



Cofinanciado por  
la Unión Europea

# NEWSLETTER

AUTUMN 2023



## BUILD GREEN: AVANCE EN ESPACIOS SOSTENIBLES

### El Proyecto

Build Green es un proyecto Erasmus Plus, en la categoría de acción clave "Colaboraciones para la cooperación y el intercambio de prácticas", en el campo de las Colaboraciones estratégicas para la educación de adultos.

Son muchas las áreas en las que los ciudadanos pueden participar en la transición hacia un futuro más sostenible y consciente del medio ambiente, y en este proyecto queremos centrarnos en la construcción de espacios sostenibles utilizando seis temas principales: el uso de materiales naturales y reciclados para la construcción, casas pasivas de escala pequeña y bajo costo que utilizan bajos niveles de energía para calefacción y refrigeración, espacios para permacultura, paredes verdes, jardines en la azotea y agricultura de interior, todo lo cual reduce la cantidad de energía y recursos tanto en la etapa de construcción como durante su mantenimiento después de eso.

El proyecto también ofrecerá a los participantes las técnicas para construir de manera sostenible de una manera más asequible para llegar a ampliar las oportunidades para que más personas se unan. El proyecto desarrollará metodologías utilizando Tecnologías Digitales en Línea para implementar actividades del proyecto con los principales grupos objetivo: participantes y profesionales de instituciones de educación superior, PYMES, escuelas VET y personas que trabajan y se ofrecen como voluntarias para grupos comunitarios, organizaciones y asociaciones interesadas en el tema.

El consorcio cree que estas oportunidades ofrecen una posibilidad significativa para que los participantes y las partes interesadas se involucren en la economía circular de una manera significativa pero práctica. El consorcio también prevé crear una red de profesionales en España, Hungría y Grecia.



<https://www.facebook.com/BuildGreenErasmusPlus>



<https://buildgreen-project.eu/>

## Información sobre el proyecto

**Duración:**  
otoño 2021 - otoño 2023

**Número de Proyecto:**  
2021-1-ES01-KA220-ADU-000028308

### Productos Intelectuales:

-IO1: Online Interactive Toolkit

-IO2: Build Green Curriculum

### Sitio web

<https://buildgreen-project.eu/>

**Estén atentos para más información!**



## ÚLTIMAS ACTIVIDADES

El proyecto se ha prorrogado hasta finales de 2023. Hemos terminado el compendio de estudios de caso, que demuestran el poder de la construcción sostenible para dar forma a un futuro con bajas emisiones de carbono, que está disponible en nuestro sitio web.



Los estudios de caso están organizados por 6 temas y 3 países, con una bibliografía completa para ayudar a los lectores a acceder a más recursos. Juntos, estos ejemplos forman un mosaico de posibilidades para un entorno construido sostenible.

**Topic 1. Natural & Recycled Materials**  
**1.3. Greece**  
**1.3.1. Strawclay house in Volos, Thessalia.**

It is useful to mention that old buildings that have wooden elements to strengthen their rigidity is not something new in Europe, on the contrary, it consists part of Europe's traditional architecture and mechanical tradition, time-proven over the years. Referring to the significant benefits of the project, she underlines that: "We are building a purely bioclimatic house with many benefits. The first major benefit is that the building will have as small an energy footprint as possible. In fact, the materials used have minimal energy costs. For example, I took the quantities of straw from the estates that I own at a distance of 25 minutes from Volos. The second benefit is that this house 'breathes', meaning that even at midday in the summer it is very cool. In fact, for the winter with an energy fireplace the house will be warm at a very good level" (Thessalia.gr, 2015).

Photos and article: Website: Cob, article "Strawclay house in Volos", source: <https://www.cob.gr/en/natural-building/portal/oloi.html?view=project&id=3323&aw=clay-house-in-volos-2&catid=138>

