

PREFABS – THE SOLUTION TO A HOUSING CRISIS



*A Uni-Seco type Prefab
Image courtesy of Clive Gilbert © 2011*

Introduction

By the time the war second world war ended, thousands of people made homeless by German bombing were living in Underground stations, or squatting. Many more had been taken in by family or friends and were living in crowded conditions. Not only that, but thousands of men were soon to be demobbed from the services and would need a decent home to live in to start a family.

The sight of ruined buildings on the huge number of bomb sites in the cities and towns was not good for morale, so the ruins were knocked down and the sites were cleared, often by Italian and German prisoners of war. Although this meant that there was plenty of space to build new homes, the shortage of skilled manpower and of building materials meant that it was not possible to build sufficient conventional homes quickly enough to house the many thousands who desperately needed somewhere to live. A new, quick housing solution was needed, and needed **urgently**.

The Temporary Housing Programme (THP)

As early as May 1943 the Government decided to invest in a prototype, temporary steel bungalow, which became known as the 'Portal Bungalow', named after the then Minister of Works, Lord Portal. The Prime Minister, Winston Churchill, promised 500,000 temporary new homes, although only 156,623 were actually produced (between 1945 and March 1949).

The first prototype was displayed outside the Tate Gallery, London, in May 1944. As a result of comments suggesting improvements, the prototype underwent various changes. The houses would be prefabricated in sections, in factories no longer needed for war production, transported to where they were needed and 'bolted' together on site, in a fraction of the time it would take to build a conventional house. Although the prefabrication of buildings had been used for hundreds of years and continues to be used today, very soon, these temporary houses built under the temporary housing programme became known as 'prefabs'.

As steel was needed for the war effort, and therefore in short supply, no steel prefabs were actually made. Nevertheless, the steel 'Portal' prototype, used as a starting point, provided inspiration to private firms who were then commissioned to design and produce their own versions, but within specific guidelines.

All were to have two bedrooms, the floor area was to be 635 square feet, and to allow transportation from the factory, each component part could be no bigger than 7½ feet wide. The most important stipulation was that they all had to make use of the government-approved "heart-unit". A back-to-back kitchen, bathroom, fire place with back boiler, airing cupboard and toilet. The design of the unit kept plumbing to a minimum. Only the relatively few imports (8,462) from the USA did not use the "heart-unit".



*A 1947 Prefab kitchen, Swindon, Wiltshire.
Image source: English Heritage*

One type the 'AIROH' (Aircraft Industries Research Organisation on Housing), was made from leftover aircraft building materials and could be bolted together on a previously prepared base, in less than a day. In the summer of 1945 a prototype aluminium prefab was exhibited behind the London department store, Selfridges.

The Homes

There were thirteen types from eleven different manufacturers (one from the USA). Although they were all based on the same concept, each manufacturer had their own detailed designs, and decided which materials they would use. The materials were chosen from concrete, asbestos-cement, steel, wood and aluminium or a combination of several, as decided by each manufacturer.



*A 1947 Prefab Interior of 7 Hopewell Road, Kingston-upon-Hull
Image source: English Heritage*

The desperate need to provide shelter quickly was the key to the success of the prefab. They were produced and erected quicker than conventional house building methods, often by prisoners of war and compared to much of the housing at the time, prefabs had a lot to offer in the way of 'mod-cons'. They all had an indoor toilet and a separate bathroom, whereas a vast number of houses of the period had outside toilets and a portable galvanised tub for a bath.



*The bathroom of an ARCON Prefab at the Rural Life Museum, Tilford
Image courtesy of Clive Gilbert © 2011*

Prefabs had their own front and rear gardens, and a shed was also provided. Sheds were often disused Anderson air raid shelters, bricked up at one end, with a door at the other end, or they might be made from wood.

Built in drawers and cupboards for storage were standard, as was a 'fitted' kitchen. Crude by today's standards but nevertheless they had a gas hob, oven and refrigerator as standard. Another feature, provided before washing machines became universal, was the 'copper'. The 'copper' was a large metal bowl under which a gas flame could be lit to heat water for washing clothes. Manual labour was then applied using a 'washboard'. A table that folded back into the kitchen wall was also provided in some of the homes.

The main living area had a solid fuel fireplace and grate, with a back boiler for heating hot water which was then stored in a tank, in the airing cupboard. The tank also had an electric immersion heater for heating water when the fireplace was not in use. The fireplace, in the main living area was the only source of heat provided in the house, consequently the other rooms could be very cold in winter, and damp was a problem. On some types, ducting for hot air from the fireplace to the bedrooms was provided, but was not effective. On cold winters mornings, some families would light the gas oven and open the door to heat the kitchen, which became the main centre of activity.

