BrandBook Feature

Sustainable Building

Great rooms lead to great experiences

How do we create a sustainable context in architecture? What elements are essential and how do we promote sustainability in the built environment?

Sharing his insights with us is:

Amandus Samsøe Sattler

Architect, founding partner of Allmann Sattler Wappner Architekten, and President of the German Sustainable Building Council DGNB



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Amandus Samsøe Sattler - background

Amandus Samsøe Sattler is an architect and one of the founders of the award-winning architecture company Allmann Sattler Wappner Architekten in Munich. The firm boasts a diverse portfolio across an extensive range of sectors and scales. In terms of hospitality, the Hotel Der Öschberghof deserves special mention.

Amandus Samsøe Sattler is President of the German Sustainable Building Council DGNB e.V., Europe's biggest network for sustainable building. As non-profit organisation the DGNB is committed to demonstrably good buildings and urban districts that are worth living in - this means building an environment around ourselves with foresight. The central aim is to promote change in the building and property market, engendering an appropriate understanding of quality as a foundation for responsible and sustainable action.

Amandus is a specialist judge and Chair for professional architectural competitions. He gives international lectures, holds workshops and he is the author of various publications.

Amandus has close links with Denmark, even part of his name, 'Samsøe', is Danish; a result of his marriage to a Danish architect.

Great rooms lead to great experiences

"You sense well-designed rooms as soon as you enter them. They give you the feeling that you are going to have a great experience there. And that is just how relevant it is. We have a perception of a room's quality, even if many people are not consciously aware of it."

Aesthetics and sensory perception are key aspects of sustainable construction for Amandus Samsøe Sattler. But he also stresses that sustainable construction is a harmonious blend of various elements.

Architects have a tremendous responsibility in the development of sustainable construction and can have a great impact. But they need curiosity, knowledge and they often have to take the initiative.

Aesthetics: The fourth element in sustainable building

There is no clear definition of sustainable construction. It is regarded in many distinct ways and covers a wide variety of topics.

Amandus Samsøe Sattler argues that sustainable construction is the deliberate use of resources, but it is also about minimising the use of these resources in terms of CO2 consumption. People used to talk about organic architecture, but today's hot topic is more the carbon footprint.

In this case, even the materials used must be environmentally friendly. Many materials used damage the environment and are not ecologically sound.

It is generally understood that sustainable construction is a combination of ecological, economic, and social principles. But for Amandus, there is also a fourth, vitally important dimension to consider:

"I always include aesthetics because, for me, the whole thing only makes sense if we can build aesthetically. - Here, aesthetics are about people noticing them and that they also create an impact. When it comes to these aspects of sustainability, it is hugely important that the building also has a sensual appeal and perception. This is the basic principle of aesthetics."

Taking the life-cycle into consideration is another aspect that needs to be examined and evaluated: how long a house will last and be serviceable. We are missing plenty of data on the individual products and materials here, but it is something that is a requirement now and will be in the future.

It is also essential to consider the user so that defined sustainability criteria can be fulfilled. What does the user experience in the buildings? What qualities enhance a user's stay there?

Thus, sustainable construction is not only about data and facts, it also involves sensual perception and feeling. And ultimately, sustainable construction is a harmonious blend between a whole host of various factors that influence both buildings and people.

Mixing the numerous elements - the DJ booth:

There is no magic formula for sustainable construction: you must sync it up with the task at hand every time. With his affinity for music and his experience as a DJ, Amandus compares it to a DJ booth with an array of controls, where the DJ adjusts the sound:

"This is how it is with sustainability. You have this desk in front of you and you must see how you can adjust the knobs - you can do it for some themes but not for others. It is like mixing all the tracks. When you turn up one knob, it is great - but you have to make sure you are turning lots of them up. That is a good metaphor for the overall objective of sustainability."

The political sphere is often tempted to find a quick fix and focus on one issue in isolation, which is what happens with energy efficiency, for example. Energy efficiency cannot stand alone. An energy-efficient house with roof-mounted photovoltaics is not sustainable if it is not also constructed using decent materials and is aesthetically-pleasing. This has little value. You must adjust all the knobs, as Amandus explains. There is still a lot to be done, in his opinion.

Sustainability is a complex matter - but that is not a bad thing. There are no straightforward answers. Understanding this is crucial because it also expresses how our world is built; the world is highly complex. From biodiversity, to resources to the whole question of CO2. The scope is extensive. As Amandus so beautifully and vividly puts it:

"It is a beautiful bouquet of a whole bunch of very different flowers."

