



# 7 Day Build

*Cedar House, North Elmham, Norfolk*

**H**udson Architects' Cedar House, a new build private residence in Norfolk, a new prototype for cost-effective new build modern housing. It deploys innovative off-site construction, which simplifies the building process without compromising the architecture of the house.

Designed for a photographer and his family, the brief was for a simple house comprising two bedrooms and a third room, which could function as both a guest room and office. A separate area of the house was required to provide a dark room and, a larger spacious gallery/studio with separate loading access for large canvases and prints.

The location of the building dictated the external envelope of the house. Situated in the countryside of North Elmham, on the river Wensum, it was important that the building was sensitive to its surroundings and sat

comfortably with the local agricultural landscape. Hudson Architects designed a modest rural building simple in form and evocative of a functional farm building. This design led to research into possible elemental construction methods. Working with structural engineers Alan Conisbee Associates and off site construction specialists, the practice adopted a system of prefabricated timber panel floors, walls and roofing, making the entire building extremely quick to assemble on site and offering high levels of insulation.

What is exceptional about the house is the way in which Hudson Architects have achieved complex spacious interiors from a prefabricated system. Keen to stretch the inherent properties of the panel system, Hudson Architects discovered that a lightweight roof structure would eliminate roof beams permitting soaring ceilings and seamless open plan spaces, and

that large openings, even across corners, were achievable without the need for additional structural reinforcement.

This meant that the practice could design a light and spacious building arrangement that engaged with its surroundings whilst also offering a ready-made building package which kept the costs down, and presented limited risk to the client. The final scheme incorporates a cantilevered corner window measuring 4m x 2m which frames views onto the river from the living room, and an 8m line of glazed doors which fold in completely, extending the living room on to a raised deck on the west side.

Orientated on a North-South axis the building makes the most of the morning and afternoon sun. The kitchen faces East and the living room deck and entrance space is orientated to the West overlooking the planned orchard.

Externally the building has been entirely cloaked in 15,000 untreated cedar shingles, a material which belies the prefabricated system beneath. Fixed to battens over a breathable waste-woodchip building board cedar was chosen as a more cost effective alternative to weatherboarding. Coupled with the clean lines of the aluminium window surrounds and integrated into a design, which cleverly conceals obtrusive rainwater systems, the cedar reads as a dramatic sleek protective cloak, which sits harmoniously with its countryside surroundings.

Built on a 100 year flood plain and designed to sit one metre above the ground, the lower half of the structure has been engineered to be sacrificial in the unlikely event of flood. Internally, electrical circuits and sockets are raised to a dado height level.

The building, which was erected in just one week under a design and build contract, is extremely cost effective at approximately £1000 per sqm (excluding external works). The final value £245,000 came within the original budget of £275,000 and was delivered on time.