



**Affordable Building Concepts**  
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# Chairman's Statement



**Desmond Cullinane**  
Chairman  
Affordable Building Concepts

Recent studies via a number of global agencies such as the UN estimate that the Continent of Africa has a demand for at least 1 billion affordable homes immediately just to cope with the current chronic shortage of decent housing. Additionally, the explosion of growth amongst the young and aspiring populations of not just Africa but India and other emerging economies around the world has put extreme pressure on all Governments in the developing world to find a suitable solution.

Affordable Building Concepts Ltd is a new subsidiary company of mine set up to tackle the enormous problem of how to construct decent highly quality housing with suitable toilets, bathrooms and kitchens at a cost that is affordable to even those on very low income.

It has been a huge task but we have done it. I am proud to say that we have already built a number of affordable houses and built a demonstration site in Ireland to prove the quality of our building techniques. It has been a huge success to date and has attracted enormous interest.

My vision now is to bring affordable housing to all corners of the developing world supported by an excellent team of professionals who are all dedicated to the task in hand.

I look forward very much to introducing you to my team and our truly revolutionary building technology whereby even a simple 3 bedroom house can built within just 3 days. It completely sets us apart from our competitors and we are now ready to significantly expand our operations across the globe.

Welcome to real 21st Century housing — affordable to all.

Desmond Cullinane  
Chairman  
Affordable Building Concepts Ltd

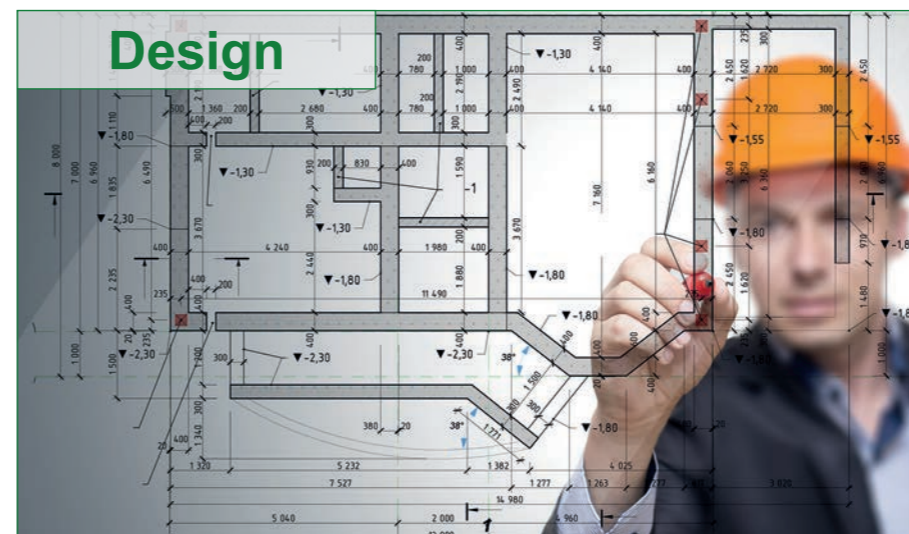
# Our Services

## Planning



Understanding client requirements in detail is of crucial importance to us. We will discuss all aspects of a building project with a client and then arrange a strict time-line sequence with action points against each target or deadline with a clear division of responsibilities for each member of our team involved in the build. Everything we undertake for a client is agreed and planned in advance of any building project so that targets can be met and specifications completed in full.

## Design



Once the basic parameters of a building project have been agreed with a client and signed off by both parties, the full details are sent to our design engineers and architects to begin working on producing a full set of designs. Once the designs have been agreed and signed off by a client, they are sent to our Project Director and his project managers.

## Completion



The Project Director will sign off each completed house against the agreed designs and inform the client each time a new house has been completed. Each new build is inspected in great detail before the Project director will sign it off as being complete.

# Alu-Form System

Affordable Building Concepts in response to wide International demand for a locally based Economic, Eco Friendly, Volume Fast Build product developed its own unique copyrighted Aluminium Formwork System to use with poured concrete to produce high quality, durable housing that both reduced costs and significantly and streamlined the total build process. For High volume applications Affordable Building Concepts will install in country a production facility for its Formwork Systems and train local workers in both the production process and subsequent construction activities.

This system is particularly suited to multi story applications e.g. Apartment Blocks, Schools, Hospitals etc. and can cope with buildings in excess of 50 stories. They can also cater for Bridge building and Water Tank applications and negate the need for specialised transport requirements, road closures etc.

Our Alu-Form system complies with International Building Standards and allows for large scale developments to be constructed using small scale manageable parts delivered to site.

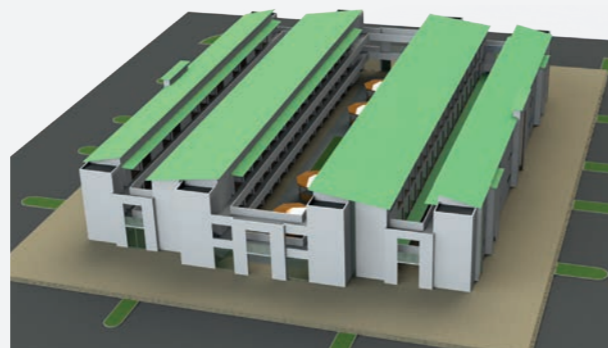
Affordable Building Concepts is committed to minimising the impact of the construction business on the environment and encouraging sustainable practices within the company – hence our use of concrete within our formwork systems.

