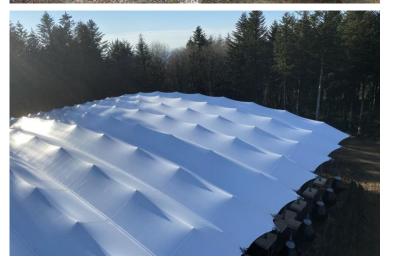
## T/E/S/S ATELIER D'INGÉNIERIE





## **Couverture de fouilles Domus PC2**

Location : Centre Archéologique Européen de Bibracte, Mont Beuvray

(Massif du Morvan)

Architect : Paul Andreu + T/E/S/S

Client : Bibracte EPCC

Package : Structure et couverture textile Scope : Mission de maîtrise d'œuvre complète

Date: 2018-2021

In 2009, the architect Paul Andreu and T/E/SS delivered to Bibracte a prototype site shelter that met an original set of specifications: it had to allow archaeologists to work simultaneously with visitors, have no foundation so as not to affect the buried remains, and be modular and reversible. This 850  $\rm m^2$  shelter had been installed on the Pâture du Couvent site at the time of the completion of the excavations in this sector, in order to present the oldest remains of Roman construction on the site.

In 2018, Bibracte's Etablissement Public de Coopération Culturelle (EPCC) has renewed its trust in this team to take on a new challenge, which is taking place on the site of the Domus PC2: It involves covering the entire surface of the remains of a 1,000 m² Roman house as its excavation begins in order to facilitate the work of the archaeologists and to allow visits to the site throughout the year, with the ambition of taking advantage of this opportunity to explain how the archaeologists conduct the excavation and record what they destroy day after day to reach the deepest layers.

The 1,500 m² shelter will have an appearance very similar to that of the Pâture du Couvent, with its weights compensating for the absence of a foundation, but the framework has been simplified by the possibility of using a lifting machine (a 100T crane) to handle the heaviest beams. This imposing crane made a brief stay on the Beuvray to lift the structure after the assembly of the posts on their concrete base.

The design of this shelter was born, as for the first structure, from the specific needs of the site: to limit its impact on the ground for the protection of the remains and the respect of this natural site, to shelter the researchers and to attract visitors. The proposed structure thus meets the economic, functional and landscape objectives of the project.

The design of the shelter stems from this research linking site, lightness and functionality: With a surface area of 1500m², the 42m by 36m cover follows the square shape of the Domus, protected under a light stretched canvas. Its galvanized steel frame (67 T in total) carries without intermediate supports between two lines of posts spaced 36m apart, with an overhang of 3m towards the outside. Suspended weights allow to retain the structure to the wind uplift and to maintain the tension of the canvas.

On the underside of the framework, 3 metal walkways of 1.4m wide and 36m long are suspended to ensure the progression of researchers and visitors above the remains.

The structural scheme has been carefully designed to ensure that there are no permanent foundations in the ground and to provide replicable grids to allow for prefabrication and possible expansion.