

Areas for further research are identified

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Manufactured Homes at Dale Farm  
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## Manufactured Homes at Dale Farm

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**One of the several Chalet style manufactured homes standing on the concrete hardstanding of the former scrapyards that is known as Dale Farm**

### Review Summary

On 2 July 2011 the author was invited to view the several manufactured homes at Dale Farm which have been described incorrectly by Basildon District Council as temporary structures. The author believes that the manufacturers of these homes would disagree with the idea that these Chalets are in any sense "temporary", by which connotations of inferior may be derived. The author believes that these Chalets are as permanent as any home. Indeed, the permanence of so called "traditional" construction may be illusory.

It is the author's view that these several manufactured homes are manufactured and sold to be permanent main residences, and are intended to be delivered on a low loader to be propped off their steel framed chassis on a concrete raft. The propping may be a proprietary jacking system, or blockwork piers, or pitch pine sleepers, provided the chassis is propped in all four corners of each volumetric unit that comprise the two halves of completed Chalets. The resultant home is a permanent residential structure.

These manufactured homes are not sold or rented as temporary structures, but will provide a service life sufficient for mortgage lenders or landlords, and their insurers, to consider them permanent main residences. The Chalets should be considered as permanent dwellings. The manufacturers should be consulted about their products as the reputation of the manufacturing companies is being questioned.

### **Prefabrication is neither “modern” nor temporary construction**

It is a common mistake to imagine that prefabricated construction is in some way an indication that the building is temporary, or has a short service life. Prefabrication is widespread and evidently essential in construction, with ‘... the simplest prefabricated component in use throughout most of the world being the building brick or block.’<sup>1</sup> Clearly too, the construction industry takes certain forms of prefabrication away from, or “offsite”, as unremarkable, as in the case of bricks and blocks, while more novel construction methods are seen as innovative.



### **Familiar brick and block bungalow at Dale Farm**

The promotion of construction innovation offsite has in recent years been discussed in terms of “Modern Methods of Construction”, which led to established manufacturers of prefabricated building products, such as brick and block manufacturers, simultaneously marketing their products as “traditional” and “modern”. The ahistorical “modern” description was of little use in clarifying how buildings are produced through complex manufacturing supply chains. The pursuit of MMC was sufficient for government around 2005,<sup>2</sup> and imprecise talk of “modern methods” persists to this day.

John Prescott’s parliamentary constituency of Hull is a notable centre for manufacturing homes, and caravans. It is easy to elide caravans with manufactured homes and to imagine them all to be modern, mobile, and manufactured, but there are great differences between the touring caravans at Dale Farm that are replaced in sort time frames as are cars, the static caravans which may not be habitable all year round, and the static manufactured homes that have long service lives as main residences.

The Building Research Establishment has tended to describe all house building that is not brick and block as “non-traditional”. The BRE publishes *Non-Traditional Houses – Identifying non-traditional houses in the UK 1918-75*.<sup>3</sup> This does not appear to address the sorts of steel framed manufactured homes that are main residences at Dale Farm. The book talks about “temporary” steel bungalow systems, but this too is misleading.

It is well known that the post war bungalow “prefabs”, anticipated by John Gloag and Grey Wornum in their pivotal *House out of Factory*,<sup>4</sup> have continued to be occupied long after they were expected to have served their purpose as emergency housing. This is a matter of architectural history,<sup>5</sup> and one that may be tangential to the issue at Dale Farm. Perhaps one of the most affectionate popular accounts is by Greg Stevenson, in his book *Palaces for the People*.<sup>6</sup> This gives a fine record of the 156,623 “temporary” prefabricated homes that were built as an emergency measure between 1945 and 1949, but which were being happily lived in many decades after they were intended to be demolished. Indeed, some are still lived in by proud residents, who call them home.

The structures at Dale Farm are not the same as the post-war “prefabs”. They are far better fitted as manufactured homes than the post-war “prefabs” were, but they are raised off the ground in volumetric units on a chassis in ways that the “prefabs” were not. While a few of the Dale Farm manufactured homes are single width, with four sides, most are pairs of three sided volumetric units, joined together usually along the ridge and at the gable ends. Many of the post-war “prefabs” involved far more site finishing externally, while the Dale Farm Chalets were pre-finished with pitched roofing and applied polymer render coatings to walls.



