environmental Management Systems (EMS)

Operational Efficiency

Technology and Automation

We recognise the need to automate and consolidate our current systems and to run our business more efficiently and in real time. In line with our Enterprise Resource Planning (ERP) strategy, we are now focused on optimising commerce, service, logistics, billing and customer engagement activities as well as improving operational performance monitoring throughout the Group. We will be implementing the ERP in phases over the next few years.

The ERP initiative started in early 2016, beginning with the study of Cenviro's current systems and processes and identifying suitable solutions for Cenviro Group. After careful consideration, we selected the SAP Suite on Hana Industry Specific – Utilities Waste from SAP SE. It is tailor-made for Cenviro's core business and we are confident it will address Cenviro's needs regarding finance, operations, sales, procurement and human capital management.



Our Environmental Management

Our Environmental Management

While most of our services and solutions help clients – and the nation – to tackle the environmental challenges of waste and climate change, we recognise that our own operations use natural resources, create emissions and contribute to climate change. Our environmental management policies try to minimise these negative impacts and ensure our carbon footprint is as small as possible. We are also aware that the more efficient our collection methods are and the higher the recycling rates in the country become, the more emissions our operations will release – a trade-off we need to balance with even more effective recovery methods.

We monitor several environmental indicators closely – to comply with the licensing requirements but also because we are proud of our reputation as an environmentally-responsible company. Sustainable development is at the core of Cenviro, and we support Malaysia's efforts to capitalise on opportunities arising from global environmental and climate change initiatives and promote knowledge and technology transfer.



Our Environmental Management

Managing Emissions and Addressing Climate Change G4-DMA, G4-EN15, G4-EN16, G4-EN17

At Cenviro, we work to improve cooperation between emitting sources, monitoring systems and the relevant legislation to reduce the amount of serious pollutants released into the air, soil and water.

We have performed several company-wide GHG emission studies since 2006. We have adopted the internationally-recognised Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Version). Our emissions accounting is based on the GHG Protocol classification of direct and indirect emissions, and we track the emissions in scopes 1, 2 and 3.

We are still improving our monitoring systems, especially as the boundary of the carbon emissions data is incomplete. Taking this into account, we will be embarking on a Life Cycle Analysis (LCA) based approach, where environmental aspects and potential impacts are considered throughout a product's life (i.e. cradle-to-grave) from raw material acquisition through production, use and disposal. A study on LCA is planned for 2017 and we will be able to report the results in 2018. In 2016, we conducted a training session on carbon footprint for all Heads of Department and Heads of Section. The training was organised by the Cenviro Carbon Footprint Committee which consists of 13 members who perform distinct functions in the company.

Total CO ₂ emissions	2014	2015	2016*
Scope 1 Direct GHG Emission (tonnes)	18,823	15,333	10,075.12
Scope 2 Indirect GHG Emission (tonnes)	10,218	12,725	12,543.61
Scope 3 Other Indirect GHG Emission (tonnes)	10,261	10,236	6,620.76
Total (tonnes)	39,302	38,294	29,239.49

* Data covers WMC, solar panel system at WMC, the Corporate HQ, KKA Regional Offices.

Our Environmental Management G4-EN15, G4-EN16, G4-EN17

Note:

SCOPE1

Category	Direct GHG Emissions
Description	Emissions from sources that are owned or
	controlled by us

a. Plant Operations

Running the incinerators for extended periods requires a lot of energy. Most of our scheduled waste is incinerated and the remaining slag is sent to secured landfills.

b. Company-owned Vehicles

GHG emissions produced by our fleet of company-owned vehicles were calculated from purchasing fuel for cars, motorcycles, 4-wheel drives, vans, trucks and other heavy industrial vehicles. The CO₂ emissions from the consumption of fuel were derived from the emission factor published by the IPCC Guidelines for National GHG Inventories.

SCOPE 2

CategoryIndirect GHG EmissionsDescriptionEmissions as a
consequence of our
activities, but occur
at sources owned or
controlled by another
entity

SCOPE 3

 Category
 Other indirect GHG Emissions

 Description
 Emissions as a consequence of our activities, but occur at sources owned or controlled by another entity

 a.
 Employee-owned Vehicles CO2 emissions from the consumption of fuel for employee-owned vehicles

employee-owned vehicles were derived from the emission factor published by the IPCC Guidelines for National GHG Inventories.

b. Contractor-owned Vehicles CO₂ emissions produced by combusting fuel for contractorowned vehicles were also derived from the emission factor published by the IPCC Guidelines for National GHG Inventories. Contractor-owned vehicles comprise heavy industrial transporters, waste collection vehicles and landfill compactor units listed under KASB, KKA, KKI and EISB.

c. Air Travel

GHG emissions resulting from air travel were measured from origin to destination including the number of employees on board, distance and flight class. We have included all short and long-haul flights in our GHG calculation. The data is tracked by the HR and Admin departments. We use the International Civil Aviation Organisation's Carbon Emissions Calculator to quantify our carbon emissions due to our business air travel.

Our Environmental Management

Electricity Consumption G4-EN3

Our indirect GHG emissions are mostly in the form of purchased electricity. The carbon emissions from the use of electricity were derived using the emission factor published by the Malaysian Green Technology Corporation for the Peninsular grid. We will continue to minimise our electricity consumption throughout all areas of our operations. For example, we have small-scale solar power generation and encourage the use of LED lighting.

Year	2014	2015	2016
Purchased electricity consumption (kWh)	14,960,527	17,173,311	16,927,943*

 * Data covers WMC, solar panel system at WMC, the Corporate HQ, KKA Regional Offices

We have installed a solar panel system on the roof of the WMC's pre-treatment facility generator. It comprises 600 CSUN60 High-Efficiency Monocrystalline Solar Cells and 6 Steca 23 kW threephase solar grid inverters. In 2016, the solar panel generated 177,870 kWh, which was then sold to the National Grid.



Our Environmental Management

Environmental Management Systems G4-EN29

KASB has had its own Environmental Monitoring Programme (EMP) since its establishment in 1997. The EMP is monitored annually by an appointed third-party consultant. Monitoring reports are submitted to the DOE as part of its licensing and compliance requirements.

We comply with the environmental conditions for licensing (Jadual Pematuhan) for all our facilities.

Our Environmental Performance Monitoring Committee (EPMC) comprises members from various departments as required by the DOE's Guided Self-Regulation (GSR). The committee meets regularly to control and minimise pollution from our operations. The Environmental Regulatory Compliance Monitoring Committee (ERCMC), made up of all heads of department, discusses the budget and implementation of environmental pollution control.

We have pioneered and embraced the GSR as business as usual. GSR, introduced by DOE in 2016, is a programme that aims to develop an industrial society with environmental excellence. To become a self-regulating industry, the programme decides which environmental mainstreaming tools organisations should use. Currently, we have safety and environmental monitoring systems in place. GSR is expected to be an effective environment management system that will assist industry players to become more competent in managing environmental issues.



Environmental Performance

At Cenviro, we are committed to enhancing our environmental performance in terms of operations and activities. Cenviro's environmental performance is measured, monitored and benchmarked against both local and international guidelines. We are committed to continually improving our environmental management and reporting our performance in this area to ensure sustainable environmental practices.

Our Environmental Management

Surface Water Quality G4-EN12, G4-EN29

Cenviro conducts quarterly surface water quality monitoring at five river streams (i.e. Sg. Unyai, Sg. Janging, Sg. Kulai, Sg. Jijan and Sg. Jimah). River streams SW1, SW4, SW5, SW6 and SW8 are between 1 km and 4 km from the WMC. Water quality is monitored at these stations to preserve river water quality while identifying changes and potential pollution sources. In Malaysia, the National Water Quality Standards are used to classify the water quality based on the calculated Water Quality Index.

The average WQI for station SW4 was within the range of Class II of the Environmental Quality Act, whereas the WQI average fell under Class III for stations SW1, SW5, SW6 and SW8. This may be due to the high organic content from a new development nearby, managed by another party. The average WQI for the five monitoring stations was 74.32, categorised as clean water under Class III.

We were not issued fines or non-monetary sanctions for non-compliance with environmental laws or regulations in the reporting period.



