

15 March 2018

HOUSING COMMITTEE

A meeting of the Housing Committee will be held on **TUESDAY 27 MARCH 2018** in the Council Chamber, Ebley Mill, Ebley Wharf, Stroud at **7.00 pm.**



David Hagg
Chief Executive

Please Note: This meeting will be filmed for live or subsequent broadcast via the Council's internet site (www.stroud.gov.uk). By entering the Council Chamber you are consenting to being filmed. The whole of the meeting will be filmed except where there are confidential or exempt items, which may need to be considered in the absence of the press and public.

AGENDA

- 1 **APOLOGIES**
To receive apologies for absence.
- 2 **DECLARATIONS OF INTEREST**
To receive declarations of interest.
- 3 **MINUTES**
To approve the minutes of the meeting held on 20 February 2018.
- 4 **PUBLIC QUESTION TIME**
The Chair of Committee will answer questions from members of the public submitted in accordance with the Council's procedures.
DEADLINE FOR RECEIPT OF QUESTIONS
Noon on THURSDAY 22 MARCH 2018.
Questions must be submitted in writing to the Chief Executive, Democratic Services, Ebley Mill, Ebley Wharf, Stroud and sent by post or by Email:
democratic.services@stroud.gov.uk

- 5 **WORK PROGRAMME**
To consider the work programme.
- 6 **MEMBER REPORTS**
a) Housing Review Panel
b) Performance Monitoring
- 7 **CAPITAL PROJECT MONITORING**
a) Tenant Services Capital Programme
b) Support to Social Housing Providers
c) Disabled Facilities Grants
d) Sheltered Housing Modernisation Project Update
e) New Homes and Regeneration Programme
- 8 **BUDGET MONITORING REPORT 2017/18 MONTH 10**
To receive a report on the forecast of the outturn position against the revenue budget and capital programme for the General Fund and HRA for 2017/18.
- 9 **NON-TRADITIONAL HOMES REPORT AND ACTION PLAN**
To consider a report on the options for the homes.
- 10 **THE CHANGING FUTURE OF TENANT INVOLVEMENT**
To receive a report on tenant engagement.
- 11 **SHELTERED MODERNISATION PROJECT**
To receive an update on the progress of the project and approve future programmes.
- 12 **MEMBERS' QUESTIONS**
See Agenda Item 4 for deadline for submission.

Members of Housing Committee

Councillor Mattie Ross (Chair)
Councillor Chas Townley (Vice-Chair)
Councillor Catherine Braun
Councillor Miranda Clifton
Councillor Colin Fryer
Councillor Julie Job

Councillor Norman Kay
Councillor Darren Loftus
Councillor Phil McAsey
Councillor Jenny Miles
Councillor Tom Skinner
Councillor Debbie Young

Tenant Representatives

Ian Allan
Sadie Tazewell

HOUSING COMMITTEE**20 FEBRUARY 2018**
7.00 pm – 8.07 pm
Council Chamber, Ebley Mill, Stroud
3**Minutes****Membership**

| | | | |
|--------------------------------------|---|--------------------------|---|
| Councillor Mattie Ross (Chair) | P | Councillor Norman Kay | A |
| Councillor Chas Townley (Vice-Chair) | P | Councillor Darren Loftus | P |
| Councillor Catherine Braun | P | Councillor Phil McAsey | A |
| Councillor Miranda Clifton | P | Councillor Jenny Miles | P |
| Councillor Colin Fryer | P | Councillor Tom Skinner | P |
| Councillor Julie Job | P | Councillor Debbie Young | P |

P = Present A = Absent

Tenant Representatives

| | | | |
|-----------|---|----------------|---|
| Ian Allan | P | Sadie Tazewell | P |
|-----------|---|----------------|---|

Officers in Attendance

| | |
|---|----------------------------------|
| Director of Tenant and Corporate Services | Housing Renewal Manager |
| Head of Contract Services | New Homes & Regeneration Manager |
| Head of Housing Services | Democratic Services Officer |
| Sheltered Housing Project Manager | |

HC.033**APOLOGIES**

Apologies for absence were received from Councillors Kay and McAsey.

HC.034**DECLARATIONS OF INTEREST**

There were no declarations of interest.

At this point in the meeting the Chair thanked Ben Smith for his loyal service to the Council. Ben has worked for the Council since 1966 having had several roles and concluding in Property Services as a Contracts Officer.

HC.035**MINUTES – 12 DECEMBER 2017**

The Chair asked for comments on the minutes, and at this point asked the Head of Contract Services to explain the situation regarding the change of contractor for the South Contract. A new contractor had recently been appointed and will undertake the remaining work on the programme until 2020. Members asked questions relating to this.

A sheltered housing report would be put forward to Committee on 27 March 2018.

RESOLVED **That the minutes of the meeting held on 12 December 2017 are confirmed and signed as a correct record.**

HC.036 **PUBLIC QUESTION TIME**

There were none.

HC.037 **WORK PROGRAMME 2017/18**

Performance monitoring – Members were asked to put forward items they felt should be monitored for the new Civic Year 2018/19.

RESOLVED **To note amendments to the work programme.**

HC.038 **MEMBER REPORTS**

a) Housing Review Panel

Councillor Townley updated Committee on the recent meeting of the Panel. Discussion took place on:

- Civil Penalty Notices.
- Housing to rent programme reduction in funding.
- Downsizing initiatives – under occupation of 3 and 4 bed houses.
- Funding for supported housing.

b) Performance Monitoring

Councillor Braun introduced this item. She explained the work of the task and finish group which put recommendations forward to Strategy and Resources Committee. The group found that there needed to be a more consistent approach throughout the Committees. Audit and Standards Committee will have the option to review issues when necessary. Tenant representatives are a very important part of this process and will be invited to performance monitoring meetings.

Performance monitors will produce a report on indicators which need to be discussed by Committee. Performance reports will be available with the meeting papers.

Following discussion, Members were asked to consider priorities which needed to be put on the work programme. The Director of Tenant and Corporate Services would distribute performance indicators for Members to consider.

RESOLVED **To note the reports.**

HC.039 **CAPITAL PROJECT MONITORING**

The Head of Contract Services provided an update on the capital projects and explained that the new contractor will endeavour to catch up with any work that has slipped over the next 18 months. Tenants will be informed of work which is due to take place.

The Sheltered Housing Project Manager and the New Homes and Regeneration Manager updated Committee on the modernisation of the schemes and explained the work which is being undertaken for each of them.

Discussion took place on the work taking place at

- Sherbourne House
- Tanners Piece
- Dryleaze Court
- Cambridge House, and
- Ship Inn

The Housing Renewal Manager answered questions from Members on the item relating to Disabled Facilities Grants. She explained that work on this service is carried out as a county wide initiative and clients are referred from the Occupational Therapist to help them stay in their own home. Information for the public is readily available.

RESOLVED **To note the reports.**

HC.040 **CIVIL PENALTIES POLICY**

The Housing Renewal Manager introduced the report and explained that the Housing and Planning Act 2016 allowed penalty notices to be enforced on private sector landlords in breach of the Act, up to a maximum of £30,000. The policy which Members were asked to approve is a countywide policy, which authorities within Gloucestershire have or are adopting.

Discussion took place on the process of issuing these notices, registering of HMO's and officers identifying these properties.

RESOLVED **To adopt the Gloucestershire Civil Penalties Policy contained in Appendix A to this report.**

HC.041 **MEMBERS' QUESTIONS**

There were none.

The meeting closed 8.07 pm.

Chair

STROUD DISTRICT COUNCIL**AGENDA
ITEM NO****HOUSING COMMITTEE****5****27 MARCH 2018****WORK PROGRAMME**

| Date of meeting | Matters to be considered at the meeting | Notes |
|------------------------|---|---|
| 12.06.18 | Work Programme | Leads: Chair and Director of Tenant and Corporate Services |
| | Member Reports a) Housing Review Panel b) Performance Monitoring | Leads: Chair: Cllr Chas Townley Performance Monitoring Monitors |
| | Capital Project Monitoring a) Tenant Services Capital Programme b) Assistance to Affordable Housing Providers c) Disabled Facilities Grants d) Sheltered Modernisation Project e) New Homes and Regeneration Programme | Leads: Head of Contract Services Policy Implementation Manager Head of Health and Well Being New Homes and Regeneration Manager New Homes and Regeneration Manager |
| | Handyperson Service – income generation opportunities | Lead: Maintenance and Voids Manager |
| 11.09.18 | Work Programme | Leads: Chair and Director of Tenant and Corporate Services |
| | Member Reports a) Housing Review Panel b) Performance Monitoring | Leads: Chair: Cllr Chas Townley Performance Monitoring Monitors |
| | Capital Project Monitoring a) Tenant Services Capital Programme b) Assistance to Affordable Housing Providers c) Disabled Facilities Grants d) Sheltered Modernisation Project e) New Homes and Regeneration Programme | Leads: Head of Contract Services Policy Implementation Manager Head of Health and Well Being New Homes and Regeneration Manager New Homes and Regeneration Manager |
| | Draft Housing Strategy - The Private Sector Renewal Strategy | |

| Date of meeting | Matters to be considered at the meeting | Notes |
|------------------------|--|---|
| 11.12.18 | Work Programme | Leads: Chair and Director of Tenant and Corporate Services |
| | Member Reports a) Housing Review Panel | Leads: Chair: Cllr Chas Townley Performance Monitoring Monitors |
| | a) Capital Project Monitoring b) Tenant Services Capital Programme c) Assistance to Affordable Housing Providers d) Disabled Facilities Grants e) Sheltered Modernisation Project f) New Homes and Regeneration Programme | Leads: Head of Contract Services Policy Implementation Manager Head of Health and Well Being New Homes and Regeneration Manager New Homes and Regeneration Manager |
| 05.02.19 | Work Programme | Leads: Chair and Director of Tenant and Corporate Services |
| | Member Reports a) Housing Review Panel b) Performance Monitoring | Leads: Chair: Cllr Chas Townley Performance Monitoring Monitors |
| | a) Capital Project Monitoring b) Tenant Services Capital Programme c) Assistance to Affordable Housing Providers d) Disabled Facilities Grants e) Sheltered Modernisation Project f) New Homes and Regeneration Programme | Leads: Head of Contract Services Policy Implementation Manager Head of Health and Well Being New Homes and Regeneration Manager New Homes and Regeneration Manager |
| 09.04.12 | Work Programme | Leads: Chair and Director of Tenant and Corporate Services |
| | a) Member Reports b) Housing Review Panel c) Performance Monitoring | Leads: Chair: Cllr Chas Townley Performance Monitoring Monitors |
| | Capital Project Monitoring a) Tenant Services Capital Programme b) Assistance to Affordable Housing Providers c) Disabled Facilities Grants d) Sheltered Modernisation Project e) New Homes and Regeneration Programme | Leads: Head of Contract Services Policy Implementation Manager Head of Health and Well Being New Homes and Regeneration Manager New Homes and Regeneration Manager |

Information sheets sent to Committee Members

| Date sent & ref no | Topic |
|-------------------------------|---|
| H-2017/18-001 | Non-Traditional Stock Action Plan |
| H-2017/18-002 | Sheltered Housing Modernisation Project |
| H-2017/18-003 | New Homes and Regeneration Programme |
| H-2017/18-004 | Small Sites, Garages and Disposals Update |
| H-2017/18-005 | Corporate Asset Management Strategy Action Plan |
| H-2017/18-006 | Rent Collection Including Actions, Support and Outcomes |
| H-2017/18-007 | Universal Credit |
| H-2017/18-008 | Energy Strategy Action Plan |

Topics for future Information sheets

- Draft Housing Strategy
- New Homes Programme Update
- Homelessness Guidance following the new legislation in the spring of 2018

Members Information Evening

- An update on the impact of Universal Credit on the HRA

STROUD DISTRICT COUNCIL

**AGENDA
ITEM NO**

HOUSING COMMITTEE

27 MARCH 2018

7

| | |
|---|---|
| Report Title | CAPITAL PROJECT MONITORING |
| Purpose of Report | To inform the Committee of progress on capital projects within its remit. A - Tenant Services Capital Programme B - Assistance to Affordable Housing Providers C - Disabled Facilities Grants D - Sheltered Modernisation Project E - New Homes and Regeneration Programme |
| Decisions | The Committee notes the report |
| Consultation and Feedback | Budget setting has previously been agreed at Council. Progress has been discussed with the Tenant Reps for Housing Committee. |
| Financial Implications and Risk Assessment | <p>Item A – The capital programme for ongoing major works within the HRA is funded within the HRA Medium Term Financial Plan (MTFP). This will be reviewed annually to ensure that the budget continues to support the delivery plan within overall affordability of the HRA. The budgets included in this report represent £4,758k of a total major works programme of £6,602k. A large underspend is currently forecasted within major works. At the end of the year any variance will be transferred to the Major Repairs Reserve and used to fund capital works in future years.</p> <p>Item B – There are no direct financial implications as this report is for information only. Any additional expenditure outside of the agreed budget must be reported separately.</p> <p>Item C – Further funding from the Better Care Fund would be available if necessary, up to a total of £0.5m. However demand is such that this will not be required and any unused funds will remain in the pooled Gloucestershire fund.</p> <p>Items D & E – There are no direct financial implications as this report is for information only. Any additional expenditure outside of the agreed budget must be reported separately.</p> <p>Lucy Clothier, Principal Accountant Tel: 01453 754343 Email: lucy.clothier@stroud.gov.uk</p> <p>Risk assessment by the report author (Item A) The capital programme of planned and cyclical maintenance provides relevant information of content and performance in the delivery of works. These are monitored and managed via Key Performance Indicators (KPI's).</p> |

| | |
|---|---|
| Legal Implications | <p>Item A – The Council as a landlord has a statutory duty to maintain its housing stock including the fabric of the building and heating/hot water systems. Having procured a new contractor satisfactory performance and monitoring of these contracts is therefore important to ensure compliance with this duty.</p> <p>Item B – Where funding is provided by way of a grant it may be appropriate to be secured by a grant agreement (particularly where it is a large sum), this would ensure it is used for the purposes intended by SDC and allows appropriate provisions for clawback/termination if it is not.</p> <p>Where money has be secured through a S106 obligation towards Affordable Housing, if there are any obligations on the Council as to how that money must be spent/time limits/clawback these will be provided within the terms of the deed itself.</p> <p>Item C – The update on this part of the report repeats that provided to the February committee. As such, there are no further legal implications to report.</p> <p>Items D & E – As the report for Item D is being given by verbal update at the Committee no specific legal implications can be given for this. In general the position remains that as these are ongoing projects with a range of legal implications, the cases will be considered on a case by case basis.</p> <p>Craig Hallett, Solicitor & Deputy Monitoring Officer Tel: 01453 754364 Email: craig.hallett@stroud.gov.uk (Ref: rcd13.3)</p> |
| Report Author (s) | <p>Item A - Joe Gordon, Head of Contract Services Tel: 01453 754190 Email: joe.gordon@stroud.gov.uk</p> <p>Item B - Pippa Stroud, Policy Implementation Manager Tel: 01453 754099 Email: pippa.stroud@stroud.gov.uk</p> <p>Item C - Jon Beckett, Head of Health and Wellbeing Tel: 01453 754443 Email: jon.beckett@stroud.gov.uk</p> <p>Items D - Kimberley Read, Sheltered Housing Project Manager Tel: 01453 754175 Email: kimberley.read@stroud.gov.uk</p> <p>Items E - Leonie Lockwood, Business Development Manager Tel: 01453 754153 Email: leonie.lockwood@stroud.gov.uk</p> |
| Options | This report is a standing report for Housing Committee. |
| Performance Management Follow Up | Update reports are to be supplied to this committee within the timeline of the committee work programme |
| Background Papers/ Appendices | None |

1.0. Item A - Tenant Services Capital Programme

1.1. Introduction

1.1.1. The following report provides an ongoing **executive summary** of the Capital Projects within the remit of the Housing Committee. The purpose of this report is to advise Committee on progress and management of the capital projects and allow members to question project managers. Reports have been tabled at June, September, and Decembers 2017's Housing Committee where members asked for further detail within each report and for information sheets to be attached where appropriate