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Straw clay house, Greece

**Topic 1. Natural & Recycled Materials**  
**1.2. Hungary**  
**1.2.2. The adobe brick**

Adobe is a natural building material, 100% recyclable compared to other building materials. It can be used to build load-bearing and internal partition walls, and can serve several generations. Adobe can be used to build a stable house at a lower cost. The external drainage of the building can prevent future waterlogging. In most construction sites, earth suitable for adobe production is excavated when the foundation is dug. Adobe bricks can be used to make a uniform wall, have good thermal and acoustic insulation properties, contain only natural materials and are therefore much healthier. Its material is ventilated, ensuring a constant humidity level. No air conditioning is needed in summer, the optimum humidity reduces allergies and respiratory diseases, and it also protects against electric smog. An adobe house can be built on several floors. For plastering, traditional flake must can be used, or lime mortar if this is not available. In adobe buildings, cement render should not be used. The bricks required for an average dwelling house can be made in 2-4 weeks and built into the wall after about 2 weeks drying. The size of an adobe brick is 30x25x15cm, e.g. for a 30cm thick masonry you need 36 bricks per square metre. For a 45cm thick masonry you need 54 bricks per square metre.

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Adobe bricks, Hungary

**Topic 1. Natural & Recycled Materials**  
**1.1. Spain**  
**1.1.1. Abrazo House, Llanes, Voto, Cantabria**  
Two-storey house built using earth, straw bales, and 90% recycled wood

Abrazo House is a two-storey, 220m<sup>2</sup> family home and ecological learning centre located in a small village in eastern Cantabria. It was built during 2008-12, with a low cost and low environmental impact, using principally local, natural and recycled materials and volunteer labour.

The most abundant materials used in the house are clay soil from the building site, sand, straw, and wood. Stone, brick, terracotta tile and concrete were also used in the foundations. Other materials used in the house include lime and gypsum, glass, and rubber roofing membrane for the living roof.

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Cob-straw bale house, Spain

**Topic 4. Green Roofs**  
**4.1. Spain**  
**4.1.2. Forest Cabin, Voto, Cantabria**

Green roof (north and central roof)

Forest Cabin Green Roof: West deck connected to central roof. Concrete detail with gravel inside to evacuate rainwater.

Forest Cabin is a semi-circular construction of about 70 square meters, with load-bearing structural walls using the "cob" technique and a termoarcilla (insulated brick) stemwall. It was hand-built by the owners, between 2013-2015 (structure, with volunteer labour) and 2020-2022 (finishes and interior). It is built mainly with recycled and/or natural, locally sourced materials, many obtained from the site itself, including stone walls, earth and eucalyptus roof beams.

The structure blends in with the topographic curves of the terrain and with the mass of trees existing on-site: mainly oaks, hazelnuts, chestnuts, walnuts, laurels, and strawberry trees (Arbutus unedo). For this, the construction has 5 different roofs, four of them living roofs.

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Green roofed cabin, Spain

**Topic 4. Green Roofs**  
**4.3. Greece**  
**4.3.1. Stavros Niarchos Foundation Cultural Center**

Stavros Niarchos Foundation Cultural Center is well-known in Greece for its focus on sustainability and has been rewarded with numerous environmental awards. Its planted roofs are all covered with Mediterranean plants grown in a special substrate and led to the Green Roof Leadership Award 2018. The SNFCC is a very important place to the residents of Athens, as it offers them a plethora of free activities, while also helping them get in touch with nature.

Picture taken from the Stavros Niarchos Foundation website (2018), link: <https://www.snf.org/en/newsroom/news/2018/02/the-snfcc-awarded-the-green-roof-leadership-award-2018/>

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Green roofed cultural centre, Greece

**Topic 4. Green Roofs**  
**4.2. Hungary**  
**4.2.1. IKEA roof garden, Budapest**

IKEA's roof garden can be found at one of the busiest intersections, at Órs Vezér square. This was the first really biodiverse, extensive, no-irrigation green roof in Hungary so it is a very good point of reference for the experts. On the surface of 6500 square meters there are over 150 species. The roof garden was built because during the extension of the store a significant area of green surface disappeared. They undertook to build the green roof because of the protest of the residents, to make up for the lost green area. First they deployed a Sedum carpet but the roof garden was not prepared for this and the building got flooded. The whole structure had to be rebuilt. It took 1 year to rebuild, insulate and repair it but IKEA was serious about the project. The Sedum carpet could not be saved so they built a really diverse, high biological performance, long blooming combination green roof instead. Sedum clippings and a wild flower seed mixture (on 20% of the surface) was planted. The area is not open to the public, it cannot be visited, but can be seen from the houses around it. This way the plants can develop undisturbed.

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Green roofed IKEA store, Hungary

## PROJECT PARTNERS



Innovation Frontiers  
Mind is the limit



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