Surface Water Quality 2016

*Note: SW7 was demolished in 2010 due to an alteration of the river. It was converted into concrete drainage by the developer on the land adjacent to WMC, Sendayan TechValley.

Our Environmental Management

Groundwater Quality G4-EN12

Since 1996, we have monitored the groundwater quality quarterly at seven stations located near the WMC and Kampung Jimah Lama (KJL) as per our licensing requirements.

The KJL monitoring station was demolished in 2016 to allow for flood mitigation works, and will be relocated after the works have been completed while another station was also demolished to provide access to vertical secured landfill works. GW5 was also demolished as the location of the monitoring station at the landfill area was in the middle of the access road used for the vertical secured landfill project works. Two new groundwater wells were established in July 2016 near a retention pond within the WMC. Another station was relocated to the landfill area.

The results collected from all stations are compared to the Recommended Raw Water Quality Standards (RRWQS) by the Malaysian Ministry of Health. The groundwater samples collected from these monitoring wells are analysed for their pH levels, total dissolved solids, conductivity, hardness, heavy metals, volatile organic compounds and polychlorinated biphenyls. All parameters were below the permissible limits of the RRWQS except the pH at GW3, which was slightly above baseline 1996 but still within the permissible limit of RRWQS. We have followed all environmental laws and regulations in the reporting period regarding groundwater quality. There have also been further initiatives to improve groundwater quality, such as installing new technology for the liner system to prevent seepage of leachate into the groundwater. Leachate from the leachate collection sumps will be channelled to the leachate treatment plant to undergo treatment.



Our Environmental Management

Wastewater Quality G4-EN12, G4-EN22

We practise zero discharge and wastewater from untreated leachate and reservoir water samples are treated and re-used for plant operation purposes inside the WMC. Wastewater quality is monitored at three monitoring stations and follows the Standard B effluent limits of the Environmental Quality (Industrial Effluents) Regulations, 2009. The wastewater stations selected to be analysed on a quarterly basis are the leachate treatment plant, main water reservoir and sewage treatment plant.

River sediment quality monitoring is conducted bi-annually and the results are compared with their 1996 (RS1) and 1998 (RS3) baseline data. In 2016, two stations were monitored for river sediment quality (RS1 and RS3). No samples were collected at station RS2 due to the construction of a concrete spillway. Traces of metals were detected at both river sediment stations. No traces of pesticides and polychlorinated biphenyls (PCBs) were detected in samples.



Our Environmental Management

Air Quality G4-EN21

As we treat scheduled waste with inorganic compounds we need to ensure that the air emitted from the stacks comply with the regulations. We are committed to monitoring smoke from the stacks, and have installed a real-time monitoring system at the DOE office.

As part of our efforts to manage and combat the adverse impacts of our operations, Kualiti Alam performs quarterly air quality monitoring as per the Environmental Monitoring Programme. Samples are taken from three sites within the WMC compound (A1, A5 and A6) and three outside the WMC compound (A2, A3 and A4). Ambient air at all stations was considered 'safe' in 2016.



The key reference point in the air pollution index systems is the index value of 100 (the 'safe' limit), based on the National Air Quality Standards or Guidelines for the specific air pollutants concerned. Air quality with API values exceeding 100 is considered likely to cause health effects to the public. The API levels at our sites have been within the safe limit.

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Our Environmental Management

Stack Emissions Monitoring G4-EN21

Cenviro complies with the DOE facilities licence (Jadual Pematuhan) for all stack emissions monitoring parameters. The average values for INC1 and INC4, indicating good quality emissions in 2016, are shown in the table below. We use the Continuous Emissions Monitoring System (CEMS) to monitor and ensure emissions are from the stacks, and the data is directly communicated to DOE. Nine stacks are monitored bi-annually for emission quality.

Parameter	2016		DOE LIMIT
	INC 1	INC 4	
Total Particulate Matter	23.25	24.75	30
Dioxin-Furan	0.0371	0.0345	0.1
Hydrogen Chloride	0.002	0.01675	100
Nitrogen Dioxide	85.5	72.25	400
Sulphur Dioxide	6.325	3.275	200
Carbon Monoxide	15.9	22.25	125
Chlorine	0.008	0.004	200
Arsenic and Its Compounds	0.01775	0.03075	25
Cadmium and Its Compounds	0.01775	0.07375	15
Chromium and Its Compounds	0.38825	0.70805	50
Lead and Its Compounds	0.02175	0.07325	20
Mercury and Its Compounds	0.03400	0.00825	0.2
Copper and Its Compounds	0.03700	0.08075	100

Our Environmental Management



Note: The API scale and terms used in describing the air quality levels is based on the National Air Quality Standards.

Our Environmental Management G4-EN21

Within the WMC Compound

The Air Pollution Index (API) is an indicator for air quality at any area, based on the average concentration of five air pollutants. The API for stations A1, A5 and A6 ranged from good to moderate in 2016, according to the API scale in the previous page. Moderate level does not pose negative effects to the health of humans and no restrictions for outdoor activities are necessary.

Our target is to maintain the API at 50 and below within the WMC. We control the emissions to meet the stipulated limits and reduce dust at the operation area by conducting water browsing. The recorded ambient air quality is compared to the Ambient Air Quality Guidelines as stipulated in the DOE's licensing requirements. The average ambient air quality recorded in 2016 is presented in the table below.

	Results by Station:		DOE
Parameter (mg/Nm ₃)	A1	A2	Lillins
Total Suspended Particulates (TSP)	53.5	71.5	260
Particulate Matter (PM ₁₀)	38.5	46	150
Sulphur Dioxide	0.2	1.9	105
Carbon Monoxide	1	1	35
Nitrogen Dioxide	0.4	0.4	320
Ozone	0.01	0.01	200

Outside the WMC Compound

The air quality reported for stations outside the WMC compound (A2, A3 and A4) is monitored based on concentrations of six major pollutants: total suspended particulate, ground-level ozone (O_3) , ambient gaseous (CO, SO_2 and NO_2), ambient ground-level acids (HCl, Cl_2 and H_2SO_4), heavy metals, and polychlorinated biphenyls (PCBs). The ambient air quality is monitored half-yearly at these stations. The overall air quality was well below the respective limits stipulated in the Malaysian Ambient Air Quality Standards 2013 (MAAQS) and limits adopted by the states of Arizona (USA) and Ontario (Canada). We started tracking ozone levels in 2012.

Odour Management

Measures in place to control odour:

Odour Removal Systems are installed at the outlet of the microwave system. The fumes and odours are filtered through activated carbon filters before being released into the atmosphere.

The pungent wastewater generated is channelled through an effluent treatment plant to eliminate the odour.

In the event of a complaint from the community on odour, we strive to deploy the relevant team with an air quality analyser to assess whether our operations contribute to the odour.

Our Environmental Management

Noise Monitoring

Noise is not often thought of as pollution, but we know that noise pollution affects both health and behaviour and industries are required to monitor and manage the noise they produce. At Cenviro, we monitor noise levels quarterly at four locations. The data is compared with the Annex A, Schedule of Permissible Sound Levels, Schedule 1: Maximum Permissible Sound Level (LAeq) by Receiving Land Use for Planning and New Development under The Planning Guidelines for Environmental Noise Limits and Control, 2004 by the DOE.

All noise levels were below the stipulated limits during the day and at night except Station 4 at night. Higher readings were typically recorded during the day. The night time noise level at station N4 exceeded the respective limits in June 2016. Although the recommended limit was slightly exceeded, it was still acceptable under personal Permissible Exposure Limit (PEL) that stipulates the minimum noise level for human hearing impairment is 85 dB(A). Nearby traffic and machinery could have contributed to the results.