It is easy to overlook the use of concrete in society. Concrete plays a vital part in our daily

lives and in a functioning society. Its benefits to society are immense, being used to build our schools, hospitals, apartment blocks, bridges, tunnels, dams, sewerage systems, pavements, runways, roads and more.

Few people realize that concrete is in fact the most used man-made material in the world, with nearly three tons used annually for each man, woman and child. Twice as much concrete is used around the world than the total of all other building materials, including wood, steel, plastic and aluminium. None of these other materials can replace concrete in terms of effectiveness, price and performance for most purposes.

The completed finish is so smooth that it can be painted onto directly without any other preparation and the process does not require the normal range of skilled tradesmen that conventional construction techniques demand. Further the formwork has been designed so that no Pins are required in the shuttering so no residual holes to be filled in with the exception of some holes for the realigning steelwork in the shuttering. The System is light so that panels can be easily moved on site by construction workers.



# Alu-Form System

## Versatility

Concrete is used in buildings, bridges, dams, tunnels, sewerage systems pavements, runways and even roads

## Low Maintenance

Concrete, being inert, compact and non-porous, does not attract mould or lose its key properties over time

## Affordability

Compared to other comparable building materials e.g. steel, concrete is less costly to produce and remains extremely affordable. With Alu-Form there is no necessity for skilled Tradesmen. There is 0% Waste of materials and concrete.

## Fire-resistance

Being naturally fire-resistant concrete forms a highly effective barrier to fire spread

## Relatively Low Emissions of CO2

CO2 emissions from concrete and cement production are relatively small compared to other building materials. 80% of a buildings CO2 emissions are generated not by the production of the materials used in its construction, but in the electric utilities of the building over its life-cycle (e.g. lighting, heating, air-conditioning)

## Energy Efficiency in Production

Producing concrete uses less energy than producing other comparable building materials. A study quoted by the NRMCA concluded that the energy required to produce one ton of concrete was 1.4 GJ/t compared to 30 GJ/t for steel and 2GJ/t for wood

## Excellent Thermal Mass

Concrete walls and floors slow the passage of heat moving through, reducing temperature swings. This reduces energy needs from heating or air-conditioning, offering year round energy savings over the life-time of the building. One study quoted by the NRMCA found that concrete walls reduce energy requirements for a typical home by more than 17%

## Locally Produced and Used

The relative expense of land transport usually limits cement and concrete sales to within 300km of a plant site. Very little cement and concrete is traded and transported internationally, this saves significantly on transport emissions of CO2 that would otherwise occur

## Albedo Effect

The high "albedo" (reflective qualities) of concrete used in pavements and building walls means more light is reflected and less heat is absorbed, resulting in cooler temperatures, this reduces the "urban heat island" effect prevalent in cities today, and hence reduces energy use for e.g. air-conditioning.



## Alu-Form System Flat & A Roof Housing



### Flat Roof House

Size Options | 1 Bedroom 40m<sup>2</sup> | 2 Bedroom 60m<sup>2</sup> | 3 Bedroom 78.75m<sup>2</sup> | 4 Bedroom 96m<sup>2</sup>

## Alu-Form System A Roof Housing



### A Roof House - 2 Bedroom 86.50m<sup>2</sup>

We also offer our 2 Bedroom A Roof House with alternative design & size options in 40m<sup>2</sup> | 56m<sup>2</sup> | 64m<sup>2</sup> | 65.09m<sup>2</sup> | (information available upon request)



### A Roof House - 1 Bedroom 36m<sup>2</sup>

We also offer our 1 Bedroom A Roof House with alternative design & size options in 40.5m<sup>2</sup> | 51.25m<sup>2</sup> | (information available upon request)



### A Roof House - 3 Bedroom 80m<sup>2</sup>

We also offer our 3 Bedroom A Roof House with alternative design & size options in 114.89m<sup>2</sup> | 161.64m<sup>2</sup> | (information available upon request)