Allocation

The Government allocated the prefabs to local councils, and not surprisingly the towns and cities that had suffered the greatest bomb damage were allocated the most. Local councils decided where to site their prefabs and could vary from two or three in a relatively small bomb site, to hundreds in a new estate. Local councils also decided who should live in each property, priority being given to people with children or with special medical needs.



*A rare photograph of the prefabs in Gadesden Road, Epsom
Image courtesy of Bourne Hall Museum*

Epsom and Ewell Borough erected 204 prefabs, all in the West Ewell area, mainly in Gatley Avenue and Gadesden Road. The Council charged 13s. 7d. (67.92p) a week rent and 4s. 6d. (22.5p) rates (Council tax), making a total of 18s. 1d. (90.42p) per week. They were all demolished by the end of the 1960s.



The Gadesden Road site in 2011.

*This photograph is thought to be taken from the same place as the one above
Image courtesy of Clive Gilbert © 2011*

Conclusion

Attitudes to the temporary prefabs varied. People who were fortunate enough to have had their homes spared by the bombing, thought them ugly and out of place. Others who had lost their homes and were living in trying circumstances were delighted to at last have their own space to live in, and returning servicemen who wanted to start a family needed somewhere to live.

The success of prefabs should be assessed not by today's standards, but by the standards prevailing at the time. For some, the prefabs were superior to the slums they had been bombed out of! It is estimated that in 1945 a quarter of homes were without mains electricity, and in 1951 a third of homes did not have a plumbed in bath. Few could afford a fridge. Prefabs offered then, a good standard of accommodation, albeit in an unconventional format. Perhaps the most well known Briton to be brought up in prefab is Neil Kinnock, who lived in an Arcon type from 1947 to 1961.

Prefabs offered a quick solution to a desperate need for housing. They could be erected quickly and provided reasonable accommodation at a time of great need. Surprisingly, however, although quick to produce and erect, at an average cost of around £1,300 each, they proved to be more expensive to put up than conventional housing.

These temporary, stop gap houses were only expected to last for fifteen years, until around 1964. But not only did they last through and beyond the 1950s, but in February 2011, some 65 years later, 187 were still occupied in Catford south east London, although under threat of redevelopment, six Uni-Secos have been given

grade II listed status. They are not the first to be listed, that honour was given to some Phoenix models in Moseley, Birmingham in 1998. Thereby preserving a small but interesting piece of our Nation's history.

This article was researched and written by Clive Gilbert © 2011

Sources:

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- Wikipedia. British post-war temporary prefab houses.
http://en.wikipedia.org/wiki/British_post-war_temporary_prefab_houses
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- Epsom Herald, 28 Dec 1945.
- Daily Mail, 28 & 29 September 1944.
- Sunday Express, 20 February 1944.

Appendix – Misc Notes

TYPE	APPROXIMATE NUMBER BUILT	COST EACH £	TOTAL COST £
Aluminium B2	54,500	1,610	87,745,000
Arcon MkV	38,859	1,209	46,981,000
Uni-Seco	28,999	1,131	32,798,000
Tarran (1)	1,015	1,022	1,037,000
Tarran (2)	11,000	1,147	12,617,000
Tarran (3)	6,999	1,126	7,881,000
USA import	8,462	663	5,610,000
Phoenix	2,428	1,200	2,914,000
Spooner	2,000	1,097	2,158,000
Universal	2,000	1,218	2,436,000
Orlit	255	1,202	307,000
Miller	100	1,139	114,000
Isle of Lewis	50	2,000	100,000
Total			202,698,000

Aluminium Bungalow

54,500 built.



Prefab at St Fagans National History Museum

Photograph by Rudi Winter via www.geograph.org.uk and Wikipedia

- Developed by Aircraft Industries Research Organisation for Housing (AIROH). The first to be wholly manufactured and constructed on a production line. Melted down war planes providing homes.
- The floor was made from pine.

- Aerated concrete provided some insulation for the walls which were finished with plasterboard inside.
- Window frames and guttering were aluminium. Doors and door frames were wood.
- It arrived in four sections, it could be bolted together on its prepared base in less than 24 hours.
- Museum of Welsh Life. St Fagins, Cardiff, CF5 6XB. Open 10 to 5.