Boundary Noise Level Monitoring (Day Time)

Boundary Noise Level Monitoring (Night Time)



Our Environmental Management G4-DMA, G4-EN11, G4-EN12, G4-S01, G4-S02

Biodiversity

We are conscious of the importance of conserving biodiversity and strive to ensure that our operations do not harm sensitive species, habitats and ecosystems. Natural diversity in ecosystems provides many benefits to human life. We recognise the importance of conserving biodiversity and conserve it by avoiding or reducing potential harm to sensitive species, habitats and ecosystems. We have several monitoring systems in place to measure the impact of our operations on the ecosystem in the areas where we operate:



Our Environmental Management G4-EN11, G4-EN12, G4-S01, G4-S02

Test	Objectives/Description	Results
Bio-aquatic monitoring Monitored biannually – June and December 2016 at four stations	Bio-aquatic monitoring ensures the ecological condition of waterways remains good. We use the Shannon-Wiener Diversity Index to measure the number(s) of species in the surroundings of WMC. A higher number indicates good stream quality.	The state of the streams is stable, except for a decline in the zooplankton. The diversity index improved in December 2016 compared to June 2016 with more species present.
Chlorophyll-a concentration Monitored biannually – June and December 2016	<i>Chlorophyll-a</i> levels increase with nutrient levels. We monitor the level to understand the state of the rivers.	The average results of <i>Chlorophyll-a</i> concentration in 2016 were higher than the previous year.
Testing for toxicity Monitored biannually – June and December 2016	Conducted to assess whether living aquatic organisms are exposed to different concentrations of water samples from the various stations.	The percentage growth of <i>chlorella vulgaris</i> monitored in year 2016 increased slightly after 96 hours of experiment.
Flora and Fauna Survey Annual monitoring conducted in December 2016 at three stations	Assessment required by DOE.	71 species of flora and 17 species of fauna were identified in 2016 at our three biomonitoring stations. All stations observed had green plants with no signs of distorted physical damage to leaves or surfaces. The fauna was found in their normal state without mutations or skin diseases. This indicates that all monitoring stations are devoid of hazardous pollution.

ENPOWERED ntre PEOPLE G4-DMA

Cenviro's future relies on people with skills, passion and innovative minds. We continue to motivate employees to contribute to our shared mission and vision through solid people policies, development programmes, a caring culture and appropriate benefits. In 2016, our focus area was to lay the structure and platforms for internal and external competency training. The safety and well-being of our employees is always our highest priority. An extensive safety programme is now in place, aimed at reducing the accident rate to zero in the long term.

At a Glance

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Performance Overview____

Establishment of

Anti-Alcohol and Drugs Policy

to maintain a safer and healthier working environment

Conducted



at a total cost of

RM509,360

HSE GOALS:

zero injuries at the workplace

Number of recorded injuries **decreased** by

33.96%

in 2016, the lowest since 2010

2 out of 3

phases completed in our fire prevention and firefighting system improvement project

Employee engagement score was **72% with**

nearly 99%

response rate

Recorded 944,787 man-hours with zero-LTI, an improvement of 42.06% from 2015

Average training hours **per employee was 34.29**hours

compared to 27 hours in 2015 – a 27% increment

Allocated RM1 million for joint community programmes throughout the state of Kedah

Performance Overview G4-LA1





Female

Workforce Turnover Rate*

0.72%

Permanent

*excluding EISB

Male

Non-Permanent

Safety, Health and Well-being at Workplace

Safety, Health and Well-being at Workplace G4-LA6

Safety is a responsibility equally shared by all of us. We take pride in maintaining a productive and safe workplace and minimising the risk of accidents, injuries and exposure to health hazards for all our employees, contractors, visitors and the public. A key measure of our success is sending each employee and contractor home safely every day. Maintaining a first-class safety record and building stakeholders' trust is more important to us than short-term financial gain.

Our working environment is complex and involves a range of tasks. We operate a number of vehicles and facilities, and many parts of the operations involve working with heavy equipment or hazardous materials. Realising that any incident can pose risks to our employees, the local communities and the environment, we have made safety a top priority.

Cenviro has a dedicated department to manage issues related to health, safety and environment. In line with the Occupational Safety and Health (Safety and Health Committee) Regulations 1996, the WMC's Health, Safety and Environment (HSE) Committee comprises 25 members, with management and employee representatives.

HSE personnel conduct routine workplace inspections on security, safety, health, environment, fire and HAZMAT throughout the plant. All findings are reported to the Head of HSE. In case of non-compliance, HSE personnel will issue a Corrective Action and Preventive Action (CAPA) order to the respective area owner.

All visitors to WMC are briefed about health and safety. Personal Protection Equipment (PPE) such as safety helmets, jackets, shoes and face masks must be worn when entering PPE zones.

We believe all accidents are preventable and have set a goal of zero injuries. However, human errors do occur and we encourage all employees to inform management of every injury or hazard, no matter how small. For example, we introduced a You-See-You-Act programme in WMC in 2016 to encourage employees to report any unsafe behaviour or working conditions to the HSE Committee and get rewarded for it. This helps us learn from every mistake, take corrective action and create a safer workplace for all. Thanks to our improved policies, last year we had the lowest number of recorded incidents since 2010. The number of recorded injuries decreased by 33.96%, the lowest since 2010. In 2016, we recorded 944,787 man-hours with zero-LTI, an improvement from 665,036 man-hours with zero-LTI in 2015. This is equivalent to a 42.06% increment in LTI man-hours.



Safety, Health and Well-being at Workplace



INCIDENTS RECORDED IN 2010-2016

In 2016, we invested RM210,250 and 7,747 hours in health and safety training for our people. In addition, we offered a wide variety of guides, health programmes and other benefits to promote employee health and wellness.

In 2016, the HSE Department introduced a new 'Penalty Matrix System' to address negligence for injury at WMC. The Penalty Matrix System is designed to raise employees' awareness and compliance with the company's safety, health and environmental procedures. The Penalty Matrix System enforces demerit points and penalties to employees or contractors who breach safety regulations.

ONGOING HEALTH AND SAFETY INITIATIVES Safety Initiative Plan



Safety, Health and Well-being at Workplace



'Safety is a business imperative. Even one accident is one too many for us. My team and I oversee the implementation of our policies and initiatives. However many systems we put in place, ultimately safety can only thrive when there is a culture embedded across the organisation that safety is numero uno. We ran a few campaigns this year to complement our existing training and workshops. We will be looking at new ways to measure safety learning and awareness in the coming year, complemented by a renewed safety curriculum.'

Muhammad Fauzan Baharudin Head of Health, Safety and Environment



In 2016, KASB

established an Anti-Alcohol and Drugs Policy to maintain a safer and healthier working environment. The usage of illegal drugs and alcohol, and abuse of other substances is prohibited within WMC premises. The policy applies to employees, contractors, temporary workers and visitors.

AUDITS IN 2016

KASB underwent a CHWMEG, Inc. 2017 Facility Review Programme in 2016. CHWMEG is a US-based, non-profit association that promotes responsible stewardship. CHWMEG reviews waste disposal facilities on behalf of companies looking for service providers in the area. It has over 280 enterprise members, representing over 800 individual companies. We received an appreciation letter from Exxonmobil for our cooperation with the CHWMEG auditor. In 2016, our facilities were audited for HSE by customers, such as Petronas Chemical Group, BASF, Exxonmobil and Conoco-Philips on oil and gas standards, and we were found to be on par with their expectations and standards.

Safety, Health and Well-being at Workplace

Kualiti Alam Clinic

To improve the health and wellness of our workforce and their access to healthcare, we have built a clinic at the WMC. The new Kualiti Alam Clinic, operated by KPJ Seremban, will be officially opened in June 2017. The clinic will comply with the standards set by the Ministry of Health (MOH) under Cawangan Kawalan Amalan Perubatan Swasta (CKAPS) Division. The clinic will provide first-level response to work-related incidents and illnesses, while also providing primary and preventive care.

OHSEM Day

Cenviro celebrates OHSEM Day annually. During OHSEM Day 2016, KASB launched its Anti-Alcohol and Drugs Policy and organised a tree planting activity. About 100 Kelat Paya Merah trees were planted by employees within our KASB premises.





Safety, Health and Well-being at Workplace

Emergency Preparedness

The Emergency Response Command Centre (ERCC) is the central command and control facility responsible for emergency preparedness and emergency management in KASB's WMC. Operational since 2015, it runs 24/7. The ERCC is equipped with two fire tenders including one HAZMAT (hazardous materials) vehicle and an ambulance. Our plant is now equipped with a full range of firefighting equipment, including mobile foam extinguishers, breathing apparatus, foam and water spray nozzles, chemical protective suits and fire bunker suits. The ERCC ensures rapid response to any emergency at the WMC, as well as the surrounding areas and communities.