## Alu-Form System A Roof Housing



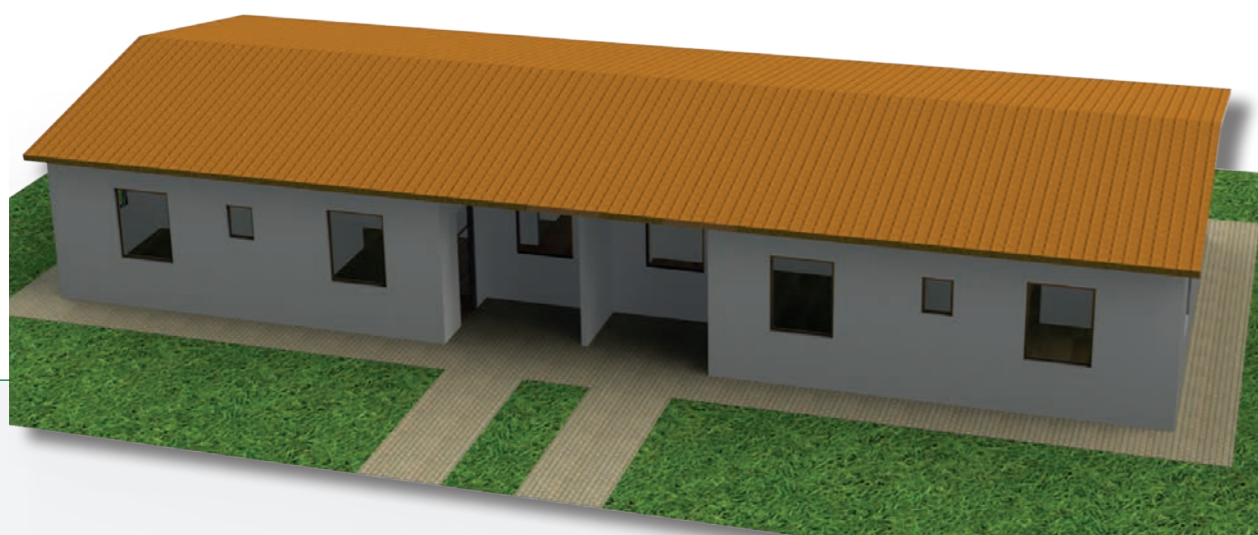
**A Roof House - Semi Detached - 1 Bedroom 42.25m<sup>2</sup>**

Also available in 2 Bedroom 56.41m<sup>2</sup> (information available upon request)

