

## Key figures

**Location:** Middelburg.

**Size:** 116 kWp.

**Annual energy production:** 87,000 kWh.

**Energy-use:** On site within the buildings and archives.

**Technology:** 781 ( 776 + 5) custom made solar panels München Solar 150 Wp 28 cells (All Black).

## Attention points

- When installing solar panels in the historic city centre, it is highly recommended that cooperation be sought with the various stakeholders at an early stage. In this way, possible objections can be avoided in advance and support can be created.
- Seek cooperation with various partners. Not only the cooperation between those directly involved, such as the municipality and the Zeeland Archives and the State Property Agency, but also the cooperation with numerous experts in special building constructions.
- It is valuable to share the results of a project like this with colleagues and visitors, to inspire them.

## Contact

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## Useful links

[www.zeeuwsarchief.nl/zonnepanelen-zeeuws-archief-in-gebruik-genomen/](http://www.zeeuwsarchief.nl/zonnepanelen-zeeuws-archief-in-gebruik-genomen/)

[www.middelburg.nl/solarise](http://www.middelburg.nl/solarise)

# Interreg



EUROPEAN UNION

## 2 Seas Mers Zeeën

## SOLARISE

European Regional Development Fund



## Middelburg - Solar on historic buildings: Zeeland Archives



[www.interregsolarise.eu](http://www.interregsolarise.eu)

TOTAL PROJECT BUDGET:

4,18 M €

INCLUDING AN ERDF BUDGET OF:

2,51 M €



**Interreg**  
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SOLARISE  
European Regional Development Fund





## Budget

€ 181,000 of total partner budget € 599,000.

## Goal

The City of Middelburg aims to be energy-neutral by 2050. The use of roofs for the utilisation of solar energy has the highest priority in historic Middelburg. This is challenging due to the large number of monumental buildings in the town centre and the protected townscape, which is subject to strict regulations.

## Description

The "Zeeland Archives" is the regional historical centre of Zeeland. It administers and stores archives and collections from Zeeland's public authorities, private individuals and businesses. These 34 kilometres of archives can be consulted by anyone and are stored in three depots that reach 13 metres below ground.

Maintaining optimum climatic conditions costs a lot of energy. The "Zeeland Archives" is housed in the historic inner city of Middelburg and consists of a monumental section (old city palace from 1765) and a modern new building (2000).

When choosing between various alternatives, sustainability is an important consideration. Various sustainability measures have already been realised, such as: the central heating system has been replaced by low-energy boilers, conventional lighting has been converted to LED lighting and the monumental glass has been fitted with sunscreens.



One of the main wishes was to install solar panels on the roof.

This was preceded by a long preparation process. There were many challenges, such as fire safety, the appearance of a roof with solar panels in the historic city centre, the connection to the existing electricity network and, of course, the costs.

There are now 781 solar panels on the roof. The entire roof, no less than 725 m<sup>2</sup>, is fully utilised. The guaranteed minimum yield is 87,000 kWh per year. The expected yield is about 95,000 kWh per year because of the extra hours of sunshine in Zeeland.

At the entrance to the building there is a real-time display showing how much solar energy has been generated and how much this will save in euros.