1.1.2. The third quarter has been completed and positions of works against budget spend are detailed in 2.1

1.2. Current position

1.2.1. The third quarter works of the capital programme are as follows broken down by contractor:

| NKS (North of the district) | | | | | |
|---|--------------------------|---------------------|---------------|--------------------------|-----------------|
| Planned works | Delivered to Date | Actual Spend | Budget | Projected Outturn | Variance |
| Kitchens | 20 | 108,571 | 386,250 | 145,877 | (240,373) |
| Bathrooms | 76 | 96,606 | 386,250 | 396,208 | 9,958 |
| External works | 28 | 257,897 | 850,000 | 552,965 | (297,035) |
| Disabled adaptations (Both sides of the district) To note the actual spend includes the over statement on the year end creditor | 43 | 25,127 | 308,000 | 60'000 | (248,000) |

| Mears (South of the district) | | | | | |
|--------------------------------------|--------------------------|---------------------|---------------|--------------------------|-----------------|
| Planned works | Delivered to Date | Actual Spend | Budget | Projected Outturn | Variance |
| Kitchens | 66 | 249,760 | 386,250 | 266,630 | (119,620) |
| Bathrooms | 75 | 232,528 | 386,250 | 260,166 | (126,084) |
| External works | 16 | 126,435 | 850,000 | 330,087 | (519,913) |

| Proframe (Both sides of the district) | | | | | |
|--|--------------------------|---------------------|---------------|--------------------------|-----------------|
| | Delivered to Date | Actual Spend | Budget | Projected Outturn | Variance |
| Doors & windows | 266,503 | 204,929 | 515,000 | 499,116 | (15,884) |

| Glevum (Both sides of the district) | | | | | |
|--|--------------------------|---------------------|---------------|--------------------------|-----------------|
| | Delivered to Date | Actual Spend | Budget | Projected Outturn | Variance |
| Heating & boiler upgrades | 137 | 593,076 | 690,000 | 775,628 | (85,628) |

| Mitie & Bell (Mixed sides of the district) | | | | | |
|---|--------------------------|---------------------|---------------|--------------------------|-----------------|
| | Delivered to Date | Actual Spend | Budget | Projected Outturn | Variance |
| Painting/communal areas | 351 | 133,094 | 515,000 | 300,000 | (215,000) |

1.3. Performance

- 1.3.1. Following Decembers Housing Committee when we notified you of our intension to end our formal contractual relationship with Mears Group PLC, re-procurement of the South Contract went live on 31 January 2018.
- 1.3.2. The process ended on the 16 February 2018, and following evaluation we appointed a new contractor Mi Space (UK) Limited, who are part of the Midas Group. Midas will commence service provision on Monday 12 March 2018.
- 1.3.3. Works relating to the South of the District, which will not be delivered prior to 12 March 2018 has either been passed to the North Contractor (NKS) or moved forward into the 2018-19 programmes, dependant on priority. Affected stakeholders have been notified.

1.4. Summary

- 1.4.1. We are committed to ensuring our resources deliver maximum value for money to the Council, and our partners delivering the services meet the high standards both our customers and us as a client demand. in order to improve our performance for our customers and clients. We continually need to make sure that we are not falling into patterns of complacency and will continually review our processes to ensure we work smarter with our Partners.

2.0. Item B, Support to Social Housing Providers Capital Programme

- 2.1. The Council has a small General Fund capital programme that provides occasional grant assistance to housing associations, and this supplements the much greater resources available to them from Homes England.
- 2.2. We allocate our resources to those schemes that best meet housing need in the Stroud district in terms of type, location and tenure. However, value for money is also a consideration, and those projects that produce the greatest number of

homes for the lowest grant cost are obviously more attractive in terms of investment.

- 2.3. At the time of writing, there was £192,000 in uncommitted funds remaining in the s.106 code, and £230,000 of former Homebuy funds being held. Some of these funds are likely to be committed to support a large-scale ExtraCare scheme for older people while a commitment of £190,000 has now been made to support the purchase of a site in Wotton Under Edge by Two Rivers Housing Association for the development of a shared ownership scheme.

Recent funding allocations and forthcoming commitments are set out below:

| Location | Grant | Number of units | Grant Per Unit | Provider | Date paid | Notes |
|------------------------------|----------|-----------------|----------------|------------|------------|--|
| Littlecombe, Dursley | £240,000 | 22 | £11,000 | SDC | July 2013 | SDC regeneration site |
| Bisley Old Road Stroud | £130,000 | 23 | £5,700 | Stonewater | July 2014 | All rented homes |
| Lynch Road Berkeley | £66,374 | 10 | £6,600 | Fortis | March 2016 | Abnormal costs for sewer re-routing |
| Elm Road Stonehouse | £90,000 | 8 | £11,300 | Two Rivers | Oct 17 | Off the shelf purchase |
| Commitments | | | | | | |
| Stagholt Standish | £30,000 | 4 | £7,500 | Two Rivers | June 18 | Rural site. Planning application now received. |
| Full Moon, Wotton Under Edge | £190,000 | 10 | £19,000 | Two Rivers | TBA | Market housing site purchase opportunity. |

3.0. Item C Disabled Facilities Grants

- 3.1. The Council has a statutory duty to provide Disabled Facilities Grants (DFG) under the Housing Grants, Construction & Regeneration Act 1996. Funding is provided by Central Government for this purpose through the Better Care Fund (BCF) which is jointly administered by the County Council and Clinical Commissioning Group (CCG).
- 3.2. The DFG is a means tested grant to assist disabled occupants to remain living safely in their own homes by the provision of adaptations such as stairlifts and wet floor showers. The maximum limit for a DFG is £30,000. This is a statutory function and the Council has no discretion as to the use of these funds and no control over demand as referrals must come from the County Council Occupational Therapy Service. There is no waiting list and all applications are dealt with expediently.
- 3.3. For 2017/18 a sum of £330,000 has been identified in the BCF for DFG's in the Stroud district and this is considered sufficient to meet demand based on previous expenditure. Any unspent allocation has to be returned to the BCF.

3.4. The table below illustrates the numbers of approvals and expenditure since 2015:

| Year | No. of DFG's Approved | Amount Paid |
|----------|-----------------------|-------------|
| 15/16 | 27 | £269,935 |
| 16/17 | 31 | £279,710 |
| 17/18 Q1 | 4 | £48,454 |
| 17/18 Q2 | 5 | £35,559 |
| 17/18 Q3 | 3 | £53,525 |

4.0. Item D Sheltered Housing Modernisation Project Update

4.1. A full update is being presented to Housing Committee at the meeting to be held on 27 March 2018.

5.0. Item E New homes and regeneration programme

5.1. Introduction / Background

5.1.1. Stroud District Council has an objective to invest in 150 new Council homes by March 2018 and has also approved the regeneration of 3 sites where defective Woolaway properties are to be replaced with new homes providing a total target delivery number of 236 homes.

5.1.2. An additional budget of £700,000 was approved at Strategy and Resources on the 13 June 2017, with 30% of that budget funded from right to buy receipts, to purchase properties on the open market.

5.1.3. A full update on the New Homes and Regeneration Programme was provided to members at the meeting on the 20th February. Since then the planning application for The Ship Inn has been submitted. A summary of the number of new build completions for 2017/18 will be presented to the Housing Committee in June 2018 together with a further update on the programme at that stage.

5.2. Programme

5.2.1 The table below sets out the schemes within the programme.

| Scheme | No. replacement units | No. additional Units | Total No. of Units | Status |
|------------------------------|-----------------------|----------------------|--------------------|-----------|
| New Homes Completed | | | | |
| Hanover, Dursley | 0 | 18 | 18 | Completed |
| Ex Warden conversions | 0 | 11 | 11 | Completed |
| Minchinhampton Woolaways | 35 | 0 | 35 | Completed |
| Top of Town, Stroud -Phase 1 | 14 | 8 | 22 | Completed |
| Littlecombe, Dursley | 0 | 22 | 22 | Completed |
| Leonard Stanley Woolaways | 19 | 32 | 51 | Completed |
| Top of Town – Phase 2 | 8 | 5 | 13 | Completed |
| The Corriett, Cam | 0 | 6 | 6 | Completed |
| Fisher's Road, Berkeley | 0 | 4 | 4 | Completed |

| | | | | |
|-------------------------------------|-----------|------------|------------|--------------|
| Hillside, Coaley | 2 | 2 | 4 | Completed |
| Top of Town – Phase 3 | 10 | 2 | 12 | Completed |
| Chapel Street, Cam | 0 | 14 | 14 | Completed |
| Top of Town – Phase 4 | 3 | 3 | 6 | Completed |
| Property purchases (RTB receipts) | 0 | 3 | 3 | Completed |
| Sub Total | 91 | 127 | 221 | |
| Completions by Year End | | | | |
| Ex Warden conversions | 0 | 4 | 4 | On site |
| Property purchases (RTB receipts) | 0 | 1 | 1 | Sale agreed |
| Sub Total | 0 | 5 | 5 | |
| Balance of Programme | | | | |
| The former Ship Inn site , Bridgend | 0 | 9 | 9 | Design Stage |
| Southbank, Woodchester | 4 | 1 | 5 | Design Stage |
| Site to be identified | 0 | 5 | 5 | Design Stage |
| Sub Total | 4 | 15 | 19 | |
| Grand Total | 95 | 150 | 245 | |

5.3. Balance Of Programme

- 5.3.1. The former Ship Inn site is in the design stage and a planning application is due to be submitted prior to the date of this meeting with work starting in 2018/19.
- 5.3.2. For the scheme to develop 5 homes at Southbank Woodchester, once we have finalised issues with the original contractor, we aim to retender the scheme and this is currently being prepared. A figure has been included within our budget for 2018/19 for the scheme.
- 5.3.3. Various alternative sites are being progressed to feasibility stage to be considered for the balance of the remaining budget, which again has been moved to 2018/19.

STROUD DISTRICT COUNCIL

AGENDA

HOUSING COMMITTEE

ITEM NO

27 MARCH 2018

8

| | |
|---|--|
| Report Title | Budget Monitoring Report 2017/18 Month 10 |
| Purpose of Report | To present to the Committee a forecast of the outturn position against the revenue budget and Capital programme for the General Fund and HRA for 2017/18. |
| Decision(s) | <p>The Committee RESOLVES:</p> <p>a)to note the outturn forecast for the General Fund and HRA Revenue budgets and Capital programmes for this Committee To recommend to Strategy and Resources Committee:</p> <p>b)that, subject to the overall position at outturn, the carry forwards and reserve transfers detailed in this report are approved</p> |
| Consultation and Feedback | Budget holders have been consulted about the budget issues in their service areas. The feedback has been incorporated in the report to explain differences between budgets and actual income and expenditure. |
| Financial Implications and Risk Assessment | <p>There are significant levels of revenue underspends and capital slippage forecasted in the HRA. This should be considered when reviewing the overall position of the HRA over the medium and long term. Any HRA surplus at year end would return to HRA reserves, strengthening the reserves position over the medium term, subject to any future approvals for use of the reserves.</p> <p>Lucy Clothier, Principal Accountant Tel: 01453 754343 Email: lucy.clothier@stroud.gov.uk</p> |
| Legal Implications | <p>To the extent that the outturn forecast is for noting, the report is for information and there are no legal implications. There are also no legal implications associated with the carrying forward of surpluses, however, it does not appear that any alternatives to such a carry forward have been considered. (Ref: r0903/c2703/d1203)</p> <p>Mike Wallbank Solicitor Advocate and Deputy Monitoring Officer Email: mike.wallbank@stroud.gov.uk</p> |

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| Report Author | Lucy Clothier, Principal Accountant Tel: 01453 754343 Email: lucy.clothier@stroud.gov.uk |
| Options | None |
| Performance Management Follow Up | Budgets will continue to be monitored on a regular basis by budget holders supported by Finance. The outturn position will be reported to Strategy and Resources Committee in May 2018 and Housing Committee in June 2018. |

Background

1. This report provides the first monitoring position statement for the financial year 2017/18. The purpose of this report is to notify members of any known significant variations to budgets for the current financial year, highlight any key issues, and to inform members of any action to be taken if required.
2. **Due to the volume of information contained in the report, it would be helpful where members have questions on matters of detail if they could be referred to the report author or the appropriate service manager before the meeting.**

General Fund Revenue Budget position

3. Council approved the General Fund Revenue budget for 2017/18 in February 2017 including budget proposals of the administration. This committee had previously considered the standstill budget at its meeting in December 2016.
4. The latest budget for Housing Committee taking into account the carry forwards is £573k (Original Budget was £562k).
5. The monitoring position for the service at 31 January 2018 shows a projected net **underspend of £36k (-6.3%)** against the latest budget, as summarised in Table 1. This underspend is stated net of transfers to reserves and carry forwards. The overall position on the General Fund will be considered by Strategy and Resources Committee at their meeting in April 2018.
6. The position includes the transfer to earmarked reserves of an estimated £65k. This is new grant funding received in 2017/18 that will be used over the period 2018/19 to 2020/21. Further detail is included in paragraph 9. Any transfers would be subject to the overall position of the General Fund at Outturn.
7. The outturn position is mainly attributable to the major items outlined in Table 2 with an explanation of the significant variances that have arisen.

Table1 – General Fund Revenue budgets Housing Committee 2017/18

| Housing Committee | Para Refs | 2017/18 Original Budget (£'000) | 2017/18 Revised Budget (£'000) | 2017/18 Forecast Outturn (£'000) | 2017/18 Outturn Variance (£'000) |
|-------------------------------------|-----------|---------------------------------|--------------------------------|----------------------------------|----------------------------------|
| Homelessness | 9 | 259 | 259 | 255 | (4) |
| Housing Strategy | 10 | 89 | 110 | 93 | (18) |
| Private Sector Housing | 11 | 214 | 204 | 189 | (14) |
| Housing (General Fund) TOTAL | | 562 | 573 | 553 | (36) |

8. The table below outlines the key variances for this Committee.

Table 2 - Headline Budget variances

| Housing Committee | Para Refs | Overspend / (Underspend) (£'000's) |
|--|-----------|------------------------------------|
| Homelessness | 9 | |
| Salary underspend | | (24) |
| Bed and breakfast expenditure | | 90 |
| Bed and breakfast income | | (66) |
| Additional grant income – request to transfer to EMR | | (65) |

9. Homelessness – (£4k) underspend

(Phil Bishop extn 4063, phillip.bishop@stroud.gov.uk)

Salary savings of £24k have been identified across Housing Advice and Homelessness Prevention. This is largely due to delays in recruiting to vacant posts.

Spend on bed and breakfast continues to be higher than budgeted, however this is partially offset by income from corresponding Housing Benefit claims. With the rollout of full Universal Credit in the district, the income received going forward is likely to reduce which could create an ongoing pressure within the service.

Two additional grants have been received in 2017/18. Grant funding of £22k has been received as new burdens funding for the Homelessness Reduction Act (three year grant). This will be used to fund a part time post to support the additional duties of the Homelessness Reduction Act.

A £63k Flexible Homelessness Support Grant (two year grant) will be used to fund an additional full time post for the length of the grant funding. Part of the grant has been used in year to partially offset the additional cost of Bed & Breakfast (£10k), and £10k towards homelessness prevention.

As these grants were not received until partway through the year and recruitment for the new posts is underway, it is proposed that the remaining grant (£43k Flexible Homelessness Grant and £22k new burdens funding) is transferred to an earmarked reserve and allocated to fund the posts in future years.

10. Housing Strategy – (£18k) underspend

(Pippa Stroud extn 4099, pippa.stroud@stroud.gov.uk)

General running costs are expected to be £3k lower than budgeted for the year, and £15k of a carried forward budget remains.

11. Private Sector Housing – (£14k) underspend

(Maria Hickman extn 4454, maria.hickman@stroud.gov.uk)

A small underspend in staffing costs (£4) have been supplemented by the ending of the Home Improvement Agency contract, giving an overall underspend of £14k.

General Fund Capital Programme

12. The Housing General Fund Capital Programme of £389k was approved by Council in January 2017. This has subsequently been revised to £710k following the approval of the carry forwards/slippage and profiling changes by Strategy and Resources Committee at their meetings in June 2017 and January 2018.

13. Table 3, below, shows the General Fund Capital Outturn forecast for the Housing Committee 2017/18, projecting an underspend of £231k at this stage of the financial year. Based on the current forecast an amount of £120k would be proposed to be carried forward and added to the 2018/19 Capital Programme.

