

New town center will attract the butterflies it resembles

ArchiCAD and Artlantis overcome design challenges.



Weatherhead Architecture
weatherheadarchitecture.com

Name of project: **Butterfly Square**

Type of project: A new town square comprising residential and retail units

Location: Allarp master plan, Skummeslövsstrand, Sweden

Size: (5800 m² / 62,431 square feet)

Software used: ArchiCAD 17 / Artlantis Studio 5

Project overview

Butterfly Square is a landmark building, which provides a new urban center in Halland, on the West coast of Sweden. The building was designed based on the client's desire for a new town square that comprises 30% external space, more than 80 apartments, as well as retail areas and parking. We spoke with David Weatherhead of Weatherhead Architecture about this fascinating project.

"The building is shaped like a butterfly with the large planted roof rising out of the nature park. The roof aims to grow the local flower of the region," Weatherhead explained. "The hårginsten flower is sadly becoming increasingly rare in the area. The beautiful yellow flowers attract the ginst butterflies (ginst fjärilar), which are also endangered," he added.

The residential development provides a series of spaces for people of all ages and abilities. By raising the building up to accommodate parking, the space allows connection to the nature park and creates a series of zones for various activities to take place.

The design is part of the Allarp master plan, phase 1 of which is currently under construction.



Design concept

A series of spaces linking to the nature park through a building that presents itself as the open wings of a butterfly.



Design

"The design evolved through thinking about the range of spaces we felt the master plan would benefit from," Weatherhead said. "We wanted the spaces to be a pedestrian, child-friendly environment made up of a small series of spaces that could work together. We also wanted the square to feel different, and in many ways feel part of the nature park flowing in," he continued.

The Buildings

The buildings have been designed to be a part of nature and add to the beautiful surroundings. To achieve this, the design firm took the entire building footprint and filled it with landscape. The footprint then is lifted to form the roof of the buildings. As the planted roof rises out of the nature park, which runs through the master plan, it offers views of nature to everyone in the area.

The roof raises from the level of the nature park up to a maximum height of 18m at the building corners. Views are opened up towards the sky and the nature park, making the space inside feel less enclosed. The roof form also allows views into the central space from more of the wider master plan. The form enables the buildings

themselves to be the local landmark – a distinctive element for master plan and beyond.