### **Road worthy caravans are clearly different to static manufactured homes**

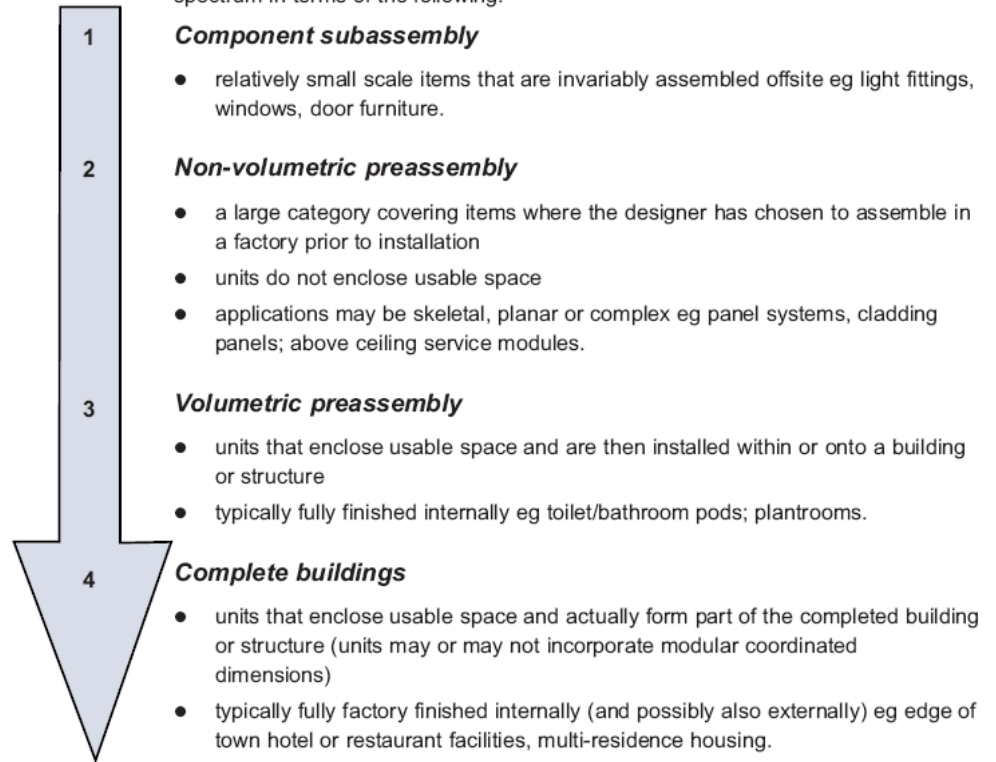
*BuildOffsite* is the industry-wide campaigning organisation in Britain that promotes greater uptake of offsite techniques by the construction sector. *BuildOffsite* is an alliance of clients, developers, designers, contractors, manufacturers, suppliers, government, advisors and researchers.<sup>7</sup> The organisation has a clear strategy to improve the public and professional understanding of manufactured buildings, and manufactured housing as an important sector.<sup>8</sup>

Professor Alistair Gibb at Loughborough University has notably developed the *BuildOffsite Glossary of Terms* to better distinguish between forms of offsite manufacture.<sup>9</sup>

The diagrams are revealing.




It is mythic to imagine that prefabricated homes are temporary. This is not 1945, and the idea of temporariness was incorrect then. In the twenty first century the developing offsite manufacturing sector has manufacturing capabilities that would have been astonishing after the Second World War. Manufactured homes of today are advanced.

A useful generic categorisation (Gibb, Loughborough University) considers the spectrum in terms of the following:



Additionally for *BuildOffsite*, Gibb maintains:

Further to the preassembly categorisation, it is helpful to delineate the extent of offsite completion within each category in addition to the basic structure of the unit itself. This can be done using a star system as follows:

	<i>One star</i>	no significant internal or external finishes applied in the factory.
	<i>Two stars</i>	either internal or external finishes applied in the factory.
	<i>Three stars</i>	both internal and external finishes applied in the factory.

The manufactured homes at Dale Farm are Three Star products, with both internal and external finishes applied in the factory. No doubt the residents have undertaken subsequent home improvement works, as any household would do over time, but the Chalet style homes are clearly pre-finished inside and outside before they are delivered as structural volumes. These are advanced structures. They are advancing further.

These structures are at least to be considered as volumetric, but it appears that Gibb's categorisation suggests the Dale Farm Chalets are to be thought of as Complete Buildings, of a Three Star quality of pre-finish. They are an advanced form of manufactured home.