In other words, truly sustainable buildings are a blend of all the elements, with their vastly different weightings.

Construction is a driving force

According to Amandus Samsøe Sattler construction has the greatest influence on sustainable architecture. It accounts for 70-80% of the building's overall carbon footprint. Thus, construction is a core central aspect. A client is unlikely to be able to build in a climate-neutral way if the construction has generated too much carbon dioxide. There is no way to offset that.

The façade is another aspect. This also plays a big part. The façade is both the thermal barrier between the outside and the inside and it is also what faces the town. So, the façade does not just need to be well-designed, it needs to do something for the town, too, as Amandus explains:

"A lot of buildings are developed independently. By themselves, they are well designed but they do not really blend into the context of the town. I believe that a building's contribution to the surrounding neighbourhood is a particularly fundamental aspect."

The third and equally important aspect is the quality of the spaces. This involves a number of elements such as daylight and air. How much daylight fills the room? How is the quality of the air? Can the user open the window?

Materials matter for the space, too, Amandus confirms. The material should convey genuine quality, be durable and of lasting value, and have tactile surfaces that stimulate the senses. This material should form both the room's atmosphere and its internal climate optimally. In many buildings, good ventilation is ensured mechanically because the materials release toxic emissions. This is absurd.

Whilst the exterior of a building may seem to attract more attention than the interior, the interior is just as important for its use.

You sense well-designed rooms straight away

Amandus Samsøe Sattler claims that a good architect builds a house from the inside out. He envisions the functionality and the spatial qualities and then slowly composes the house from the inside before bringing it to the outside. This is how the configuration of the space also shapes the façade.

Accordingly, the relationship between interior and exterior in a sustainable building is also evident through the correlation between the two themes. This is often considered in isolation and the architect plans the construction and the shell. The interior designer creates an inner space but the two have nothing to do with each other. This lack of cohesion results in people having a less favourable experience of the inner space.

If rooms are only planned to be flexible and not for a specific function, it compromises the spatial quality the user experiences. This is often the case with new builds: everything is arranged just as it would be in a furniture shop. In old buildings, there is a much greater connection between the interior and exterior worlds, since the façades also reflect how the rooms are used. In Amandus' eyes, a better symbiosis between the inside and the outside translates into better façades and spaces:

"You sense well-designed rooms as soon as you enter them. They give you the feeling that you are going to have a great experience there.

For example, our DGNB Members' Day was held at a church site which boasted an incredibly well-designed hall, a stunning courtyard and it was all made from authentic materials. As soon as I arrived, I knew we were going to have a brilliant day there. Be it consciously or subconsciously, you notice when the materials are right, when the light and the air quality are spot on, when you can open the window and the sun is shining outside. And that is just how relevant it is. We have a perception of a room's quality, even if many people are not consciously aware of it."

Materials influence perception

For Amandus, perception is about truth. And real materials. As he says, if the interior is made from cardboard and plastic, the perceptions of the user are different than if the materials are real. Real wool carpets. Real bricks. Real floors made from concrete or wood - these create a completely different atmosphere:

"For me, a sustainable space would be a real space; a space in which the user can perceive and experience real things instead of fake materials that pretend to be something they are not."

In indoor spaces, the user experiences how aesthetically rich the furnishings are. This is achieved through the various materials, different colours and all fittings and fixtures. All furnishing elements influence each other and affect the perception.

The material selection is a major consideration in sustainable buildings. This is not just true for the atmosphere and perception of the room but is also the case if you intend to have the building certified.

Material performance is key

Material selection is an interesting aspect of DGNB certification. The material itself is not certified. What is certified is how the material performs.

For example, if you are installing some flooring, it is not what the floor is made of, it is how it performs that is important: is it durable? Is it hard-wearing? How does it affect the air quality in the space? What are its acoustic properties? What is its visual quality? Does it reflect or absorb light? The safety aspects are also assessed: How can the user clean the floor? Is it bonded? Can it be recycled? What qualities does it develop during use? And then there are the ecological aspects: Is the floor made from natural materials or plastic and non-renewable resources?

All these different aspects are assessed. The review is rather complicated, but it is also objective, and it establishes an important connection between materials and the quality of the space.

Architects need to be the conscience of the construction industry

One service component of the DGNB is a platform for materials - 'the Navigator' - where manufacturers can describe how the product is made. This allows for transparency and declaration. But ultimately, it is the architect and the client who select which materials are used in the construction.