Table 3 – Housing Committee Capital Programme

| Housing Capital Schemes | 2017/18 Revised Budget (£'000) | 2017/18 Spend to date (£'000) | 2017/18 Projected Outturn (£'000) | 2017/18 Outturn Variance (£'000) |
|--|--------------------------------|-------------------------------|-----------------------------------|----------------------------------|
| Affordable Housing – Support to Registered Providers | 120 | 0 | 90 | (30) |
| Disabled Facilities Grants | 330 | 153 | 226 | (104) |
| Private Sector Housing Loan Scheme | 60 | 43 | 43 | (17) |
| Health through Warmth Grants | 200 | 20 | 120 | (80) |
| TOTAL General Fund Capital | 710 | 216 | 479 | (231) |

14. The Councils Capital programme for 2017/18 is reported and updated regularly throughout the year by the responsible officers.

Support to Registered Providers – (£30k) slippage

15. A grant payment of £90k has been made to a Registered Provider, with the remaining budgeted grant of £30k now likely to be made in 2018/19. Therefore it is proposed that the remaining funds be carried forward into 2018/19.

Disabled Facilities Grants – (£104k) underspend

16. Disabled Facilities Grants are funded (via the County Council) through the Better Care Fund. Although the approved budget is £330k, the full allocation for the Stroud District Council area is substantially higher (over £500k) and funding would be provided by Gloucestershire County Council for all spend up to this higher allocation amount. An underspend of £104k is currently forecast due to low demand. Any underspend must return to the County Council, to be returned to the county pool.

Private Sector Housing Loan Scheme – (£17k) underspend

17. An underspend of £17k is currently forecast.

Health Through Warmth Grants – (£80k) underspend (carry forward)

18. The funding for the Health Through Warmth is predominantly used for insulation and heating systems to increase thermal efficiency in homes of people with cold or damp related health issues. Since this is external funding it is proposed that any underspent funds are carried forward into 2018/19.
19. Further detail on the capital programme can be found in the Capital Project Monitoring Report.

Housing Revenue Account Budget position

20. The original net Housing Revenue Account budget for 2017/18 is a transfer from reserves of £3.088m, as approved by Council at their meeting in January 2017. This has now been revised to a transfer from reserves of £3.578m taking into account the additional capital budget as approved by Strategy and Resources in June 2017 and January 2018.
21. The monitoring position for the service at 31 January 2018 shows a projected net underspend of £1.541m (-6.7% of gross spend) against the latest budget, as summarised in Table 5. This is an increase of £0.392m from the £1.149m underspend reported in September 2017.
22. Table 6 shows the HRA Capital spend and projected outturn for 2017/18.
23. It is proposed that any surplus at the end of the year is returned to HRA general reserves. Based on the current forecasted underspend of £1.541m, this would increase HRA general reserves to £3.176m. The revised reserves position over the medium term, subject to any calls on reserves, would be as follows.

Table 4 – Estimated HRA General Reserves

| | 2017/18 £000s | 2018/19 £000s | 2019/20 £000s | 2020/21 £000s | 2021/22 £000s |
|---|------------------|------------------|------------------|------------------|------------------|
| Opening Balance | 5,213 | 3,176 | 3,050 | 3,234 | 3,040 |
| Budgeted Transfer To/(From) General Reserves | (3,578) | (126) | 184 | (194) | 1,742 |
| Forecasted 2017/18 Underspend | 1,541 | | | | |
| Closing Balance | 3,176 | 3,050 | 3,234 | 3,040 | 4,782 |

24. It should be noted that although this increase in reserves over the medium term is good news, the majority of the surplus is made up of one year only underspends. Therefore further savings in future years can't be assumed and the long term position, as reported in the 2018/19 Budget Setting paper at the December Committee meeting, remains largely unchanged.

Table 4 – HRA Revenue Summary

| | Para Refs | 2017/18 Original Budget (£'000) | 2017/18 Latest Budget (£'000) | Forecast Outturn (£'000) | Outturn Variance (£'000) |
|---|--------------|--|--|--------------------------------|--------------------------------|
| Income | | | | | |
| Dwelling Rents and Service Charges | 25 | (22,269) | (22,171) | (22,565) | (394) |
| Other Charges and Income | | (661) | (661) | (664) | (3) |
| Total Income | | (22,930) | (22,832) | (23,229) | (397) |
| Expenditure | | | | | |
| Supervision and Management | 26 | 5,301 | 5,234 | 4,921 | (313) |
| Repairs and Maintenance | 27- 31 | 3,658 | 3,643 | 3,040 | (603) |
| Sheltered Housing Service | 32 | 1,441 | 1,523 | 1,346 | (177) |
| Other Expenditure | | 552 | 552 | 558 | 6 |
| Sheltered Housing Modernisation | 33 | 425 | 406 | 314 | (92) |
| Queens Court | | 0 | 0 | 43 | 43 |
| Revenue Funding of Capital Programme (Depreciation and RCCO) | | 10,562 | 9,880 | 9,880 | 0 |
| Provision for Bad Debts | 34 | 100 | 100 | 50 | (50) |
| Total Expenditure | | 22,039 | 21,338 | 20,152 | (1,186) |
| Other Costs and Income | | | | | |
| Interest Payable/Receivable | 35 | 3,476 | 3,476 | 3,426 | (50) |
| Transfers to/(from) Earmarked Reserves | 36 | 503 | 1,596 | 1,688 | 92 |
| Transfers to/(from) General Reserves | | (3,088) | (3,578) | (3,578) | 0 |
| Total Other Costs and Income | | 891 | 1,494 | 1,536 | 42 |
| Total Housing Revenue Account | | 0 | 0 | (1,541) | (1,541) |

Further detail of this breakdown is as follows:

25. Dwelling Rents and Service Charges – (£394k) additional income

Income is expected to be £394k more than budget. This is largely due to void loss (excluding dwellings intended for redevelopment) being lower than the budgeted void rate of 2%.

26. Supervision and Management – (£313k) underspend

Salary underspends of £104k (due to vacant posts during the year) as well as an unused staffing contingency of £184k make up most of this underspend. Funding set aside for estate works and resident involvement have not been fully utilised due to needing time for the new Neighbourhood Management Officers to learn their roles and changes to tenant involvement, the future of which is being reported to this committee. The cost of insuring the dwellings and other assets in the HRA has risen, being £50k more than budget in 2017/18. This has been offset with the assumption that there will be no calls on the £50k contingency budget. This could change should something happen before the end of the financial year.

27. Repairs and Maintenance – (£603k) underspend

28. Planned Maintenance – (£309k) underspend

There was a delayed start for the new contractor on external decorating that will result in some of the programme slipping into next year. Some other planned areas, such as smoke detector servicing is now being undertaken by the In-house Gas Team, providing additional savings to the planned maintenance budget.

29. Gas In-house Provider – (£91k) underspend

Savings relate in part to reduced salary costs while recruiting to vacant posts, as well as lower than budgeted overheads.

30. Voids – (£152k) underspend

Void spend has been lower than budgeted throughout the year.

31. Responsive Maintenance – (£51k) underspend

Due to the reactive nature of works, it is difficult to predict the works required during the year and a small underspend is expected.

32. Sheltered Housing Service – (£177k) underspend

Salary underspends and lower than budgeted in year costs (such as grounds maintenance) have led to an expected underspend of £177k. This budget will be reviewed as the Sheltered Modernisation Programme continues.

33. Sheltered Housing Modernisation – (£92k) slippage

A reduced number of decants have occurred during the year. The balance of £92k will remain in the Earmarked reserve in order to contribute towards funding the decanting of residents from Cambridge House and Glebelands which will begin in 2018/19.

34. Provision for Bad Debt – (£50k) underspend

It is currently expected that in line with last year, the additional provision needed for unpaid rents and charges will be lower than budget. This could change at the end of the year. It is also likely that this will increase significantly over the medium term due to the impact of Universal Credit.

35. Interest Payable/Receivable – (£50k) underspend

The budget includes an amount of £50k for payment of interest on Right To Buy (RTB) receipts to be repaid to Government. It is currently expected that this won't be necessary.

36. Transfers to/from Earmarked Reserves – £92k reduced transfers from Earmarked Reserves

The current forecast in Sheltered Housing Modernisation means that £92k of the budgeted transfer will not be needed in 2017/18. This amount will therefore remain in the reserve and will be allocated to the project in the future.

HRA Capital Programme

37. The following table shows the full capital programme for 2017/18

Table 6 – HRA Capital Summary

| Capital Summary | 2017/18 Revised Budget (£'000) | Spend to date (£'000) (to end Jan 18) | 2017/18 Projected Outturn (£'000) | 2017/18 Outturn Variance (£'000) | Proposed Slippage (£'000) |
|---------------------------------------|--------------------------------|---------------------------------------|-----------------------------------|----------------------------------|---------------------------|
| Central Heating | 690 | 593 | 776 | 86 | 0 |
| Disabled Adaptations | 308 | 25 | 60 | (248) | 0 |
| Kitchens and Bathrooms | 1,545 | 781 | 1,163 | (382) | 0 |
| Major Voids | 515 | 270 | 450 | (65) | 0 |
| Asbestos/Radon and Compliance | 453 | 91 | 105 | (348) | 0 |
| Doors and Windows | 515 | 267 | 499 | (16) | 0 |
| Electrical Works | 206 | 208 | 260 | 54 | 0 |
| Damp Works/Insulation | 124 | 2 | 2 | (122) | 0 |
| Renewable Heating 1 | 0 | (569) | (569) | (569) | 0 |
| Non-Traditional Properties | 340 | 3 | 179 | (161) | 0 |
| Door Entry | 206 | 5 | 195 | (11) | 0 |
| External Works | 1,700 | 385 | 883 | (817) | 0 |
| Total - Major Works | 6,602 | 2,061 | 4,003 | (2,599) | 0 |
| Woolaways - Minchinhampton | 0 | 2 | 2 | 2 | 0 |
| Woolaways-Leonard Stanley (New Build) | 0 | (87) | 2 | 2 | 0 |
| Woolaways-Top of Town (New Build) | 0 | 5 | 5 | 5 | 0 |
| The Corriett | 0 | (28) | (26) | (26) | 0 |
| Berkeley | 0 | 3 | 3 | 3 | 0 |
| Hillside, Coaley | 0 | (84) | (47) | (47) | 0 |
| Southbank, Woodchester | 8 | 3 | 0 | (8) | 0 |
| Chapel Street, Cam | 535 | 509 | 535 | 0 | 0 |
| Littlecombe | 0 | (28) | 2 | 2 | 0 |
| New Homes Contingency | 17 | 0 | 0 | (17) | 48 |
| Fountain Crescent | 0 | 5 | 0 | 0 | 0 |
| Woolaways-Top of Town Phase 2 | 0 | (26) | 4 | 4 | 0 |
| Woolaways-Top of Town Phase 3 | 203 | 181 | 229 | 26 | 0 |
| Ship Inn | 19 | 10 | 20 | 1 | 0 |
| Woolaways-Top of Town Phase 4 | 485 | 477 | 490 | 5 | 0 |
| Miscellaneous Properties | 700 | 566 | 700 | 0 | 0 |
| Total - New Build | 1,967 | 1,508 | 1,919 | (48) | 48 |
| Sheltered Housing Modernisation | 1,366 | 336 | 568 | (52) | 52 |
| Total Capital Expenditure | 12,482 | 3,905 | 6,490 | (2,699) | 100 |

38. Major Works – (£2,599k) underspend/slippage

This is a combination of reduced spend in areas such as Major Voids, Asbestos and Disabled Adaptations, as well as reprogramming of the kitchens and bathrooms contract and slippage in external works. A change in contractor has affected some non essential works, although critical works have continued using the existing provider.

39. Central Heating - £86k overspend

Spend on heating systems is slightly higher than budgeted due to the inclusion of two large communal boilers in sheltered schemes which have significant costs.

40. Disabled Adaptations – (£248k) underspend

Based on demand, total spend on disabled adaptations is expected to be £140k, however this has been offset by an overaccrual of £80k brought forward from last year.

41. Kitchens and Bathrooms – (£382k) underspend

Validation of works, and tenant refusal of works has meant that fewer kitchens and bathrooms are needed than originally estimated. There is therefore an underspend of £382k against budget. The level of budget needed going forward will be reviewed as further data is received on stock condition.

42. Major Voids – (£65k) underspend

Spend on major voids is in nature responsive and the numbers of major voids have varied greatly throughout the year. An underspend of £65k is currently expected.

43. Compliance – (£348k) underspend

This budget is allocated for a number of compliance issues such as asbestos removal. Asbestos removal is directly linked to major works as the removal happens in conjunction with the works. It is estimated to cost £163k less than budget in this year, as the level of major works is lower. Other parts of this budget include and remedial capital works linked to Fire Risk Assessments, which although no works have been required from this budget (although new fire doors have been fitted within the doors budget line), may be needed in future years as Fire Risk Assessments are routinely reviewed.

An allowance was also made for funding to make good homes where fires have been removed under compliance. For efficiency, some of this work has been undertaken through the Central Heating work stream.

44. Doors and Windows – (£16k) underspend

The replacement of doors and windows is largely on target for the year.

45. Electrical Works – £54k overspend

A number of communal areas have been rewired which has increased the cost of electrical works in year. This has been funded from underspends elsewhere in major works.

46. Insulation – (£122k) underspend
A programme of works is being formulated to ensure available grants utilised, and ensuring the most beneficial use of the available funding. This has unfortunately been delayed due to staffing changes.
47. Renewable Heating – (£569k) underspend
A large sum of £569k is being reported as an underspend in Renewable Heating. This sum is in dispute with the contractor that completed the works in 2014. With no response forthcoming from the contractor to resolve the situation, the accounting entry will not be carried forward into next year. Provision will be made for the sum (which would show in revenue), which will be called on should the claim be settled. This will lead to an underspend being shown on the capital renewable heating line, with the revenue cost of the provision being offset from reducing the RCCO needed to fund the capital programme. The bottom line of the HRA will therefore be unaffected.
48. Non Traditional Properties – (£161k) underspend
Refurbishment of 16 non traditional homes is expected by the end of the year, however this is lower than budgeted due to a change in contractor.
49. Door Entry – (£11k) underspend
The installation of door entry systems in communal blocks is currently expected to be mostly on target. This work is programmed to overlap with other works streams, some of which have been delayed and so there is potential that it may slip into early 2018/19.
50. External Works – (£817k) underspend
Due to issues with the contractor and reduced works possible over winter months it has not been possible to catch up with works following a late start on site. This has led to an expected £817k underspend in 2017/18.
51. Any slippage in contracts at this point in the year will lead to a revised programme over the medium term and so has not been included in the slippage figures. Remaining funding will remain in the Major Repairs Reserve and will be used to fund capital works over the coming years.
52. **New Build and Development – (£48k) slippage**
2017/18 has seen the completion of the final phases at Top of Town and the completion of the mixed tenure scheme at Chapel Street, Cam. Some final consultant fees a number of our completed schemes have also been due during the year.

The New Build and Development Programme has been reprofiled, as recommended by Housing Committee in December. It is expected that a small carry forward of £48k will be required at the end of the year. This is largely due to allowances made for additional amounts on new build sites which have not yet been agreed. They have therefore been taken out of the forecast for 2017/18.

53. Sheltered Housing Modernisation– (£52k) slippage

The Sheltered Housing Modernisation Project has been reprofiled, as recommended by Housing Committee in December. Delays in the procurement of a contractor for the works at Sherborne House, mean that slippage is likely in the region of £52k.