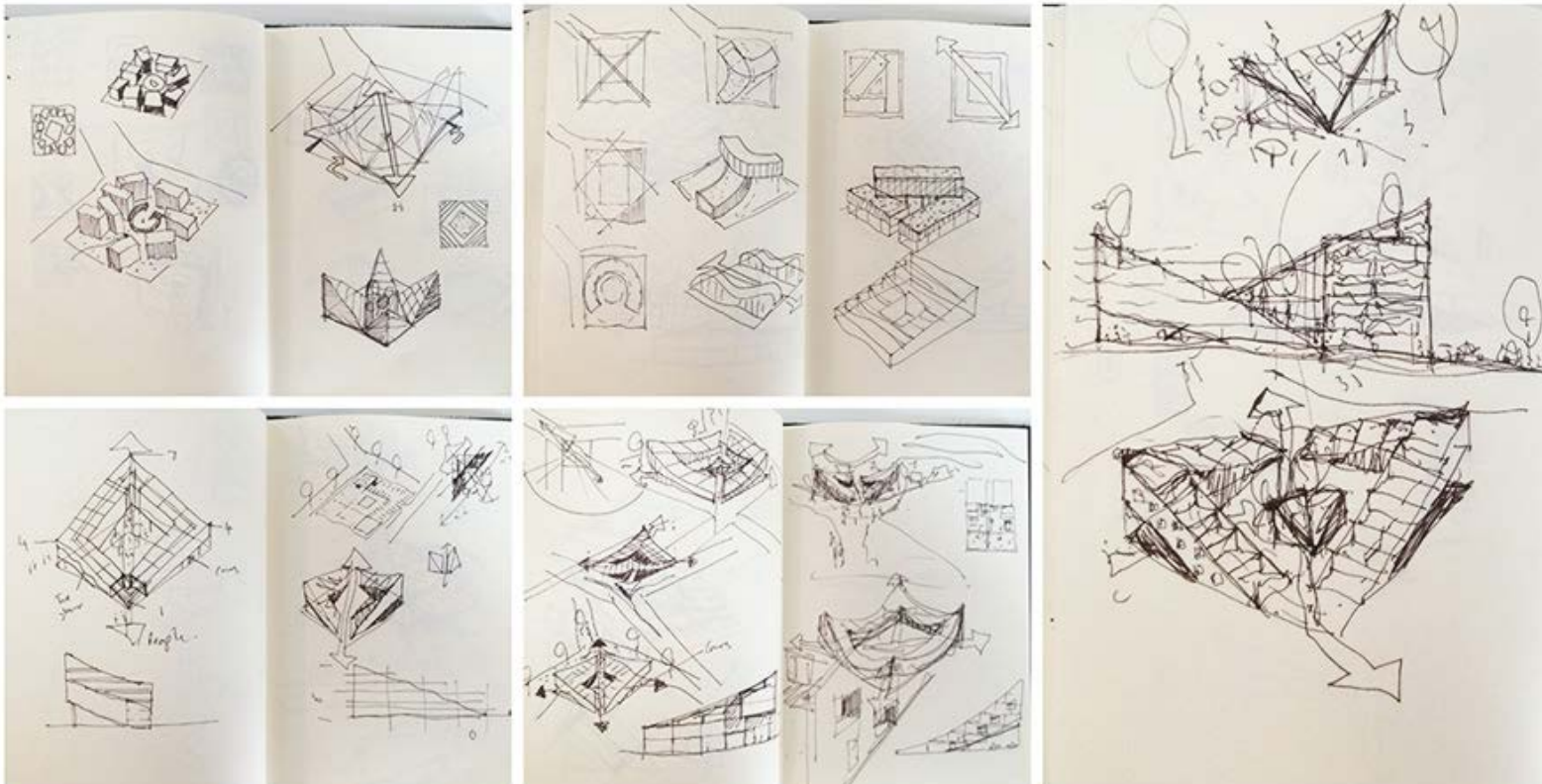
Materials

The building is set with a simple material palette that aims to integrate with nature and maximize daylight. The raised main body of the building is clad in glass and timber. This helps make the building respond to its location and create privacy, while also maximizing the daylight and flexibility that glass buildings enable. Perforated metal panels have been incorporated on the ground floor to increase permeability, while offering screening benefits to the cars.

The main square materials are a mixture of stone and timber. Timber has been incorporated to give a warmer, more child-friendly feel to some of the spaces. Strip lighting has been incorporated within the stone tiles.

Challenges

As with most any project, there were several design challenges the team at Weatherhead Architecture had to overcome. According to Weatherhead, "Parking always creates inherent problems when