KASB WMC also has a Fire and HAZMAT Team with 15 firefighters who have been trained in the prevention and mitigation of incidents involving hazardous materials. In 2016, 7 in-house trainings were conducted by the Fire HAZMAT Team for 31 participants.



Fire HAZMAT training on Chemical Protection Suits



Safety, Health and Well-being at Workplace

In 2015, a fire broke out and affected a part of the KASB storage area. Although KASB suffered property damage, it was minor. More importantly, injuries were avoided. After the incident, the standards and fire protection systems at KASB were further improved by:

- Establishing a Central Command and Control facility at the new ERCC
- Acquiring two fire engines and one ambulance
- Employing 16 competent fire and HAZMAT specialists
- Upgrading fire detection, firefighting and gas detection systems and equipment
- Constructing a 13,294 m² full roofing storage area complete with a perimeter drainage system and sump pit

Cenviro formed a Joint Safety Committee, known as Sendayan Tanah Merah Emergency Mutual Aid (SETMA) in 2015 for the coordination of emergency response affecting Sendayan TechValley and Tanah Merah areas. This committee also addresses other matters concerning health, safety and environment near Sendayan and Tanah Merah. Details on SETMA can be found on page 34.



FIRE PREVENTION AND FIREFIGHTING SYSTEM IMPROVEMENTS PROJECT

PHASE 1 Completed May 2016	 RM2.46 million invested Firefighting system and ancillary installation work for single-storey warehouse Procurement of firefighting equipment
PHASE 2 Completed October 2016	 RM2.36 million invested Upgrading the Fire Water Ring Main System and Ancillary Works for WMC Water Sprinkler System at CWTC Additional Fire Water Pump Replacement of CO₂ Cylinders in all Low Voltage (LV) and Main Switch Board (MSB) Rooms
PHASE 3	RM4 million to be invested in four different types of firefighting systems

Safety, Health and Well-being at Workplace

Fire drills and emergency exercises are an important part of workplace safety and prepare employees to respond quickly, calmly and safely.

A Disaster Management Exercise (DMEX) evacuation drill was organised in 2016, with Jabatan Bomba dan Penyelamat Negeri Sembilan (Fire and Rescue Department Negeri Sembilan), Ibu Pejabat Polis Daerah (IPD) Port Dickson, Hospital Tuanku Jaafar, DOE Negeri Sembilan, Civil Defence Department and Port Dickson District Office.

In 2016, we conducted 7 drills, attended by 462 participants. The drills covered different scenarios, such as fire and explosion, spillage and leakage, gas release, collapse and vehicle accidents. HSE Department also organised the annual OHSEM Day to promote a safe and healthy workplace. This year, it included a safety talk, health screening, a blood donation drive and exhibition booths by various organisations including BOMBA Negeri Sembilan, Department of Occupational Safety and Health (DOSH), Social Security Organisation (SOCSO) and National Occupational Safety and Health (NIOSH).

The internal procedure for Emergency Response Plan (ERP) was also revised, and the Emergency Response Team of employees was strengthened with regular training and drill exercises.



Safety, Health and Well-being at Workplace G4-LA9, G4-LA10

Trainings in 2016

- Emergency Spillage Response Plan Training in Labuan
- Scheduled Waste Management Training & Briefing for Kementerian Pendidikan Malaysia
- Mercury Spillage Awareness Training
- Awareness on Scheduled Waste Management

There were several capacity building initiatives to educate our contractors and customers in 2016, including:

- Emergency Spillage Response Plan Training in Labuan
- Scheduled Waste Management Training & Briefing for Kementerian Pendidikan Malaysia
- Mercury Spillage Awareness Training
- Awareness on Scheduled Waste Training

KASB's Annual Safety Training for contractors:

- Operation procedures
- Defensive driving training
- Emergency response training
- Mock fire drills, spillage and accident procedures
- Fatigue management
- Driver safety talks
- First aid training

Year	Training Hours	Average Training Hours per Contractor
2014	1,008	5.54
2015	1,118	5.85
2016	495	3.0

*A total of 165 drivers were trained in 2016.

Training Programme	No. of Training Sessions Held	Total No. of Participants
Integrated Management System	1	23
Pengurusan Pemandu & Emergency Response Procedure and New Driver Training on Kualiti Alam's Standard Operating Procedures	55	116
Defensive Driver Training	Did not perfor completed i	rm in 2016 but n early 2017.



Safety, Health and Well-being at Workplace

KESUKA for Health and Emotional Well-being

Cenviro's sports club, KESUKA (Kelab Sukan Kualiti Alam), promotes a healthy lifestyle through sports, welfare and recreational activities. In 2016, KESUKA organised more than 50 wellness, sports and recreational programmes to strengthen employees' ties. All 445 employees of Cenviro Group are members of KESUKA and the programmes are free of charge.

Supporting the educational needs of employees' children

The HR Department and KESUKA jointly organised 'Peledak Potensi Diri – Saya Berhak Hebat' workshops in 2016 for employees' children taking the UPSR examination. The workshops used Neuro-Linguistic Programming (NLP) techniques to help children manage their emotions to become inspired and confident. There were 26 participants and the workshop was facilitated by an in-house certified NLP Trainer for Students.







Developing Next Generation Workforce

Developing Next Generation Workforce G4-LA2

We know that our employees, called Cenviro Champions, determine our future success. To attract, motivate and retain the best and brightest, we invest in the development of our people and reward superior performance.

We offer employees a competitive rewards package with benefits like retirement savings options, allowances and annual bonus payments for most positions. Our rewards reflect our pay-for-performance culture. Our investment has led to low turnover rates.

Performance Management G4-LA11

We have established systems for performance management. Bi-annual performance appraisals are conducted and in 2016, 88.19%* of our employees were appraised. We use an electronic performance management system (e-PMS), introduced in 2015. This web-based system automates the entire appraisal process.

PERFORMANCE MANAGEMENT SYSTEM AS A KEY DRIVER

TALENT MANAGEMENT (High achiever, recognised talent)

SUCCESSION PLANNING (High achiever, critical skill) PERFORMANCE IMPROVEMENT PLAN/EXIT MANAGEMENT

(Poor performer, poor fit)

LEARNING & DEVELOPMENT

(Gap analysis, career development)

*excluding EISB

Developing Next Generation Workforce

Training and Development G4-LA9, G4-LA10

Our training and employee development programmes ensure that we have a skilled workforce and a ready pool of future leaders to take on more responsible roles within the Group. We are committed to developing the next generation employees with the necessary skills and expertise to operate our business safely, reliably and affordably. In 2016, our employees received on average 34.29 hours of training, through our 155 training programmes, compared to 27 hours and 86 training programmes in 2015. The significant increase is attributed to running compulsory in-house training on scheduled waste management for all employees, introducing in-house training programmes including ergonomics and Enterprise Risk Management (ERM) workshops, as well as launching an intensive induction programme with plant visits for all new recruits.

In total, we arranged 155 training programmes in 2016, ranging from accounting and leadership to HSE and technical trainings. The Company also conducts a two-day training on environmental awareness for new employees. The training is called 'Introduction to Scheduled Waste Management' and it is delivered by an external party or an internal trainer.

Year	No. of Employees *	Training Cost (RM)	Average Training Cost per Employee (RM)	Training Hours	Average Training Hours per Employee
2014	315	461,529	1,465	1,785	5.67
2015	412	326,844	793	11,428	27
2016	445	509,360	1,144	15,257	34.29

* Note: As on last day of training

By Designation

Designation	Average Training Hours by Employee Category		
Manager	59.60		
Executive	39.57		
Non-Executive	26.08		



Developing Next Generation Workforce G4-LA10

Top Management Development Programme

The Cenviro Top Management Development Programme was introduced to empower the leadership team and help them remain focused and productive following the recent restructuring and rebranding exercise. Also known as the Leadership Development Programme, it is a significant part of building a high-performance team within the Company. The programme was launched in December 2015 and the three modules were completed in 2016.