54. Further detail on the capital programme can be found in the Capital Project Monitoring report.

HOUSING COMMITTEE

27 MARCH 2018

9

| | |
|---|---|
| Report Title | Non Traditional Homes Report and Action Plan |
| Purpose of Report | To provide members with the results of the structural appraisals undertaken to the remaining non traditional housing stock and present members with options for keeping the remaining properties in repair. |
| Decisions | The Committee RESOLVES to: To undertake all works defined in the report within a 10 year period subject to the availability of adequate financial resources. |
| Consultation and Feedback | Curtins Consulting as the appointed Structural Engineers, The Project Surveyor, Senior Asset Data Officer, Operational officers, Chair and Vice Chair of Housing Committee. |
| Financial Implications and Risk Assessment | <p>The capital programme is approved annually by Council as part of budget setting.</p> <p>Should this recommendation be approved, the works on non traditional properties would, subject to the overall funding position of the HRA, be included in the proposed HRA capital budget to Strategy and Resources in December 2018.</p> <p>Lucy Clothier, Principal Tel: 01453 754343 Email: lucy.clothier@stroud.gov.uk</p> <p>Risk assessment by the report author Failure to ensure the Councils compliance requirements are met, or fail to keep the properties in good repair could place the Council in breach of its statutory obligations with the regulator. Poor quality housing may affect a person's health, work, education, and wellbeing.</p> |
| Legal Implications | <p>The committee should note that proposed wording of the resolution will commit the Council to undertaking "all works" within 10 years subject only to "adequate resources" being made available. The report indicates some potential provisos to which that decision might be subject in paragraph 5.4.</p> <p>In the absence of clear and appropriate conditions, the recommended decision is open to successful legal challenge within the 10 year period particularly given the decision significantly exceeds the life of the current Council and the absence of allocated funding.</p> |

| | |
|---|--|
| | <p>If the committee is minded to proceed as per the Decision Box, the committee is recommended to:</p> <ul style="list-style-type: none"> • Consider the implications (if any) for the adopted Strategy; • Clarify its legal duties regarding the refurbishment of the units; • Most importantly, clarify all the provisos of the resolution (e.g. amongst others that is subject there not being changes in the Council’s HRA priorities etc.; that “adequate” resources are only those that are allocated annually as part of the budget process rather than simply available; and that the decision will need to be periodically reviewed (rather than simply the works subject to performance monitoring) and may in any event, change taking account of possible future changes of the Council, its functions, its duties or its management of council housing etc.); • Consider what alternative options exist including amongst others responsive maintenance works only, redevelopment etc. (as indicated in Appendix 1); • Potential outcomes of the works (e.g. impact on RTB sales as touched upon in Appendix 1); • Whether the works will need to be procured (or fall within an existing contract) and as such what, if any, impact there may be on the total costs. (Ref:d13.3c14.3) <p>Karen Trickey, Head of Legal Services & Monitoring Officer Email karen.trickey@stroud.gov.uk</p> |
| Report Author | <p>Joe Gordon, Head of Contract Services Tel: 01453 754190 Email: joe.gordon@stroud.gov.uk</p> |
| Performance Management Follow Up | <p>Performance monitoring will be done by providing regular updates to Housing Committee, as well as management and monitoring group meetings.</p> |
| Background Papers/ Appendices | <p>Appendix 1 – Summary Report prepared by the Special Projects Officer</p> <p>Appendix 2 - Curtins Structural Report</p> |

1.0 Introduction

- 1.1 The Non Traditional Homes Strategy presented to Housing Committee in December 2016 set out the requirement for the Council to adopt a strategic approach for the maintenance and repair of the remaining non traditional homes stock.
- 1.2 This report and appended documents set out the findings of the structural surveys undertaken, as well as the financial resources required to ensure the properties are maintained to ensure their long term viability.
- 1.3 The total number of non traditional properties still owned by the Council is six hundred and eighty seven (687) of which two hundred and twenty nine (229) require some degree of works to be undertaken to bring them up to the required standard. Full details are set out within the Special Projects Surveyor report at Appendix 1.

2.0. Structural Surveys

- 2.1 The structural surveys undertaken indicate that the remaining stock, with the exception of the Swedish Timber Framed properties, have not deteriorated as quickly as would normally have been anticipated.
- 2.2 Some Cleansing of erroneous historic data is required to ensure the Councils database provides an accurate reflection of the portfolio (this work was completed prior to running the financial forecasts).
- 2.3 The main structural elements of the refurbished properties have a life expectancy commensurate with a typical traditional property of a similar age and design, subject to normal maintenance and repair.
- 2.4 Given the findings at 2.3 above we can have some confidence that refurbishment of suitable properties, using appropriate proprietary systems are a viable and cost effective, sustainable option for the Council.

3.0 Thermal Comfort

- 3.1 The average SAP rating for social housing is 62.4 against an all housing average of 54.5. The Council has an aspiration to bring all stock up to the sector average where it is practicable to do so.
- 3.2 The average SAP rating across all retained housing stock is 61 (D), the lowest being 20 (G) and the highest being 91(B). The average SAP across the effected Non Traditional Properties is 57.84 (D), the lowest being 8 (G) and the highest being 74 (C).
- 3.3 In considering the viability of these properties the Council, as a responsible landlord not only has to give consideration to the physical aspects of these properties, but also the social impact on our tenants.

- 3.4 The degree of variance between the highest and lowest levels of thermal performance is considerable, even taking into account the contribution of the most recently constructed housing stock. By increasing thermal levels of the stock, the Council can play a part in ensuring the degree of variation in the fuel bills faced by similar households across its stock does not contribute to those household becoming fuel poor.

4.0 Financial Resource

- 4.1 Detailed cost have been summarised within the Special Projects Surveyor report included at Appendix 1.
- 4.2 The overall cost for delivering the programme (subject to the exclusions indicated within the Curtins report) is £6,735,569 of which £4,743,469 is already committed within the MTFP or indicated within the financial forecast. This is made up of £3,043,469 capital works and £1,700,000 of External Wall Insulation (EWI).
- 4.3 The additional resource required is £1,992,100. However should the programme timescale be escalated an additional £886,556 will be required to fund the programme within the first six years.

5.0 Our Approach

- 5.1 Our approach takes into consideration the requirements of the Energy Strategy and Action Plan, which has a set objective for the Council to develop an Affordable Warmth Strategy.
- 5.2 Setting SAP targets in terms of affordable warmth, and how they might be used to assess future affordability at a time when both thermal efficiency and energy prices are rising is not clear. However to do nothing in terms of improving the stocks thermal conductive capacity is not a viable option.
- 5.3 Over a period of six to ten years, using a combination of structural performance and SAP rating to rank the properties. Starting with the worst first, we will aim to refurbish between twenty three and forty properties per year.
- 5.4 Refurbishment will be subject to confirmation of available resource during the budget setting period, Assessment in accordance with the Obsolescence Procedure Guide, and consideration of any other service or organisational wide requirements.

6.0 Recommendations

- 6.1 Subject to a maximum period of ten (10) years, undertake all works as quickly as possible subject to the availability of adequate financial resources.



Non-Traditional Homes Summary Property Review

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February 2018

Table of Contents:

| | |
|---|-----------|
| INTRODUCTION | 3 |
| PROJECT BRIEF | 3 |
| METHODOLOGY | 3 |
| EXCLUSIONS | 4 |
| MORTGAGEABILITY | 4 |
| EXTENT OF INVESTIGATION | 6 |
| CONCLUSIONS AND RECOMMENDATIONS | 6 |
| AIREY..... | 6 |
| BL8..... | 6 |
| CORNISH | 7 |
| DORLONCO | 7 |
| REEMA CONCLAD | 8 |
| REEMA HOLLOW PANEL | 8 |
| STENT..... | 9 |
| SWEDALE..... | 9 |
| UNITY | 9 |
| NEXT STEPS | 10 |
| RISKS..... | 10 |
| SUSTAINABLE REINVESTMENT | 10 |
| SOCIAL VALUE AND OUR TENANT EXPECTATIONS | 11 |
| CONCLUSIONS | 11 |
| RECOMMENDATIONS | 11 |
| NON TRADITIONAL HOMES SHORT TERM BUDGET FORECAST | 12 |
| 5 YEAR FIGURES | 13 |
| 10 YEAR FIGURES | 14 |
| CONCLUSION AND RECOMMENDATION..... | 15 |

Introduction

Curtin's Consulting Limited were appointed by Stroud District Council (referred to in their report as SDC or the Council) to undertake a survey and prepare a report on the condition of the remaining non-traditional properties which remain with the Councils housing portfolio.

Surveys were completed in May 2017, and provide a supplement to the earlier report undertaken in August 2003. Additional work has been undertaken to clarify the financial position and viability of the stock.

This report considers only the structural stability and measures which may be taken to keep the properties in good repair.

The 2003 report, prepared by Curtins, noted that some roof coverings were already at or approaching the end of their design life and there was an expectation of an increasing number of repairs being required over the next 30 years. This was particularly to the Woolaway properties which have since been demolished and the sites redeveloped.

Project Brief

The purpose of the surveys was to assess the current structural condition of the stock and identify any remedial work required supplemental to the previous report undertaken in 2003, to ensure a minimum 30-year continued life of the structures is achieved.

In addition, outcomes would provide an update to the outturn report to enable SDC to consider future options regarding the remaining non-traditional housing stock.

Methodology

- Desk top review of Curtins 2003 report
- Visual inspection of external walls
- Determining the configuration of the principal structural components
- Visual inspection internally of floors, walls, ceilings where access available
- Recommendations for future action
- Provision of a report, including an assessment of "remaining life"

For each construction type, Curtins gave an assessment of "remaining life". This is based on the Curtins 2003 report, and their observations of the properties inspected at that time.

It will be assumed that unless there is evidence of deterioration then the remaining life will remain at a constant 30 years. Therefore, the baseline position in 2003 should still be 30 years in 2017.

The remaining life only applies to the non-traditional elements (PRC, steel frame, timber frame etc), and not to any other elements (timber roof structure, coverings, wall finishes, windows etc).

Exclusions

Curtins report expressly excludes that “No trial pits will be excavated; no floorboards will be taken up. The surface waste drainage systems will not be investigated. The survey will not include investigation of non-structural elements such as services (gas, electric, and water supply), windows, doors, finishes (plaster, ceilings etc.), roof insulation and coverings, pollution and/or contamination, asbestos etc. Insulation, damp penetration and condensation will be examined insofar as they might adversely affect the structural components.”

These elements, where applicable, will be considered as part of any surveys for refurbishment works or financial viability forecasting.

Mortgageability

The Curtins report covers non-traditional and mortgageability. The Housing Defects Act of 1984 and Housing Act of 1985 confirmed some construction types as being “*Designated Defective*”. This only applied to properties which were of PRC (Prefabricated Reinforced Concrete) construction, and these types of property became instantly un-mortgageable circa 1980.

In theory, but not necessarily in practice, any construction type which was not “*Designated Defective*” should be mortgageable. However lenders, in protecting their own interests, have tended to put any non-traditional type into the unmortgageable category.

The majority of SDC non-traditional properties are designated defective PRC types and the subsequent works required to achieve mortgageability would require the removal of the PRC external walls and party walls (which will have added difficulty where the adjoining house is private), and replacing them with traditional masonry construction.

| Type | Construction | Designated Defective | Major Works | Qty | Mortgageable?* |
|-------------|---------------------|-----------------------------|-----------------------|------------|-----------------------|
| Airey | PRC | Yes | External Walls | 59 | No, Internal PRC |
| BL8 | Steel Frame | No | Over cladding – Brick | 53 | Yes |
| Cornish | PRC | Yes | Walls Out | 52 | Yes, PRC Removed |
| Dorlonco | Steel Frame | No | As original | 13 | Yes |
| Reema HP | PRC | Yes | EWI and as original | 256 | No, all PRC remain |
| Reema CC | PRC | No | As original | 36 | Yes |

| | | | | | |
|----------|--------------|-----|--------------------|-----|-----------------------|
| Stent | PRC | Yes | EWI | 55 | No, all PRC remain |
| Swedish | Timber Frame | No | EWI and Original | 20 | Yes |
| Unity | PRC | Yes | EWI | 59 | No, all PRC remain |
| Woolaway | PRC | Yes | EWI and Demolished | 5 | No, all PRC remain |
| | | | | 608 | *Note: in theory only |

It should be recognised that even amongst lenders there are different attitudes to non-traditional housing. The above information is Curtin's opinion and not that of individual lenders.

The majority of the non-traditional stock listed are known as Reema Hollow Panel, and the cost for undertaking the structural PRC repairs necessary to make all of SDC non-traditional properties mortgageable would prove to be the most expensive option.

If SDC were to have a single contract for the works and started a new one every week (without any breaks), the contract period would be roughly 5 years. Further considerations would include the removal of existing EWI and additional cost of removal.

The impact of the works on tenants would be very disruptive, would need to be temporarily decanted, probably for twenty weeks (depending on the amount of improvements incorporated into the works – e.g. new central heating, rewiring, kitchens, bathrooms etc.).

In addition to decanting and loss of rental income during the works, there will also be significant SDC management time to consider, both technical and housing management staff.

The Council's non-traditional properties may not be acceptable for mortgage purposes if the property was not completed to a PRC license standard or a bespoke scheme authorised by the Council.

No licences have been updated for twenty years, and any works "to the licence" will also need to comply with current building regulations at the time of the works. For example, the U-value to be achieved is far more onerous today than when the licences were first written in the mid 1980's, so, for example, wall thicknesses are greater to accommodate more Insulation.

Curtins would recommend that if you wish to sell the refurbished properties on the private market (rather than re-letting to your tenants) you should obtain documentation confirming that the works were carried out to a licence (which means approaching the licence holders).

Extent of Investigation

The non-traditional housing stock currently comprises of 687 properties of which 229 are affected by the review which are distributed as follows:

| Construction | Qty |
|--------------------|-----|
| Dorlonco | 13 |
| Reema Conclad | 36 |
| Reema Hollow Panel | 162 |
| Swedish | 18 |
| Total | 229 |

Curtins undertook surveys to 42no. affected properties, representing 18% of the non-traditional housing stock affected by the review.

Conclusions and Recommendations

Airey

SDC own 59 Airey properties located Brownhill, Coaley. Ebley, Hardwicke, Kingswood, North Nibley, Slimbridge and Westrip.

Initially a “Leeds” scheme was adopted, which at the time would have made houses repaired under the scheme “mortgageable” for tenants if the party and spine wall had been dealt with.

Subsequently an “External Walls” only scheme was adopted. As the PRC elements in the party and spine walls were not dealt with, the scheme would not have been “mortgageable” for tenants.

Retained PRC Remaining Life – Curtins state “no change since 2003” and provide 30 years remaining life from the date the report was published”

Conclusion – Curtins state “There is no reason to believe that the retained (but structurally redundant) PRC columns in the external walls or the party and spine wall internally had suffered any deterioration”

Recommendations – Internal inspections of retained PRC in the party and spine walls whenever property vacant. Check risk of fire spread across party wall, seal where required.

BL8

SDC own total 53 BL8 properties located in Cam and Leonard Stanley.

The external walls have been refurbished by building a new brick outer leaf against the existing metal sheet external walls. The details of the works are not known to Curtins, but they assume that the raft foundation was extended to accommodate the

new brickwork, and a cavity with insulation was incorporated into the works. The refurbishment works included for a new Decra roof installed over the existing roof sheeting.

Retained metal frame Remaining Life – Curtins state “no change since 2003” and provide 30 years remaining life from the date the report was published”

Recommendations – No further action required

Cornish

SDC owns a total of 52 Cornish properties located in Bridgend, Wotton-Under-Edge, Coaley, Cam, Kingswood, and Slimbridge.

The Cornish properties were not part of Curtins 2003 Report. All the dwellings have been refurbished to a “Walls Out” scheme meaning that only the exterior walls have been renewed.

Retained PRC Remaining Life – Not applicable, all PRC in external walls removed and replaced with traditional brick/block cavity walling

Recommendations – Internal inspections of support to first floor walls whenever property vacant and action to improve support where required. Inspections of PRC constructed outbuildings to build up database of structural condition, aim to remove all PRC outbuildings within 20 years or less.

Dorlonco

SDC owns a total of 13 Dorlonco properties located in Cashes Green. The external walls can either be brickwork, rendered block work, or render on metal lathing. The rendered block work type has been used in Cashes Green. The steel frame sits within the cavity of the external wall. The roofs have conventional slates on a timber sub-frame which is ultimately supported on steel trusses.

Retained Steel Frame Remaining Life – 30 years

Recommendations –

- Install EWI, but also remove existing cavity fill and use the opportunity of opening up to
- Inspect the steelwork within the cavity.
- Install “whole house” ventilation system in conjunction with EWI.
- Inspect chimneys during voids, and take down to below roof where deteriorated or not needed.
- Enabling works for EWI include dealing with overhead electric cables, reducing ground levels where too high, and moving gas pipe work away from the building.

Reema Conclad

SDC owns a total of 36 Reema Conclad properties located in Forest Green, Nailsworth, Minchinhampton. The PRC elements in the external walls are performing satisfactorily, and apart from some minor localised repairs to panels no further remedial action is required at the present time. Of the eight properties inspected there were only two minor localised cracking/spalling defects. Pro-rata across the Conclad stock we might expect about ten minor repairs.