### **Offsite Manufacturing as a valuable sector**

In 2007 *BuildOffsite* conducted a survey of the offsite manufacturing sector, in which the category of permanent volumetric unit was said to be worth 28% of a £6,000,000,000 construction industry sector.<sup>10</sup> Many of these permanent volumetric units are combined to form hotels, apartment blocks, or student accommodation.

While not all permanent volumetric units are residential, and not all are produced as single dwellings for private households, the permanent single homes that are produced by a range of manufacturers is clearly big business, and should not be underestimated.

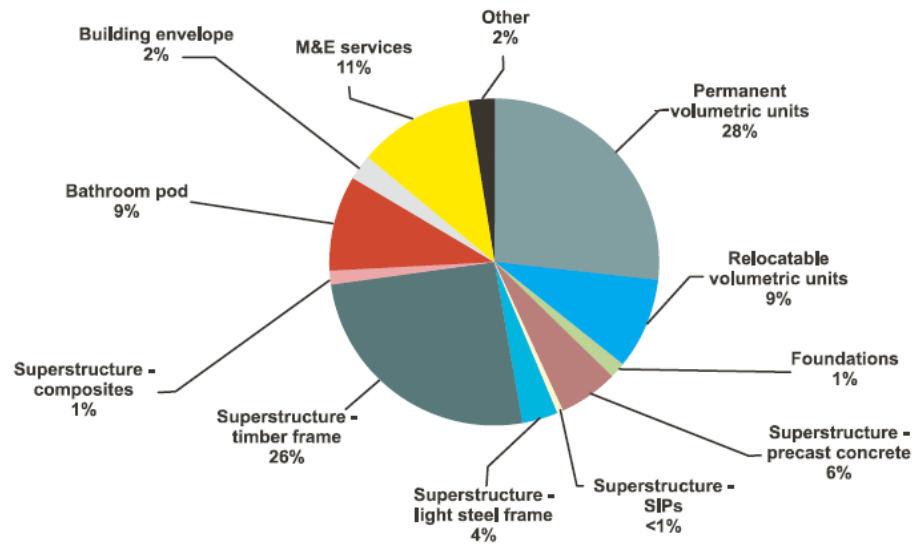


Fig. 1: Innovative offsite construction split by technologies  
See Table 1 for definitions of sub-categories.

It will be worthwhile contacting *BuildOffsite* to find information about the manufacturers whose Chalets were in evidence at Dale Farm. It is worth discussing each based on a brief internet search. The three manufacturers in evidence are:

- Omar Park Homes Ltd
- Tingdene Homes Ltd
- C Jenkin & Son Mobile Homes Ltd

This review considers each briefly, but further contact with the manufacturers is required.

### Omar Park Homes Ltd

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There are several manufactured homes at Dale Farm that appear very similar in form, detailing, and finish to at least one chalet that clearly shows an Omar plaque. Omar Homes was established in the 1960s at Biggleswade in Bedfordshire. Their first homes were very popular, and since that time the company has greatly expanded a product portfolio. There has been substantial growth in demand over subsequent decades for manufactured homes, and their expanding market led the company to relocate to Brandon, in Suffolk in the 1980s. Omar Homes is one of Britain's leading manufacturers of manufactured homes, and it is now widely recognised as one of East Anglia's most dynamic companies. They have a list of satisfied customers who will no doubt provide testimonials to the quality and service life of the manufactured homes in their property portfolios.<sup>11</sup> There are also independent authorities that Omar Homes can refer to if requested to demonstrate the service life of their products.

The managing Director of Omar Homes, Lawrie Izzard, told *The Manufacturer* website in 2007 that his company was '... buzzing with all the new ideas generated by our very productive link with Anglia Ruskin University... We now enjoy a higher profile within the industry and are seen as a technical market leader.'<sup>12</sup>

The management of Omar has changed since 2007, in what must have been a difficult period for any housing manufacturer. Dean Westmoreland became Chief Executive in January 2010 and co-owner in March 2010. His experienced background is in manufacturing operations. He has a strong management team in a growing business. <sup>13</sup>



### **Omar Park Homes Ltd appear to have manufactured the majority of Chalets**

The company maintains that '... Omar Park Homes are built to a standard that surpasses the requirements of BS 3632. This starts with a chassis main frame constructed of at least 6mm hot rolled steel angle to provide deflection less than the code of practice allows therefore minimising structural stresses. The use of plasterboard walls gives greater fire protection, reduces sound transmission and gives the solid construction feel of a traditional home. We manufacture our own PVCu windows and doors to domestic standards with internal beading for extra security. Our roof trusses are assembled in our own truss plant using conventional nail-plates and on twin homes linked to engineered proprietary "I" beams for maximum support. All aspects critical to the quality of our homes are managed, controlled and carried out by our own craftsmen. Materials and components are carefully specified to give optimum durability and manufacturers' product support service.' <sup>14</sup>