## Alu-Form System A Roof Housing



**A Roof House - G+1 3 Bedroom 146.69m<sup>2</sup>**



**A Roof House - Semi Detached - 3 Bedroom 76.56m<sup>2</sup>**



**A Roof House - G+1 3 Bedroom 170m<sup>2</sup>**

## Alu-Form System Apartment Blocks



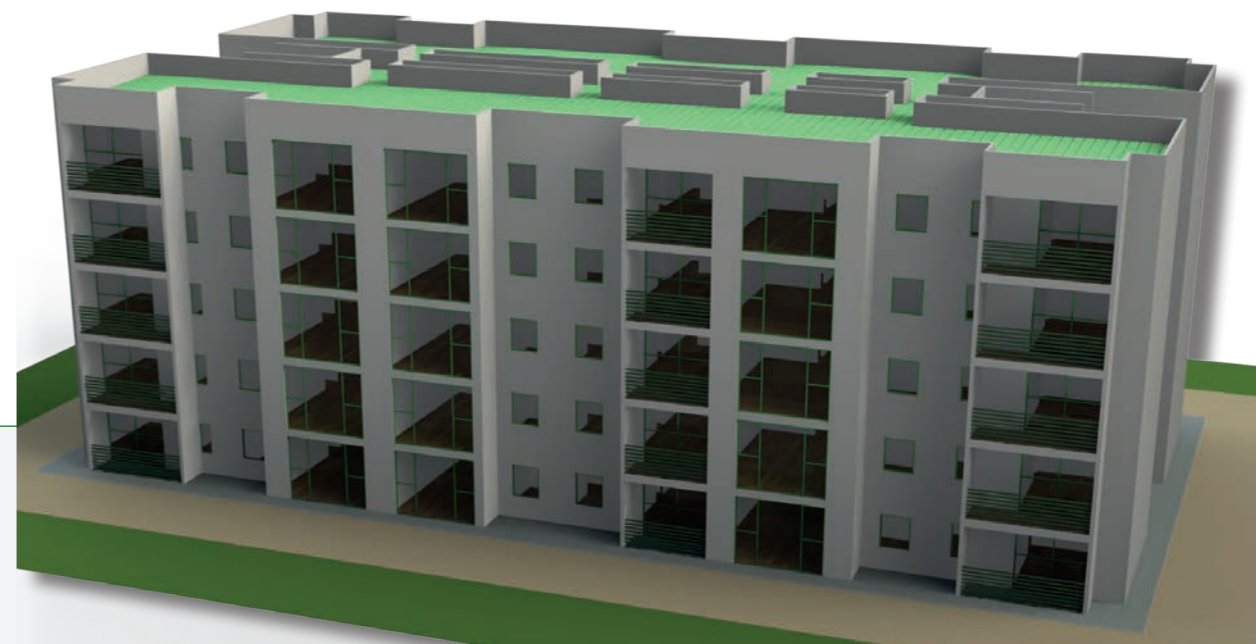
**Apartment Block - G+3**



**Apartment Block - G+4**

Apartment sizes range from 43.14m<sup>2</sup> to 70.28m<sup>2</sup>

## Alu-Form System Apartment Blocks



**Apartment Block - G+4**

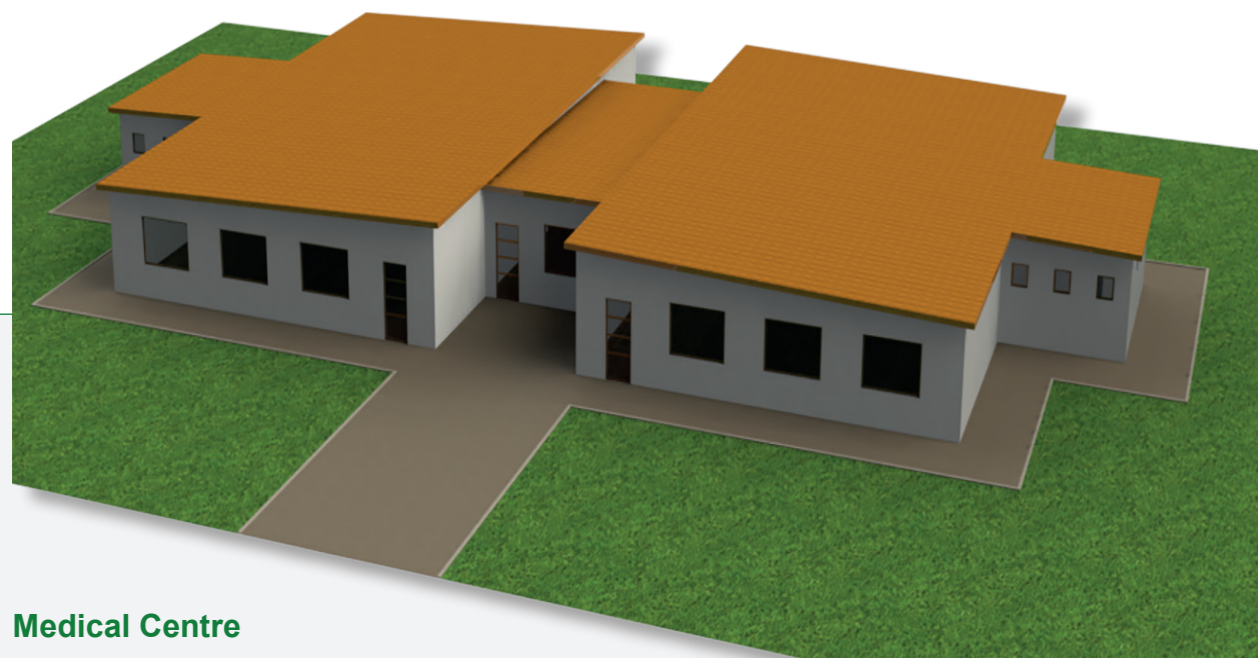
Sizes Options | 1 Bedroom Size 57m<sup>2</sup> | 3 Bedroom Size 98m<sup>2</sup> | 4 Bedroom Size 109m<sup>2</sup>



