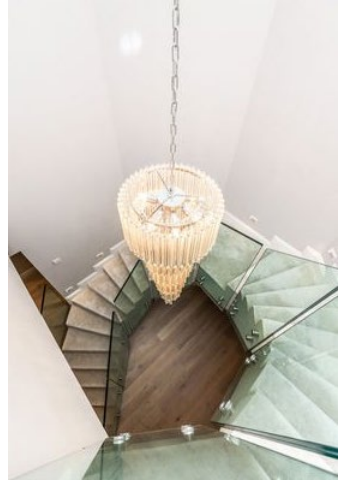


# PRIMA BUILDING SOLUTIONS

Building with  
Emmedue

Prima Building Solutions are very pleased to announce that we are now working with the Emmedue Building System, giving our clients an Eco Friendly, thermal structure in a fraction of the time of a traditional build created by EMMEDUE Technology.

# About Prima Building Solutions



Established in 2022 Prima Building Solutions is a leading, sustainable construction company that is committed to providing exceptional and high-quality finishes with every project it undertakes.

As a dynamic and innovative company, our passion for sustainability, speed of erection and the strength of our builds ensures all of our projects are finishes with the upmost quality.

Our team and our construction arm have over 200 years combined construction experience and have worked on some of the most well know projects in the UK, across Europe and further afield, including Cadburys World, Glasgow Transport Museum, Gibraltar Hospital and Dubai Ski.

# The System's Story so far



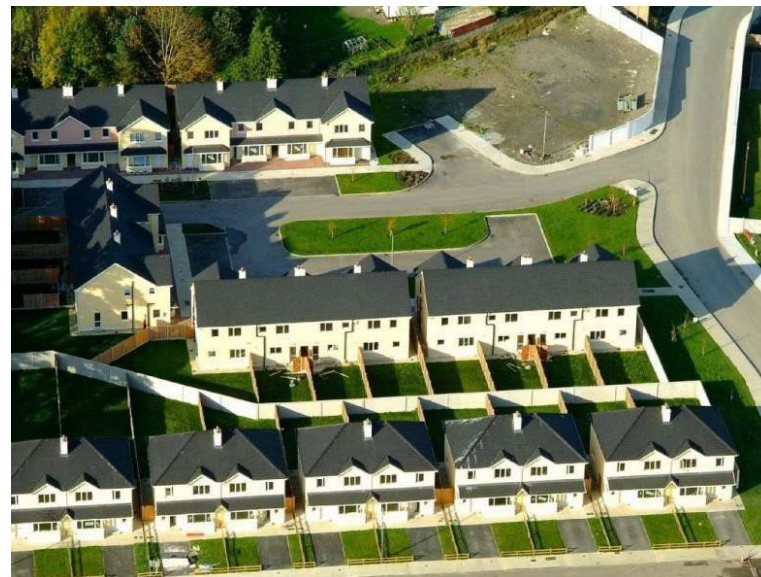
Tocumen Airport, Panama



Coca Cola Headquarters, Ecuador



Puerto Plaza Hotel & Shops,  
Dominican Republic



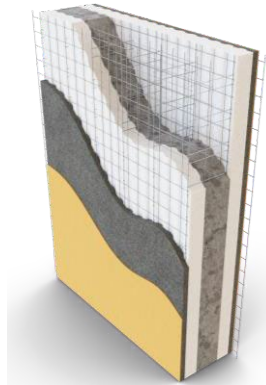
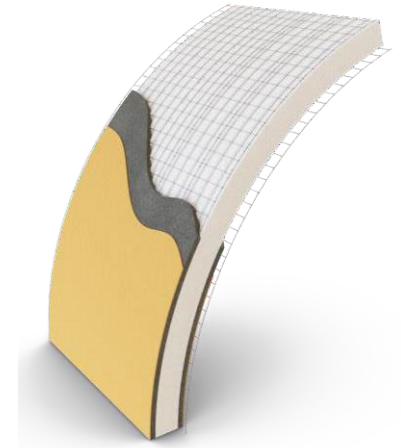
Housing development, Ireland

The system began with an inspiration, a vision by Angelo Candiracci an Italian engineer who wanted to build an ingenious product for the construction industry that belongs not only to himself but to the world and today has been in use for over 35 years and forms the structural basis for over one million buildings worldwide.

Prima Building Solutions are excited and we are all as passionate as the team in Italy to bring this innovative, highly sustainable, and versatile EMMEDUE building system to the UK

Not only does this system benefit from a much greater speed of construction and a much lower carbon footprint when compared to other forms of traditional build, it is suitable for use across multiple sectors.