The DGNB is aware that it is difficult to make everything absolutely perfectly. This is why the system is made up of silver, gold and platinum certificates. These indicate the degree of fulfilment towards 100% compliance. The client must be able to take responsibility for their own level of compliance. That is the key to sustainability, suggests Amandus Samsøe Sattler:

"Some say that architects are the conscience of the building industry. We architects have to ask the questions why we do not go further, why we do not do more, why we do not do better? It is the client that makes the decisions and the laws that hamper us. But we can do so much more, if only we do not give up. We have to push the manufacturers too, and ask them, what is going on with your supply chain? Is it a value creation chain or is damage being done? That is our job, to be honest. That is where we really talk about the role of the architect."

And something has been happening in the field of sustainable construction over the past few years. This can also be observed in the construction of hotels - at least on the outside.

Attitudes and values in consumer culture

In hotel construction, properties are visibly being built in a better way, even in the various low-cost chains, Amandus points out. They are making more and more of an effort to ensure that the buildings are of visible quality and radiate longevity - at least on the outside:

"When you look inside, of course, you see the opposite because everything in there is usually built very cheaply and badly. People know that they will want to replace the interior in a few years, depending on what is in fashion. People build a lot of fake things and glue everything onto chipboard and afterwards they throw them away. Things still have not changed there."

In interior design, this trend follows consumer expectations. Hotel operators are convinced that they can only be relevant if these hotels mirror the latest trends. Unless they switch everything up every few years, they lose their prominence and booking numbers go down. That is the thinking. This is because consumers think new is better than old. It is a mentality in our society. New things smell great and old things might be scratched and do not look so hot anymore. Guests always want the new thing. And of course, this is the popular approach in hotels. Hopefully, this will change with the next generation.

Sound and sustainable design

And this leads to the question of how hotels can operate more sustainably when renovating. The issue, according to Amandus Samsøe Sattler, is for hotels to use better materials that are also more sustainable and will last longer. Consequently, if renovations and modernisations are only undertaken when there is a genuine need, rather than just following the latest trend, hotels can restrict waste production patterns.

"We also like something old when it is well built. It only looks scruffy when it is poorly constructed... So, build a great design instead of the latest trend. A great design is one that lasts! We see it nowadays, too. Great design from 1950s Denmark: all the well-designed furniture, tableware, lighting - all these beautiful things that are still around today. That is design that we love to use, that we are happy about design that stands the test of time and is sustainable."

An excellent example of this new way of thinking is an ongoing project by Amandus. He has been building a hairdresser's shops since 1987. In 30 years, there have been 4 refits in the same shop. The client wanted to celebrate their 40th anniversary with a new interior. However, Amandus realized that everything in the existing shop was still in top-notch condition. So, the plan was changed and the only thing to be modernized was how to communicate this: 'For sustainability and to protect the climate, we are preserving the shop and celebrating it for the 40th time'. The hairdresser hired an agency to help with the new messaging and nothing has been changed. Amandus did not have a revenue from this project - but this was important to him:

"We have to start with ourselves. We cannot talk about sustainability and using less resources, then do the opposite. And this is not a fairy tale, it is a true story."

Changing attitudes takes time. There are some deeply ingrained ways of thinking and habits that need to change. Meanwhile, the existing frameworks and expectations are often a burden on development.

Sustainable construction takes time - and new legislation

Amandus Samsøe Sattler points out that progress towards sustainable construction is slow. There are lighthouse projects and pilot projects as well as projects with certifications. One reason for this is that people are working against decades of development, based on industrial interests of the fossil society.

But now a short-term change is needed and building materials and construction types have a major role to play. But these new construction methods must also be approved accordingly. This is where we also need new construction legislation.

The next question will be whether it is economically feasible to build in a climate-neutral way.

Profiting from sustainable construction

When speaking with his clients, Amandus often determines that the methods used for calculating profitability do not always leave room for sustainability. This calls for a change to the calculation scheme - and many are not ready for that yet. Projects need to be depreciated over a longer period of time, then paying a higher price will pay off.

Investors have various exit strategies. These result in a variety of calculation models, the majority of which are based on short-term investment targets. As Amandus points out this influences their willingness to plan for the long-term and build sustainably:

"Very few people ever say, I am building this house and I want to keep it, use it or rent it out for 30 or even 50 years. This is why I can work with long-term financing. It means I can build in a sustainable way, too, because I am able to invest more in quality."

This mindset of making a quick buck and then disappearing really must change. Demand for sustainable construction accreditation is growing, particularly to secure investment for the future. It is a positive trend that is having an impact now and in years to come.

Phase Sustainability Today!