PRC Remaining Life – 30 years, longer when EWI is installed.

Recommendations –

- Install EWI, inspect **all** properties and carry out repairs to the PRC as part of the EWI installation.
- Install “whole house” ventilation system in conjunction with EWI.
- Enabling works for EWI include dealing with reducing ground levels where too high, dealing with porches and rainwater down pipes, extending the roof gable ladder, re-locating radon gas pumps and ducts away from the buildings, and liaising with LA Planners regarding the existing tile hangings to the first floor.

Reema Hollow Panel

SDC owns a total of 192 Reema Hollow Panel properties located in Forest Green, Nailsworth, Minchinhampton, Woodchester, Whiteshill, Stonehouse, Leonard Stanley, Cashes Green.

The Hollow Panel type of construction comprises wide, storey height, pre-cast, lightly reinforced concrete panels, the inner and outer leafs joined by vertical ribs. Steel reinforcement protrudes into the cast in-situ concrete column at panel junctions and corners. Each panel features channel shaped rebates on upper and vertical edges. These act as permanent shuttering for the in-situ concrete columns and reinforced ring beam. At corners and party walls quoins provide the shuttering and external finish.

PRC Remaining Life – 30 years, possibly more if EWI installed. May need to repair first floor PRC “ladder” beams from time to time and these should be inspected at changes of tenancy.

Recommendations –

- Amend database to correct additions and deletions found during the survey
- Install EWI, inspect **all** properties and carry out repairs to the PRC in advance.
- Install “whole house” ventilation system in conjunction with EWI.
- Check for and seal gaps across the party walls where there is a risk of fire spread.
- Check “ladder” FF beams at all changes of tenancy.
- Repairs to single storey extension at 31 Victory Road, Whiteshill

- Enabling works for EWI include dealing with reducing ground levels where too high, dealing with overhead cabling, gas pipework, porches, conservatories, roof verges

Stent

SDC owns a total of 55 Stent properties located in Dursley. Since 1998 the PRC external walls of the houses have been protected by EWI. There is no reason to believe that the retained PRC has deteriorated.

PRC Remaining Life – 30 years, subject to routine maintenance of the EWI (which is now 19 years old).

Recommendations –

- Assessment of the EWI in 2018, and 2023. Carry out any repairs to the finishes necessary to continue protection of the PRC.
- Consider new EWI from 2023.
- If new EWI, then remove existing to enable a full assessment of the condition of the PRC prior to installing new.
- Carry out internal inspections at changes of tenancy, including random opening up to view the PRC wall condition. Log the floor construction materials (steel or timber), check condition, and repair/replace as necessary.

Swedale

SDC owns a total of 20 Swedish Timber properties located in North Nibley, Painswick, Stancombe, Stinchcombe, The Camp, Uley and Wotton-Under-Edge. Dwellings comprise semi-detached chalet bungalows and two storey houses. The external walls are clad in vertical timber boarding throughout, and the dwellings have steep pitch gable roofs covered with concrete tiles, slates or timber shingles. The chalet bungalows and some houses have single-storey gable roof extensions.

Timber Frame Remaining Life – Stancombe - 30 years

Other sites – Limited without extensive repairs to the timber frame in the short term

Recommendations –

- Repairs and EWI to be installed within three years.
- Install “whole house” ventilation system in conjunction with EWI.
- Carry out maintenance works this year – gutters, ivy, dormer windows, chimneys, roof tiles, flashing, ground levels, underfloor vents all need attention to varying degrees.
- EWI enabling works prior to Repair and EWI Contract – overhead cables and gas pipework.

Unity

SDC owns a total of 59 Unity properties located in Hardwicke, Ebley and Cashes Green. There are two basic types of Unity dwelling. The earlier version (Mark I) has

outer cladding and inner block skin not fixed to the columns but tied across the cavity with copper ties. The later version (Mark II) has outer cladding fixed directly to the columns using copper straps. The columns are slightly different cross section; the Mark I columns have a slight recess in the side, the Mark II columns are of plain rectangular section.

The PRC elements in the external walls were in good condition with a low risk of corrosion to the steel reinforcement, and of all the properties have been protected by the installation of EWI.

PRC Remaining Life – 30 years, subject to routine maintenance of the EWI (which is now 16 years old).

Recommendations – Repairs to the EWI to continue to protect the PRC.

Next Steps

SDC recognises that better standards of insulation are needed help improve the thermal properties of its homes, regardless of the types of primary heating systems which are installed.

When carrying out refurbishment work on buildings owned by SDC, we will actively seek to go beyond the minimum level of insulation required to meet regulations where it is practically and economically feasible to do so.

External wall insulation improves the home's thermal comfort and performance, limits Co2 pollution and reduces energy costs of accessories (heat pump, air-conditioning, fans). It creates more comfortable living spaces by limiting the effects of condensation and eliminates a large number of thermal bridges and excessive heat loss through the walls.

Risks

Sustainable Reinvestment

We want to help create sustainable communities which are places where people want to live for the long term. Due consideration will need to be given against any capital outlay and the increased risk of RTB that may result in commercial and socially valuable council assets being sold at below their market value or replacement cost.

This may not be something the Council can control, or indeed influence, however, it should be noted that this is an inherent risk given the average discount available on Council homes increased by 132% between 2012/13 and 2016/17 to more than £60,000, and during that period Right to Buy sales have increased 409% (*Source Local Government association*).

If the Council chooses to do nothing, it is likely to see increased level of reactive maintenance being undertaken on the properties which in itself may not be a long term sustainable option.

There is also the increased risk of tenants becoming dissatisfied with the condition of their homes which may lead to increased levels of complaints, and claims for disrepair.

Social Value and Our Tenant Expectations

Social value remains an important part of Stroud's commitment to stakeholders and we realise that communities need to be successful, economically, socially, and environmentally.

Therefore within this context we consider the locations where a number of our non-traditional stock is located to be beneficial to local needs and particular strategic objectives in determining the impact of investment decisions.

We understand that growing competition to attract the best tenants, rising energy costs, and a more informed client has seen tenant expectations rise. Tenants are more aware of what is achievable from the information provided on Energy Performance Certificates (EPC). Improving the energy efficiency of homes will mean that tenants will live in warmer homes with the potential to manage their energy consumption more efficiently, giving them the scope to reduce their fuel bills.

When SDC invests in improvements to its housing stock the only obvious benefit is for the tenants in the form of better thermal comfort and/or lower fuel bills.

Conclusions

The Curtins report of 2003 provided the Council with a number of options which with the exception of the Woolaway stock, largely remains outstanding.

Since 2003, Housing has seen a number of legislative changes which has put greater emphasis on social landlords to ensure the homes they provide meet required standards.

Recommendations

It is inevitable that some works would make the properties more attractive to potential purchasers under the RTB scheme, and potential lenders would find it easier to justify securing loans against the properties.

Undertaking all of the works to make the properties mortgageable would add considerable expense to any programme, and crucially would not extend the life of the properties substantially beyond other proposed measures.

It is recommended that the Council's reinvestment strategy in the properties takes into account the opportunity to undertake identified capital works at the same time as structural and preventative measures indicated within the Curtins report. This would provide an opportunity to achieve greater scales of economy.

If the Council continued to invest at the current rates it is estimated that works would take in the region of twenty five (25) plus years to complete.

Non Traditional Homes Short Term Budget Forecast

5 Year figures

| Owner | Total Stock | Surveyed |
|---------------|-------------|------------|
| Council Owned | 229 | 162 |
| Total: | 229 | 162 |

| | Catchup | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|----------------------|------------------|---------------|----------------|----------------|----------------|----------------|------------------|
| Dorlonco | 13,432 | 1,767 | 25,113 | 12,748 | 26,780 | 1,419 | 81,258 |
| Reema HP | 604,605 | 79,210 | 123,355 | 185,934 | 43,702 | 87,982 | 1,124,789 |
| Remma Conclad | 216,633 | 6,633 | 42,288 | 19,783 | 10,000 | 10,892 | 306,230 |
| Swedish Timber | 304,563 | 11,953 | 41,494 | 56,647 | 22,957 | 11,603 | 449,216 |
| Grand Total: | 1,139,233 | 99,563 | 232,251 | 275,112 | 103,438 | 111,897 | 1,961,493 |
| Per Property: | | | | | | | 8,565 |

| Archetype EWI & SEWI costs | Unit cost | Unit | Total cost |
|----------------------------|-----------|------|------------|
| Swedish Timber | 22,250 | 18 | 400,500 |
| Dorlonco | 15,600 | 13 | 202,800 |
| Reema HP | 15,600 | 162 | 2,527,200 |

| Grand Total of works | |
|-----------------------------|------------------|
| Capital works | 1,961,493 |
| EWI & SEWI | 3,692,100 |
| Grand Total of works | 5,653,593 |

| Cost per Property per Archetype | EWI&SWEI | Capital Costs | TOTAL |
|---------------------------------|----------|---------------|---------------|
| Swedish Timber | 22,250 | 8,565 | 30,815 |
| Dorlonco | 15,600 | 8,565 | 24,165 |
| Reema HP | 15,600 | 8,565 | 24,165 |
| Remma Conclad | 15,600 | 8,565 | 24,165 |

The above information has been captured from Keystone Asset Management database and the data illustrates indicative costs for 229 non-traditional properties over a fixed term.

The total planned works costs above are a 5-year fixed period and are shown in the table as 1,961,493 million.

The additional external wall insulated render system have been costed per archetype and are shown as a total cost of 3,692,100 million which amounts to a final total of 5,653,593 million expenditure.

10 Year figures

| Owner | Total Stock | Surveyed | | | | | | | | | | |
|---------------------------------|-------------|---------------|-----------|---------|---------------|--------|---------|---------|---------|---------|---------|---------------|
| Council Owned | 229 | 162 | | | | | | | | | | |
| Total: | 229 | 162 | | | | | | | | | | |
| | Catchup | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | Total |
| Dorlonco | 13,432 | 1,767 | 25,113 | 12,748 | 26,780 | 1,419 | 12,952 | 18,327 | 11,224 | 27,240 | 16,840 | 167,841 |
| Reema HP | 604,605 | 79,210 | 123,355 | 185,934 | 43,702 | 87,982 | 177,723 | 172,636 | 199,311 | 198,132 | 93,881 | 1,966,472 |
| Archetype EWI & SEWI costs | | | Unit cost | Unit | Total cost | | | | | | | |
| Swedish Timber | | | 22,250 | 18 | 400,500 | 4,746 | 49,168 | 29,563 | 10,509 | 654 | 400,869 | |
| Dorlonco | | | 15,600 | 13 | 202,800 | 0 | 31,318 | 10,653 | 13,583 | 3,517 | 508,288 | |
| Grand Total of works | | | | | | | | | | | | 13,290 |
| Capital works | | | | | 3,043,469 | | | | | | | |
| EWI & SEWI | | | | | 3,692,100 | | | | | | | |
| Cost per Property per Archetype | EWI&SWEI | Capital Costs | | | TOTAL | | | | | | | |
| Swedish Timber | 22,250 | 13,290 | | | 35,540 | | | | | | | |
| Dorlonco | 15,600 | 13,290 | | | 28,890 | | | | | | | |
| Reema HP | 15,600 | 13,290 | | | 28,890 | | | | | | | |
| Remma Conclad | 15,600 | 13,290 | | | 28,890 | | | | | | | |

The above information has been captured from Keystone Asset Management database and the data illustrates indicative costs for 229 non-traditional properties over a fixed term.

The total planned works costs above are a 10-year fixed period and are shown in the table as 3,043,469 million.

The additional external wall Insulated render system have been costed per archetype and are shown as a total cost of 3,692,100 million which amounts to a final total of 6,735,569 million expenditure.

Conclusion and Recommendation

When reviewing and appraising stock requirements, any investment is focused on sustainable stock and reducing the carbon footprint of the building. Therefore, the proposed works have been recommended to prevent the deterioration of our housing stock and has been identified from Curtin's technical appraisal, supplementary report and SDC's in-house stock condition surveys.

Where similar sized registered social landlords and local authorities have carried out significant levels of improvement on their non-traditional stock, it is generally accepted that good practice requires landlords to thermally improve the walls through external cladding, roof insulation and replacing inefficient central heating.

We can see that the cost per property type is less than the £30k which represents good value for money, given the projected surveyed life of the components. Therefore, based on site assessment reports, data analysis, the approach should be to complete the works when properties become vacant minimising disruption to residents; however it is not anticipated that tenants will need to be decanted in order to deliver the works effectively.

Report



Condition Survey

**Airey
BL8
Cornish
Dorlonco
Reema Conclad
Reema Hollow Panel
Stent
Swedish
Unity
Woolaway**

dwellings at various locations

for

Stroud District Council
Council Offices
Ebley Mill
Stroud
GL5 4UD

By Curtins Consulting Ltd
May 2017

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Contents



| | | |
|-------------|-----------------------------------|-------------------------------|
| 1.0 | Introduction & Brief | |
| 2.0 | Scale of the Investigation | |
| 3.0 | Airey | |
| | 3.1 | Construction |
| | 3.2 | Major Works carried out |
| | 3.3 | Conclusions & Recommendations |
| 4.0 | BL8 | |
| | 4.1 | Construction |
| | 4.2 | Major Works carried out |
| | 4.3 | Conclusions & Recommendations |
| 5.0 | Cornish | |
| | 5.1 | Construction |
| | 5.2 | Major Works carried out |
| | 5.3 | Conclusions & Recommendations |
| 6.0 | Dorlonco | |
| | 6.1 | Construction |
| | 6.2 | Visual Inspection |
| | 6.3 | Conclusions & Recommendations |
| 7.0 | Reema Conclad | |
| | 7.1 | Construction |
| | 7.2 | Visual Inspection |
| | 7.3 | Conclusions & Recommendations |
| 8.0 | Reema Hollow Panel | |
| | 8.1 | Construction |
| | 8.2 | Visual Inspection |
| | 8.3 | Conclusions & Recommendations |
| 9.0 | Stent | |
| | 9.1 | Construction |
| | 9.2 | Major Works carried out |
| | 9.3 | Conclusions & Recommendations |
| 10.0 | Swedish Timber Frame | |
| | 10.1 | Construction |
| | 10.2 | Visual Inspection |
| | 10.3 | Conclusions & Recommendations |
| 11.0 | Unity | |
| | 11.1 | Construction |
| | 11.2 | Major Works carried out |
| | 11.3 | Conclusions & Recommendations |
| 12.0 | Woolaway | |
| | 12.1 | Construction |
| | 12.2 | Major Works carried out |
| | 12.3 | Conclusions & Recommendations |

Contents



13.0 Notes on Mortgageability

12.0 Summary

Appendices

- Appendix A - List of Addresses**
- Appendix B - List of Survey Addresses**
- Appendix C - Forms of Original Construction**
- Appendix D - Photographs**
- Appendix E - List of Previous Reports**
- Appendix F - Copy of 2003 Report**
- Appendix G -**
- Appendix H -**
- Appendix I -**
- Appendix J -**
- Appendix K -**

Contents



13.0 Notes on Mortgageability

12.0 Summary

Appendices

- Appendix A - List of Addresses**
- Appendix B - List of Survey Addresses**
- Appendix C - Forms of Original Construction**
- Appendix D - Photographs**
- Appendix E - List of Previous Reports**
- Appendix F - Copy of 2003 Report**
- Appendix G -**
- Appendix H -**
- Appendix I -**
- Appendix J -**
- Appendix K -**

1.0 Introduction & Brief



Introduction

- 1.1 Curtins Consulting Limited were appointed by Stroud District Council (referred to in the report as SDC or the Council) to undertake a survey and prepare a report on a number of different types of non trad dwellings.
- 1.2 Airey, Cornish, Reema Hollow Panel, Stent, Unity & Woolaway are prefabricated reinforced concrete (PRC) properties, and were *Designated Defective* under the Housing Defects Act 1984.
- 1.3 Reema Conclad properties are prefabricated reinforced concrete (PRC) properties that were not *Designated Defective* under the Housing Defects Act 1984.
- 1.4 BL8 and Dorlonco properties are metal framed properties, and were not *Designated Defective* under the Housing Defects Act 1984.
- 1.5 Swedish houses are timber frame properties, and were not *Designated Defective* under the Housing Defects Act 1984.
- 1.6 The survey work was carried out in early May 2017.
- 1.7 This report has been prepared as follows:

Sections 3 to 12 detail the construction, inspections, previous reports, conclusions & recommendations for each of the property types. Section 13 provides comment on issues of mortgageability and Section 14 provides a summary of the findings, conclusions & recommendations.

