# Old Coach Station - Great Yarmouth

**Principle Contractor:** R G Carter Limited

**Client:** Great Yarmouth Development Company

**Project:** Old Coach Station, Royal Britannia Crescent, Nelson Road North, Great Yarmouth

**Location:** Great Yarmouth

**Type of contract:** Design and Build

**Architect:** Norfolk Property Services

**Aircrete contractor:** Osborn Brickwork

**Build time:** Total build time from brownfield site to the completed 19 house development was 10 months

**Project value:**

The aircrete value was around £20,000 with the total development costing circa than £2 million. This was an object order, the first for R G Carter, they used all 100mm Multi Plate 3.6N blocks to build the internal leaf of the external cavity wall and also the same block has been used in the separating wall.

The separating wall used local bridgestop on a raft foundation to achieve RD E-WM 23. This solution allowed three code points to be claimed under the Code for Sustainable Homes. The H+H internal estimating team provided a package with the essential Thin-Joint materials required for the masonry shell.

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**Executive summary:**

Contractor R G Carter wanted a construction solution that was more adaptable than a timber frame system, which would allow late design changes to be incorporated into this innovative housing development without too much difficulty.

H+H's Rå Build method, using the Thin-Joint System of large format aircrete blocks and quick-drying Celfix Mortar provided the optimum solution.

"We wanted a solution that was more flexible than timber frame, one that would allow design tweaks to be incorporated without too much difficulty. We'll definitely be using H+H aircrete on our next job"

**Contractor,**
**R G Carter Limited**

**Project description:**

Britannia Crescent is an arc-shaped development of 19 three-bedroom houses built on the site of the former Beach Coach Station car park in Great Yarmouth, Norfolk. The scheme was named in honour of the royal visit to the town as part of the 2012 Diamond Jubilee celebrations.

The development has been designed to the Lifetime Homes standard, which means the dwellings have been designed to be easily accessible for occupants including wheelchair and disabled visitors; the homes have been constructed to be easily adapted over time to meet the changing needs of their occupants. As such, the homes feature level thresholds and wider doorways, lit and covered entranceway's and good accessibility throughout to allow people to enter, exit and move around the properties without physical barriers.

As part of the Lifetime concept, the houses also feature a gully set into the bathroom floor to enable the room to be easily adapted in the future. The roof structure of the homes has also been designed to allow the attic to be easily modified to accommodate an additional future bedroom.

The development has been designed to prevent crime and has achieved Secured by Design status.

Three of the scheme's homes are available for low cost home ownership.

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**Reason for choosing H+H aircrete products:**

Britannia Crescent was the first Thin-Joint system project for contractor R G Carter. "We wanted a solution that was more flexible than timber frame, one that would allow design tweaks to be incorporated without too much difficulty," says George Williams, Contracts Manager at R G Carter.

Thin-Joint is a recognised Modern Method of Construction (MMC). The system allows the inner leaf of cavity walls to be constructed first, faster and to a better quality than traditional brick/ block cavity construction.

In addition to its speed of construction, R G Carter selected the Thin-Joint System for its environmental credentials. Aircrete products provide outstanding thermal insulation. It also achieves the highest rating in the BRE's Green Guide to Housing Specification, which provides guidance to designers and specifiers on the environmental impacts of common materials used in housing.

**Aircrete specification:**
Rå Build method of construction, using Standard Grade Multi-Plates and the Thin-Joint System.

**Foundations:**
Traditional, in-situ raft foundation constructed using an Insulslab series of interlocking expanded polystyrene pods to form a rigid waffle shaped slab. This is then filled with poured steel fibre, reinforced concrete to form the finished foundation.

**External walls:**
H+H Standard Grade, Multi-Plates with inner leaf constructed using 610mm x 375mm x 100mm blocks; 150mm cavity of fully filled with Drytherm Cavity Slab 37; and 100mm brick outer skin.

**Internal partition walls**:
Metal Stud with 12.5mm BG Plasterboard and 3mm skim.

**Roof:**
Interlocking concrete tiles.

**First floor:**
Timber composite joists supporting timber tongue and grove floorboards. Floor joists were installed using retrofitted joist hangers, helping the speed of build as no cut course was required, as the slot for the joist hanger does not go through the entire block. Airtightness is not compromised.

**Windows:**
uPVC double glazed units.

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**Product benefits:**

- Easily meets or exceed Part L and Part E of the Building Regulations
- Simplifies the construction process
- H+H aircrete products use up to 80% recycled material
- Achieves A+ rating in the BRE Green guide

**Other benefits included:**

- Block-work is highly adaptable, easily allowing for any last minute design changes
- Aircrete achieves an air permeability of 0.12m³/hr/m²
- Has excellent fire resistance with a Class 0 rating for surface spread of flame

**H+H aircrete applications:**

- Internal and external leaf in cavity walls
- Solid walls
- Separating / party walls
- Flanking walls
- Partitions
- Multi-storey
- Foundations

Aircrete is an excellent all round commercial and industrial building material. Used in partition and external walls (both solid and cavity), fire walls and as infill to steel and concrete framed buildings it provides durability, fire resistance and superb thermal and acoustic insulation.

H+H aircrete has exceptional sustainability credentials: not only does it provide excellent thermal and acoustic insulation and contributes to air-tightness but, being manufactured from up to 80% recycled materials, it is sustainable both in manufacture and in use. We also have BES 6001:2008 accreditation for responsible resourcing of materials in addition we have an A+ rating under in the BRE green guide on both cavity and solid external walls Couple this with H+H UK's rigorous approach to pursuing the highest environmental standards throughout the whole of its business and it's easy to see why this innovative and award winning system is now firmly established within the UK.

## Contact details

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For further information about the subjects covered or the H+H products used in this case study, please visit our website **www.hhcelcon.co.uk**