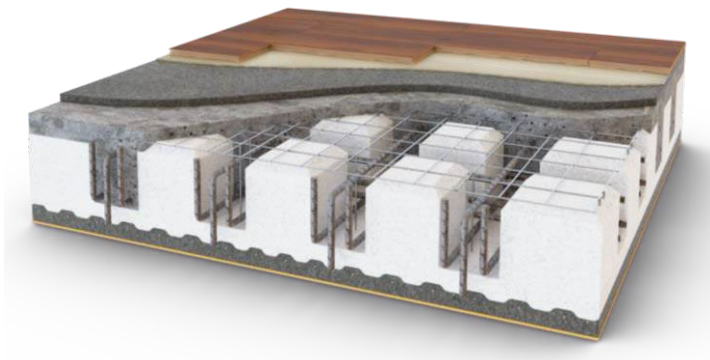
Please see some of the projects completed across the globe using the EMMEDUE building system



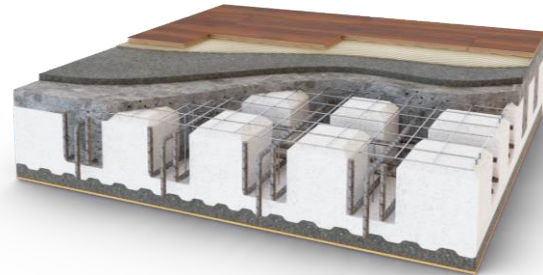
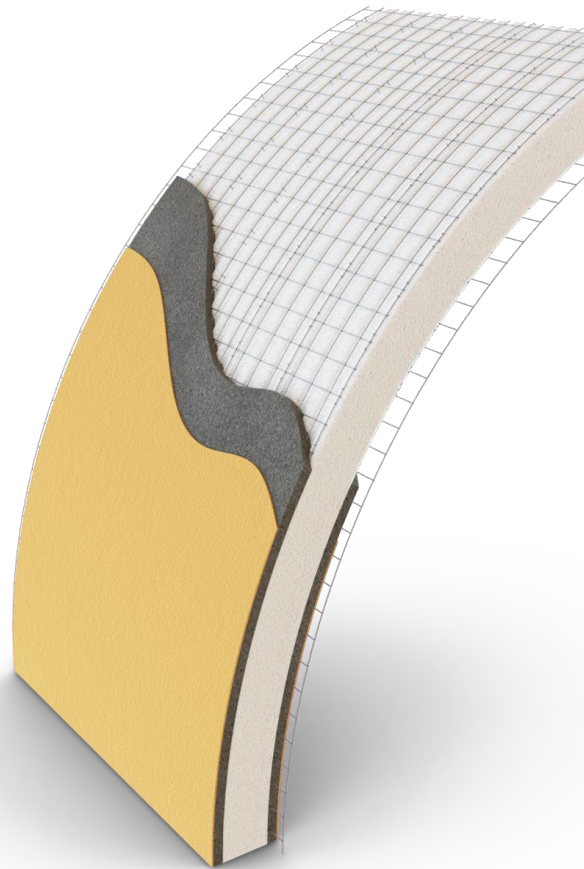
## OUR MISSION STATEMENT

Our mission is choosing to become a pioneer in building a greener future, whilst actively looking for new ways to cut our carbon footprint through design and construction.

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# Low carbon insulated concrete walls and floors



The System consists of two types of wall panels that combine to provide a panel system that is capable of being used for all elements of a structural building. Panels are made structural through the application of high strength concrete sprayed to the surfaces in the case of the single panel or poured into the cavity for the double panel.

The first type is the single panel which consists of an EPS rigid core with prefabricated, galvanized, high tensile steel wire mesh reinforcement (600Mpa). Following erection on site it is sprayed both sides in shotcrete (concrete) creating a structural building.

The second type of panel is the double panel. The double panel is made up of two basic panels, shaped as required and joined together by double horizontal connectors tying the two panels together throughout the section (acting as the rebar). This creates a hollow core which is then filled with the concrete of required strength to meet the project needs.

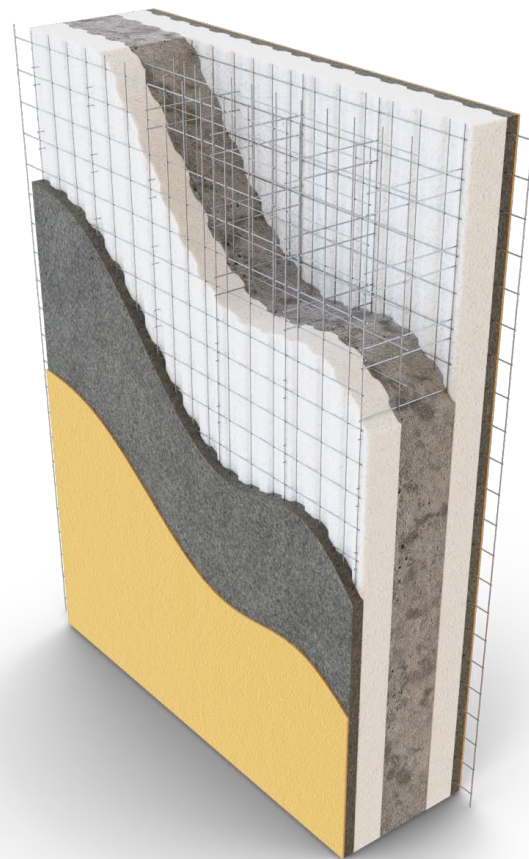
External Clad options:

