



Press Release

Sinar Mas Land and Chandra Asri Turn Plastic Waste into Asphalt

- The use of recycled plastic waste is a form of commitment by Sinar Mas Land and Chandra Asri in preserving the environment by providing new functions and economic value of plastic waste.
- The additional plastic waste to the asphalt mixture can increase the quality of road durability by up to 40 percent.

BSD City, 24 August 2021 – Data from the Ministry of Environment and Forestry in 2019 stated that waste generation in Indonesia reaches 64 million tons per year. Around 15% of the waste in general is plastic. One of solutions to the solid waste problem is a circular economy model which aims to provide benefit for society, business, and the environment.

In implementing the circular economy, it takes the participation of all stakeholders and the community to play an active role in managing plastic waste. This effort is also carried out by Sinar Mas Land and PT Chandra Asri Petrochemical Tbk (Chandra Asri) who took an active role in developing asphalt with a mixed of plastic waste. The application of the plastic asphalt has been carried out on one of the roads in the west area of BSD City. The total paving area is 15,518 m² while the total plastic waste used are 5.37 tons or equivalent to 3.58 million plastic bags.

Managing Director President Office Sinar Mas Land Dhony Rahajoe explained that this activity is in line with the company's sustainability vision to create sustainable development. "As a form of positive contribution to Indonesia's commitment in protecting the environment, Sinar Mas Land realizes the need for concrete steps to be taken on the issue of environmental change and environmental preservation. Plastic waste is one of the big problems that need to be solved together. This collaboration will turn plastic waste into materials that have economic value and are useful in infrastructure development while reducing the rate of increase in the amount of plastic waste that damages the environment," said Dhony.

Chandra Asri has implemented asphalt with a mixed of plastic waste since 2018 through the "Aspal Plastik untuk Indonesia Asri" program together with its stakeholders. This program is part of Chandra Asri's efforts to implement circular economy model.

Edi Rivai, Vice President of Corporate Relations & Sustainability Chandra Asri said, "In line with our principle of being the Growth Partner, the cooperation with Sinar Mas Land is the proof of our efforts to continue to find sustainable solutions to waste problems, especially plastic waste, in Indonesia. We believe that the problem of plastic waste can be managed with the participation of various stakeholders. Hopefully, in the future there will be more and more partners to participate in this initiative to jointly support the Government of Indonesia in achieving the waste management goals."

Previously, Chandra Asri had held projects of asphalt with a mixed of plastic waste in various cities in Indonesia such as Cilegon, Tegal, and Semarang in collaboration with the local governments. In addition, Chandra Asri also collaborated with academic institutions such as Universitas Indonesia in Depok and Universitas Dian Nuswantoro in Semarang. Up until today, the total of road with asphalt plastic waste mixture by Chandra Asri and its partners are 42.74 km and 234.1 tons of plastic waste have been successfully managed through this activity.

Gabriel Andari Kristanto, Ph.D, lecturer at the Faculty of Engineering, Universitas Indonesia explained that the asphalt plastic conducted by Chandra Asri and Sinar Mas Land is one of the





implementations of the circular economy concept. "In this activity, plastic waste is upcycled into a mixture of asphalt which has a higher economic value. Not only that, plastic waste is also transformed into material with new purpose that can be enjoyed by the wider community. This does not only benefit businesses, but also society and the environment."

Asphalt model with a mixed of plastic waste is a program of the Government of Indonesia through the Ministry of Public Works and Public Housing (PUPR). The type of plastic waste used is plastic waste commonly used as daily shopping bags from HDPE (High Density Polyethylene) type. This asphalt with a mixture of plastic waste has referred to a study conducted by the Ministry of Public Works and Public Housing and has an increase in road durability of up to 40 percent. Sinar Mas Land and Chandra Asri also collaborated with the Indonesian Plastic Recycling Association (ADUPI) in providing recycled plastic waste materials used in this program. The model used contains plastic (chopped plastic bags/HDPE) to produce an asphalt mixture that is resistant to deformation (changes in shape due to temperature) and is better at fatigue resistance. (*)

About Sinar Mas Land

Sinar Mas Land is a property developer in Indonesia with more than 40 years' experience. Sinar Mas Land has developed more than 50 projects in Indonesia. Sinar Mas Land's success by developing property and real estate in Indonesia is also recognised by credible and independent institutions in the world by obtaining various prestigious international awards such as the FIABCI World Prix d'Excellence Awards (2019), ASEAN Energy Awards (2019), Asia Pacific Property Award (2021), Cambridge IFA's Global Good Governance Award (2021), Asia Pacific Property Award (2021) and FIABCI World Prix d'Excellence Awards (2021).

With the support of a solid management team, Sinar Mas Land is known as an independent city developer (through BSD City Development) and a pioneer in the cluster development or concept-clustered residential housing concepts. In addition, Sinar Mas Land is also a pioneer in developing innovative Strata Mall / Trade Center (ITC) projects in Indonesia. Sinar Mas Land is listed on the Indonesian Stock Exchange as PT Bumi Serpong Damai Tbk, and on the Singapore Stock Exchange.

Sinar Mas Land has strong strategic partners such as Sojitz Japan, Aeon, Itochu, Mitsubishi Corporation, Hongkong Land and local partners such as Kompas Gramedia and Kalbe. For more information, please visit: www.sinarmasland.com.

About Chandra Asri

Chandra Asri Petrochemical is Indonesia's largest integrated petrochemical company producing Olefins and Polyolefins. With a history of over 29 years and over 2,000 dedicated staff, the company incorporates state-of-the-art technologies and supporting facilities located strategically in the country's petrochemical hub, Cilegon and Serang. As a Growth Partner, Chandra Asri is committed on creating high-value jobs, expanding the domestic petrochemical value chain, and serving the needs of the vibrant and growing Indonesian market. For more information, visit: www.chandra-asri.com.

For more information, please contact:

Suryandi,

Director of Corporate Affairs and HR PT Chandra Asri Petrochemical Tbk

Telp: (62-21) 530 7950 | Fax: (62-21) 530 8930

 $\hbox{E-mail:} \ \underline{suryandi@capcx.com} \ or \ corporate.comm@capcx.com.$

Atikah Sunarya

Head of Public Relations and Social Media Sinar Mas Land

Tel : 021- 50 368 368

Email : atikah.sunarya@sinarmasland.com