The old windows look like relicts from the past, which, together with the reveals, can be seen behind an additional layer of glass as though they were in a display case.

Beside the old conservatory is the new annex with kitchen and dining areas. The smoothly rendered surface here makes a conscious departure from the brick used in the existing building.

Residential building in Driebergen, NL

The small village of Driebergen is part of the catchment area of the city of Utrecht. Its urban structure is characterised by historical villas and manors combined with contemporary residential areas. It was here that architects from ZECC Architecten used unconventional means to modernise a listed villa. Furthermore, an energy concept was devised to successfully transform it into a zero-energy building

Building owner:
Private
Architect:
ZECC Architecten, Utrecht, NL
Location:
Diederichslaan, Driebergen, NL
Sto products:
Facade insulation system (StoTherm Wood)
Applicator:
Gebroeders Van der Kant, Zeist, NL

Photos: Cornbread Works, Utrecht, NL

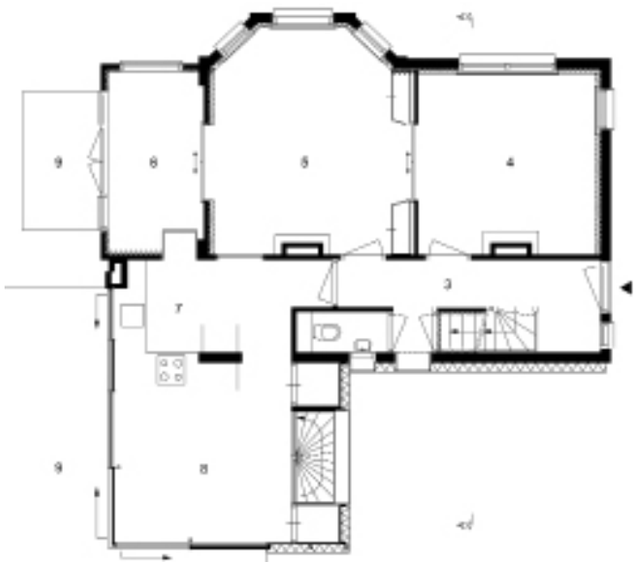
Surrounded by mature trees, the villa is situated on the edge of the village of Driebergen. It was constructed at the beginning of the 20th century and it has largely been preserved in its original condition: a solid, two-storey brick building with a gable roof and narrow, white wooden windows that are typical of the region. The living areas and conservatory face the street, while the bathroom, hall and kitchen with annex can be found to the rear of the building. However, the small window openings here were few and far between, obstructing the view out into the enchanted garden. This had bothered the residents for some time. They wanted a light-flooded kitchen and dining area with a seamless transition into the green landscape outside. Ultimately, they turned to Zecc Architecten to turn these dreams into reality. The architects suggested that the old annex be replaced by a modern one with a glazed facade that would provide those sought-after views. The architectural concept involved preserving the original building as far as possible and constructing all new elements in a reversible manner, i.e. so that they can be removed if desired. In addition, plans were made to turn the villa into a zero-energy building. The

Large glass panels insulate the wooden windows inside.

Clear architecture and an unobstructed view of the surrounding greenery are the key features of the dining room. A section of the old brick facade marks the transition between the new and existing building.

Wooden stairs and terrazzo floors have been preserved in their original condition.

architects opted for internal insulation in the living areas in order to preserve the historical brick facade; this was made from renewable resources for ecological reasons. Flush with the plastered surface, large additional windows protect the original old wooden windows, which now appears as though they are being exhibited in a display case. These also minimise energy loss, which would have been unavoidable in these areas. The old wooden staircase in the hall was in excellent condition. Using internal insulation here would have had a major impact on the structure of the staircase, so the decision was made to insulate this side of the facade externally. The architects had the old bricks removed, ground down and added to the render, which accounts for the characteristic pastel shade of the surface of both the new facade and the annex. New methods of energy generation were also introduced: a geothermal system with heat pump and storage tank now help meet the building's heating needs. Photovoltaic modules on the roof supply the villa with electricity, which, depending on its own requirements, can also be fed into the public grid.



Ground floor plan