

High Efficiency Light Panel (HELP), a new wood-base panels system.



ROSEWOOD
4.0 Sustainable Wood
for Europe

The aim of the project is to develop a construction system known as High Efficiency Light Panel (HELP). Consists of a set of innovative solutions based on a mixture of lightweight timber framing and cross laminated timber (CLT), for the manufacture of "Zero Emission" walls, slabs and roofs.

There is an improvement of the structural capacity of the construction system that allows more height (3-4 floors) than with the traditional lightweight building. The positioning of a three-layer or CLT board on the inside of the walls acts directly as a vapour barrier, saving the cost of installation.

The new building solutions are based on wooden or wood-base panels which will be subjected to tests, analytical calculations and numerical approximations for their structural, thermal, acoustic, watertight and fire resistance characterization. In addition, its environmental characterization (CO₂, reutilization) will be carried out.

A solution with the new construction system has been defined for use in slabs, walls and roofs. Spreadsheets have been developed to obtain thermal transmissivity, surface and interstitial condensations, sound absorption and structural capacity.

DETALLES

ORIGEN DE LA MADERA

Bosque

TIPO DE MADERA

Madera en rollo

POTENCIAL DE MOVILIZACIÓN

10-20 m³ / house

TIPO DE MADERA AFECTADA

Sawn timber, KVH

FACILIDAD DE APLICACIÓN

Medium

IMPACTO EN EL MEDIO AMBIENTE Y LA BIODIVERSIDAD

Positive

FACILIDAD DE IMPLEMENTACIÓN - EVALUACIÓN

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EFFECTO SOBRE LOS INGRESOS

Positive: decreased building time

PREREQUISITOS CLAVE

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POTENCIAL DE EXPLOTACIÓN

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TIPO DE EVENTO EN EL QUE SE HA PRESENTADO ESTA IFS

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HUB

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EFFECTO SOBRE EL EMPLEO

Positive: increased efficiency of materials

IMPACTO ECONÓMICO

Increase of the load-bearing capacity of the building by 30% approximately

COSTES DE IMPLEMENTACIÓN (EURO - €)

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CONOCIMIENTOS ESPECÍFICOS NECESARIOS

High knowledge needed about similar construction systems

MÁS DETALLES

RETO ABORDADO	DOMINIO	TIPO DE SOLUCIÓN
--	Industria de la construcción con madera	--
PALABRAS CLAVE	SOLUCIÓN DIGITAL	INNOVACIÓN
--	No	Si
PAÍS DE ORIGEN	ESCALA DE APLICACIÓN	AÑO DE INICIO Y FIN
España	Nacional	2017 - 2018

REFERENCES AND RESOURCES

SITIO WEB PRINCIPAL	RECURSOS
http://www.mabitat.es	--
SITIO WEB DEL PROYECTO	
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REFERENCIA DEL PROYECTO	
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PROYECTO BAJO EL QUE SE HA CREADO ESTA FICHA

Rosewood

FECHA DE MENSAJE

13 Sep 2019



[Link to Rosewood 4.0](#)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No.

862681

A TOOL FROM ROSEWOOD 4.0, DESIGNED AND DEVELOPED BY