Clearly Omar Homes insist that their chalets have a "traditional" feel of permanence, even though they are delivered by low loaders in two volumetric halves, and combined on site on prepared concrete rafts. These are not sold as temporary homes, but as permanent dwellings. While the models at Dale Farm are modest in size, they are well fitted as standard. Omar Homes can also provide exceptional specifications of fittings, offering luxury home ranges. <sup>15</sup> The company says '... the purchase of a new home is one of the most important decisions that you will ever make. Here at Omar, we aim to ensure a stress-free purchase that meets all of your expectations. Omar Homes pride themselves in being able to provide tailored homes and lodges to meet all requirements. We have an established in-house design and product development team that spend a vast amount of time researching new and innovative ideas.' <sup>16</sup>

This is big business for Omar, who strongly reject the notion that a manufactured home is a temporary dwelling, or an insignificant purchase. This is an important point of course. To demolish the Chalets at Dale Farm as temporary sends the message to many Local Authorities, many of whom have granted planning approval for Chalet estates, that there is something inferior in the developments they have approved.

Indeed, in Crays Hill, adjacent to Dale Farm, Basildon District Council has approved a Chalet home estate with a permanent planning approval. No doubt that is not the only example around the Local Authority area. These Chalets attract planning approvals.

Julia Smith observes in *The Manufacturer* that '... Omar Homes has become a major name in the industry. In particular there has been growing demand from Housing Associations and other social housing providers for affordable housing solutions... The buildings are virtually complete before transportation to their final destination where they are mounted on basic block foundations before the roof is put in place. A house can be completely weatherproof in less than four hours whereas it would take days, if not weeks, in a conventional construction environment.'<sup>17</sup>

Once delivered these manufactured homes are not intended to be moved as might a caravan or a mobile home. *BuildOffsite* as the industry authority clearly makes a distinction between relocatable and permanent volumetric units. While they recognise '... there is a risk, within a rapidly developing supply chain, of trying to "pigeon hole" offsite systems and products into pre-defined categories', and point to the *BuildOffsite Glossary of Terms*,<sup>18</sup> they argue '... there is a need to create some structure to define the overall make up of the offsite sector, to better inform those less familiar with the offsite business'.<sup>19</sup> The Omar products at Dale Farm are permanent volumetric units. Wheels that are evident on the chassis are for initial delivery and positioning. It is common practice for the chassis and the skirts to the manufactured homes to be built up after the drainage and utilities connections have been made. Access may be sensibly provided to the underside for maintenance to drainage and utilities connections.

Omar Homes has a showground based at their head office in Brandon, Suffolk.

The majority of Dale Farm manufactured Chalet style homes appear to be Omar Homes.

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Tingdene Homes Ltd is one of the leading privately owned businesses specialising in volumetric construction in Britain. Tingdene was founded in 1969 in Wellingborough in Northamptonshire, and its head office, factory and visitor centre remains there today on a 16 acre site. The company concentrates on permanent homes for the retirement sector, but also manufactures holiday accommodation and complete building solutions for hotels, student accommodation, and offices. With a wider range than Omar Homes, their website says '... the company's success has been characterised by high professional standards, innovation, quality build and the desire to succeed to market demands'.<sup>20</sup>

The company clearly prides itself on quality, and offers a warranty scheme from First Assist Insurance Company Ltd,<sup>21</sup> that compares favourably with any similar warranty in the rest of the permanent housing market:

'Platinum Seal provides the protection in the unlikely event of a major structural defect... for up to ten-years. Furthermore, for the first 12 months, your park home is completely covered to include every part, component, fixture and fitting. Plus, should your manufacturer not be around to help in the future, the Platinum Seal liquidation protection fulfils your manufacturer's obligations... Platinum Seal provides park home purchasers with a similar level of protection as would be expected when purchasing a new bricks and mortar home.'<sup>22</sup>

As with Omar Homes, Tingdene Homes are built to *BS 3632 Specification for Residential Park Homes*. This is important to understand.