CEPSWAM Course for Management Team

The Certified Environmental Professional in Scheduled Waste Management (CEPSWAM) course is an in-house competency training programme that familiarises employees with the current regulatory framework, waste properties, waste management concepts and good management practices. This unique training course in Malaysia adopts a hands-on approach and provides a Certificate of Competency for participants who successfully pass both theory and practical examinations at the end of the course.

The second CEPSWAM programme, conducted in 2016, was open to all employees. 14 employees passed both the theory and practical examinations at the end of the course and received the CEPSWAM certificate. To date, we have 36 certified employees.

Cenviro High Performance Team (CHPT) Programme

With the rapid expansion of the Company, having highperforming teams is even more critical. The CHPT Programme enhances the competitive spirit and builds Cenviro's future leadership. 51 employees from various departments were identified for the seven-day training in 2016.

Competency training organised by Environment Institute of Malaysia (EiMAS)

48 employees attended competency trainings organised by EiMAS and received a one-year competency certification. We have internal targets to ensure that at least two fully competent employees are available for six competency areas. We are also putting measures in place to ensure that the 12 trained employees have a buddy system to assist and support them. We are keen to build in-house competency and not rely on our vendors or external parties.

I like that my colleagues constantly challenge me in the 15 years that I have been working here. Although most processes are routine, I have to be careful with what I am doing and follow the guidelines carefully. I have received numerous trainings during the course of my work and have improved my skills considerably. We are always given the opportunity to upgrade our skills on new treatment techniques and technologies. When there are new requirements, we have to establish new methods. 99

FO MOOI HUA Environmental Management Services Manager

Developing Next Generation Workforce



Cenviro Workplace launching ceremony at Kualiti Alam Waste Management Centre.



Cenviro Champions with the delegates from Department of Environment Malaysia at Hari Alam Sekitar Negara held in Kuching, Sarawak.





Managing Director, Khalid Bahsoon and the management team look focused as they brainstorm for ideas at Cenviro Branding Recharge workshop in Putrajaya.

isse:

Cenviro Group Hari Raya Aidilfitri Open House 2016.

Maintaining an Engaged Workforce

Maintaining an Engaged Workforce

We value the feedback of our employees and have various channels for engaging with them. One of the most informative ones is the annual Employee Engagement Survey (EES). In 2016, we partnered with Aon Hewitt to design a comprehensive survey to capture employee opinions and reactions. Nearly 99% employees responded to the survey (407 employees). The employee engagement score was 72%.

Aon Hewitt's research indicates that organisations in the region with engagement scores above 70% consistently deliver better business results. 81% of employees think that Cenviro is a socially and environmentally responsible organisation. As a response to the survey, we are planning to organise Results-to-Action Workshops with the Management Team and develop organisation-wide action plans starting with divisional plans.

KASB's top management promotes operational improvement, as well as safety, health, environment, security and fire, and HAZMAT awareness by Management by Walking Around (MBWA). MBWA is a floor tour by management employees to ensure workplace cleanliness, provide opportunities to meet employees, and to check equipment and the status of ongoing work. This programme started in January 2016. Employees may raise any issue or concern during the MBWA audit every month. Employees are also recognised for their contributions towards protecting the environment by the Operational Excellence programme.

Implementation of 5S

The 5S concept – sort, set in order, shine, standardise and sustain – is implemented wisely in WMC. The 5S method improves safety and productivity and establishes a sense of ownership. In our case, the implementation of 5S will result in efficient workplace spaces, ease of finding necessary items, reduction of oil or water spillage and waste, reduction of accidents and an increase in discipline and better relationships among employees.

All elements related to safety, health, environment and 5S are audited. Scores are given to each department. A quarterly accumulative score will determine the winner. Tokens of appreciation and prizes are given to departments according to their scores.



Our Managing Director sharing information on the Company's performance and future direction at the Townhall

Maintaining an Engaged Workforce





EISB's 5S Improvement Plan

5S is a basic, fundamental, systematic approach for productivity, quality and safety improvements in all types of businesses. It is a prerequisite for any improvement programme. The 5S philosophy focuses on an effective workplace organisation and an efficient work environment while reducing waste. It also aims to improve quality and safety. A quarterly 5S audit was conducted by the Quality Improvement and Technical Audit (QITA) Department.

Objectives of 5S programme

Increase productivity and efficiency

Deliver quality products that fulfil specifications

Manage costs by eliminating wastage and waste disposal

Produce effectively and efficiently

Deliver an early and accurate product to market

Facilitate fast and accurate production
Empowered People

Promoting Diversity and Equal Opportunity

Promoting Diversity and Equal Opportunity G4-10, G4-DMA, G4-LA1, G4-LA12

We recognise the value of building on the diverse backgrounds and perspectives of our employees. We operate in an industry traditionally dominated by men, but strive to diversify our workforce in the future. We believe in equality and will not discriminate based on race, age, gender, ethnicity, religion or personal background.

Workforce breakdown by gender			
Year	Male	Female	
2014	89.9%	10.1%	
2015	89.1%	10.9%	
2016	88.7%	11.3%	

Workforce breakdown by age group		
Age Group	Percentage	
<30	20.1%	
30-50	57.5%	
>50	22.4%	

Workforce breakdown by designation		
Designation	Percentage	
Executive	13.7%	
Non-executive	86.3%	

*excluding EISB

Workforce breakdown by ethnicity		
Ethnicity	Percentage	
Malay	92.1%	
Chinese	1.5%	
Indian	5.9%	
Others	0.5%	

Workforce breakdown by category		
Category	Percentage	
Permanent	84.9%	
Temporary	15.1%	

Workforce turnover rate		
Year	Percentage	
2014	9.90%	
2015	7.40%	
2016	0.72% *	

Workforce breakdown by women in management

Year	Percentage of women in management	Percentage of women in top management
2014	12.62%	1.23%
2015	15.53%	3.16%
2016	2.47% *	0.22% *

Empowered People

Human Rights

Human Rights G4-HR3

State has a duty to protect human rights, but equally the private sector is responsible for respecting human rights and complying with all applicable laws. Cenviro acknowledges this responsibility to respect employees' rights in accordance with the relevant local legislation and regulations. We do not tolerate any form of harassment, discrimination or violence in the workplace. We also strive to ensure that the same applies to the supply chain personnel and local community members.



Empowered People

Human Rights G4-11, G4-HR3

We conduct our business believing that everyone should be treated with dignity and respect. We comply with all applicable employment and human rights laws and regulations and our suppliers are expected to do the same.

All employees, including security personnel, are issued with an Employee Handbook and Code of Conduct that clearly defines our ethical responsibilities.

Cenviro complies with the Children and Young Persons (Employment) Act 1966. Individuals below the age of 18 years cannot be employed according to the Malaysian Employment Act 1955. No incidents of discrimination or risk to freedom of association and collective bargaining occurred in 2016. There have been no reported incidents of risks of child, forced or compulsory labour.



COMMUNITY

Businesses should be accountable for the socioeconomic impact they create and take ownership of the welfare and development of the communities around them. Giving back to the community has always been part of our company culture – we do this by being a responsible neighbour and a trusted community partner. We believe our business contributes to the well-being of our nation and revitalises the local economy, and we also contribute actively in social development through our community, environment and education programmes. The programmes include donations, sponsorship, festive contributions and celebrations, public education campaigns, employee volunteerism, and community outreach activities. We believe in the power of education, and support public seminars, exhibitions, roadshows and excellence awards.

G4-DMA

At a Glance

114 Community Engagement and Development



Community Engagement and Development

Community Engagement and Development G4-S01

Engaging with communities and contributing towards community development is not only the right thing to do, but also makes good business sense. Cenviro builds trust through inclusive and respectful engagement with our communities and is accountable to them. Through quality relationships, we strive to understand community needs, aspirations and cultures as well as anticipate future generations' needs.

Secretary, Jawatankuasa Kemajuan dan Keselamatan Kampung Sendayan (Kampung Felda Sendayan),

ENCIK AZMI BIN OTHMAN

"I have lived all my life in this village. My family has been here for many generations. I have been a village head for 20 years. Now, many of our young people have left. They want to move to bigger cities. Actually, our location is good, and more development is occurring. So, there are more job opportunities.

