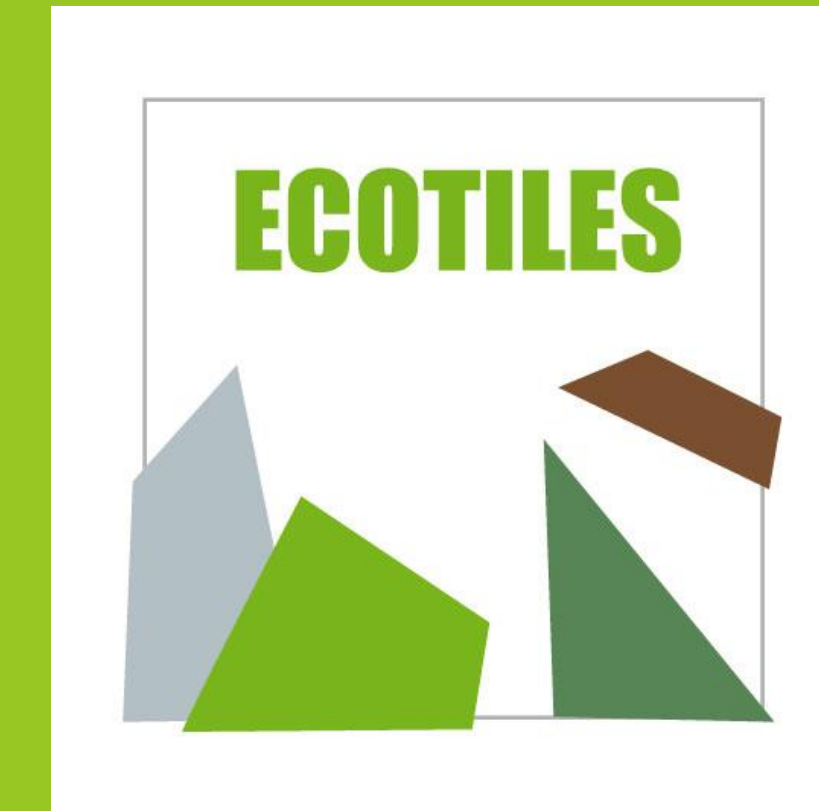


ECO TILES Project

ECO innovative methodologies for the valorisation of construction and urban waste into high grade TILES



with the contribution of the LIFE Programme of the European Union

The project

ECO TILES (LIFE14 ENV/IT/000801) is a research project financed by the LIFE program of the European Union, under the topic ENVIRONMENT - WASTE. The project is a synergy between the University of Camerino and the Grandinetti company. The research demonstrated the possibility to produce fully recycled Terrazzo tiles using recycled glass, ceramic and Construction & Demolition Waste (CDW). The new products were found to have a substantial less environmental impact compared to the traditional tiles as demonstrated by the Life Cycle Assessment (LCA)