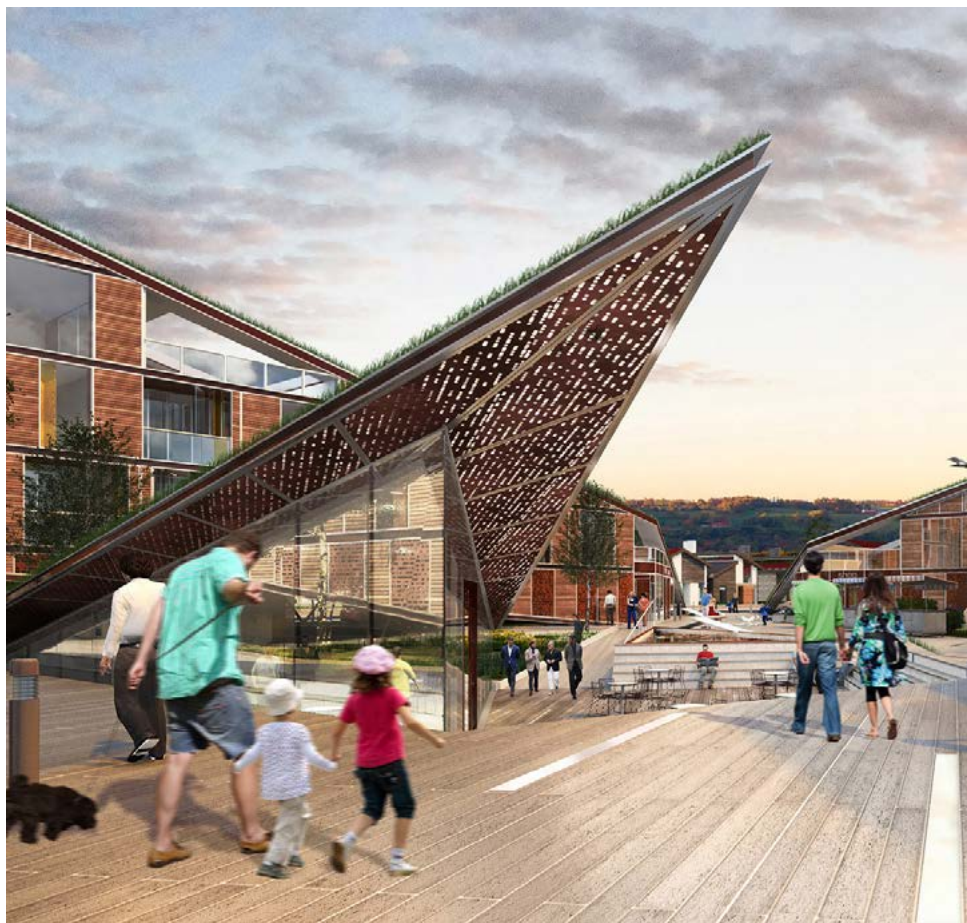
"I find the greatest challenge is to create a fully working BIM model, one which produces beautiful, informative drawings, while also offering realistic visualizations."

- David Weatherhead, architect

trying to design successful pedestrian spaces." To address the parking requirements, the buildings were raised by one storey, and parking was tucked away under their footprint. This allows a totally pedestrian central space, which also eliminates the privacy problems normally associated with ground floor apartments.

Weatherhead reminds us that design challenges are present in every project and become the opportunities if approached properly. "I find the greatest challenge is to create a fully working BIM model, one which produces beautiful informative drawings, while also offering realistic visualisations," he said.

To overcome this particular challenge, Weatherhead models every object in ArchiCAD, and couples this with Artlantis to create the renders. In order to minimize abortive work, he creates different visualization modules that he turns on and off as required. This allows him to export modules and import them in Artlantis as objects. "For example, I can model the shell of all of the apartments in the main model, but I create a specific module of the detailed information for one or a few of the apartments that I want the visuals to be taken from," he explains. "This is a simple thing to do but extremely effective in minimizing modeling time while keeping the detail where I want it."



Weatherhead uses ArchiCAD side-by-side with sketching. He finds it very versatile as a modeling software at the very first stages of a project, helping to eliminate the need for a secondary modeling software. "The way I model has evolved over the years through experience on many large-scale projects," Weatherhead said. "Firstly, I use a lot of modules. I find it best to get these down, even in basic form, as early as possible. The modules allow detail to be added over time at the right time. They also significantly reduce the amount of abortive work."

Weatherhead has used ArchiCAD Teamwork for so many years that he no longer notices it. He also uses BIMx for client meetings, but still prefers well-drawn plans and perspectives.

The Butterfly Square project is due to start on site in 2016 and is awaiting detail design stage to commence. We can't wait to see this butterfly take flight.

About Weatherhead Architecture

Weatherhead Architecture is a new, London-based architectural studio led by Architect David Weatherhead.

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