Many of the people who live here work for Cenviro and, as an employer, the Company takes good care of their people. The youngsters have good career prospects and Cenviro trains them to be more mature and responsible.

Over the years, Cenviro has helped many villagers through their contributions to our village committee, orphans, single mothers and women's cooperative, as well as providing fire support, bus stops and school donations.

We like that they are collaborative, and involve us in decisions that impact the Sendayan area. If we have any concerns about their construction work or lorries, they are always open to hearing from us."



In the future, we will consider extending support for improved facilities and seek to engage with the community more directly and frequently. We will further explore how to ensure that local communities have access to employment indirectly created by our operations.

Community

Community Engagement and Development G4-S01

Cenviro-MyKasih 'Love My Neighbourhood and Love My School' Programme

The collaboration between Cenviro and MyKasih Foundation started in 2015. Contributions have been channelled to 1,000 economically-challenged families in Kedah via MyKasih's MyKad-based cashless payment system to ensure the aid reaches the recipients.

In 2016, a donation of RM1 million was distributed to 1,000 less fortunate families in Kuala Nerang, Kulim, Pendang and Alor Star, Kedah. Under this programme, each family received an allowance of RM80 per month and RM60 was given to selected poor students monthly. MyKasih Foundation is a non-profit organisation that provides food aid, and organises health awareness and financial literacy programmes, children's education, and skills training programmes for less fortunate Malaysians.





Community

Community Engagement and Development G4-S01



Delegates from the Malaysian Danish Business Council visited Kualiti Alam Waste Management Centre in Negeri Sembilan.





Delegates from Dedaun Environment visited Kualiti Alam Waste Management Centre in Negeri Sembilan

"Jom Kenal Kualiti Alam Roadshow" presentation to YB Dato' Haji Ubaidah Haji Redza, Negeri Sembilan State Executive Council Chairman of Committee, Public Utilities, Environment, Co-operative and Consumerism.

Community

Community Engagement and Development G4-S01

Community Contributions

Other community contributions in 2016:

- Monetary and goodie bags contribution during Ramadhan and Aidilfitri for the underprivileged and to mosques in local communities.
- Jalur Gemilang contribution in conjunction with 2016 Merdeka celebration strengthened the relationship between the five local communities and the Company.
- Contributed to Cenviro Group Aidiladha Qurban Ceremony for employees and five local communities.
- Contributed to Program Konvoi Berbasikal in conjuction with Hari 1Wilayah 2016. A total of 150 Cenviro employees took part, making ours the largest single company participation.









GOOD CONDUCT AND ETHICAL BUSINESS PRACTICES

The Board of Directors of the Cenviro Group recognises that sound corporate governance is fundamental to the success of the business. The role of corporate governance is crucial in monitoring all aspects of the Company's behaviour which affect society at large. Our strong Corporate Governance framework has helped establish the Company's credibility and enhanced value, strengthened customers' trust in our business and improved the Group's overall competitiveness. Cenviro Group continuously applies and evaluates the governance practices to meet the evolving corporate environment.

120	The Board
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125	Whistle-Blowing Policy
126	Anti-Corruption and Gift Policy
127	Privacy Policy

Sustainability Governance at Cenviro G4-34

Roles	Responsibilities		
Board of Directors	To steer the organisation towards achieving sustainability agenda		
Group Corporate Communications	Coordinates sustainability reporting and community-related initiatives		
Group Human Resource	Oversees employee-related matters		
Group Health, Safety and Environment	Regulating, enforcing and monitoring of environment, occupational safety and health policies		
Group Procurement	Responsible for sourcing goods and services		

The Board

Cenviro is led by an effective and experienced Board that controls the affairs and businesses of the company and Group.

As creating a sustainable future takes more than good intentions, the Board has an obligation to help drive a strategic approach to maintain and improve corporate sustainability. In discharging its roles and responsibilities, the Board ensures that the highest corporate governance standards are adhered to, aligns the interests of its stakeholders, and sets the tone for its ethics and values.



Board Composition G4-LA12 ____

Name	Designation	Age	Meeting Attendance
Khalid Bahsoon	Managing Director	47	9/9
Ahmad Farouk Mohamed	Non-Independent Non-Executive Director	44	9/9
Shahazwan Mohd Harris*	Non-Independent Non-Executive Director	45	9/9
Loh Tzu Anne	Non-Independent Non-Executive Director	41	9/9

*Resigned on 11 February 2017

Our Directors bring on board a wealth of knowledge and experience on various matters, including business development, finance, accounting/audit as well as risk, project and transformation management and general management skills drawn from the industries that they previously operated in.

We regret the loss of our Chairman, YBhg Dato' Seri Ismail Shahudin, who passed away in July. His leadership and wisdom contributed greatly to the growth of the company.

Board Meetings

Board Meetings take place every quarter to review Cenviro Group's financial standing, progress of projects, and operational and business performance. These quarterly and year-end scheduled meetings are categorised as Ordinary Meetings.

If an urgent or special matter arises, and it needs to be dealt with before the next regular Board Meeting, a Special Board Meeting will be called.

A Director who has either direct or indirect interest in any proposal or transaction which is being presented to the Board for consideration, will declare his or her interest and abstain from deliberation and voting of the same at the Board Meeting. In 2016, five Ordinary and four Special Board Meetings were held.

Board Committees

The Board has established three Board Committees to assist in the execution of its responsibilities for the Group:

- 1. Group Audit and Risk Committee
- 2. Group Investment Committee
- 3. Group Nomination and Remuneration Committee

The Board Committees are guided by the respective Terms of Reference.

Management Team

Cenviro's Management Team comprises talented professionals with decades of experience across the waste management industry. Reporting to the Board, the Management Team defines and disseminates the Company's vision for future growth and success.



from left to right

Zaki Abdul Aziz Daud Head, Business, Project & Technical Development

Khalid Bahsoon Managing Director

Lim Kwee Yong Chief Finance Officer

from left to right

Idris Sulaiman Head, Operations

Nurulhuda Faisol Head, Legal

Muhammad Fauzan Baharudin Head, Health, Safety and Environment



Management Team



from left to right

Mogens Straarup Chief Technical Officer

Ismawati Mohd Shah Head, Corporate Communications

Yee Hui Min Company Secretary

from left to right

Faridah Ab Ghani Head, Human Resource & Administration

Amirul Bahri Abd Malek

Head, Marketing – Clinical Waste & Environmental Support Services

Kamarulbahrin Mohd Suki Head, Marketing – Scheduled Waste, Logistics & Packaging



Risk Management G4-56 ____

The implementation of Enterprise Risk Management (ERM) helps us identify, assess and manage risks in line with Cenviro Group's risk appetite. All these risks have been classified into the 5 categories of governance, strategy and planning, operations and infrastructure, compliance and reporting.

We adopted a risk-based audit in 2016, derived from our ERM Risk Profiling and Assessment Report (Risk Register). The findings were reported to the Board's Audit and Risk Committee (ARC) and subsequently to the respective departments for action planning. Heads of Department are responsible for ensuring all the approved mitigation action plans are implemented accordingly, with assistance from the Internal Audit Department.

Both the ERM and internal audit activities will continue annually as part of our commitment to providing a sound business practice in terms of governance, risk management and internal control processes.

Our Internal Audit Department provides an independent, objective assurance and consulting activity and carries out audits to evaluate and improve the effectiveness of risk management, control and governance processes within Cenviro Group. In 2016, we performed four cycles of internal audits, which focused on areas of Operations, Safety, Marketing, Projects, Human Resources, Procurement and Management Information Systems.

Conflict of Interest

No employee of the Cenviro Group is permitted to engage in any activity that can be detrimental to the Company's interests. Employees may hold shares in listed public companies. However, prior permission must be obtained from the Company if they intend to acquire substantial shareholdings or hold a directorial position in another company.

Employees must not participate in or influence the purchase of goods and services from any party that they stand to obtain a direct or indirect interest or benefit from.

New recruits to the Company are provided with the Employee Code of Conduct upon joining, and they are required to disclose all interests. Current employees are expected to make ongoing disclosures as and when needed.