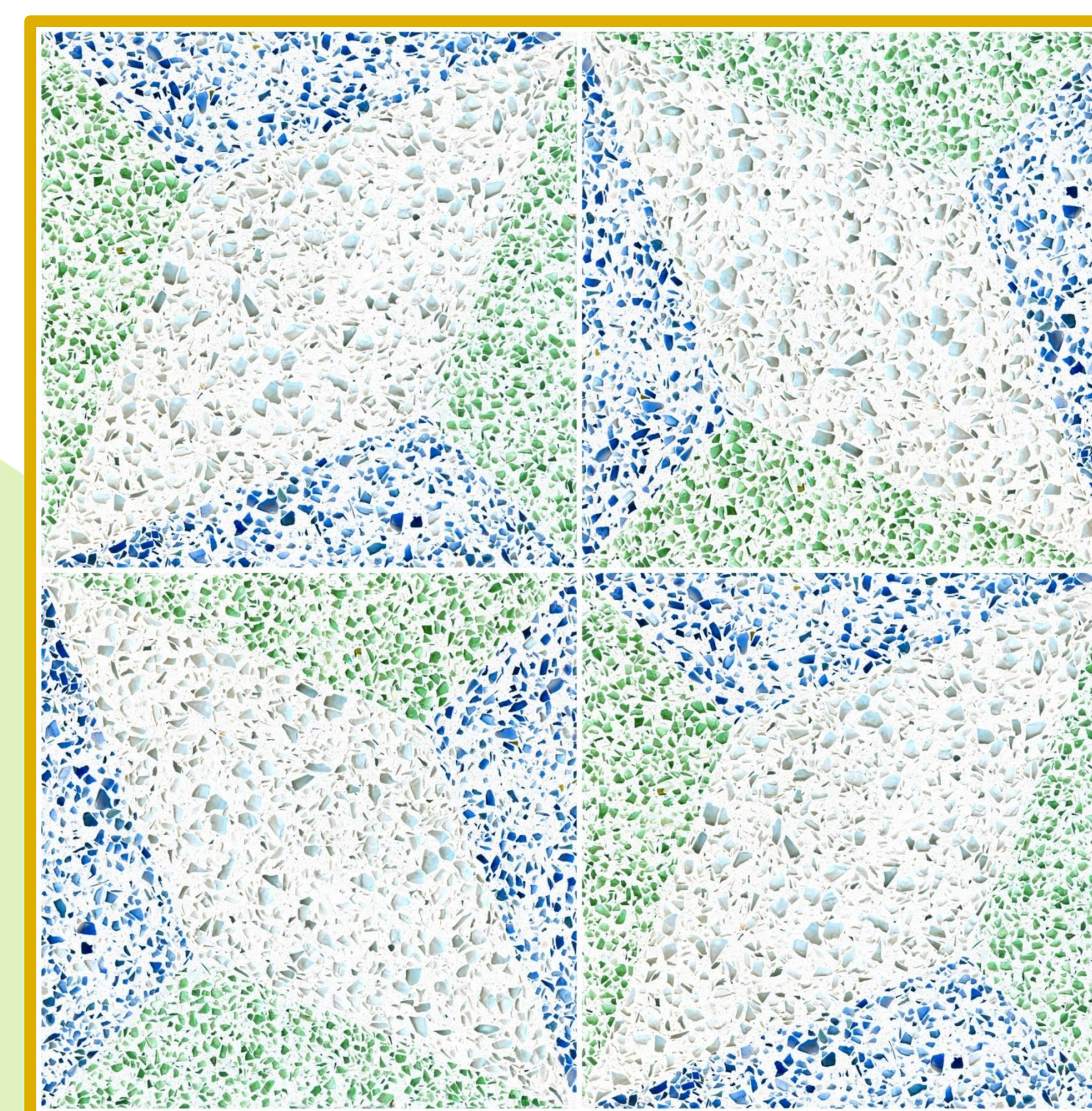
«Fiasco» ECO TILE @ CERSAIE 2016

The LIFE ECO TILES typologies

The ECO TILES have been experimented in 3 different typologies: the “standard” tile is similar to a traditional tile but contains up to 70% of waste material. The “extra ware” aims to valorize the technical performance of the product, with a high resistance to abrasion. The “design” tile allows a wide range of colors and patterns, also for custom-made productions.



ECO TILES featured in AD Collector April 2017, special issue



ECO TILES design configuration «Compass»

Single and Double Layer ECO TILES

The Single Layer tiles are made of one layer, polished, composed of recycled glass fragments, cement, pigment and a powder (marble, glass or quartz). The Double Layer tile adds to the bottom a second layer composed of cement and 75% of crushed CDW. The Single Layer is thinner, lighter and it is more suitable for the preparation of the “design” tiles. Double Layer tiles are heavier and sturdier, a perfect fit for the “extra ware” type and for high traffic environments.



ECO TILES characteristics compared to traditional tiles

	Terrazzo EcoTiles	Terrazzo Traditional	Ceramic Tiles
Production temperature	Low	Low	High
Energy consumed	Low	Low	High
CO ₂ emissions produced	Very low	Low	High
Recycled Glass Fragments used	33%	0%	0%
Recycled Glass Powder used	33%	0%	0%
Raw Materials extracted from quarries	0%	66%	100%
Powder from Construction & Demolition Waste (CDW)	up to 40%	0%	0%
Portland Cement used	20-30%	33%	0%