- You can spray both sides in shotcrete
- You can render it
- You can brick face it
- You can timber clad it
- You can panel it

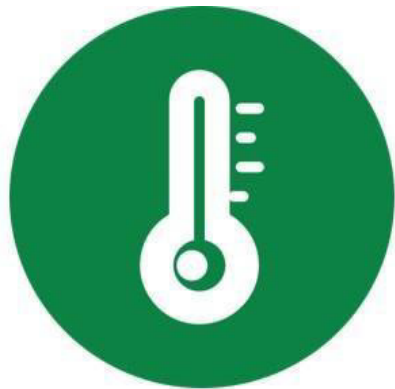
The exterior options are endless as you can mechanically fix through the insulation into the concrete core for permanent fixing.

This system also includes the required floor, stairs and roof panels which are permanent shutters for in situ poured concrete.

The system is perfect for all building types; residential, schools, hospitals, garden offices, outbuildings, the list is endless.



# Environmental Benefits



## **Thermal Insulation**

The thickness and density of the panel can be customised to deliver specific thermal insulation requirements as per the Government's new Future Homes Commitment.

In fact the proposed new external wall target of 0.26 W/m<sup>2</sup>K is already being met by using this panel system.



## **EPS Sustainability**

Polystyrene, the default rigid-insulation core has the highest A+ rating in the BRE Green Guide.

**Safe:** It does not release toxic or harmful substances and is completely inert.

**Recyclable:** during production, no waste materials are produced and the panel production aims to optimise the cuts whilst minimising waste. Any EPS scraps are directly recycled during production at the plant itself.

**Non-Toxic:** The material does not create allergies and is not harmful to the health of those who produce or install it.



## **Energy Efficiency** **Low in CO<sub>2</sub>**

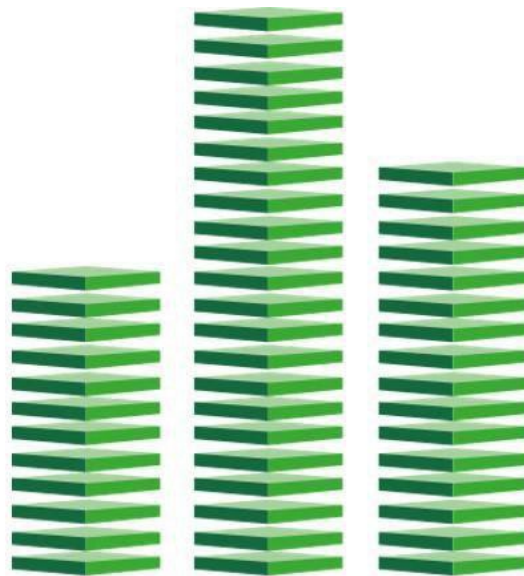
The panels create buildings that achieve high levels of energy efficiency and contribute towards energy efficiency regulations. This is thanks to the insulating envelope provided by the polystyrene core which eliminates thermal bridges and ducts considerably, improving indoor thermal comfort.

# Physical Characteristics



## **Fire Resistance**

The panels are made of self extinguishing expanded polystyrene, these encase a full concrete structural wall therefore preventing any combustion (up to REI 150 Fire Rated for a Double Panel)



## **Strength**

This Advanced Building System has undergone internationally recognised laboratory tests that prove the structural strength of a finished building that can withstand earthquakes, cyclones or even explosions of over 29.5 tons per square metre.



## **Versatility**

The panel promotes complete design flexibility, being equipped with a complete range of building elements; load-bearing walls, curtain walls, floors and stairs. The system is completely compatible with other existing construction system, including reinforced concrete or steel structures.

# Construction Efficiency



## **Speed of Installation**

The efficient logistics of this Advanced Building System show a marked reduction in construction compared to traditional building methods



## **Lightweight**

The panels are both easy to handle and transport. The finished structure is lighter than a traditional one and that reflects on the economy of the whole building as the savings start from delivery



## **Cost Effectiveness**

The system allows high quality structures to be built at a very economical price, due the efficiency achieved in the construction of the works, the movement and assembly of the panels.