Whistle-Blowing Policy G4-56

Cenviro's Whistle-Blowing Policy applies to any suspected improprieties involving employees, consultants, vendors, contractors, and/or any other parties with a business relationship with the Company. This Policy provides a mechanism to report instances of unethical behaviour, actual or suspected fraud, dishonesty or violation of the Company's Code of Conduct or Ethics Policy without fear of retribution.

Whistle-blowers (employees and vendors) may use a dedicated hotline number, website and email address to report suspected incidents of corporate wrongdoings. The whistle-blowing programme, known as Cenviro Tip-Offs, was introduced in May 2016. Cenviro Tip-Offs is managed by an independent party, Deloitte.

Employee/Vendors contact Cenviro

Tip-offs Anonymous line via:

Website

Email

Toll-free hotline

Overview of whistle-blowing process

provides feedback to caller via

unique ID number.

Cenviro continues corrective action and Deloitte contact centre

Investigation team updates e-Room members and e-Room members provide feedback to Deloitte.

Deloitte reviews call, prepares report (in/out scope) and uploads to secure e-Room and sends notification to e-Room members.

E-Room members review the report, decide if further investigation is needed and engage internal/ external investigator if needed.

Our Cenviro Tip-Offs can be contacted **24/7** via



A 1800-817-365



report@cenvirotipoffs.com

https://cenvirotipoffs.com

All the above communication channels are secure, easy to use and available to all employees and any parties with a business relationship with the Cenviro Group and its subsidiaries/affiliates. Any information received will be treated with the utmost confidentiality.

Anti-Corruption and Gift Policy G4-56, G4-DMA, G4-SO3 _

Cenviro has zero tolerance towards corruption and all employees are expected to uphold the integrity of the Company. Any reports of corruption will be investigated immediately. Those found guilty will be dismissed and further action taken where necessary.

Our Anti-Corruption and Gift Policy regulates that employees must neither offer nor receive bribes for their own benefit, or the benefit of relatives or spouses, on behalf of the Company.

Employees and their immediate families must not receive gifts or favours from contractors, suppliers, clients, customers or any other parties with business dealings with the Company. However, under such circumstances where it is customary to do so, employees can accept gifts of nominal value or favours, provided they are not unduly influenced by them.

Cenviro's 'No Festive Gift' Policy prevents employees from accepting any form of gifts, favours or gratuitous entertainment from contractors, suppliers, customers or any other parties with business dealings with the Company.



Privacy Policy G4-56, G4-DMA, G4-PR8 ____

We adhere to the Personal Data Protection Act 2010 (PDPA) that protects the personal data of individuals performing commercial transactions. We only collect personal identification information that has been voluntarily submitted. We have appropriate data collection, storage and processing practices and security measures against unauthorised access. We do not sell, trade or rent personal identification information to others. There were no breaches of privacy cases in 2016.

Policies and Certifications

Other policies:

KASB IMS Policy Statement

Certifications for ISO 9001, ISO 14001 & OHSAS 18001:

- KASB
- KKA
- KKI

Certifications for ISO/IEC 17025:

KASB

KASB also revised its Environmental Policy in 2016 to implement the Guided Self-Regulation (GSR), recently introduced by the Department of Environment (DOE). To ensure KASB's compliance with environmental requirements, we engaged a DOE Registered Auditor to conduct an audit in 2016.



Assurance Statement

BUREAU VERITAS Certification

INDEPENDENT VERIFICATION STATEMENT

To: The Stakeholders of Cenviro Sdn Bhd

Introduction and objectives of work

Bureau Veritas has been engaged by Cenviro Sdn Bhd to conduct an independent verification of its Sustainability Report 2016. This Verification Statement applies to the information included within the scope of work described below.

This information and its presentation in the Sustainability Report 2016 are the sole responsibility of the management of Cenviro Sdn Bhd. Bureau Veritas was not involved in the drafting of the report. Our sole responsibility was to independently verify the accuracy and assure the information included. This is the 9th year we have verified the Cenviro Sdn Bhd Sustainability Report, which includes E-Idaman Sdn Bhd.

Scope of work

Cenviro Sdn Bhd requested Bureau Veritas to verify the accuracy of the data and information included in the Sustainability Report 2016.

Methodology

As part of its independent verification, Bureau Veritas undertook the following activities:

- Interviews with relevant personnel including the Head of Departments of Cenviro Sdn Bhd including E-Idaman Sdn Bhd.
- Review of documented evidence produced by Cenviro Sdn Bhd including E-Idaman Sdn Bhd.
- 3. Audit of performance data
 - Review of Cenviro Sdn Bhd Bhd, including E-Idaman Sdn Bhd systems, for qualitative and quantitative data aggregation and analysis.

BUREAU VERITAS

Page 1 of 4

4.

Assurance Statement



Assurance Statement



Assurance Statement



GRI G4 Content Index for 'In Accordance' Option-Core_

GENERAL STANDARD DISCLOSURES					
GENERAL STANDARD DISCLOSURES	PAGE (OR LINK)	EXTERNAL ASSURANCE			
STRATEGY AND	ANALYSIS				
G4-1	P20, P22-P23	YES. P128			
G4-2	P20, P22-P23	YES. P128			
ORGANISATION	ORGANISATIONAL PROFILE				
G4-3	Front Page, P16	YES. P128			
G4-4	P16-P19, P30-P33	YES. P128			
G4-5	P9	YES. P128			
G4-6	P9	YES. P128			
G4-7	P19	YES. P128			
G4-8	P16, P18-P19	YES. P128			
G4-9	P6-P7, P12-P13, P18	YES. P128			
G4-10	P109	YES. P128			
G4-11	P111	YES. P128			
G4-12	P72	YES. P128			
G4-13	P19, P22	YES. P128			
G4-14	P35	YES. P128			
G4-15	P39	YES. P128			
G4-16	P39	YES. P128			
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES					
G4-17	P9	YES. P128			
G4-18	P34-P35	YES. P128			
G4-19	P40	YES. P128			

GENERAL STANDARD DISCLOSURES				
GENERAL STANDARD DISCLOSURES	PAGE (OR LINK)	EXTERNAL ASSURANCE		
IDENTIFIED MAT	ERIAL ASPECTS AND	BOUNDARIES		
G4-20	P40	YES. P128		
G4-21	P40	YES. P128		
G4-22	Significant restatements of data compared to prior years are noted in the section where they appear	YES. P128		
G4-23	P41	YES. P128		
STAKEHOLDER ENGAGEMENT				
G4-24	P36-P38	YES. P128		
G4-25	P35	YES. P128		
G4-26	P36-P38	YES. P128		
G4-27	P36-P38	YES. P128		
REPORT PROFILE				
G4-28	Р9	YES. P128		
G4-29	Р9	YES. P128		
G4-30	P9	YES. P128		
G4-31	P9	YES. P128		
G4-32	P9	YES. P128		
G4-33	Р9	YES. P128		
GOVERNANCE				
G4-34	P119	YES. P128		
ETHICS AND INTEGRITY				
G4-56	P10-P11, P124-P127	YES. P128		

Aug 2017 Service

Content Index Cenviro Sdn. Bhd.

