Microalgae bio-asphalt

Waste Flow
Construction and Demolition Waste

Impact on PESTEL categories
Technological

Location of the good practice
Amsterdam Metropolitan Areas

Stakeholders involved
Public institutions, enterprises, researchers

Keywords
Sustainability of buildings, Improving waste logistics, Quality management

Description
The projected solution proposes an alternative for conventional asphalt-based on microalgae. This bio-asphalt proves to be an effective and sustainable solution for road construction and could serve as a viable alternative for asphalt-based on petrochemicals. Bioasphalt production using microalgae is beneficial as it can be tailored to consume a wide variety of resources from CO2 to biomass. In an urban environment, it can tap into an extensive network of urban biomass flows.

Objective
Asphalt products derived from biological processes (bio+asphalts) have been explored as a possible replacement of petroleum-based asphalt. The traditional asphalt supply chain is linear, except recycling at the end of life. Bio Asphalts solution aims to change the supply chain and close loop, by ensuring that raw materials are from renewable sources and the dissipated wastes can break down safely in the environment. Like their petrochemical counterparts, end of life bio asphalts can also be recycled.

For further information
http://h2020repair.eu/wp-content/uploads/2019/03/Deliverable-5.2-Catalogue-of-solutions-and-strategies-for-Amsterdam.pdf (page 149)