'Each home is individually built by skilled craftsmen, under strict factory conditions ensuring attention to detail throughout the process. Quality control checks are made to ensure that when the home leaves the factory to be delivered to the customer it is of the highest quality finish. All these measures are designed to provide our customers with peace of mind, the knowledge that their home has been built with quality standards in mind, a home built to last many years. (Park Homes are built to comply with BS 3632 and all associated standards)'.<sup>23</sup>



### **Tingdene Homes Ltd plaque is just legible under site applied paint finishes**

A Park Home built in accordance with *BS 3632 Specification for Residential Park Homes* can be used for full residential use and can be your main residence. Residents are protected with security of tenure by the Mobile Homes Act if the site is registered with a residential licence. A Caravan Holiday Home is in clear contrast built in accordance with the awkwardly titled standard *BS EN 1647 Leisure accommodation vehicles - Caravan holiday homes - Habitation requirements relating to health and safety*, which allows the caravan to be built with a lower insulation level suitable mainly for summer use.

The caravan holiday home can be used on a holiday park for holiday use only, but cannot be your main residence.

Park Homes, like those manufactured by companies like Omar and Tingdene, can be main residences, occupied all year round, and permanently. Dale Farm residents occupy several of these Park Homes.

To confuse matters Park Homes are sometimes called "mobile homes", but they are not road worthy in the way a touring caravan is.

This confusion relates to the Mobile Homes Act, but most Park Homes remain in one location after they have been delivered on a wheeled chassis by the manufacturer. Attempting to move a Park Home that has been connected on site as two volumetric halves of one complete, fully finished building, will seriously damage the interior finishes and fittings. The Park Home main residences at Dale Farm are not mobile.

## C Jenkin & Son Mobile Homes Ltd

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C. Jenkin & Son is a long established family business since 1932. We are one of the major specialist suppliers of mobile homes covering the UK having a strong reputation for quality and cost, alongside customer care. They claim approval by Local Authorities and Insurers.<sup>24</sup>

The confusion in terminology is most acute in the case of C Jenkin & Son Mobile Homes Ltd, and at least one of their Park Homes was seen at Dale Farm. This is not a moveable home, but could be repossessed by the manufacturer with a low loader. That potential is clearly of benefit to C Jenkin & Son, who provide Park Homes to social landlords. The Park Home at Dale Farm is provided to Basildon District Council to rent out for income.

It is not clear if Basildon District Council realises that one of the Park Homes is being rented out by them at Dale Farm. Nor does the author know if Basildon District Council has a stock of such Park Homes for rent across their Local Authority area, either from C Jenkin & Son, or from other manufacturers. It will be worth looking at the tenancy agreements, and the contracts Basildon District Council has with Park Home manufacturers, to see what standards of accommodation were procured for rental as main residences over an extended period of time. It is possible that Basildon District Council might have procured housing structures that provide a more permanent provision, rather than procure Park Homes for rent as a temporary measure to deal with emergency housing need. It is also likely that C Jenkin & Son has a number of similar arrangements with other Local Authorities.



**There is at least one Park Home rented from C Jenkin & Son Mobile Homes Ltd**

C Jenkin & Son describe themselves on their home page as '... a quality specialist supplier of temporary and re-locatable accommodation & mobile homes.'<sup>25</sup> However Park Homes are not mobile in the sense of being readily moveable, can only be relocated with a low loader, and then only after splitting the volumetric units apart, with potential damage to finishes across the halfway joint. They are not rented as temporary homes, but as main residences with some degree of permanence. However Local Authorities like Basildon District Council might consider the manufactured homes to be "temporary" council housing, in the absence of any more long term public sector house building programme. This may be a misconception on the part of Local Authorities like Basildon District Council, when the manufactured homes are rented for years without any prospect of replacement by another structure.

### **Service Life of Park Homes at Dale Farm**

It is not immediately clear how long Omar Homes, Tingdene Homes, and Jenkins Homes claim their Park Homes will provide a main residence. It is not clear what service life they are claiming to offer. Further research is required, and the manufacturers could easily be contacted to ascertain the service life of the sorts of Park Homes permanently located at Dale Farm and used as main residences all year round.

A permanent home might reasonably be considered to have a service life of at least 60 years, or considerably longer than any mortgage or credit finance arrangement to pay for it out of household income. This is obviously important for lending securitisation.

The author suggests further research is needed into the normal relationship of finance to service life of permanent housing. As John Miles of Arup well appreciated in 2002, '... lenders know that public confidence in new types of construction can easily be dented by media reaction. This may well be ill-informed, but nevertheless, mud sticks. Problems with even a small proportion of houses using new construction methods can result in exaggerated criticism, which could blight not only that construction type, but new methods generally.'<sup>26</sup> John Miles is a leading director of Arup.