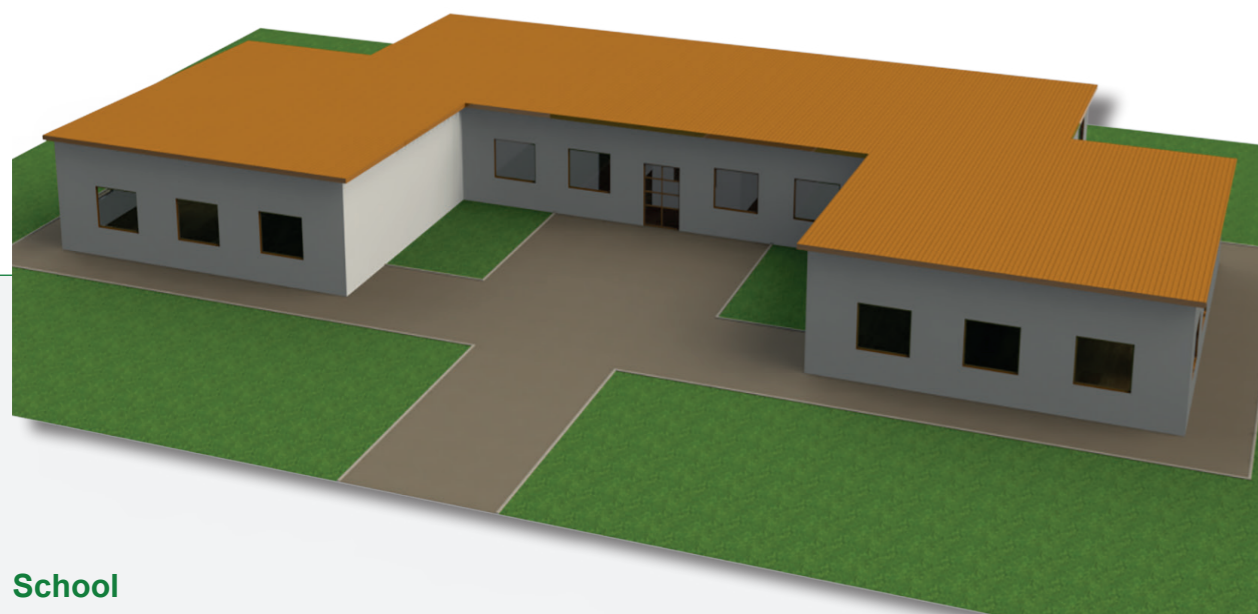
**Apartment Block - G+7**

Apartment sizes range from 72m<sup>2</sup> to 101m<sup>2</sup>

## Alu-Form System Medical Centre & Schools

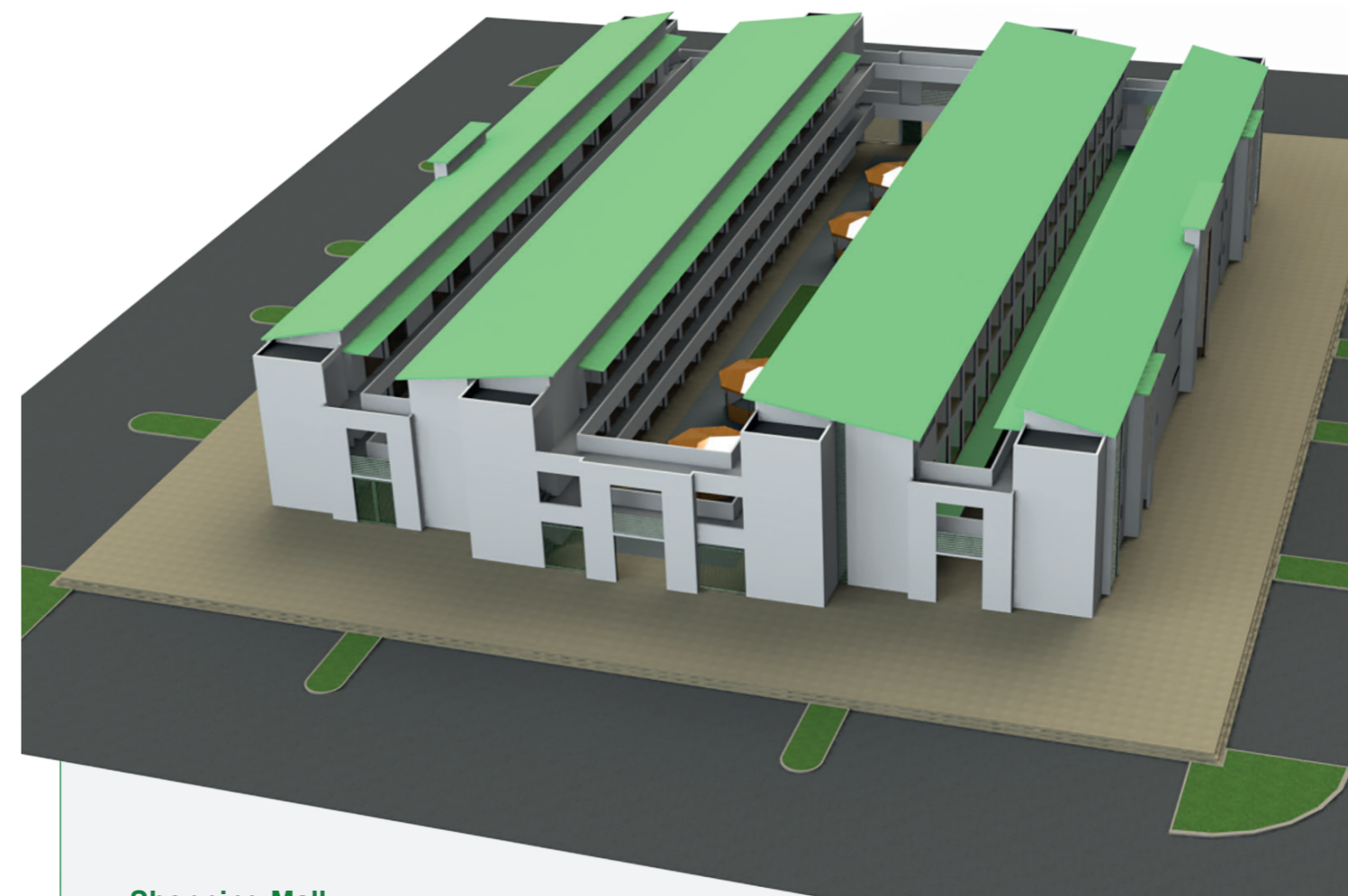


**Medical Centre**



**School**

## Alu-Form System Shopping Mall



**Shopping Mall**

Shopping Mall - 172 Units

# Alu-Form System



# Alu-Form System



# Alu-Form System



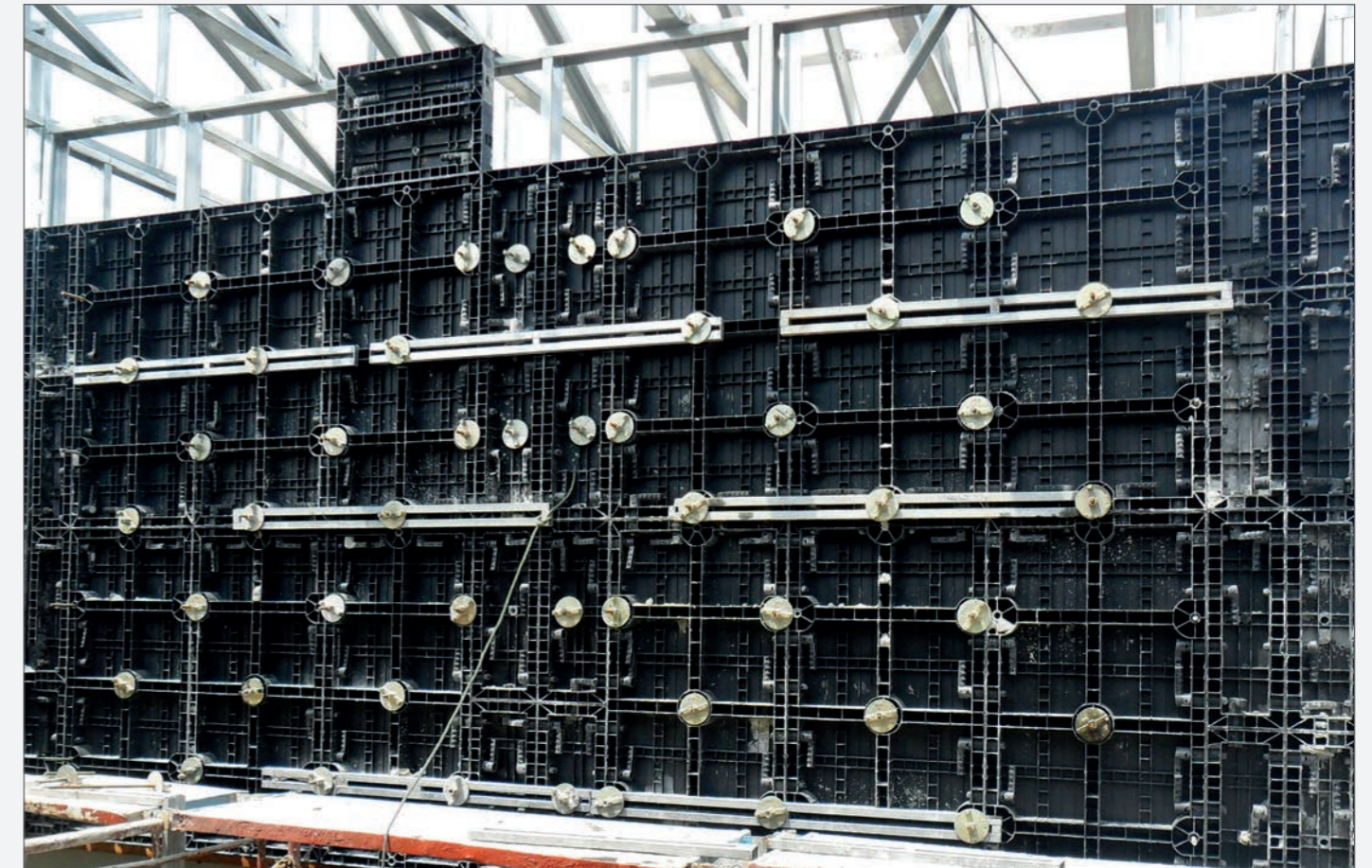
# Alu-Form System



# Alu-Form System



# Alu-Form System



# Foam Cement System

**Our Patented Foam Cement Panels have many advantages over conventional building methods due to its Low Thermal Conductivity, Light Weight Materials, Excellent Sound Insulation, A Level Fireproof, Long Life Span and Faster Installation Time.**

Our system is fully certified with , SGS and ISO certifications and has been used for the construction of Affordable Housing, Apartments, Schools and Hospitals throughout the world.

## Energy Efficient

- Cement foam is an excellent thermal insulation material.
- Helps lower heating and cooling costs.
- Helps eliminate unwanted air infiltration.
- Creates a more comfortable indoor living environment.

## Minimal Waste

- Pre-cut to the specific requirement of your design.
- Simplifies framing, insulation and sheeting to one process.
- Faster construction cycle reduces labour costs.
- Pre-punched openings for electrical and plumbing.

## Safety

- Non-toxic and totally inert.
- Contains no Chlorofluorocarbon (CFC)
- Contains no Hydro-fluorocarbon (HFC)
- No danger to health during installation.

## Sustainable Material

- Will not Rot, Rust or Decompose.
- Maintenance Free.
- Maintains structural strength.
- Long life span (50-100 Years)

## Recyclable

- Cement foam can be recycled in a number of ways.
- Foam Cement Panels are 100% recyclable.
- Ozone friendly material.

## Mould, Insect and Rodent Resistant

- Totally free of any nutritional value for insects.
- Excellent resistance to moisture absorption.
- Resists termites, other insects and rodents.