In the Appendices, we have provided a full list of all the properties in the survey population (Appendix A), a list of surveyed properties (Appendix B), illustrations of typical original construction (Appendix C), photographs (Appendix D), List of Previous Reports (Appendix E).

This report is provided electronically on disk – as .pdf versions of the report text and Appendices plus Excel.xlsx versions of the tables in Appendices A, B, and full size copies of the photographs in Appendix D.

A copy of the Curtins 2003 Report is also included on the disk

- 1.8 This report has been prepared for Stroud District Council and should not be relied upon by any Third Party without express permission in writing from Curtins Consulting Ltd.

1.0 Introduction & Brief



Brief

1.9 The brief was to provide a supplement to a report prepared by Curtins in 2003. The Council are considering future options for their Non Trad Stock. One option is to install and external wall insulation system (EWI), and another to carry out refurbishment works which would make the properties “mortgageable” for their tenants to buy.

The brief may be summarised as follows:

- Desk top review of Curtins 2003 Report
- Visual inspection of external walls
- Determining the configuration of the principal structural components
- Visual Inspection internally of floors, walls, ceilings where access available
- Recommendations for future action
- Provision of a Report, including an assessment of “remaining life”

1.10 Exclusions & Limitations

- (a) The survey will be restricted to the PRC or non trad structural elements.
- (b) For each construction type we will give an assessment of “remaining life”. This will be based upon the Curtins 2003 report, and our observations of the properties inspected. It will be assumed that unless there is evidence of deterioration then the remaining life will remain constant – 30 years in 2003 should still be 30 years in 2017. The remaining life only applies to the non-trad elements (PRC, steel frame, timber frame etc), and not to any other elements (timber roof structure, coverings, wall finishes, windows etc etc).
- (c) No trial pits will be excavated, no floorboards will be taken up. The surface waste drainage systems will not be investigated. The survey will not include investigation of non structural elements such as services (gas, electric, water supply), windows, doors, finishes (plaster, ceilings etc.), roof insulation and coverings, pollution and/or contamination, asbestos etc. Insulation, damp penetration and condensation will be examined insofar as they might adversely affect the structural components.
- (d) Property types which are *Designated Defective* under the Housing Act 1985 have a “mortgageability” problem for private owners when the existing concrete elements remain in place. Generally they become “mortgageable” when these are removed or made redundant. Stroud District Council should be aware that most “Non-Trad” property types may be problematic for private owners seeking a mortgage. Whilst this does not impact on this survey and report as SDC are not seeking to sell their stock, tenants should not be given advice based on this report that they may subsequently use to give comfort to lenders about the condition of their property.
- (e) We are unable to comment on defects which may be present but hidden from view. Further intrusive investigations may reveal additional or different defects to those observed in this survey.

2.0 Scale of the Investigation



- (a) A full list of the Non Traditional Stock is provided in Appendix A, divided into the various construction types. The list includes the following attributes (note: the information listed below is contained in the Excel version, it may not be included in the text version due to space constraints).

| Description | Column title | Comments |
|----------------------------------|--------------|---|
| Unique Property Reference Number | upnr | Numbers as per SDC lists |
| Property Construction | Type | The table is arranged in alphabetical order of type |
| Main location | Town/Village | Within each Type the location is listed alphabetically |
| Street | Street | Within each Town/Village the street is listed alphabetically |
| House Number | No | Also refers to Flat number |
| Post Code | Post Code | |
| Property Type | H/F/B | Details Houses, Flats, Bungalows. The code used is generally self-explanatory, eg SDH = Semi Detached House, F0 = Ground floor flat |
| Individual survey | Surveyed | Surveyed property indicated by Y |
| Major Works carried out (eg EWI) | Works | From data supplied by SDC |
| Year Works carried out | Year | From data supplied by SDC |

- (b) The list of dwellings & construction types was supplied by SDC, and included properties which were of Traditional or Not Identified (“No ID”) construction. Some of these were in or near roads that contained Non-Trad construction types. In some cases we have been able to check on site and correct the record for the actual construction where there has been an error, but we have not checked every property in every road, and some errors may remain.
- (c) Not all construction types were surveyed as shown in the following table.

| Construction | Surveyed | Reasons |
|-----------------------------------|----------|---|
| Airey | No | External walls masonry, PRC components hidden |
| BL8 | No | Brickwork in front of external wall metal sheeting |
| Cornish | No | All PRC replaced with masonry construction |
| Dorlonco | Yes | |
| Reema Conclad | Yes | |
| Reema Hollow Panel (without EWI) | Yes | |
| Reema Hollow Panel (with EWI) | No | PRC components hidden by EWI |
| Stent | No | PRC components hidden by EWI |
| Swedish (not previously surveyed) | Yes | |
| Swedish (previously surveyed) | No | Curtins carried out opening up surveys in 2015 & 2016 |
| Unity | No | PRC components hidden by EWI |
| Woolaway | No | All to be demolished for site redevelopment |

2.0 Scale of the Investigation



- (d) The Non Traditional stock survey population comprises 212 No properties distributed as follows. We surveyed 42 No, representing 1 in 5 properties, which was above the target of 1 in 10 properties.

| Construction | Qty | Surveyed Externally | % Surveyed |
|--------------------|-----|---------------------|------------------|
| Dorlonco | 13 | 3 | 23.1% (1 in 4.3) |
| Reema Conclad | 36 | 8 | 22.2% (1 in 4.5) |
| Reema Hollow Panel | 157 | 25 | 15.9% (1 in 6.3) |
| Swedish | 6 | 6 | 100% (1 in 1) |
| Total | 212 | 42 | 19.8% (1 in 5.0) |

- (e) All the properties surveyed were occupied, but not all tenants were at home during our survey work, and a small number of tenants declined to allow us into their homes.

| Construction | Qty | Surveyed Internally | % Surveyed |
|--------------------|-----|---------------------|------------------|
| Dorlonco | 13 | 2 | 15.4% (1 in 6.5) |
| Reema Conclad | 36 | 5 | 13.9% (1 in 7.2) |
| Reema Hollow Panel | 157 | 20 | 12.7% (1 in 7.9) |
| Swedish | 6 | 2 | 33.3% (1 in 3) |
| Total | 212 | 29 | 13.7% (1 in 7.3) |

- (f) A list of the surveyed properties is provided in Appendix B, divided into the various construction types.
- (g) The external survey was by visual inspection from ground level, focusing on the Non Trad construction components where these were exposed to view.
- (h) For Dorlonco type construction the steel frame is not exposed, but defects to the render finishes can provide some evidence of deterioration of the steelwork.
- (i) For Reema Conclad type construction the exterior face of the large panels are visible.
- (j) For Reema Hollow Panel type construction the exterior face of the large panels and the columns/beams are visible.
- (k) For Swedish timber frame properties the outer boards are visible. Apart from the site in North Nibley Curtins have carried out opening up investigations at all the sites of Swedish timber frame houses during the last two years. The survey population for this report was all the remaining dwellings to establish whether any were substantially different in external condition from those already examined.
- (l) Internally the steel frame is evident but hidden by finishes in the Dorlonco houses. In all the other construction types the Non Trad components are hidden from view, and evidence of deterioration would only be detected by disturbance to the finishes.

2.0 Scale of the Investigation



-
- (m) Damp penetration and condensation were examined as far as practical, generally concentrating on kitchens and bathrooms. Tenants belongs were not moved for the purposes of the survey.
 - (n) Where dwellings inspected had porches, conservatories or extensions we recorded the general arrangement, as these will have an impact on any future refurbishment works, whether EWI or other improvements. We also recorded other factors which may impact on EWI works.
 - (o) Refer to items 1.10 a) to d) in the previous sections.
 - (p) Pollution and/or contamination, asbestos etc are specifically excluded from our scope of services.
 - (q) References to left and right etc are made as if facing the elevation or internal room being described.
 - (r) Outbuildings were not inspected as part of the survey. Some property types (Cornish and Reema) have Outbuildings which are of the same construction as the Non Trad construction of the dwelling.

3.0 Airey

3.1 Construction



Form of Original Construction

- (a) The Airey construction was *Designated Defective* under the Housing Defects Act 1984 and the Housing Act 1985.
- (b) Details of the standard form of construction can be found in the BRE Digest "Airey Houses: Guidance to Engineers and Surveyors on Inspection of Structural Columns" published by BRE in May 1981 and "Airey Houses: Technical Information and Guidance" published by the BRE in April 1982. The form of original construction is illustrated in Appendix C1.
- (c) The external walls and party wall were formed from closely spaced storey height external wall columns, 104mm x 57mm in cross section, reinforced by a steel tube. Concrete lintels were fixed between columns at door and window positions. Concrete cladding panels were fastened to the external side of the columns with copper wire.
- (d) The inside of the columns had a timber batten cast in. To this was fixed the inner leaf plasterboard. The copper wire was fixed between plasterboard and batten, the ends extending into the cavity to hold the outer panels in position.
- (e) The internal "spine" wall was constructed of 75mm x 57mm columns. These columns are storey height, with first floor and roof joists bolted at their heads.
- (f) The party wall was constructed of two rows of columns separated by a cavity. Each row of columns is faced with plasterboard on the house side and concrete cladding panels on the cavity side.
- (g) The column bases are not usually fixed to the foundations at ground level, but some have been found to be dowelled. The columns are normally dowelled at their junction between ground and first floor.
- (h) Floor construction was ground bearing concrete to ground floor, and lattice steel joists to first floor.
- (i) The roof construction is common rafters with felt, battens and concrete tiles. All the properties being investigated had gable roofs, but the hipped version is common elsewhere in the UK.
- (j) The outbuildings were to the side or rear of the houses, and whilst they would have been built away from the house, most have been connected by a covered way. Outbuildings were built of brickwork on a raft foundation. Originally they had flat suspended concrete roofs, and over the years they may have been felted or had additional pitched timber/sheeting roofs added. The roof was constructed using expanded metal lathe (eml) as permanent shuttering. At the time of construction only mild steel eml was economically available, and corrosion and spalling of the concrete soffit is common.

3.0 Airey

3.2 Major Works Carried Out



- (a) Investigations by Mouchels (consulting engineers), probably in the mid 1980's revealed deterioration of the PRC columns at their bases.
- (b) Initially a "Leeds" scheme was adopted. This was developed by Leeds City Council, and was awarded Licence No 033 by PRC Homes Ltd, which at the time would have made houses repaired under the scheme "mortgageable" for tenants if the party & spine wall had been dealt with.
- (c) Subsequently an "External Walls" only scheme was adopted. The basis of the scheme would have been either Curtins Licence 005, or Dysons Licence 018, but as the PRC elements in the party & spine walls were not dealt with, the scheme would not have been "mortgageable" for tenants.
- (d) The external wall works had been carried out in the period 1988 to 1996, before Curtins 2003 Report, as shown in the following table

| Town/Village | Road | Qty | Scheme | Year |
|--------------|--------------------|-----------|----------------|-----------|
| Brownhill | Frith Wood | 7 | Leeds | 1994 |
| Coaley | Hamshill | 6 | External Walls | 1995 |
| Ebley | Orchard Road | 9 | Leeds | 1988 |
| Hardwicke | Elmgrove Road East | 3 | Leeds | 1988 |
| Hardwicke | Springfields | 14 | Leeds | 1988 |
| Kingswood | Chestnut Park | 1 | External Walls | 1994 |
| North Nibley | The Innocks | 9 | External Walls | 1993 |
| Slimbridge | Moorend Lane | 1 | External Walls | 1996 |
| Slimbridge | Tynning Crescent | 1 | External Walls | 1996 |
| Westrip | The Wordens | 8 | Leeds | 1988 |
| | Total | 59 | | |
| | Summary | 41 | Leeds | 1988 |
| | | 18 | External Walls | 1993-1996 |

- (e) The Leeds scheme provides for removing the outer panels, and building specially moulded lightweight blockwork between and around the PRC posts. The blockwork is mainly U shaped, except at corners and window/door opening, where it is L shaped. The new blockwork extends over the new extended foundation. There is a cavity (uninsulated) with a new outer leaf of brickwork also built off the new extended foundation.
- (f) The External Wall scheme provides for removing the outer panels, and building dense blockwork between the PRC posts. A new outer leaf of brickwork is built on a new extended foundation, with 30mm insulation in the cavity.
- (g) The two schemes are illustrated in Appendix C2.
- (h) The PRC party wall and spine wall were not part of the works, and remain in-situ. The 2003 Report found no evidence of deterioration of the retained PRC elements.

3.0 Airey

3.2 Major Works Carried Out



-
- (i) The finish adopted was brick outer leaf.
 - (j) Some chimneys may have been taken down to below roof line.
 - (k) The party wall in the loft space was originally built using clinker blockwork, and unless the party wall has been replaced as part of refurbishment works it is likely that there is a gap between the top of the blocks and the underside of the roof. Such gap provides a path for smoke and flame in the event of a fire.
 - (l) First floor joists under the bathroom floor can suffer deterioration due to leakages from above.
 - (m) The 2003 Report noted that the roof coverings were at or approaching the end of their design life and there was an expectation of increasing number of repairs required over the next 30 years.
 - (n) The 2003 Report concluded that the properties had a future life in the region of 30 years.

3.0 Airey

3.3 Conclusions & Recommendations



Conclusions

3.3.1 External Walls

- (a) The external walls of all the houses have been refurbished using either a Leeds or External Wall system.
- (b) There is no reason to believe that the retained (but structurally redundant) PRC columns in the external walls had deteriorated.

3.3.2 Internal PRC Walls

- (a) There was no evidence to suggest that the retained PRC columns in the party wall or spine wall had suffered deterioration.

3.3.3 Loft Space – Party Wall

- (a) There may be potential for fire and/or smoke to spread across the party wall into (or from) the neighbouring house, especially where the gaps are significant at the purlins and at the top of the blockwork wall (to the underside of the roof felt).

3.3.4 Remaining Life

- (a) No change since 2003, the retained PRC components should still have a remaining life of 30 years from now.

Recommendations

3.3.5 External Walls

- (a) No remedial works should be necessary to the external walls.

3.3.6 Internal Walls

- (a) Carry out inspections of the spine and party walls whenever a property becomes vacant due to change of tenancy.
- (b) Inspect the condition of the PRC posts by removing areas of plasterboard locally.
- (c) Check for deterioration of the first floor joists, particularly in the area under the bathroom floor.

3.3.7 Loft Space – Party Wall

- (a) The risk of fire and/or smoke to spread across the party wall should be eliminated. The risk of fire is generally quite small, but when a fire occurs the consequences can be serious. We recommend that where the risk of spread is higher, ie where large gaps around purlins and at ridge level are identified, remedial works should be undertaken immediately. Stroud District Council should adopt a policy of inspecting for this defect at all changes of tenancy, and carrying out works to seal any gaps at that time. Whenever works are undertaken to a property there should be an inspection and remedial work undertaken if necessary.

4.0 BL8

4.1 Construction



- a) The BL8 construction was not *Designated Defective* under the Housing Defects Act 1984 or the Housing Act 1985.
- b) Details of the form of construction can be found in Department of the Environment, Housing Development Directive "Temporary and Permanent Aluminium Bungalows: Corrosion" and "Prefabrication - A History of its development in Great Britain" by R.B. White published in 1965 by HMSO. The form of construction is illustrated in Appendix C3.
- c) A later version, the BL8, was a complete change from the B1 and B2 box structures. It was designed for the site assembly of flat panels for external walls and partitions, and was of greater total area (82m² for BL8, 62m² for B1 and B2). The BL8 was designed as detached, but were mainly erected as semi-detached pairs.
- d) A total of over 150,000 temporary houses were manufactured or imported during the period 1945 to 1948, of which about 55,000 were aluminium.
- e) The aluminium bungalow was the most highly prefabricated of the programme, with production concentrated in five large factories. Production of complete bungalows was in four fully finished units, transported to site on special low loaders.
- f) The houses were produced under the direction of the Ministry of Aircraft Production with preparation of sites by the Ministry of Works.
- g) The four units making up a bungalow were pushed along sets of rails to their appropriate place on the foundation slab. The jointing between units was via wooden batten placed in vertical channels in the edge of the wall panels. This batten acted like a tongue in matchboarding. The cavity was packed with insulation and closed with cover strips of aluminium. Similar strips protected the roof joints.
- h) At eaves and base of wall the units were locked by 'V' shaped interlocking connector bolts of aluminium through which a pine was driven horizontally.
- i) The foundations comprised 100mm thick concrete ground bearing slab, with 230mm brick perimeter walls.
- j) The external wall panels were 83mm thick, aluminium frame members faced with aluminium sheet and internally with plasterboard. The cavity was filled with fibre glass insulation, separated from the external sheeting by waterproof building paper.
- k) The 50mm internal partitions were built with aluminium frame panels faced on both sides with 6mm plasterboard.
- l) The concrete floor slab was covered with mastic asphalt flooring tiles.
- m) The roof comprised aluminium sheeting, lined on the underside with 19mm insulation board supported on aluminium trusses and purlins.

