

The Project: “Sustainable and almost zero-emission communities and the role of public buildings” | nZCom

The nZECOM project in Nestorio Municipality | Difficulties and opportunities for small mountain municipalities

Kozani

November 18, 2022



Co-funded by the European Union and National Funds of Greece and Albania, via the Interreg IPA CBC Programme “Greece – Albania 2014 – 2020”

Description of the building – Nestorio town hall

The two-story building that houses the Town Hall was built in two phases

Initially the 336.42 m² on each floor were built before 1955

The remaining 195.22 m² on each floor were built later as an addition to the existing one in 1971

The total area of the building is 531.64 m²



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North view – Entrance of the town hall



South East View



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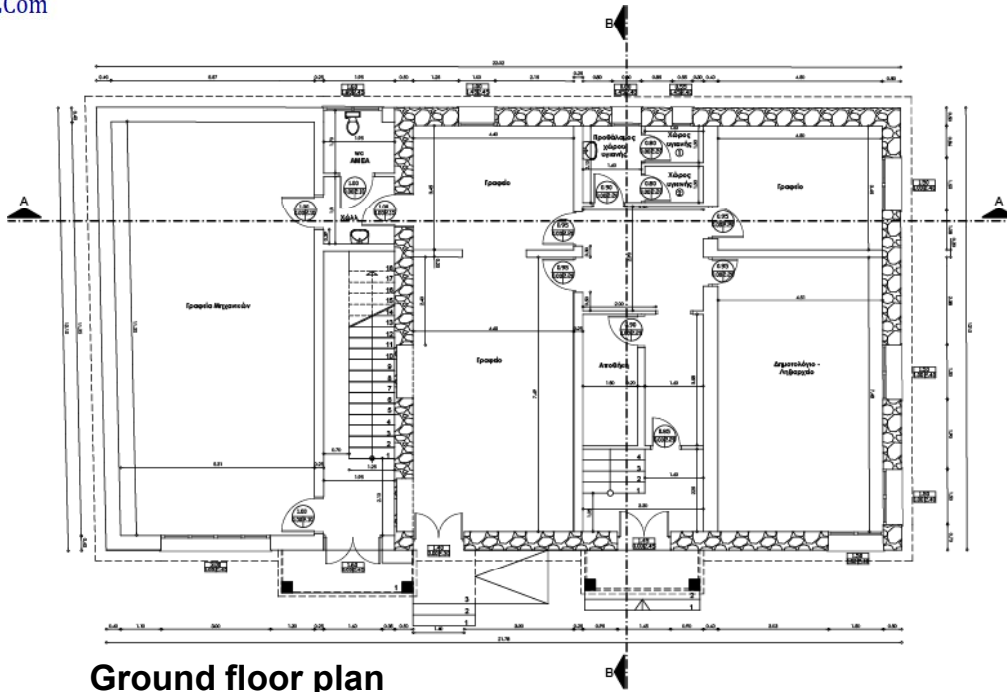
North View



