



# Deliverable D3.1

## Design of insulation geopolymer panel for installation in demo sites

### WP3

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<b>CI</b>	Classified, as referred to in Commission Decision 2001/844/EC	

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## **Publishable summary**

The Deliverable 3.1 “Design of insulation geopolymer panel for installation in demo sites” is a confidential report delivered in the context of WP3, Task 3.1: “Technical design and definition of plant steps of geopolymer components suitable for installation” concerning the definition of the steps for the scale up production of the panels.

The aim is to identify the phases of the production in order to scale up the geopolymer panels taking to account some important characteristics of the panels themselves. Particular attention has been paid to the modularity, flexibility, adaptability, fixings and design for disassembly, joint design and finally surface colour and texture in relation to the installation needs for each specific demo cases that have been chosen for the installation of the panels.

The report includes the following information: a short introduction on the aims of the task 3.1 of the WP3, a detailed description of the demo sites where the panel are going to be installed with a depth study concerning the characteristics of each demo sites in order to define the plant steps of geopolymer components suitable for installation. Furthermore, the geometry, the anchoring system, the finishing of the panels are explained always in relation with the demo sites.

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## Abbreviations

<b>InnoWEE</b>	<b>I</b> nnovative pre-fabricated components including different <b>W</b> aste construction materials reducing building <b>E</b> nergy and minimising <b>E</b> nvironmental impacts
<b>CDW</b>	<b>C</b> onstruction and <b>D</b> emolition <b>W</b> aste
<b>EPS</b>	<b>E</b> xpanded <b>P</b> oly <b>S</b> tirene
<b>ETICs</b>	<b>E</b> xternal <b>T</b> hermal <b>I</b> nsulation <b>C</b> omposite <b>S</b> ystem
<b>HDG</b>	<b>H</b> igh <b>D</b> ensity <b>G</b> eopolymer
<b>nZEB</b>	<b>n</b> early <b>Z</b> ero <b>E</b> nergy <b>B</b> uilding
<b>PGA</b>	<b>P</b> eak <b>G</b> round <b>A</b> cceleration
<b>WGP</b>	<b>W</b> ood <b>G</b> eo <b>P</b> olymer
<b>WP</b>	<b>W</b> ork <b>P</b> ackage

## Symbols

$\lambda$	Thermal Conductivity	$[\text{W m}^{-2} \text{K}^{-1}]$
$\rho$	Density	$[\text{kg m}^{-3}]$
$c_p$	Specific Heat	$[\text{K kg}^{-1} \text{K}^{-1}]$
$F_h$	Maximus Seismic Force	$[\text{N}]$
$q_p$	Wind pressure	$[\text{N m}^{-2}]$
$v_{b0}$	Basic Wind Velocity	$[\text{m s}^{-1}]$