Arcon (Architectural Consultants) MkV
38,859 built.



*An ARCON Prefab at the Rural Life Museum, Tilford
Image courtesy of Clive Gilbert © 2011*



*The kitchen of an ARCON Prefab at the Rural Life Museum, Tilford
Image courtesy of Clive Gilbert © 2011*



The living room of an ARCON Prefab at the Rural Life Museum, Tilford
Image courtesy of Clive Gilbert © 2011



Image taken from Codnor and District Local History & Heritage Website
http://www.codnor.info/Needham_street.php

- Probably the most successful, *generally* outliving the Aluminium, Tarran and Uni–Seco.
- Steel frame, asbestos-cement cladding, plasterboard lined.
- Hot air was ducted to the bedrooms from the central boiler, but was not very effective.
- Panels were filled with glass-fibre for insulation. Rounded roof apex.
- July 1945 saw the first family move into an Arcon.

- Avoncroft Museum of Buildings, Stoke Heath, Worcestershire B60 4JR.
- Rural Life Centre, Reeds Road, Tilford, Farnham, Surrey, GU10 2DL

Uni-Seco (Selection Engineering Co Ltd)

28,999 built



Catford Prefabs

Image courtesy of Clive Gilbert © 2011

- Uni-Seco: 32 feet long X 22 feet wide = 704 square feet, which is 69 sq feet more than the floor area of 635 square feet. Presumably 704 is the base dimension.
- Almost flat roofs and corner windows.
- Made from a kit of parts that could be put together in different combinations.
- Hard standing base. Timber frame. Timber framed panels of asbestos-cement were screwed to the timber frame. Panels were insulated with wood-wool and wet cement. This added strength but was not a good insulation.
- Ducted air from the boiler, not efficient. Doors, panelled plywood. Timber roof.
- Timber bearers direct onto concrete plinths rotted prematurely.
- Catford prefabs, grade II listed: Numbers 1, 3, 5, 7, 25, and 39 Persant Road. IWM Duxford.



*Kitchen in the home of Mrs Tinsley, Uni-Seco temporary house,
29 Lyham Road, London, 1945
Image source: English Heritage*

Tarran.

Type 1; 1,015 built. Type 2; 11,000 built. Type 3; 6,999 built. Total 19,014.

- The Tarran company was experienced in prefabricating buildings, having done so in the late 1930s and early 1940s. Similar plan view to Uni-Secos. Steel frame.
- Panels made from concrete and chemically treated sawdust, trade name 'lignocrete'.
- Roof frame timber, asbestos-concrete panels. Pitched, pointed apex. Heavy at 14 tons, most others 8 tons.
- Eden Camp, Malton, Yorkshire.

USA Imports.

8,462 built.

- The cheapest. Timber framed.
- Shipped as seven flat-packed panels made of either asbestos-cement or fibreboard.
- Shallow pitched roof, asbestos-cement or fibreboard.
- Smaller, 24 feet 2 inches square = 584 square feet, compared to 635 square feet. Less rental charged.
- Had a shorter life due to the British climate.
- None have survived.

Phoenix.

2,428 built.



*Wake Green Road, Birmingham
Photograph by Oosoom via Wikipedia*

- Timber frame, asbestos-cement sheets
- Floor, timber joists and floorboards onto concrete base.
- Internal layout similar to Tarran and Uni-Secos.
- Listed: 394 – 427, Wake Green Road, Birmingham, B13 OBL . OS: SP 085 823.

Spooner.

2,000 built.

- Timber frame with plywood panels, but later versions had tubular metal frames.
- Apex roof, felt covered plywood.
- Timber framed windows and inside, plywood finished.
- None have survived?

Universal (Housing Co).
2,000 built.



*Universal Prefab at the Chiltern Open Air Museum
Image courtesy of Clive Gilbert © 2011*

- Built prefabricated homes in the 1920s.
- Asbestos-cement sheets attached to wooden panels on steel frame and roof trusses. Apex roof.
- Chiltern Open Air Museum, Newland Park, Gorelands Lane, Chalfont St Giles, Bucks HP8 4AB.

Orlit
255 built.

- Little known about them. Probably mostly concrete.

Miller.
100 built.

- All erected in Scotland. Little known about them. Rendered concrete exterior. Hardboard interior attached to wooden frame.

Isle of Lewis.
50 built.

- Little known about them. Transportation, labour costs and the need to build them to withstand the weather conditions made them very expensive.