Park Homes sold or rented as main residences over protracted periods cannot sensibly be called "temporary" when the basis upon which they are financed depends on a degree of permanence that their structure can easily provide. The Steel Construction Institute is in no doubt that such manufactured homes have structural longevity in service.<sup>27</sup>



**Are the Park Homes manufactured to provide a 60 year structural service life?**

Guidance may be available from the Association of British Insurers,<sup>28</sup> the Council of Mortgage Lenders,<sup>29</sup> or the Building Societies Association.<sup>30</sup> Initial research suggests that lenders look to another industry standard when lending on manufactured homes:

'The main concern for lenders on properties built using innovative construction is that we often don't know how they will perform over the full potential life of a mortgage and beyond,' says David Hylton of Nationwide Building Society. 'We need to know that they will retain their value and marketability in a similar way to conventional structures, without abnormal expenditure on maintenance and repair. This is in the interests of owners as well as lenders and *LPS 2020* is a significant step forward in providing this reassurance.'<sup>31</sup> This is revealing, even if the Dale Farm residents are not borrowing.

The *Loss Prevention Standard for Innovative Systems, Elements and Components for Residential Buildings - LPS 2020:2006* was developed by BRE Certification, with support from the Association of British Insurers and the Council of Mortgage Lenders, to enable the assessment of manufactured systems that have yet to gain a performance track record in Britain. While claiming compliance with *BS 3632 Specification for Residential Park Homes* neither Omar Homes, Tingdene Homes, nor Jenkins Homes claim compliance with *LPS 2020* on their sales websites. It is not immediately clear if these manufacturers are recognised by BRE Certification,<sup>32</sup> though simple enquiries would ascertain any recognition.

*LPS 2020* clearly states in the Section 4.7, concerned with Durability, Resilience, Materials and Workmanship, that '... the life expectancy of the structural system and inaccessible elements or components shall not be less than 60 years'. It adds that '... individual elements or components with shorter life expectancies shall be clearly identified in the installation and/or user manual(s) and their life expectancies stated. In addition, appropriate maintenance, refurbishment and/or replacement schedules for such elements or components shall be supplied'.<sup>33</sup> This seems entirely reasonable, and the author would expect the steel Park Homes structures produced by Omar Homes, Tingdene Homes, and Jenkins Homes to be capable of meeting that standard for life expectancy, or service life. What is not clear is whether any installation or user manuals are in the possession of Dale Farm residents to indicate service life for shorter life elements or components. This documentation will be most useful if it can be collated by the residents to show the lengths of service life.



**How can you tell if it is a manufactured home?**

*LPS 2020* does not appear to relate to *BS 3632 Specification for Residential Park Homes*. The standards may have similar expectations of Durability, Resilience, Materials and Workmanship, and further enquiries are recommended in contact with manufacturers.

### **Plot Locations and Manufacturers at Dale Farm**

The author was unable to identify which homes were located on which plots at Dale Farm in the short time available on Saturday 2 July 2011. However a full survey could easily be carried out by the representatives of the residents. It is probable that there are more than three manufacturers of chalet homes with their products occupied as permanent dwellings at Dale Farm. The residents may also have catalogues, plans, receipts and other documentation that will provide information on the manufacturers of their homes. This should be collated and cross referenced to a plan of the various plots. The manufacturers may be contacted for more information on the service life of the range of manufactured homes they have delivered to Dale Farm.



**Brick plinths have been built to close the chassis and cover propped corners**

## Concluding remarks and further images

It is possible that the manufacturers will want to provide better information on the longer service life that their Park Homes can achieve. Further enquiries will be worthwhile, because at the moment it appears that “permanence” is being defined on the basis of whether dwellings are built off or concreted into foundations. The manufactured homes are not designed to be concreted to foundations. The brick plinths are non-load bearing.



**A brick and block structure that is considered “permanent”**



**Some structures are part brick or block, and part timber frames**



**Typical Chassis with the delivery wheels lifted from the ground to spin freely**



**Props can be simple block piers**



**Fitted with combination boilers and PVCu windows**



**The same services that will be seen in most homes**



**The fittings and finishes are of a good quality, and often better than in many so called "permanent" homes, constantly being refurbished**



**The homes are manufactured, not site built, but they are still home**

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