# Quick Summary of Benefits

## Benefits for End Users

- Energy Efficient
- Fire resistant
- Load-bearing
- Sound resistant
- Blast resistant
- Earthquake resistant
- Cyclone resistant

## Benefits for Builders

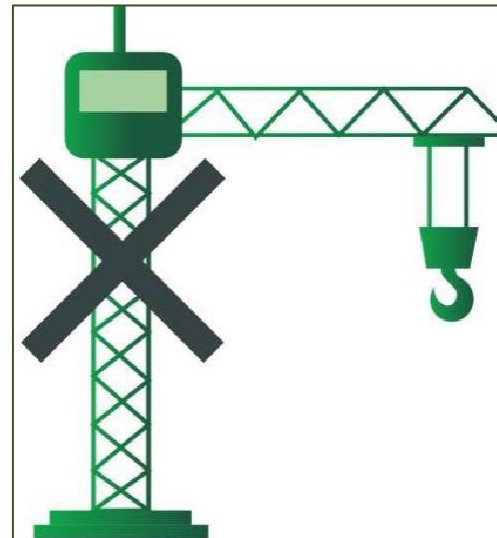
- Cost Effectiveness
- Rapid Installation
- Lightweight, ease of transport and handling
- Versatility
- Compatibility with all building systems



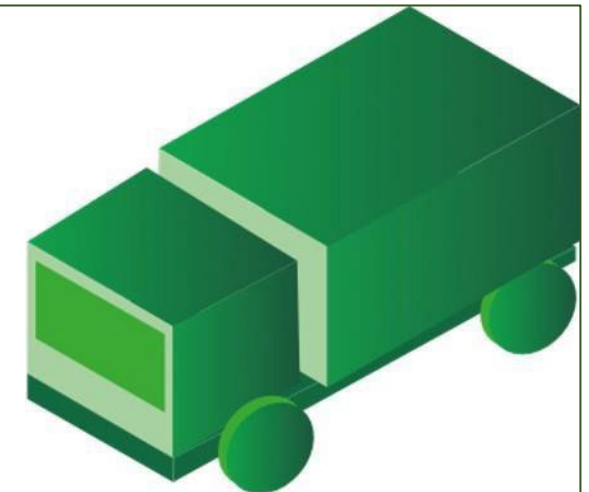
Reduction in  
Carbon Footprint



Watertight house in  
just 5 weeks



Lightweight Panels so  
no cranes required

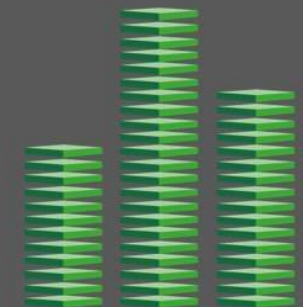


One House fits into  
one truck



## VERSATILE

The Emmedue system offers a completely versatile building system that is compatible with existing construction methods including steel, wood, brick, prestressed concrete and other Modern Methods of Construction. Its versatility is ideal for tight sites or odd shapes above and below ground and it can take any decorative finish, from direct cladding to ventilated facades.



## ROBUST

The robust panels can withstand everything from hurricanes to fires and earthquakes to explosions, all with the competitive value needed to make homes affordable and sustainable without costing the Earth. The core building fabric provides these benefits along with precision automated digital manufacturing and BIM capability supported by in-house structural and design engineers.



## LOW CARBON

Emmedue buildings perform brilliantly in both insulation and load-bearing functions. The thickness and density of the core can be customised to deliver specific thermal insulation requirements. With intimate contact between the insulation and the building envelope, the Emmedue system entirely eliminates thermal bridging, which helps to reduce energy consumption by limiting the amount of heating and cooling required in a home.



## RAPID INSTALLATION

The panels' inherent lightness allows for rapid production and installation, optimisation of the assembly sequence, reduces on-site work and saves up to 40% on construction time.

# How Green is this System and can we really build our way to a greener future?

At Aquapark we strongly believe we can 'build' our way to a greener future with the Emmedue Building system.

Buildings are huge energy consumers; greater waste comes from its heating and cooling; energy efficiency is the answer to reduce rising energy costs and CO2 emissions into the atmosphere, using EMMEDUE technology reduces CO2 emissions

The Emmedue Insulated Building Panel has a rigid insulation core using the highest A+ rating in the BRE Green guide, when we introduce concrete to the panels, not only do we produce a load bearing structure but one that provides excellent thermal and sound insulation also a resistance to fire (REI) of 120+