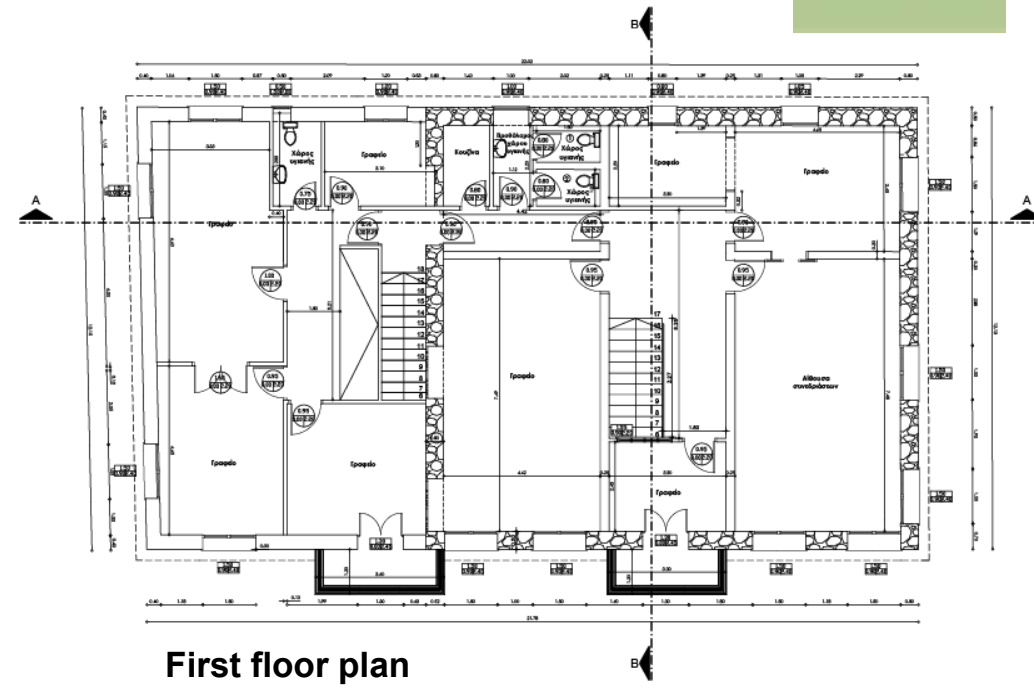
West View



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Ground floor plan



First floor plan

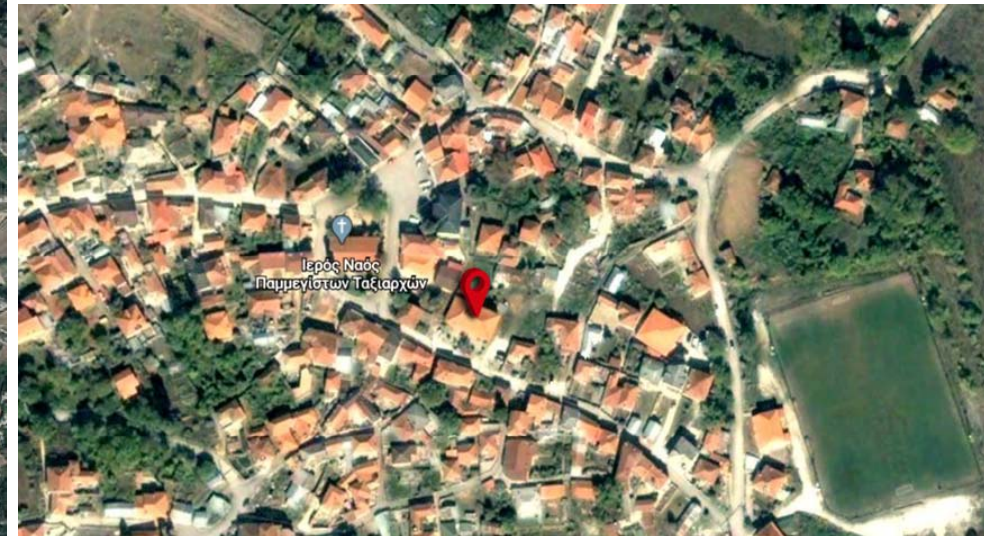


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Description of the place – Nestorio Kastoria



The geographic location of Nestorio – North Greece



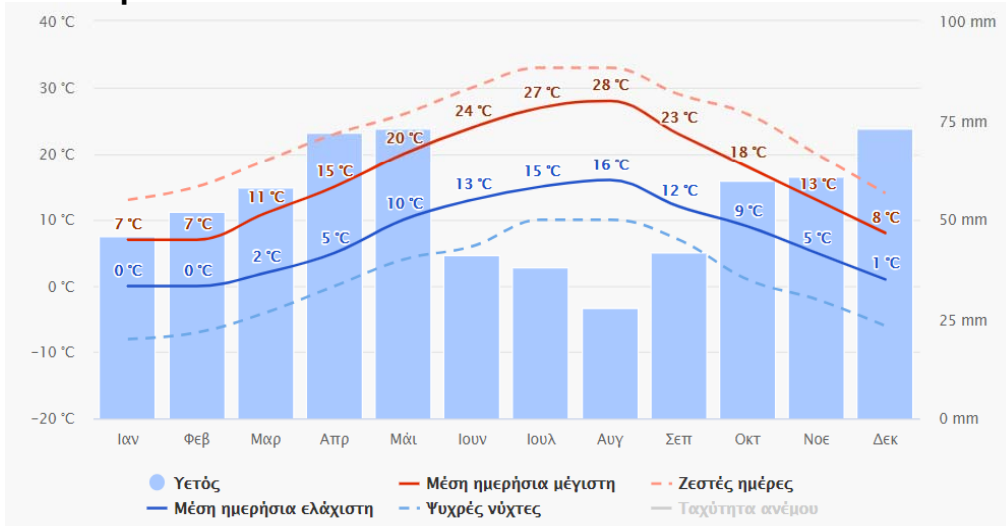
The geographic location of the building – Altitude 925 m