An incentive to rethink societal attitudes: how do we want to live? How do we want to consume? How do we want to protect our Earth? was inspired by 'Fridays for Future' and has had an immense impact on society. So many more people are now aware that something is wrong and that something needs to be changed.

But often we just do not know how to live or build differently. The next step needs to be a training initiative, says Amandus. And as President of the DGNB, as well as in his own office, this is what he wants to pursue:

You can sense good spaces and they lead to better experiences.

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"Many more people need to be trained so that they are well versed in the subject. In the office, we have two DGNB consultants who have completed basic training on sustainability issues. Yet, we have 120 employees. Why do we not have 10 consultants? That is where we should be. I would like there to be more professionals in this field and to provide training for the staff."

Amandus is also hoping to see more initiatives that support the sustainable development. One example is the 'Phase Sustainability Today' initiative by the DGNB. The DGNB has been in conversation with architectural offices for a long while and has identified some of the issues and obstacles.

With 'Phase Sustainability Today', the architect makes a declaration that they are participating in this initiative. They are given a simple double spread that lists six issues that are important for sustainability. This is how they initiate the dialogue with the client. The intention is to establish a common goal; where is this journey headed? The leaflet acts as a conversation starter. It is not about numbers and figures. DGBN has made an enormous impact with this initiative, Amandus asserts:

"We have brought on board an awful lot of architects who had not previously been interested in the DGNB. It became clear to us that such a low-threshold service easily opened doors to the topic. This has enabled us to attract many of our colleagues. We realised that we need to start more initiatives like this. This is a way we can find new members for the association. This is important because it is together, as architects, that we can move more towards sustainable construction".

The architect has a responsibility

Architects have a significant role to play. They have a responsibility to plan sustainably and they must convince the client. That was always the case, Amandus explains,

"New and innovative concepts were always something architects had to challenge the client about and convince them of. Innovations never came from the client. They never said, 'hey, why do we not build in a sustainable way?'. Neither are these initiatives coming from the Government. Architects are the key witness. And we have to keep asking these questions of the client and of the manufacturers. That is our job!

And above all, we have got to want to do it and have fun and pleasure along the way."

Desire, fun and pleasure are important drivers to build a more sustainable future. We are also going to invest more time and energy in discovering how it can be done. And it is not about the architect not being allowed to build anymore. Architects must build - they just have to do it better!

The main thing is to keep using existing buildings, not just tear them down and build new ones. There will always be good reasons to build new and waste grey energy but if we try to find solutions and question our own expectations in terms of comfort, we can also do something positive with existing houses. Unless we humans do better with how we deal with existing buildings and how we treat nature, we will continue to

harm our environment and ultimately endanger our good life, Amandus reminds us.

Creating better value and a better life

It can be equally important for the investor to really create something of better value. A building that is not only sustainable but also one they do not want to demolish after 30 years. - And one for which it may be easier to obtain financing in the future. Financing is increasingly aligned to sustainability criteria. Even the banks only want to finance buildings that also provide value and longevity. This can be very important for the investor.

Sustainable construction offers a better life for the users of the buildings in the future, for instance by improving the interior atmosphere. As a result, users feel more comfortable in the spaces. As Amandus explains:

"You can sense good spaces and they lead to better experiences. And we will interact better in good spaces. This is also of great value to us as human beings."

Amandus is thrilled to be part of this evolution towards sustainable building and living. He is grateful to work in an industry that needs to change - and which can change. We all just have to keep fighting for it and not give in too soon.



Hotel Der Öschberghof, Donaueschingen

The design for the expansion of this fivestar superior golf and spa resort is grounded in a profound awareness and appreciation of the traditional architecture of the region as well as sensitive treatment of existing structures.

Allmann Sattler Wappner Arkitekten remodelled the resort and optimized its logistics processes during normal hotel operations.

The organizational principles of our design for the expanded Hotel Öschberghof are straightforward and easily recognizable. Referring to characteristic rural architecture of the region, the design includes solitary and grouped buildings with traditional pitched roofs. Their staggered, almost rhythmic arrangement seeks to embed the complex in its surroundings with sensitivity to the landscape and attention to scale. To that end, Allmann Sattler Wappner Arkitekten gutted existing buildings and added new structures that contrast in orientation and height. The design encompasses a new entrance hall, a modern conference centre, an expanded spa area and 125 newly appointed rooms.

By applying their architectural principles consistently throughout the complex, Allmann Sattler Wappner Arkitekten achieved a clearly configured and easy-to-understand layout. An essential feature of the design is the use of open spaces within the ensemble of buildings: structure and terrace unite to create a symbiotic whole that is clearly distinct from the surrounding landscape.