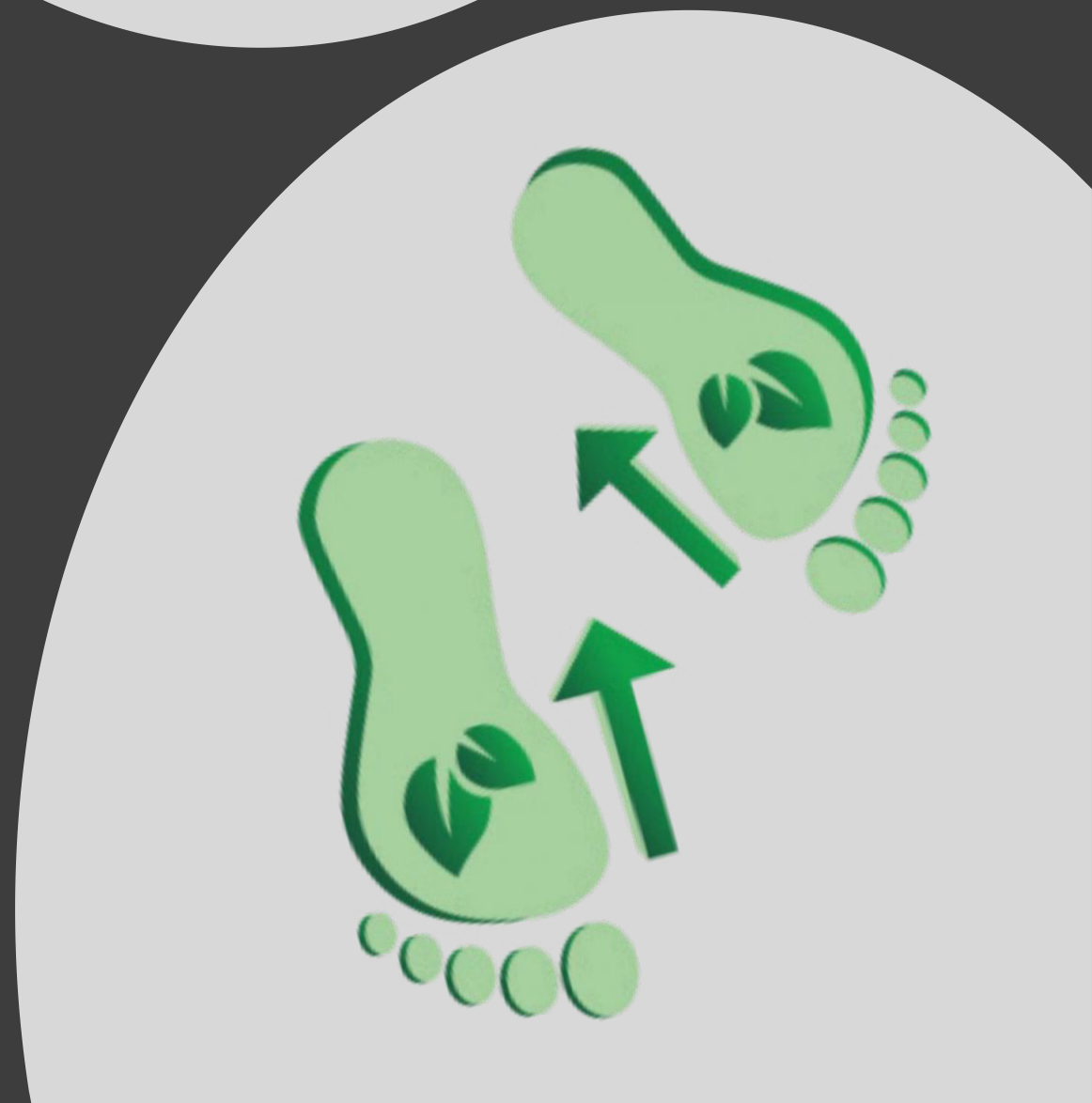
This combination also yields the lowest carbon footprint when compared to commonly used traditional systems, with 33kg of CO2e per m2 of wall compared to 117kg of CO2e per m2 of brick block and mineral insulation.

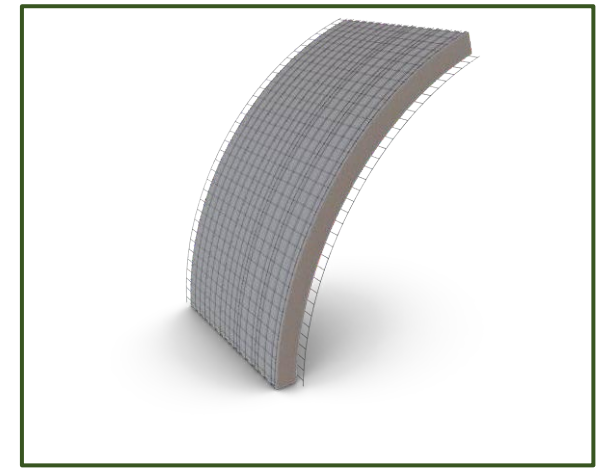
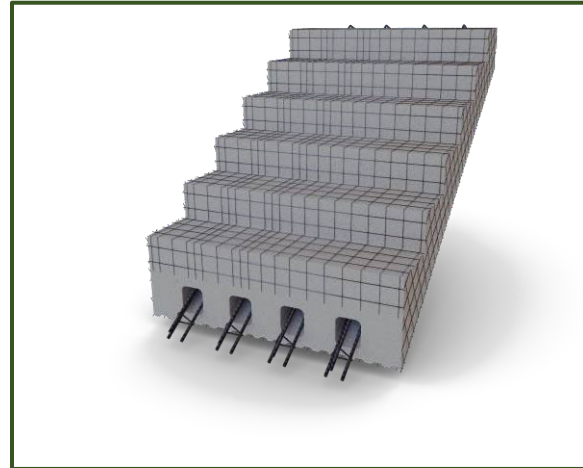
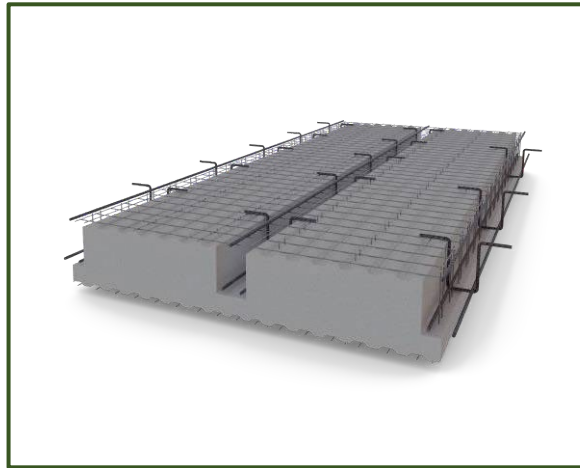
Lifestyle carbon, accounts for the vast majority of a building's carbon footprint so by design, a home made with the Emmedue system can reduce energy expenditure and carbon emissions by 65% compared to traditional builds, which helps tackle fuel poverty and support climate emergency measures.