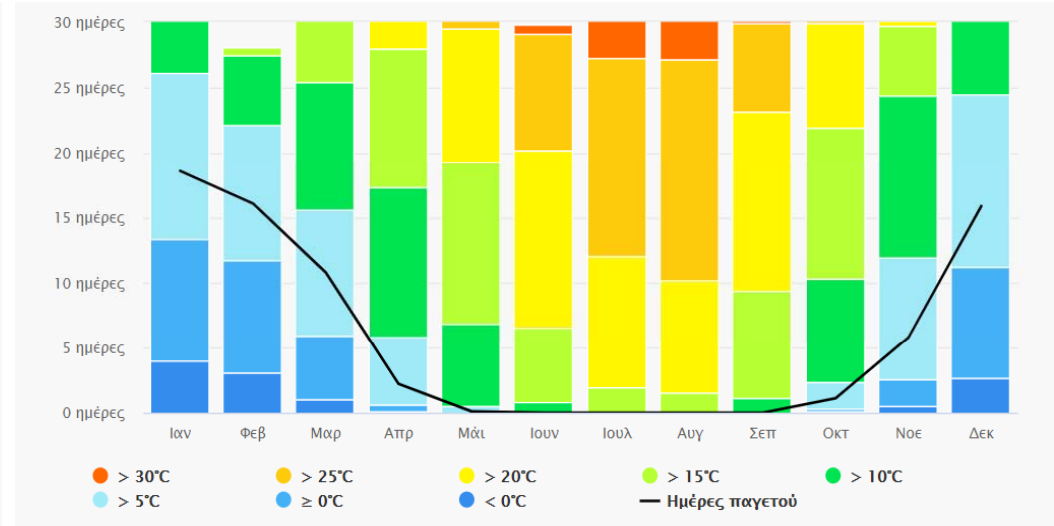
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Climate Data – Nestorio Kastoria

Average daily maximum and average daily minimum temperature



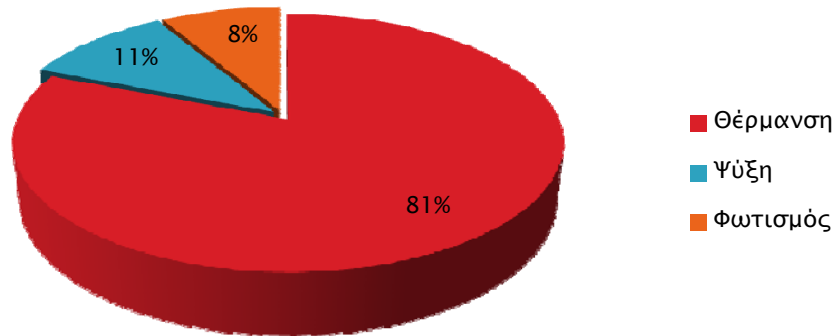
Number of Days with specific temperatures



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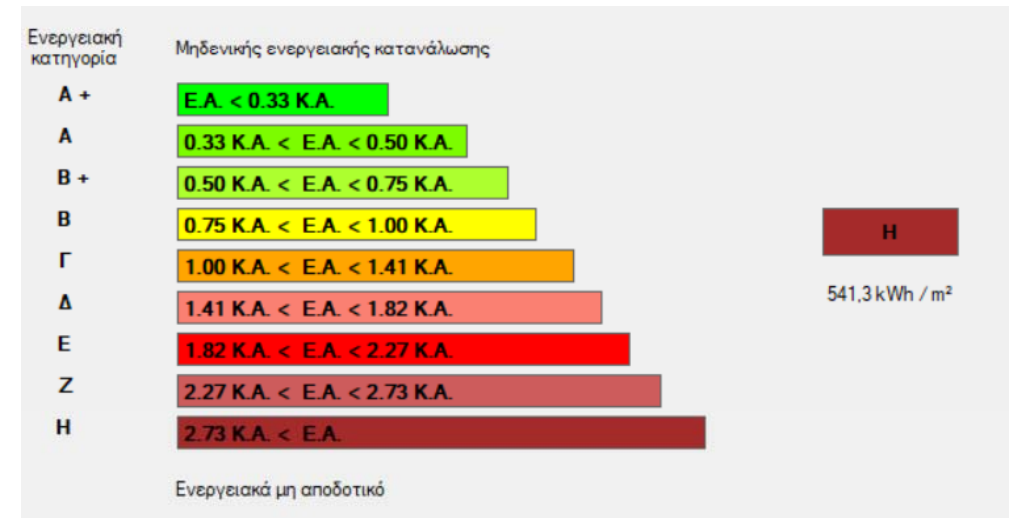
Energy Consumption – Energy Building Performance