SPECIFIC STANDARD DISCLOSURES							
CATEGORY: ECONOMIC							
Material Aspects	DMA and Indicators	Omissions	External Assurance	Reference			
Economic Performance	G4-DMA: P42 G4-EC1: P12 G4-EC3: P12		YES. P128 YES. P128 YES. P128	Integrated Solutions Financial Performance Financial Performance			
Indirect Economic Impacts	G4-DMA: P42 G4-EC7: P33, P62 G4-EC8: P45-P49, P50, P51, P52, P55, P56, P72-P73		YES. P128 YES. P128 YES. P128	Integrated Solutions Future of Landfill, Future-focused Integrated Solutions Integrated Scheduled Waste Management, Managing Clinical Waste, Vertical Secured Landfill, Recycling and Recovery Facilities, DONG REnescience - Municipal Solid Waste to Energy, COWTEC® Composting Solution, Sustainable Procurement Practices			
Procurement Practices	G4-DMA: P72 G4-EC9: P73		YES. P128 YES. P128	Sustainable Procurement Practices Operational Efficiency (Sustainable Procurement Practices)			
CATEGORY: ENVIRONMENTAL							
Material Aspects	DMA and Indicators	Omissions	External Assurance	Reference			
Materials	G4-DMA: P64 G4-EN1: P68		YES. P128 YES. P128	Our Operations and the Environment Operational Efficiency (Materials Management, Fuel)			
Energy	G4-DMA: P76 G4-EN3: P78		YES. P128 YES. P128	Managing Emissions and Addressing Climate Change Electricity Consumption			
Water	G4-DMA: P64 G4-EN8: P69		YES. P128 YES. P128	Our Operations and the Environment Water Management			
Biodiversity	G4-DMA: P88 G4-EN11: P88-P89 G4-EN12: P80, P81, P82, P88-P89		YES. P128 YES. P128 YES. P128	Our Environmental Management Our Environmental Management Our Environmental Management			

GRI G4 Content Index for 'In Accordance' Option-Core

SPECIFIC STANDARD DISCLOSURES						
CATEGORY: ENVIRONMENTAL						
Material Aspects	DMA and Indicators	Omissions	External Assurance	Reference		
Emissions	G4-DMA: P76		YES. P128	Managing Emissions and Addressing Climate Change		
	G4-EN15: P76-P77		YES. P128	Managing Emissions and Addressing Climate Change		
	G4-EN16: P76-P77		YES. P128	Managing Emissions and Addressing Climate Change		
	G4-EN17: P76-P77		YES. P128	Managing Emissions and Addressing		
	G4-EN21: P83-P86		YES. P128	Climate Change Air Quality, Stack Emissions Monitoring, Air Pollution Index, Our Environmental Management (Stack Emissions Monitoring - Within the WMC Compound, Outside the WMC Compound)		
Effluents and Waste	G4-DMA: P64 G4-EN22: P69, P82		YES. P128 YES. P128	Our Operations and the Environment Effluent Treated and Discharged, Wastewater Quality		
	G4-EN23: P70-P71		YES. P128	Domestic Waste Management, Operational Efficiency (Internal waste – domestic waste, Internal waste – scheduled waste)		
Compliance	G4-DMA: P64 G4-EN29: P79, P80		YES. P128 YES. P128	Our Operations and the Environment Environmental Management Systems		
CATEGORY: SOCIAL						
LABOR PRACTICE	S AND DECENT WORK	<				
Material Aspects	DMA and Indicators	Omissions	External Assurance	Reference		
Employment	G4-DMA: P90 G4-LA1: P93, P109	Total number and rate of new hires are not applicable as both do not reach our materiality threshold.	YES. P128 YES. P128	Empowered People Performance Overview, Promoting Diversity and Equal Opportunity		
	G4-LA2: P103		YES. P128	Developing Next Generation Workforce		

SPECIFIC STANDARD DISCLOSURES						
LABOR PRACTICES AND DECENT WORK						
Material Aspects	DMA and Indicators	Omissions	External Assurance	Reference		
Occupational Health and Safety	G4-DMA: P90 G4-LA6: P94		YES. P128 YES. P128	Empowered People Safety, Health and Well-being at Workplace		
Training and Education	G4-DMA: P90 G4-LA9: P101, P104 G4-LA10: P101, P104-P105 G4-LA11: P103		YES. P128 YES. P128 YES. P128 YES. P128	Empowered People Safety, Health and Well-being at Workplace, Training and Development Safety, Health and Well-being at Workplace, Training and Development Performance Management		
Diversity and Equal Opportunity	G4-DMA: P109 G4-LA12: P109, P121		YES. P128 YES. P128	Promoting Diversity and Equal Opportunity Promoting Diversity and Equal Opportunity, Board Composition		
CATEGORY: SOCIAL						
HUMAN RIGHTS						
Material Aspects	DMA and Indicators	Omissions	External Assurance	Reference		
Non- discrimination	G4-DMA: P90 G4-HR3: P110-P111		YES. P128 YES. P128	Empowered People Human Rights		
SOCIETY						
Local Communities	G4-DMA: P112 G4-SO1: P88-P89, P114-P117 G4-SO2: P88-P89		YES. P128 YES. P128 YES. P128	Community Our Environmental Management (Biodiversity), Community Engagement and Development Our Environmental Management (Biodiversity)		
Anti-corruption	G4-DMA: P126 G4-SO3: P126		YES. P128 YES. P128	Anti-Corruption and Gift Policy Anti-Corruption and Gift Policy		
PRODUCT RESPONSIBILITY						
Product and Service Labeling	G4-DMA: P60 G4-PR5: P60		YES. P128 YES. P128	Achieving Customer Satisfaction at KASB Achieving Customer Satisfaction at KASB		
Customer Privacy	G4-DMA: P127 G4-PR8: P127		YES. P128 YES. P128	Privacy Policy Privacy Policy		

Marketing Network

Convenient Services Nationwide

You can leverage our comprehensive marketing network for easy access and efficient services. We will be happy to provide you with more information about our capabilities and services for each of your business needs.



Glossary_

- **4R** Waste prevention techniques are commonly summarised as the so-called 4Rs: reduction, reuse, recycling and recovery. Reduction, reuse and recycling are known in the industry as the 3Rs.

5S is a workplace organisation method that uses a list of five Japanese words: seiri, seiton, seiso, seiketsu and shitsuke.

Anaerobic process

Anaerobic processes produce high energy materials like methane which can be captured and burned as an energy source, and used to power gas-burning appliances or internal combustion engines, or to generate electricity.

Bioclimatic design

A design concept that is based on local climate, aimed at providing thermal and visual comfort, making use of solar energy and other environmental sources.

Clinical waste

The Ministry of Health Malaysia defines clinical waste as:

- any waste which consists wholly or partly of human or animal tissue, blood or other bodily fluids, excretions, drugs
 or other pharmaceutical products, swabs or dressings, syringes, needles or other sharp instruments, being waste
 which unless rendered safe may prove hazardous to any person coming into contact with it.
- any other waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practices, investigation, treatment, care, teaching or research, or the collection of blood for transfusion, being waste, which may cause infection to any person coming into contact with it.
- also, a type of scheduled waste listed in the First Schedule of Environmental Quality (Scheduled Wastes) Regulations 2005 (Code: SW 404).

Effluents

Waste that pour into water and air. Liquid factory waste, smoke, and raw sewage can all be called effluents.

– E-waste

A type of scheduled waste listed in the First Schedule of Environmental Quality (Scheduled Wastes) Regulations 2005. (e.g. code: SW102 – Waste of lead-acid batteries in whole or crushed form and SW103 – Waste of batteries containing cadmium and nickel or mercury or lithium).

Glossary

Green geogrids

Geogrids are used in separation, stabilisation, and reinforcement applications. They are frequently used in construction below the stone base to extend the life of the pavements and to stabilise soft soils and reinforce retaining walls.

Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Version)

The Standard provides requirements and guidance for companies and other organisations preparing a corporatelevel GHG emissions inventory. The standard covers the accounting and reporting of seven greenhouse gases covered by the Kyoto Protocol – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

Inert waste

Waste that is neither chemically nor biologically reactive and will not decompose such as sand and concrete.

Leachate

Water that has passed through waste and contains dissolved and suspended material is termed leachate. It may contaminate other sources.

Municipal Solid Waste

More commonly known as trash or garbage – consists of everyday items we use and then throw away, such as product packaging, furniture, clothing, bottles, food scraps and newspapers.

Scheduled waste

Scheduled waste is any waste falling within the categories of waste listed in the First Schedule of Environmental Quality (Scheduled Wastes) Regulations 2005. Scheduled waste is by nature very toxic and dangerous. Improper management of such waste will lead to serious pollution of the environment and the ecosystem as well as immediate long-term impact on human health.



We now mark the beginning of greener footprints in innovating for a sustainable future and will continue with new strategies to take on the resource challenges of today to deliver value for a circular future.

Leading The Green Revolution

Cenviro Sdn Bhd

13-1, Mercu UEM, Jalan Stesen Sentral 5 Kuala Lumpur Sentral, 50470 Kuala Lumpur, Malaysia

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