Not only do we save carbon in construction, you save it in operation.

By using UK manufactured products, innovative design and quite simply less material with fewer processes, developers can start paving the way for our greener future.

THE PUREST ENERGY IS THAT WHICH IS NOT CONSUMED





## REDEFINING MODERN METHODS OF CONSTRUCTION FOR A BETTER BUILD

The Emmedue system is unique and satisfies more than one of the government's new Modern Methods of Construction (MMC) Definitions Framework combining the following elements

- Category 2 - Pre-Manufacturing of primarily 2D structural systems and
- Category 6 - labour reduction and productivity improvements on site.
- In addition, we can also supply products for the creation by others of Category 1 Pre-manufacturing 3D Volumetric structures.

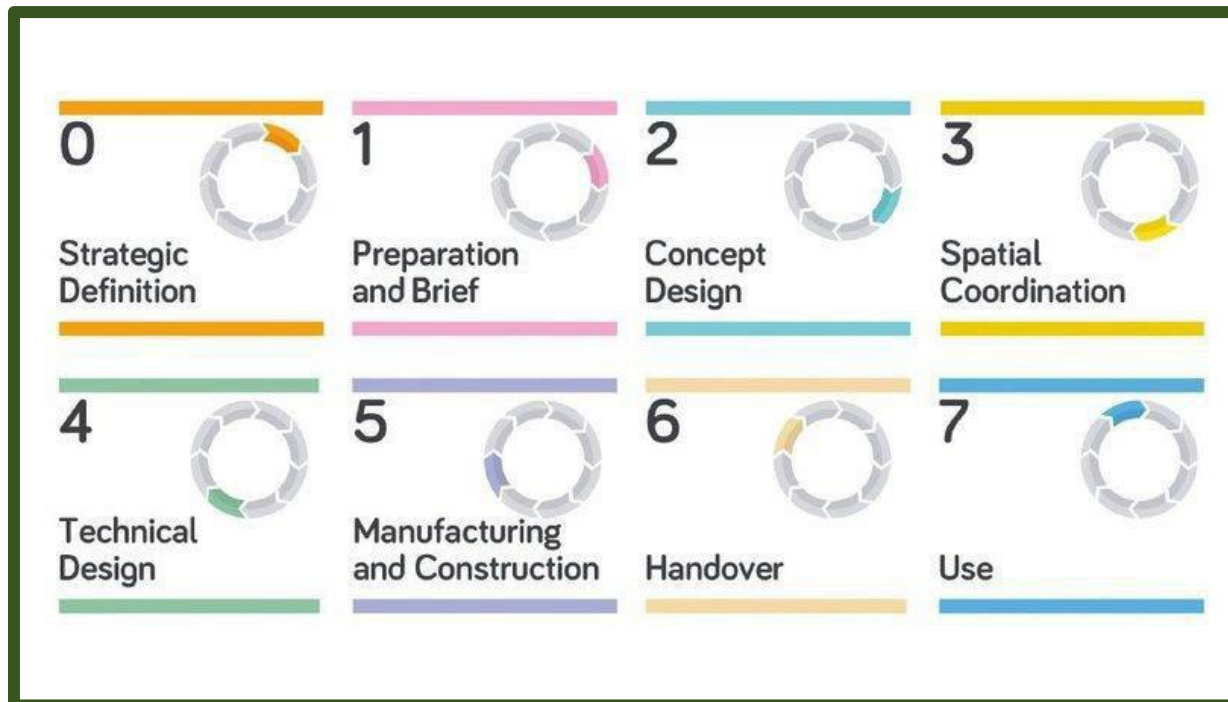
Whether you are a builder or business owner, the Emmedue system guarantees you a quality building solution that is unmatched in the UK market.