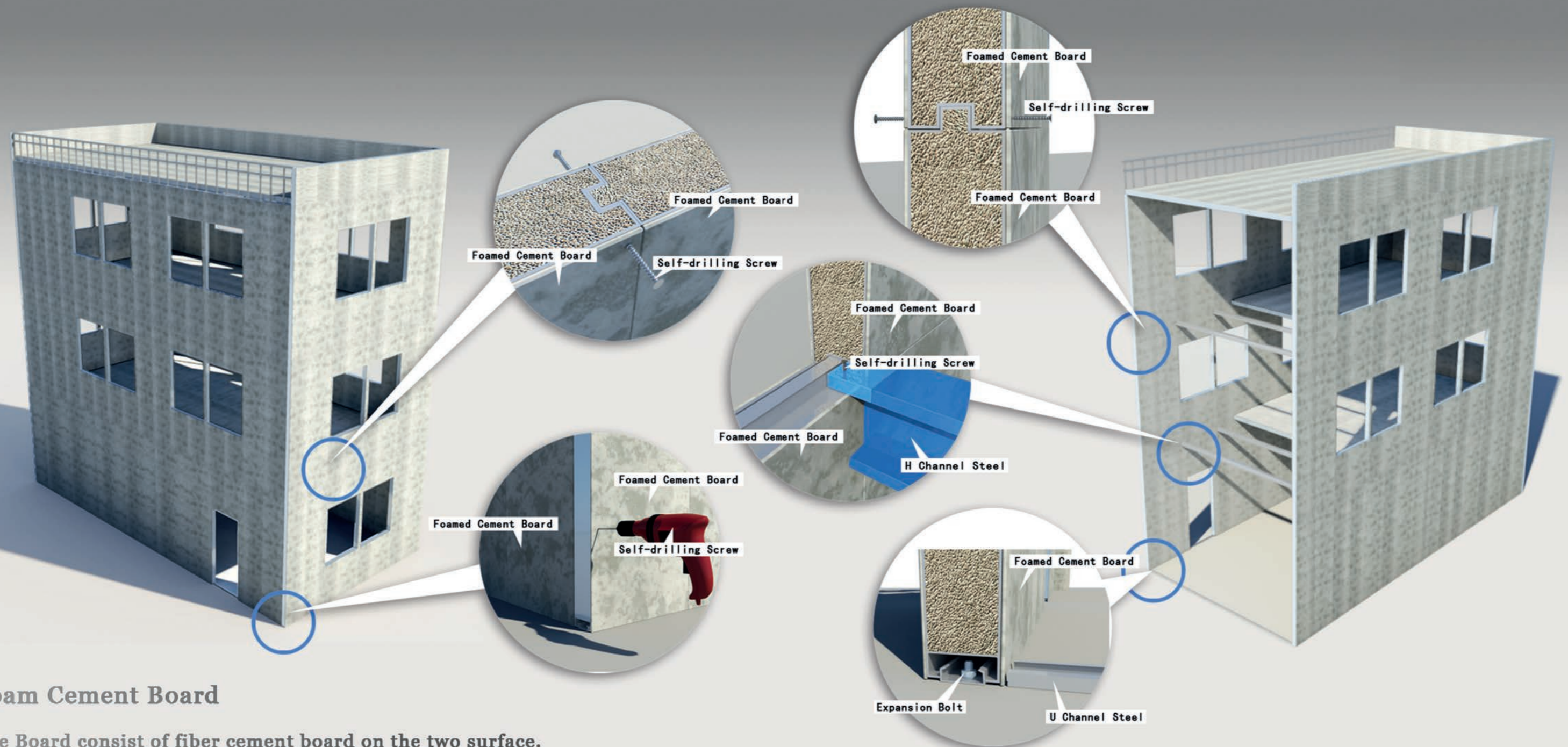
# Foam Cement System

## Foam Cement Specifications

	65mm Thickness	90mm Thickness	116mm Thickness	140mm Thickness
Appearance Quality & Dimensions Variation	d1=0	d1=0	d1=0	d1=0
Surface Density	56.3kg/m <sup>2</sup>	73.2 kg/m <sup>2</sup>	92.4 kg/m <sup>2</sup>	120 kg/m <sup>2</sup>
Anti-pressure strength	5.5Mpa	8.2 Mpa	3.6 Mpa	4.2 Mpa
Moisture Rate	3.60%	4.40%	3.70%	3.70%
Soften coefficient	0.8	0.85	1	0.81
Anti-bending damage load / Times over dead weight	3x(no damage)	3x(no damage)	3x(no damage)	3x(no damage)
Anti-impact performance	No cross creak on panel	No cross creak on panel	No cross creak on panel	No cross creak on panel
Single Point hanging strength	No break & cross crack on panel	No break & cross crack on panel	No break & cross crack on panel	No break & cross crack on panel
Fireproof Limit	4 Hours	4 Hours	4 Hours	4 Hours
Heat Transfer	0.1522Wm <sup>2</sup>	0.1427Wm <sup>2</sup>	0.1229Wm <sup>2</sup>	0.1036Wm <sup>2</sup>
Dry shrinkage value	0.3	0.3	0.3	0.3
Radioactivity-Internal Exposure Index	0.1	0.1	0	0
Radioactivity-External Exposure Index	0.2	0.1	0.2	0.2
Sound Insulation		37(0-2)Db		44(0-2)Db