4.0 BL8

4.2 Major Works Carried Out



- (a) These properties were not investigated for the 2003 Report, as refurbishment works to all of them had been carried out by that time. The date of the works is not known to us.
- (b) The external walls have been refurbished by building a new brick outer leaf against the existing metal sheet external walls. The details of the works are not known to us, but we assume that the raft foundation was extended to accommodate the new brickwork, and a cavity with insulation was incorporated into the works. The refurbishment works included for a new Decra roof installed over the existing roof sheeting.
- (c) The properties in the stock are located as follows

| Town/Village | Road | Qty |
|-----------------|--------------|-----------|
| Cam | Fairmead | 6 |
| | Hadley Road | 9 |
| | Turner Road | 10 |
| | Tyndale Road | 7 |
| Leonard Stanley | Brimley | 21 |
| | Total | 53 |

- (d) The 2003 Report concluded that the properties had a future life in the region of 30 years.

4.0 BL8

4.3 Conclusions & Recommendations



Conclusions

4.3.1 External Walls

- (a) The external walls of all the houses have been refurbished by a masonry wall in front of the original Non Trad walling.
- (b) There is no reason to believe that the retained (but still structural) aluminium components in the external walls have deteriorated.

4.3.2 Remaining Life

- (a) No change since 2003, the retained metal frame components should still have a remaining life of 30 years from now.

Recommendations

4.3.3 External Walls

- (a) No action is required.

5.0 Cornish

5.1 Construction



Form of Original Construction

- (a) The Cornish Unit construction was *Designated Defective* under the Housing Defects Act 1984 and the Housing Act 1985
- (b) Details of the standard form of construction can be found in the BRE Digest "The Structural Condition of Cornish Unit Houses" published by the BRE in 1983. The form of construction is illustrated in Appendix C4.
- (c) The ground floor external walls comprised prefabricated reinforced concrete columns with unreinforced concrete panels slotted between them in pre-formed grooves in the column sections. Some properties have nine or eleven panels per storey height (known as Type I properties), others have four panels (Type II properties).
- (d) Type 1 properties are further split into twin column and single column construction. Twin columns properties have an inner and out leaf with a small cavity, and were initially used because it was considered that damp penetration would be a problem. Experience indicated that this was not the case and the single column system was adopted. Single column properties have columns which extend from inner finishes to exterior surface, ie without a cavity. Twin column construction is a bit of a misnomer, since the columns at windows and doors were single column. So on a typical front and rear elevation the majority of columns would be single column, even if a dwelling is listed as being twin column construction.
- (e) Single column types have a flat soffit at eaves level, and a square faced front to the plinth unit. Twin column types have a coved unit at eaves level, and a projecting curved feature front to the plinth unit.
- (f) The first floor and roof is a tile clad timber structure that can be regarded as an independent wooden structure supported by the concrete columns of the house.
- (g) The party, spine and partition ground floor walls were mainly constructed of blockwork.
- (h) The first floor party wall was blockwork. Internal first floor walls were of either block or timber stud construction. Some houses have internal PRC beams supporting first floor partition walls. Flats have either timber or concrete floor construction.
- (i) The external walls consist of one or two PRC columns separated by a cavity, except at window and door openings, where a single column is used. The columns are fixed in position at their bases by PRC plinth units, and at their tops by PRC lintels forming a ring beam at first floor level. The lintels are sometimes topped by a special cornice unit into which the wallplate is inserted, to which the first floor construction is fixed.
- (j) The overall stability of the construction is provided through the friction between the columns and panels, the continuity of the ring beam and the bracing provided by the internal blockwork walls.

5.0 Cornish

5.1 Construction



-
- (k) Outbuildings are sometimes the same construction as the house – PRC plinth units, columns, lintels/beams and roof panels. Some were single units, some semi-detached. With semi-detached outbuilding the adjoining part could be SDC or privately owned. The party walls were blockwork.

5.0 Cornish

5.2 Major Works Carried Out



- (a) We have no information on previous investigations. The Cornish properties were not part of Curtins 2003 Report. All the dwellings have been refurbished to a “Walls Out” scheme, see Appendix C5, but we do not know when or to which scheme. We assume that the works were completed by the time of Curtins appointment or the construction type would have been included in the survey population.
- (b) The properties in the stock are located in the following places

| Town/Village | Road | Qty |
|-------------------|-------------------|-----------|
| Bridgend | Wharfdale Way | 3 |
| Cam | Marment Road | 10 |
| Cam | Tilsdown Close | 12 |
| Coaley | Betworthy | 8 |
| Kingswood | Chestnut Park | 4 |
| Slimbridge | Tynning Crescent | 8 |
| Wotton-Under-Edge | Fountain Crescent | 7 |
| | Total | 52 |

- (c) Unlike some other PRC construction the party & spine walls were not of PRC construction (although some have been found in Devon & Cornwall), to no works would have been required to them. These properties have a mansard roof, and none of the first floor construction has PRC components.
- (d) Some houses have internal PRC beams which support the first floor walls (typically the partition walls between the front bedrooms and the rear bedroom/bathroom). It is possible that these were not dealt with when the external wall works were carried out, but no checks have been carried out.
- (e) These partition walls are often 100mm solid masonry, & sometimes timber stud. Where the walls are masonry the support might vary – by a PRC beam, by double timber joists, by a single timber joist, or by no support other than the floorboards. The most effective method was the PRC beam (although there was usually some minor cracking on the landing), but where there was timber (even double joists) or no support the weight of the wall causes the floor to deflect, leading to cracking on the landing. The door frames also distort, becoming out of square. The “spine” wall (with the chimney) was continuous to ground level, so the cracking and door frame movement tends to be away from this fixed point (ie the door frame to the left of the spine wall falls to the left, and the door frame to right falls to the right). The partition walls which are perpendicular to the main partition walls can also suffer cracking damage due to the movement of the main partition walls. Cracking to the Landing walls tends to occur soon after construction, due to deflection of the floor, and following this main movement subsequent movement tends to be seasonal (thermal) with little progressive movement. Cracks which are repaired tend to reopen, usually minor in nature, and not noticeable until the wallpaper is stripped for redecoration.

5.0 Cornish

5.2 Major Works Carried Out



- (f) In May 2016 we inspected a Cornish Unit house at 7 Betworthy, Coaley on behalf of yourselves (our reference 061392, report dated 31 May 2016). In this property there was only a single timber joist under each of the two partition walls, and defects to the landing walls had occurred as described above.
- (g) Outbuildings – Seventeen of the stock of 52 No dwellings have Outbuildings of PRC construction the same as the Cornish Unit construction (rather than brick, block or modern precast concrete). They were located as follows

| Town/Village | Road | Qty | Other OB | PRC OB | Nos |
|-------------------|-------------------|-----------|-----------|-----------|----------------------------|
| Bridgend | Wharfdale Way | 3 | 1 | 2 | 35 & 37 |
| Cam | Marment Road | 10 | 10 | | |
| Cam | Tiltdown Close | 12 | 12 | | |
| Coaley | Betworthy | 8 | 3 | 5 | 8, 10, 16, 22, 23 |
| Kingswood | Chestnut Park | 4 | 1 | 3 | 17, 20,23 |
| Slimbridge | Tyning Crescent | 8 | 1 | 7 | 13, 18, 20, 22, 24, 26, 27 |
| Wotton-Under-Edge | Fountain Crescent | 7 | 7 | | |
| | Total | 52 | 35 | 17 | |

- (h) We have not inspected any of the PRC Outbuildings to check their present condition.

5.0 Cornish

5.3 Conclusions & Recommendations



Conclusions

5.3.1 External Walls

- (a) The PRC elements in the external walls of all the properties have been removed and replaced with brick/block cavity walling. No further action is required.

5.3.2 Internal Walls

- (a) The internal walls do not contain PRC components, so no further action is required.

5.3.3 First Floor construction

- (a) Where there are masonry partition first floor walls there is a risk that they are inadequately supported from the time of construction.
- (b) The risk of partial collapse is low, except where the walls are built off the floorboards and there is not even a timber joist beneath. There would be high risk of serious damage and injury should a tenant decide to cut all the floorboards along the skirting line.

5.3.4 Outbuildings

- (a) SDC have 17 No Outbuildings of PRC Cornish Unit construction
- (b) Experience has shown that this type can suffer from deterioration of the concrete components.
- (c) Some remedial action may be required from time to time.

Recommendations

5.3.5 External Walls

- (a) No remedial works should be required to the external walls.

5.3.6 Internal Walls

- (a) With regard to inadequately supported first floor masonry walls, we recommend that whenever a void property becomes available the handover inspection should include taking up a small number of first floor floorboards to establish whether the walls are supported by PRC beams, double or single timber joists, or just by the floorboards. If there are PRC beams their condition should be checked (by taking down the ceiling to the first joist either side of the beam) to confirm their structural adequacy. For all other methods of support you can decide whether to take action on a piecemeal basis or to deal with all the houses in that particular street at the same time under a single repair contract.
- (b) Action is essential if a wall is built directly off the floorboards without even a single timber joist underneath (due to the risk of tenants inadvertently causing failure of the wall by cutting along the skirting line).

5.0 Cornish

5.3 Conclusions & Recommendations



5.3.7 PRC Outbuildings

- (a) Whenever a property with a PRC Outbuilding becomes vacant, carry out an inspection internally & externally.
- (b) If the structure is in poor condition, take it down to floor slab level, and either leave as is or provide a timber shed for incoming tenants.
- (c) Build up a database of information concerning the size and condition of PRC Outbuildings, including whether they share a party wall with adjacent private owners (as this will require notification under the Party Wall etc Act, and additional cost to protect the retained party wall).
- (d) Provide a budget for demolition of PRC Outbuildings each year, with a view to demolishing all with 15 years (or sooner if deterioration accelerates). This is equivalent to about one per year.

6.0 Dorlonco

6.1 Construction



- (a) The Dorlonco construction was not *Designated Defective* under the Housing Defects Act 1984 or the Housing Act 1985.
- (b) Details of the form of construction are covered in the BRE Digest "Dorlonco Steel Framed Houses". The form of construction is illustrated in Appendix C6. In essence, the dwellings are two storey houses of a steel framework made of small section channels and angle-sections. It is similar to the BISF type but has an in-situ concrete first floor supported on metal lathing, which is supported on steelwork. The external walls can either be brickwork, rendered blockwork, or render on metal lathing. The rendered blockwork type has been used in Cashes Green. The steel frame sits within the cavity of the external wall. The roofs have conventional slates on a timber sub-frame which is ultimately supported on steel trusses.
- (c) Foundation and substructure comprised on concrete strip foundation brought up to above ground level. The depth of these foundations varied but was generally about 400mm, with width depending upon the thickness of the cladding.
- (d) The frame comprised of two-storey stanchions to front and rear elevations, stanchions extending to the roof line in flank end and separating walls, a floor joist support beam, a single-storey stanchion, floor joist, first-floor level lateral ties, eaves-level lateral ties, and steel roof trusses. The stanchions were held down by angle cleats which were riveted to the internal flange of the stanchions and fixed with rag bolts into the concrete foundation.
- (e) The stanchions comprised rolled steel (RS) angles at 1.2m centres in the front and rear elevations and at about 1.5m centres in the flank end and separating walls. The stanchions in the party wall were shared with the other house forming the semi-detached pair.
- (f) At first floor level RS channel floor beams connected each of the stanchions in the front elevation to the corresponding stanchion in the rear elevation. In one half of the house these channels were supported at roughly mid-span by the loadbearing partition which separates the dining room from the kitchen. In the living room, which ran from the front to the rear elevation, the channels were connected to a RS channel spine beam which spans between the chimney breast and a single-storey stanchion located in, or abutting, the partition adjacent to the stairs.
- (g) Immediately above the floor joists, the front elevation stanchions and those of the rear elevation were tied laterally by RS angles. The flank end wall stanchions were tied at first floor level by RS angle.
- (h) The roof trusses were fabricated from angle rafters, T-section ceiling ties, vertical ties of flat strip and diagonal struts. The roof trusses spanned from front to rear from the tops of the stanchions were at 1.2m centres. All steelwork connections made on site were bolted. Two forms of roof covering have been used generally for this type of construction.
 - a. Slates or tiles nailed to timber sarking.
 - b. 50mm of breeze concrete on expanded metal lathing clad with pantiles.

A more conventional form of roof covering of slates nailed to battens has also been utilised.

6.0 Dorlonco

6.1 Construction



-
- (i) Two forms of cladding have been commonly adopted.
- a. Brick leaf tied either to the steel frame or to the inner leaf with wall ties. The wall ties were normally galvanised vertical twist. Masonry was tied to the frame with loops of copper wire through holes in the leading edge of the stanchion and embedded in the masonry.
 - b. A sand/cement render on ribbed expanded metal lathing. Steel lathing stiffened with steel rods was tied back to the stanchions. The mesh was rendered both internally and externally, the render being carried over the stanchions. The external thickness of render was 37mm, giving a total thickness of about 50mm.

Other claddings such as rendered brick on end and Bath Stone have also been used.

The internal lining was generally of 50mm clinker blockwork plastered internally, although other material such as hollow clay pots has been used.

- (j) The party wall was of cavity construction, comprising two leaves of 50mm thick clinker blockwork separated by a 100mm cavity.
- (k) Ground floor partitions, including those at either side of the stairway, were loadbearing and were of 50mm brickwork or cast in situ concrete. The upper-storey partitions were of 50mm clinker blockwork.
- (l) The ground floor was of solid construction with coloured sand cement screed over the oversite concrete. The first floor was basically of concrete, being built up from ribbed expanded-metal lathing with 38mm of concrete, (which may have been breeze aggregate concrete) and topped with coloured cement/sand screed. The underside of the metal lath was finished with cement/sand render.

6.0 Dorlonco

6.2 Visual Inspection



- (a) Typical front, rear and side elevations are illustrated in Appendix D1, Photographs P1 to P3. It should be noted that the elevations shown are not of the same house. The houses were built in 1923, and there are 13 No properties in the stock, located as follows

| Town/Village | Road | Qty | Surveyed |
|--------------|-----------------|-----------|----------|
| Cashes Green | Hyett Road | 3 | 1 |
| | Kingley Road | 2 | 1 |
| | Mosley Crescent | 8 | 1 |
| | Total | 13 | 3 |

- (b) We are not aware of any previous investigations prior to Curtins investigations in 2003.
- (c) Curtins found that the steelwork had 2-3mm thick sand cement render protective coating. The steel frame was found to be in good condition with no evidence of corrosion.
- (d) It was believed at the time that some of the houses had been insulated, and cavity investigations revealed injected polystyrene beads which were found to be dry (ie no evidence of water ingress into the cavity). However, the report noted 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. This trapped moisture could accelerate corrosion locally.
- (e) The 2003 report also noted that cavity wall ties between inner and outer leafs would not meet the current requirements at the time (& therefore not now), but those examined were in reasonable condition, with only some surface rusting.
- (f) The roof trusses in the roof were also noted to be in reasonable condition, with only minor incidences of corrosion to members.
- (g) The 2003 Report concluded that the properties had a future life in the region of 30 years.
- (h) A tenant reported that the houses were built in 1923, would appear to about the right timescale.
- (i) Three of the thirteen houses were inspected, as follows.
- (j) **14 Hyett Road** – The rendered finish was good, with no evidence of cracking, although the view of the side and rear elevations was restricted. On the rear elevation there was a single storey extension, see Photographs P4 & P5.
- (k) **14 Hyett Road** – Internally there was no evidence of cracking at wall/wall or wall/ceiling junctions. The first floor partition walls were blockwork, and it is common to find cracking at first floor wall/ceiling junctions due to deflection of the floor slab. The Kitchen floor may have been timber (rather than solid concrete), and was noted to springier than for a normal timber floor.