Πρωτογενής Ενέργεια ανά τελική χρήση
(kWh/m²)



Primary energy consumption per usage

Energy consumption for heating - 438,4 kWh/m²
 Energy consumption for cooling - 57,2 kWh/m²
 Energy consumption for lighting - 45,7 kWh/m²
 Total Primary energy consumption - 541,3 kWh/m²



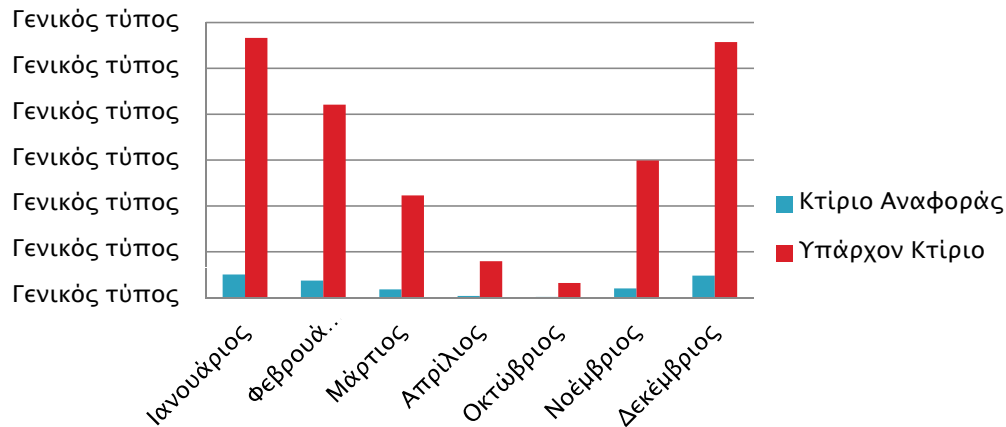
Energy Building Performance



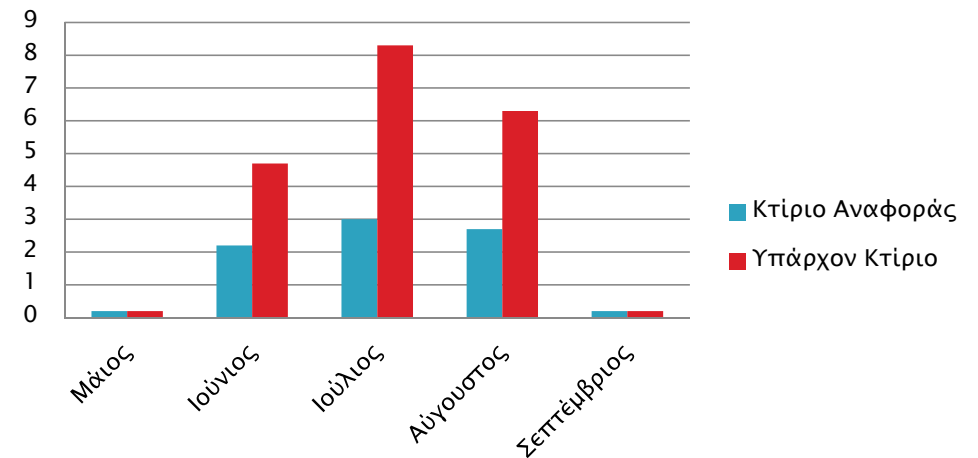
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Energy Consumption – Energy Building Performance

Energy consumption – Heating (kWh/m²)