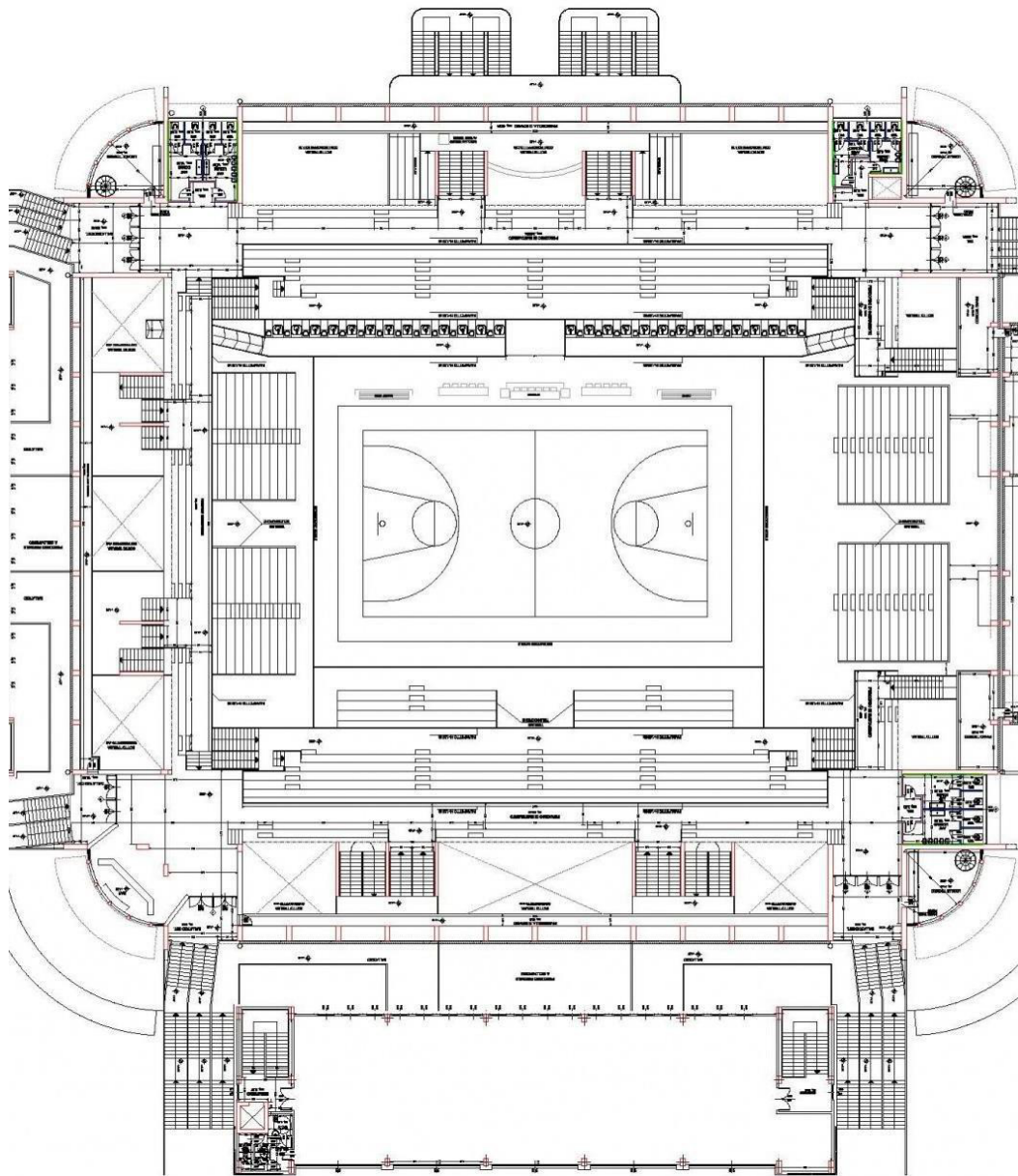
The Emmedue system allows you to create any type of building ensuring great freedom of design and tailor- made architecture to everyone.

There are numerous buildings successfully completed using this system which not only provide great structural characteristics, but they also grant excellent earthquake resistance and thermal-acoustic performance as well as exceptional environmental comfort.

Choosing to adopt the Emmedue system means choosing to provide high quality solutions, improving margins and enhancing the number of satisfied customers.

It means choosing to bring development in needed areas using a certified innovative building solution and, specially, it means choosing to become a pioneer in building the future.





## **RDS Stadium, Rimini, Italy**

A space to develop and hold all types of events

The RDS Stadium, also known as 105 Stadium until August 2017, was inaugurated on 14<sup>th</sup> December 2002. This is a multi-purpose structure located in Rimini and is recognized as one of the most representative sport palaces in Italy.

For the construction of the RDS Stadium, the Emmedue Advanced Building System was integrated to the traditional system. The Emmedue panel guarantees the chosen structural design safety and flexibility, thus allowing maximum structure versatility.

