

## HOUSING COMMITTEE

16 September 2014

<b>Report Title</b>	<b>NON TRADITIONAL DWELLINGS</b>
<b>Purpose of Report</b>	To update the Committee on the Stroud District Council's non traditional dwellings.

**1. Introduction**

1.1 Stroud District Council (SDC) as at July 2014 has 608 Non Traditional type dwellings split over 14 different construction types and within 24 Parishes.

1.2 The construction types, numbers and locations can be shown as follows:

<b>Construction Type</b>	<b>Number of Units</b>	<b>Location</b>
Aluminium BL8	51	Cam, Leonard Stanley
Cornish	20	Cam
Dorlonco	13	Cashes Green
Brickwork External Airey	49	Chalford, Ebley, Hardwicke, North Nibley, Randwick, Slimbridge
Brickwork External Cornish	22	Kingswood, Slimbridge, Stonehouse, Wotton-under-Edge
Ext Clad Airey	1	Kingswood
Ext Clad Cornish	8	Coaley
Ext Clad Unity	59	Cashes Green, Ebley, Hardwicke
Ext clad Reema	65	Cashes Green, Stroud
Ext Clad Stent	54	Dursley
Ext Clad Woolaway	27	Leonard Stanley, Stroud
Non Defective PRC	28	Nailsworth
Reema	191	Leonard Stanley, Minchinhampton, Nailsworth, Stonehouse, Whiteshill, Woodchester
Swedish Timber	20	Cam, Miserden, North Nibley, Painswick, Stinchcombe, Uley, Wotton-under-Edge
<b>Total</b>	<b>608</b>	

- 1.3 In August 2003 SDC commissioned Curtins Consulting Engineers to undertake a 'Risk Assessment and Structural Survey of SDC's non-traditional housing stock. The purpose was to assess the structural condition of the stock and identify any remedial work required to ensure a minimum 30-year continued life of the structures was achieved.
- 1.4 The findings provided an overview broken down by construction types:
- 1.4.1 **Aluminium BL** - Extensive refurbishment works have been undertaken on these properties and it is, therefore, considered that they should achieve a further life of at least 30 years, subject to regular routine maintenance. External brickwork face was installed at the Aluminium BL8 bungalows at Brimley in 2001. However, the internal walls and ceiling joists are original and will require replacing.
- 1.4.2 **Cornish** – All PRC elements were replaced in 1991.
- 1.4.3 **Dorlonco** - some properties have been insulated; investigations revealed that this comprises a blown polystyrene system. Whilst all cavities inspected appeared dry, it is considered that the presence of cavity insulation introduces a risk that any moisture entering the cavity will not evaporate as it would have done when the cavity was empty. It is, therefore, recommended that the minimum works to achieve a further 30 years will comprise patching areas of base render/cracks followed by a weatherproof decorative finish. In addition, weep holes to the external leaf should be provided. A prolonged life will be achieved by the installation of an insulated render overcladding system.
- 1.4.4 **Airey** - 25 properties in North Nibley, Coaley, Chalford, Kingswood and Slimbridge have had all external PRC columns removed and replaced with traditional construction. It is understood these works were undertaken circa 1996. A "Leeds Type 1" repair has been undertaken on the remaining 35 properties in Ebley, Cashes Green and Hardwicke. This repair system incorporates a new load bearing external masonry wall but retains all existing PRC elements. These repair schemes are equivalent to the Halifax accepted scheme for Airey houses and are considered to provide a future life in the region of 50 years. The internal inspection of the roof space revealed that the roof structure remains in reasonable condition. However, given that these properties are approximately 50 years old it is likely that an increasing number of repairs will be required to the roof coverings during the next 30 years.
- 1.4.5 **Unity** - Refurbishment works were undertaken in 2001 to incorporate a new external insulation and render system. Curtin's investigations revealed that the existing concrete elements are in good condition. Given that the properties were constructed circa 1955 it is likely that an increasing number of patch repairs will be required to the roof during the next 30 years. It is considered that providing the concrete remains dry, these properties will continue to perform satisfactorily for a further 30 years. However, it is anticipated that whilst a future life of 30 years can be achieved, an increasing number of patch repairs will be required to external wall panels, plinths, slab edges etc.

- 1.4.6 **Pebbledashed Reema, Reema (overclad) & Reema Conclad** - It is recommended that the external wall panels of the un-clad properties are afforded a degree of protection from further carbonation and subsequent corrosion. As a minimum, this would involve the patch repair of any spalling concrete followed by the application of an anti-carbonation paint system. This process has a design life of approximately 15 years and it will, therefore, be necessary to re-apply the coating in years 16-20. Whilst this approach will provide a future life of 30 years, it is possible to ensure a future life well in excess of 30 years. This alternative solution would involve the installation of an insulated over-render system, which would prevent further deterioration of the concrete panels and also offer improved energy efficiency and enhanced aesthetics. Previous investigations did reveal isolated instances of cracking within floor beams. Curtin's investigations have examined the condition of the floor beams using Linear Polarisation Corrosion Rate Measurement to determine the actual rate of corrosion of the embedded reinforcement. In all properties investigated, the actual rate of corrosion was found to be low and provided the concrete remains dry, the floor beams should continue to perform adequately for the next 30 years.
- 1.4.7 **Reema Hollowpots** – these have been over clad, however they aren't insulated and do not provide the standard of thermal comfort SDC would like. These properties suffer from condensation and ideally require internal insulation. These properties are a priority when allocating surveys.
- 1.4.8 **Stent** - It is understood that these properties were over-clad in 1999. No specific detailed information of the cladding system adopted has been made available to Curtins. However, it is anticipated that these systems will prevent any further degradation of the PRC components. The overcladding should have a minimum life of 30 years and we would, therefore, expect it to last at least for another 25 years, but should last for the full 30 years with some maintenance in the final years of the business case. It is, therefore, considered that patch repairs or re-painting of the over-cladding system will be required in years 21-25. Based on the above, it is considered that these properties should have a future life of 30 years, subject to routine maintenance and the recommendations made above.
- 1.4.9 **Swedish Timber** - An extensive refurbishment programme was carried out in 2002 to repair any defective timber and apply new internal insulation and undertake roof repairs. A number of these properties are showing minor dilapidations which will be addressed on a per property basis. For the most part, the properties are considered to be in good condition. Some of these properties have been internally insulated, the remaining ones will need to be surveyed and completed as a priority.
- 1.5 A further sample of properties was re-inspected by Housing Contracts in September 2012. These found that most had been modernised and improved with little or no structural work necessary.
- 1.6 However, it is clear that the on-going investment required for each of the different build styles is varied as the construction types have their own unique problems.

- 1.7 Improvement works for each of the different styles needs to be considered separately, and individual option appraisals are required.
- 1.8 The option appraisals will consider the investment necessary by SDC and the affordability for tenants living within these properties. These may identify hard to treat properties.
- 1.9 It is proposed that over the next two years, property types are prioritised with respect to need. SDC will engage with industry specialists to produce innovative and cost effective schemes to improve the structure and thermal efficiency of these homes. It is envisaged that these innovative options will be rolled out on a planned programme basis.