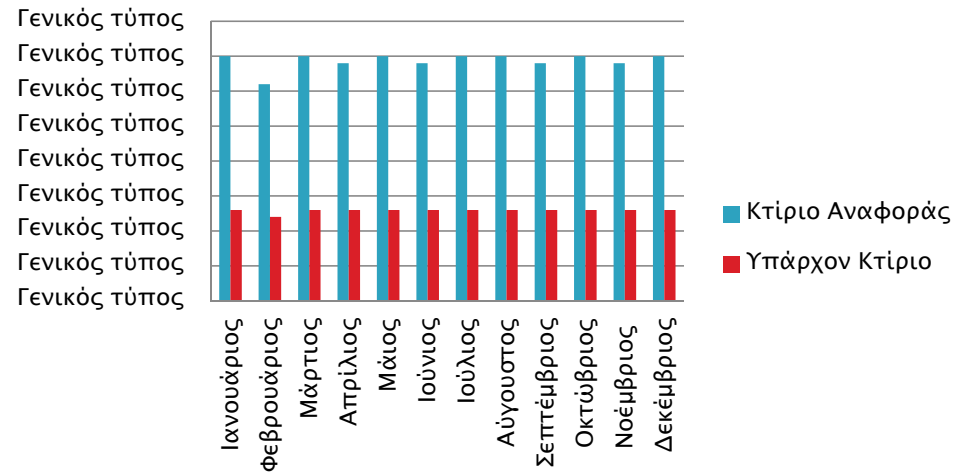
Energy consumption –Cooling (kWh/m²)



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Energy Consumption – Energy Building Performance

Energy Consumption –Lighting (kWh/m²)



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Description of works to reduce Energy Consumption

Thermal insulation of the building envelope

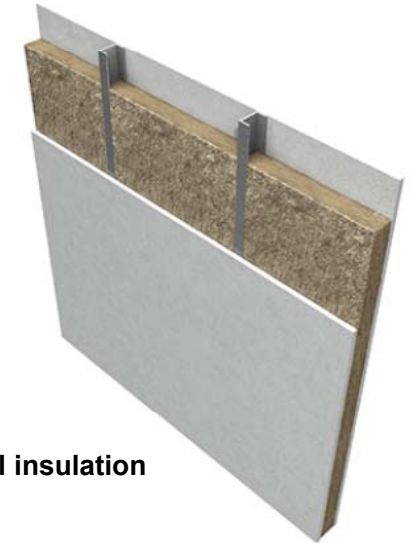


External insulation

EPS Insulation System Brick/Block

- 1 Surface Preparation (Leveling Coat or Primer)
- 2 Starter Track & Clip-on Bead
- 3 Adhesive Coat
- 4 EPS Insulation
- 5 Mechanical Fixings
- 6 Reinforcement Layer (Glassfibre & Mesh)
- 7 Render Primer (Optional)
- 8 Decorative Finish

Roof insulation

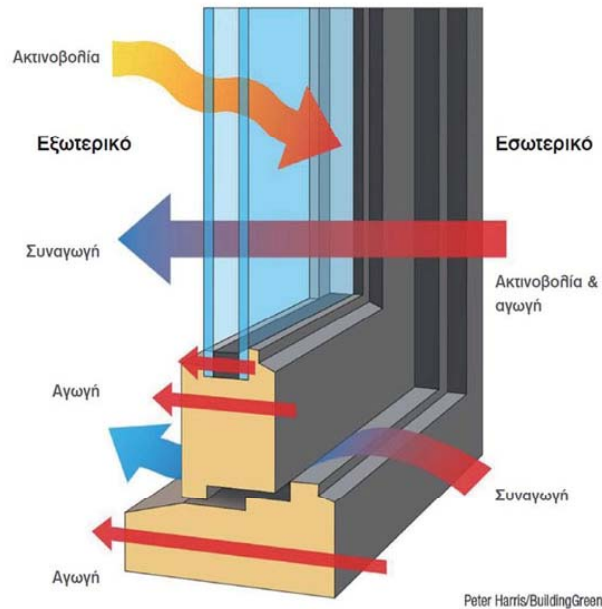


Internal insulation



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Description of works to reduce Energy Consumption



Replacement of the old wooden doors and windows with new certified energy efficient frames and energy efficient glasses



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