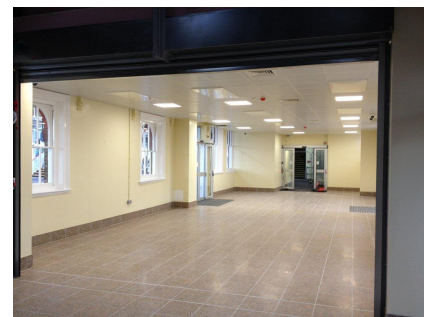


## St Josephs RC Primary School - Volumetric School Extension - Phase II

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**Client information:**

**Diocese of Barking**  
Barking



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<b>Administrated from:</b>	Head Office
<b>Form of contract:</b>	JCT Intermediate Form with Contractors Design
<b>Contract location:</b>	St Josephs RC Primary School, Broadway, Barking, London IG11 7
<b>Value:</b>	£770,000.00 (one off)
<b>Duration:</b>	September 2012 to December 2012
<b>Sector(s):</b>	Civil Engineering, Education, Public sector, Sustainable
<b>Type(s) of work:</b>	New build
<b>Short description:</b>	New School Extension - Bespoke Permanent Modular Offsite School Extension with Innovative Sustainable Design Features

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Following the very successful Phase I Extension by H.A Marks in early 2012, H.A Marks Construction were again appointed by The Diocese of Barking and to fabricate a new, Phase II Volumetric School Extension at St. Josephs Primary school.

The conceptual design was developed by Living Architects and we worked closely with Living to further develop the design and create cost value opportunities to ensure the project was within budget.

The finished design offered the best design, best Innovation, Value & approach to meet the clients strict program and budgetary requirements.

The construction program was very tight with critical milestones and the most innovative solution was to design and build the project using off-site Volumetric/Modular Units.

This meant that the Groundworks were started whilst simultanuosly working off-site at the factory to construct the bespoke, individual Steel Framed Modular/Volumetric Units.

Fantastic program savings were achieved, estimated at 8 weeks on-site, meant that the project was much faster than traditional construction approach.

This minimised the disruption to the school as the main installation occurred over the Easter break.

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Another advantage was that the carbon footprint of the build process was substantially reduced as deliveries to site were drastically reduced.

Less deliveries also meant less disruption, noise and traffic issues as the Volumetric Units were delivered and installed over the School Half Term Holiday.

Concrete, Screeded Composite floors were installed providing a robust and substantial floor mass.

Exceptional through the wall U-Values were achieved with Insulated Render System and the front elevation nearing the original brick built school was clad in individual Brick Slips to compliment the visual effect.

A highly collaborative approach with Living Architects and the clients consultant team resulted in a very successful project, Ahead of Time and On-Budget.

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## Project Team

**Client;** Diocese of Barking

**Contract Administrator & Quantity Surveying;**

**Architect;** Living Architects

### H.A Marks Construction

**Director Responsible** - Adrian Crowe

**Chief Planner/Programming/Surveying** - Martin Hughes

**Contract Manager** - David Holmes

**Off-Site Production Manager** - Tony Goff

**On-Site Project Supervisor** - Steve Archbutt

**Off-Site Volumetric Units** - H.A Marks Off-Site in partnership with Powerwall

**Facades** - H.A Marks Facades & Cladding Division

**Electrical** - H.A Marks M&E Division



## Contract Evidence

### Added value:

The project offered excellent value to St. Josephs to provide additional classroom areas with toilets in a very short time span at a very affordable price.

We achieved good cost savings through the use of our direct labour team as part of our package and secured a good price and lead time on the windows.

### Best practice:

The entire design and construction is extremely sustainable, all manufacturing and site works are controlled via our ISO 9001 (QA) & 14001 (Environmental) management systems.

### BREEAM:

We hope to achieve a very good Breeam Rating on this project. The entire development has been highly sustainable with highly insulated walls, floors and roof.

### Carbon reduction initiatives:

A key Carbon Reduction technique has been the use of H.A Marks/Powerwall off-site technology in the production of offsite Pods/Space Frames to form the superstructure.

Transport deliveries to site have been reduced by 85% and site waste for this project will have been reduced by up to 90%.

### Change management:

Change Management is carefully contained within the Design Period at the front end, prior to the manufacturing process. All modelling can be carried out at Design stage with any issues 'Designed Out' at this stage rather than later on site. This in turn leads to substantial savings.

### Client comments:

The client were pleased with progress and the Head Teacher has been very happy with our low key, non disruptive manner of working which ensures the continued smooth running of the school throughout.

### Design team/consultants:

H.A Marks had a very good working relationship with the architects - Living Architects, who are a schools specialist, the client and the cost consultants.

### Environmental management arrangements:

H.A Marks operate an ISO approved and audited 14001 Environmental system of Management.

### Health and Safety:

As the majority of the project is pre-fabricated off-site, the Enemetric/H.A Marks Volumetric system substantially improves Health & Safety by reducing Work at Heights and risks associated with working in bad weather.

### Innovative techniques:

The construction program was very tight with critical milestones and the most innovative solution was to design and build the project using off-site Volumetric/Modular Units.

This meant that we commenced Groundworks whilst simultaneously working off-site at the factory to construct the bespoke, individual Steel Framed Modular/Volumetric Units. Another advantage was that the carbon footprint of the build process was substantially reduced as deliveries to site were drastically reduced.

Less deliveries also meant less disruption, noise and traffic issues as the Volumetric Units were delivered and installed over the School Half Term Holiday.

Fantastic program savings were achieved, estimated at 8 weeks, meant that the project was much faster than traditional construction approach.

This minimised the disruption to the school.

#### **Local labour and CSR:**

H.A Marks employed substantial local labour on this project, we view employing local people as an important part of our way of managing and resourcing projects.

#### **Modern methods of construction used:**

H.A Marks are a licensed manufacturer and installer of Powerwalls patented off-site, Volumetric system of construction.

The superstructure was manufactured off-site in 26 Pods and brought to site and craned into position onto prepared foundations.

This meant that Groundworks commenced whilst simultaneously working off-site at the factory to construct the bespoke, individual Steel Framed Modular/Volumetric Units.

Fantastic program savings were achieved, estimated at some 16 weeks, meant that the project was much faster than traditional construction approach.

This minimised the disruption to the school.

#### **Prefabrications:**

H.A Marks manufactured the entire superstructure in Hot Rolled Engineered Steel Framed Pods in our factory in partnership with Enemetric Spaceframes.

#### **Recycling figures:**

Off-Site Construction and in particular Volumetric results in 90% less waste on site (source; WRAP Survey).

H.a Marks managed to significantly reduce waste using this technique. Our ISO 14001 Environmental System of management also produced a very high level of re-cycling on site

#### **Risk management:**

Risk for the client in terms of program over run and budget over runs were effectively eliminated,

#### **Standardisation of components:**

The Superstructure pods can be standardised to increase savings and efficiency as required.

#### **Supply chain involvement:**

Our Supply chain was instrumental in achieving such a tight delivery program. We liaised very early on with key suppliers eg; windows and mechanical elements to ensure the job stayed on program.

**Sustainability:**

Concrete, Screeded Composite floors were installed providing a robust and substantial floor mass. Exceptional through the wall U-Values were achieved with Insulated Render System and the front elevation nearing the original brick built school was clad in individual Brick Slips to compliment the visual effect.

**Value engineering:**

Our design and construction package offered added value in the substructure and superstructure elements. We worked very closely with Living Architects to value engineer the project to meet the clients tight budget.