## Himalaya Lodge, India



Kedarnath is a small village in the Uttarakhand region, located at 3584m above sea level at the foot of the Himalayas and near the Chorabari Glacier. Building in this area is nearly impossible due to the extreme weather conditions and logistical constraints, yet there are people who live there, who have the need for habitable housing and facilities to conduct their daily activities. Due to the conformation of the territory, the transportation of material is carried out with donkeys and horses. This is why it becomes especially difficult to build in Kedarnath.

With the Emmedue panel being light weight, yet at the same time tough, it is both easy and to handle and transport even in the most adverse conditions.

Prior to the application of shotcrete, an Emmedue panel weighs between 3.5kg/m<sup>2</sup> and 5kg/m<sup>2</sup> which means that a single worker can easily handle a 3sqm wall, that is, a panel as high as the storey height.

Another important characteristic of the Emmedue panel is that it provides an excellent performance in both insulation and load bearing functions. The thickness and density of the panel can be customized to deliver specific thermal insulation requirement, which is of primary importance in Uttarakhand region due to the extreme climate conditions.

## House infill, Amsterdam



- Images of a house built in a space between two separate buildings, using the Emmedue building system in, Amsterdam. The lightweight panels made this project much easier and quicker than that of a standard build.



# Kindergarten in Bolivia

This project was built using the Emmedue Building System and shows just how versatile the panels can be





# El Blok Hotel, Puerto Rico

Conceptually, the resort, which the New York Times described as one of the most remarkable in the Caribbean from an architectural point of view, was designed as a coral block removed from the sea floor.

In fact, its forms find inspiration in the sinuous curves, the porosity and the density of the Caribbean coral reef, on which the hotel overlooks.

The Emmedue panel not only gives the building a harmonious and highly aesthetic aspect, but also offers excellent performance in terms of thermal insulation, improving living comfort. This is possible thanks to the EPS core, which extends throughout the surface and makes up the building envelope eliminating thermal bridges. EPS also optimizes the acoustic insulation of the walls, in compliance with the most stringent regulations.



# Coca Cola Head office, Ecuador

Coca-Cola, the corporate of the worlds largest industry in the beverage sector, established headquarters in Quito, Ecuador in 2015.

This complex incorporates superlative technological standards and the highest levels of efficiency and production quality to better respond to its growing demand.

The project was carried out with the Emmedue building system as the cutting edge technology responds to the most diverse architectural requirements, ensuring compliance with building regulations and significantly reducing the environmental impact.

The structure was designed with a large window along the whole façade that maximizes the natural light inside the office space. This design was implemented by virtue of the fact that the Emmedue building system is extremely versatile. In fact, the system is compatible with other building systems, which makes it possible to integrate the Emmedue panels with different construction elements, like glass in this case.



# Esperanza Base in Antarctica

Emmedue: A Building System that meets all needs, even in the most critical of conditions.

Located at a latitude of 63° 24'S and a longitude of 56°59'W on a rocky surface at 25 meters high and 30 meters from the coastline, the Esperanza Base is located in Hope Bay, Trinity Peninsula, the northernmost part of the Antarctic Peninsula.

In 1995, the first experimental work was carried out with the Emmedue Building system in Antarctica and was managed by the Argentine Army, in the following years the base was further expanded to create more residential units, using the Emmedue Building System.

The decision to adopt the Emmedue Building system enabled the units for the base to be built in less time than if using traditional systems, the 40% time saving on the project meant that the buildings could be complete during the summer months of December to January and before the soil was covered with snow and ice and the darkness fell over Antarctica again. The speed of application of the system is guaranteed by easy manoeuvrability and ease of assembly, even under the most difficult operating conditions.

Furthermore the application of the Emmedue System has proved to be a winning choice as Emmedue structures have excellent thermal insulation.



# Intercontinental Hotel Panama

Located on the Pacific Ocean along Playa Bonita, this beachfront resort consists of five storeys with 307 luxurious guest rooms and suites.

The Intercontinental is a very good example of what can be done with the Emmedue Building System, making use of its diverse constructive elements.

The resort has been constructed with the Emmedue single panel, which has been used for the internal partitions and cladding and is proof of the excellent integrability of the system with other building methods, in this case being used within a steel structure.

Besides demonstrating an excellent interrogatability, within the framework for this project, the Emmedue panel proved, once again, its great design flexibility when it came to the domes in the main building, which had been identified as a major challenge, the Emmedue Curved panel brilliantly accomplished the clients' requirements



# Warranty and Accreditation

- The Emmedue system is supported by over 35 years of work, research, perseverance and product testing and has been used around the globe since 1981.
- The Emmedue system which is produced using Emmedue technologies has warranty agreements and technical approvals from around the globe.
- The core product has undergone extensive Lucideon weather testing to prove the strength of the system under UK weather conditions.
- Recent residential projects have gained 10 year structural warranty insurance from various providers, including Advantage, Build Zone and most recently LABC who are recognised by 97% of mortgage lenders.





**PRIMA**  
BUILDING  
SOLUTIONS

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