# Foam Cement System

# Foam Cement System



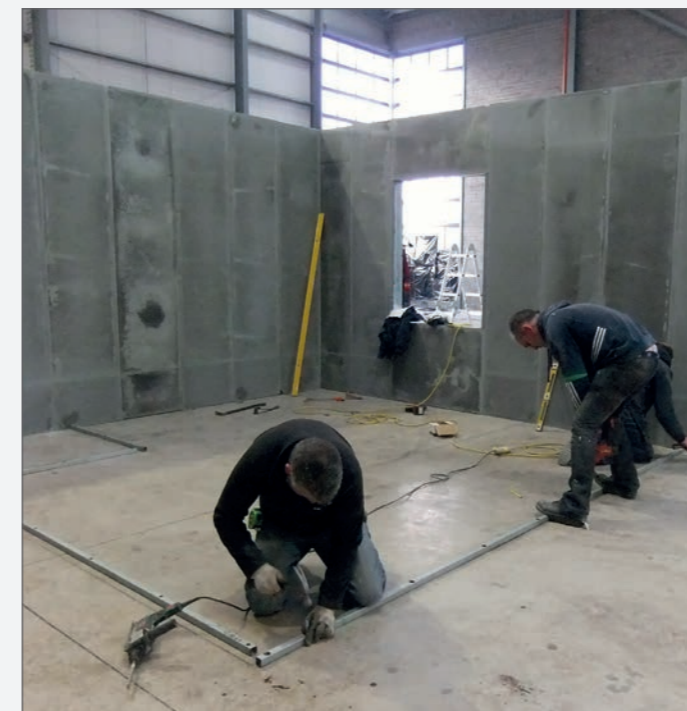
## Foam Cement Board

The Board consist of fiber cement board on the two surface.  
foam cement interior and built-in Steel Structure

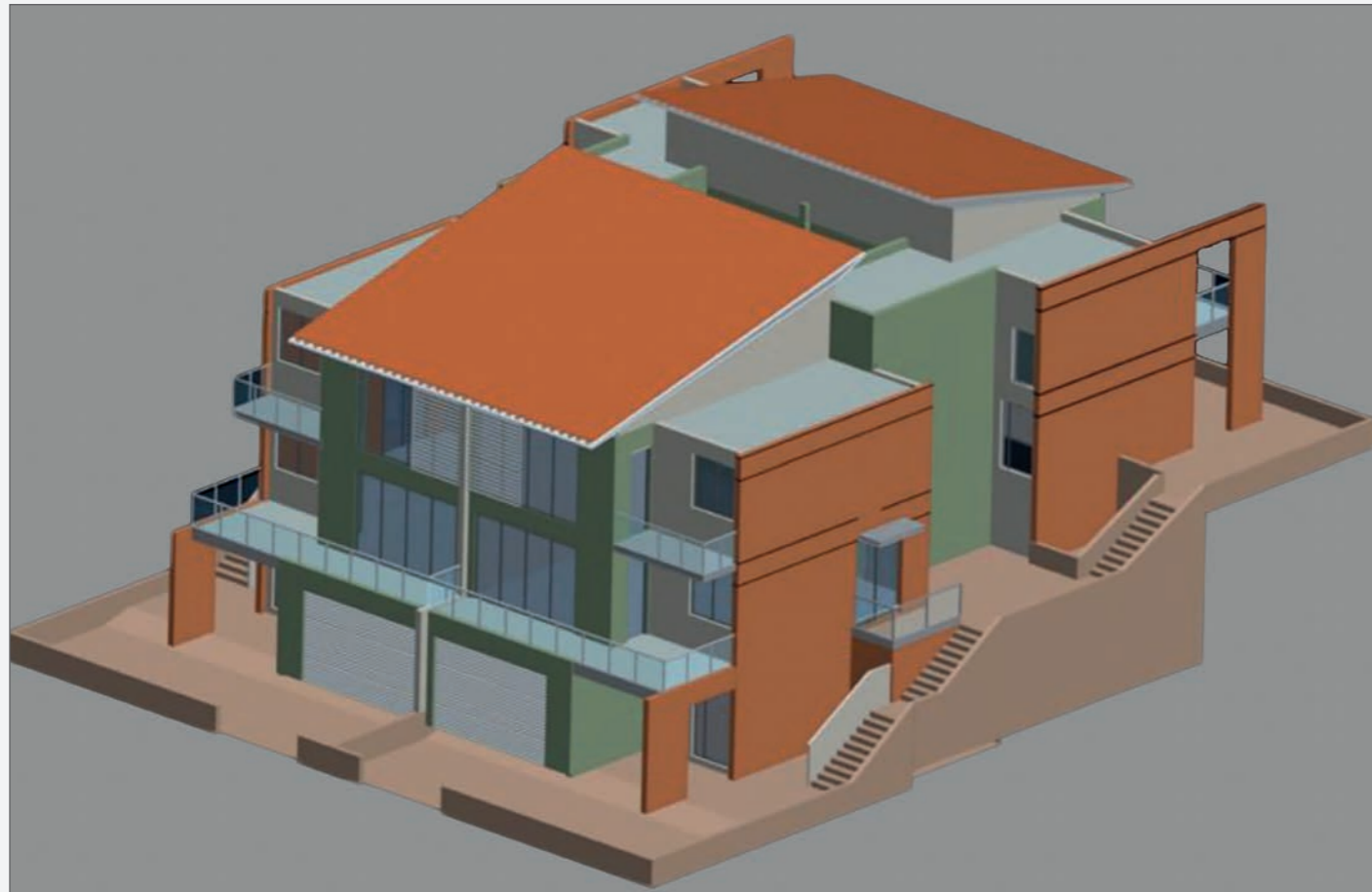
# Foam Cement System



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## Foam Cement System



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