6.0 Dorlonco

6.2 Visual Inspection



- (l) **10 Kingsley Road** – Externally, there was evidence of previous repairs to vertical and horizontal cracking, mainly below the first floor windows to the front & rear elevations. The cracking had not re-opened.
- (m) **10 Kinsley Road** – There was no internal access.
- (n) **14 Moseley Crescent** – Externally, there were no cracking defects noted to the render. The gravel to the rear was at or close to dpc level over part of the elevation, see Photograph P6.
- (o) **14 Moseley Crescent** – Internally, there was mould in the front/gable corner of the front ground floor room which is presently being used as a bedroom, see Photograph P7.
- (p) **14 Moseley Crescent** – Internally, there was mould on the window frame and cill in the rear bedroom, see Photograph P8.
- (q) **Overhead electrics** – The houses are supplied by overhead electric cables, which cross from house to house, see Photograph P9. The fixings to the wall vary, see Photograph P10, taken at 10 Kingley Road (which differs from the ones shown in P9). At 14 Hyett Road, a fixing has come off the wall, see Photograph P11.
- (r) **Ground levels** – At 14 Hyett Road ground levels were below dpc level all the way around. At 10 Kingley Road the ground was a bit too high at the front, but otherwise acceptable. At 14 Moseley Crescent the paving was a bit too high on the front and side elevations, and the gravel at the rear was above the bellcast level (as mentioned above see Photograph P7).
- (s) **Chimneys** – At 14 Hyett Road the party wall and gable chimneys were new. At No 12 the gable chimney was new, the party wall chimney was original. At No 16 Hyett Road the gable chimney had been removed. At 10 Kingley Road both chimneys were original (No record for No 16). At Moseley Crescent all the chimneys were original.
- (t) **Gas meters & pipework** – At 10 Kingley Road the gas meter box was on the rear elevation, with pipework running on the wall. At 14 Moseley Crescent the gas meter was on the front elevation with pipework running up and across the elevation and onto the side elevation. There was no meter at No 14 Hyett Road.

6.0 Dorlonco

6.3 Conclusions & Recommendations



Conclusions

6.3.1 External Walls

- (a) The steel frame components appear to be performing satisfactorily, as far as can be seen from a visual inspection. The 2003 investigations found the steelwork to be in good condition and there was no reason to suspect that it has changed in the interim.
- (b) The walls have cavity insulation, which is not considered to be appropriate as it can trap any moisture against the structural steel, and ventilation will be restricted and not allow moisture to evaporate.
- (c) The houses are suitable for an external wall insulation system to be installed.

6.3.2 Internal Walls

- (a) Minor mould was found in one of the two houses inspected internally. We do not consider mould to be a significant issue in these properties. Mould occurring is more likely to be associated with life-style than with the form of construction.

6.3.3 Chimneys

- (a) Some chimneys have been rebuilt or removed, suggesting previous problems, perhaps with water ingress.

6.3.4 Factors affecting EWI installation

- (a) Overhead Electrics – may affect EWI installation
- (b) Ground levels – where ground or paving levels are too high they may affect the EWI installation.
- (c) Gas meter boxes and pipework – whilst meter boxes can be worked around, any gas carrying pipework will need to be brought forward.

6.3.5 Remaining Life

- (a) No change since 2003, the retained steel frame components should still have a remaining life of 30 years from now.

Recommendations

6.3.6 External Walls

- (a) No remedial works are required to the external walls at the present time.
- (b) We recommend the installation of EWI. As part of the Contract the existing cavity insulation should be removed. Doing so will create an opportunity to re-inspect the steelwork within the cavity at a number of locations.
- (c) All the houses should be subjected to a detailed pre-EWI installation inspection, and any repairs to the external walls undertaken.

6.0 Dorlonco

6.3 Conclusions & Recommendations



Recommendations (contd)

6.3.7 Internal Walls

- (a) No remedial works are required to the internal walls, but “whole house” ventilation systems should be installed as part of the EWI works.

6.3.8 Chimneys

- (a) Carry out inspections of the chimneys at regular intervals not exceeding two years, carry out repairs as required.
- (b) When the opportunity permits, for instance at change of tenancy, take down any gable chimneys to below roof level (& ventilate in accordance with good practice). This might not be possible where the chimney is still being used as a flue (eg boiler flue). Party wall chimneys cannot be taken down where the adjoining house is private, without the co-operation of the adjoining owners.

6.3.9 Factors affecting EWI installation

- (a) Overhead Electrics – Divert overhead electric supply cabling to below ground. This work should be initiated well in advance of the repair and EWI works. Involve private owners where there is a shared supply from existing overhead cabling.
- (b) Ground levels – reduce ground & paving levels, ideally to below 150mm below dpc. This is not always possible or practical when there is a large area of paving adjacent to the external wall, but paving and decking should be taken down locally to just below dpc level, and soil or gravel must be reduced in level to suit.
- (c) Gas pipework to be moved forward either in advance of, or as part of, the EWI Contract.

7.0 Reema Conclad

7.1 Construction



- (a) The Reema Conclad construction was not *Designated Defective* under the Housing Defects Act 1984 or the Housing Act 1985
- (b) Details of the standard form of construction can be found in the BRE Digest “Reema Large Panel System Dwelling: Construction Details” published in 1984. The form of construction is illustrated in Appendix D7.
- (c) Approximately 16,000 Reema houses had been constructed in England and 1,600 in Wales by 1965. There are three variants on the construction – Hollow Panel, Conclad and Contrad. The Hollow Panel type was *Designated Defective* under the Housing Defects Act 1984, and the Housing Act 1985, the other two versions were later designs and were not so designated. There are two types in the Stroud District Council stock, Hollow Panel and Conclad.
- (d) The Reema Conclad type was introduced in the mid 1960’s to provide improved thermal insulation as required by the 1965 Building Regulations.
- (e) The system had concrete external panels strengthened by ribs on the inner face. Steel reinforcement protrudes into the cast in-situ concrete column (a detail not present in the Hollow Panel). The external wall was dry lined with polystyrene backed plasterboard (or foil backed ordinary plasterboard), fixed to timber battens cast into the concrete.
- (f) Floors were generally of timber joists supported by joist hangers. Variations included concrete joists, or hollow precast concrete floor panels.
- (g) Roofs were generally trussed timber.
- (h) Internal partition walls were generally non load bearing timber stud with plasterboard.

7.0 Reema Conclad

7.2 Visual Inspection



- (a) Front, rear and side elevations of a typical house are illustrated in Appendix D2, Photographs Q1 to Q3, and for a typical flat in Photographs Q4 to Q6. It should be noted that the elevations shown are not of the same house (but they are of the same flat).
- (b) The flats had small ground floor extensions forming entrances to the ground and first floor flats (see Photographs Q4 & Q5).
- (c) Most of the properties had either a front entrance porch with a door (Photograph Q7) or without (Photograph Q8).
- (d) All the properties had part of the elevations tile hung, so there was a limited view of the PRC. On the flats it was above and below the main windows, and on the houses it was to the whole of the first floor of the front and rear elevations.
- (e) There are 36 No properties in the stock, located as follows

| Town/Village | Road | H/B/F | Qty | Surveyed |
|--------------|-----------------|-------|-----------|----------|
| Forest Green | Badgers Way | SDH | 16 | 3 |
| | Nortonwood | SDH | 4 | 1 |
| | Nortonwood | Flats | 8 | 2 |
| | Woodpecker Walk | SDH | 8 | 2 |
| | Total | | 36 | 8 |

- (f) No previous investigations had been carried out prior to Curtins investigations in 2003.
- (g) Curtins observed that this construction type was not known to had added chlorides during manufacture (they were designed and made after 1960 when quality control was better than it had been in the ten to fifteen years after WW2), and the main risk of corrosion of reinforcement was via carbonation of the concrete (the concrete is likely to be carbonated beyond the depth of the steel due to age and shallow concrete cover).
- (h) No incidences of spalled or cracked external elevations were found, nor any other signs of structural distress.
- (i) The 2003 report recommended that an anti-carbonation paint be applied, to reduce the rate of carbonation, and thus reduce the risk of cracking and spalling of the concrete panels. It was noted that an anti-carbonation coating would only last for about 15 years and process would need repeating every fifteen years. An alternative solution would be to overclad with an external wall insulation system (EWI), which would also offer the benefit of improved energy efficiency and aesthetics of the elevations.
- (j) The 2003 Report concluded that the properties had a future life in excess of 30 years, if an EWI system was installed.
- (k) Six of the 28 No houses and two of the 8 No flats were inspected, as follows.

7.0 Reema Conclad

7.2 Visual Inspection



- (l) **6 Badgers Way** – Externally, there was a broken piece of PRC panel close to the front door cill, see Photograph Q9. This was within the area of the front porch. The damage appeared to be longstanding (& previously repaired), and was of no structural significance. Internally, there were no defects observed which related to deterioration of the PRC.
- (m) **19 Badgers Way** – Externally, no defects noted. Internally, there were no defects observed which related to deterioration of the PRC. A little mould was noted in the front bedroom, in the area over the stairs (open cupboard). The Bathroom ceiling had mould on the ceilings over the bath/shower, and there was very minor mould in the corners of the front Lounge window cill (no photographs included in the report).
- (n) **26 Badgers Way** – Externally, no defects noted except for a minor spall of finishes at the bottom corners of two abutting panels (probably mechanical damage, rather than deterioration of the concrete). There was no access internally.
- (o) **1 & 3 Nortonwood (flats)** – Externally, there were no cracking or spalling defects to the exposed PRC panels. Internally at No 3 there was mould on the walls adjacent to the front entrance door into the porch, see Photograph Q10. It was to both side walls and the inside of the front door. The tenant advised that it is difficult to prevent mould occurring. The tenant also stated that the flat roof leaks (the entrance porches had felt roofs). There was some mould to the kitchen window upvc cill and frame (no photographs included in the report). There appeared to be some mould/damp on the wall/ceiling above the boiler in the kitchen, but it was difficult to tell as the area was not well decorated.
- (p) **19 Nortonwood** – Externally, there were no cracking or spalling defects to the exposed PRC panels, although there was restricted views of the side elevation wall. Internally there was mould to the bathroom on the wall & ceiling above the window and bath/shower, see Photograph Q11. There was mould to the left hand window reveal, see Photograph Q12. On this property the front porch had been taken down.
- (q) **7 Woodpecker Walk** – Externally, no defects noted. The joints around the panels were seen to be filled with sealant (they are usually open on this construction type). There was no access internally, as the tenant was just leaving the house when we arrived. She advised that there was some mould in one of the secondary bedrooms.
- (r) **10 Woodpecker Walk** – Externally, no defects noted. No mould was noted internally.
- (s) **Ground levels** – At the front the ground levels were below dpc level. On the side elevation they were a bit high at 1&3 Nortonwood, and 10 Woodpecker Walk. On the rear elevation there was decking which was a little too high at 6 Badgers Way and 19 Nortonwood, and ground level was a little too high at 1&3 Nortonwood.
- (t) **Porches/Downpipes** – On some properties the porch was away from the corner of the building where the downpipe is located, see Photograph Q13. On other properties the porch is very close to the corner, see Photograph Q14. Should the Council decide to overclad the buildings with EWI then the downpipe will need to be moved outwards. This will be a problem where the porch door is close to the corner as there may be insufficient room for the door to open. Some additional work may be involved.

7.0 Reema Conclad

7.2 Visual Inspection



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- (u) **Roof verge** – For these properties the existing verge board is close to the building line, see Photograph Q15. If EWI is installed it will be necessary to extend the roof line so that the EWI so that the EWI comes up to finish under a verge soffit. The alternative would be to chamfer or slope the EWI in to fit (which does not look good).
 - (v) **Radon Pumps** – Four houses (No 27 Badgers Way, Nos 2, 7 & 8 Woodpecker Walk) have what appear to be radon pumps and ducting. Photographs Q16 & Q17 show the installation at No 7 Woodpecker Walk. If EWI is installed it will be necessary to move the pump and ductwork outwards, with a swan neck to the below ground pipework.
 - (w) **Tile Hanging** – If EWI is being considered a decision would be needed on how to deal with the existing tile hanging to first floor walls and (on flats) above and below the main windows. The usual procedure would be to remove it to fix the EWI but then to either refix it or opt for a rendered or brick slip finish. It may depend on how the local authority Planners view the matter.

7.0 Reema Conclad

7.3 Conclusions & Recommendations



Conclusions

7.3.1 External Walls

- (a) The PRC elements in the external walls are performing satisfactorily, and apart from some minor localised repairs to panels no further remedial action is required at the present time. Of the eight properties inspected there were only two minor localised cracking/spalling defects. Pro rata across the Conclad stock we might expect about ten minor repairs.
- (b) The properties are suitable for an external wall insulation system to be installed.

7.3.2 Internal Walls

- (a) Minor mould was found in about half the properties inspected internally, sometimes around windows and/or in bathrooms and kitchens (where it might be expected). Mould will be more prevalent in this property type due to cold bridging across the concrete panels. However, it was not a major problem in these properties. Mould associated with life-style may also have been a contributory factor.

7.3.3 Factors affecting EWI installation

- (a) The following may affect any overcladding undertaken in the future
- (b) Ground levels, where ground, paving or decking is too high.
- (c) Porches and downpipes, where EWI may require porch doors to be re-hung or cut down and rainwater down pipes re-located (together with associated gulleys and pipework).
- (d) Roof verges, the gable ladder will need to be extended to suit the thickness of the EWI.
- (e) Radon pumps, four properties have a radon gas dispersal unit, which will need to be re-located.
- (f) Tile hangings at first floor will attract additional costs for removal and re-fixing or a suitable finish to be agreed with Planners.

7.3.4 Remaining Life

- (a) No change since 2003, the retained steel frame components should still have a remaining life of 30 years from now, longer when protected by EWI.
- (b) Some remedial action may be required from time to time.

Recommendations

7.3.5 External Walls

- (a) No remedial works are required to the external walls at the present time, any minor repairs to the PRC can be left until an EWI contract is undertaken.
- (b) We recommend the installation of EWI.
- (c) **All** properties should be subjected to a detailed pre-EWI installation inspection, and any repairs to the PRC undertaken as part of the EWI Contract.

7.0 Reema Conclad

7.3 Conclusions & Recommendations



Recommendations (contd)

7.3.6 Internal Walls

- (a) No remedial works are required to the internal walls, but “whole house” ventilation systems should be installed as part of the EWI works.

7.3.7 Factors affecting EWI installation

- (a) Ground levels – reduce ground & paving levels, ideally to below 150mm below dpc. This is not always possible or practical when there is a large area of paving adjacent to the external wall, but paving and decking should be taken down locally to just below dpc level, and soil or gravel must be reduced in level to suit.
- (b) Porches and downpipes – adjust or move to suit as part of the EWI Contract.
- (c) Roof verge – extend gable ladder as part of the EWI Contract.
- (d) Radon pumps – re-locate as part of the EWI Contract.
- (e) Tile hanging – in advance of the EWI Contract liaise with the LA Planners to establish what will and will not be acceptable, bearing in mind that private owners who are not having EWI will retain tile hanging. There may be additional Contract costs if tiles need to be taken down, stored and reinstated to suit Planners requirements.

8.0 Reema Hollow Panel

8.1 Construction



- (a) The Reema Conclad construction was *Designated Defective* under the Housing Defects Act 1984 and the Housing Act 1985.
- (b) Details of the standard form of construction can be found in the BRE Digests “The Structural Condition of Reema Hollow Panel Houses” and “Reema Large Panel System Dwelling: Construction Details” both published in 1984. The form of construction is illustrated in Appendix D8.
- (c) Approximately 16,000 Reema houses had been constructed in England and 1,600 in Wales by 1965. There are three variants on the construction – Hollow Panel, Conclad and Contrad. The Hollow Panel type was *Designated Defective* under the Housing Defects Act 1984, and the Housing Act 1985, the other two versions were later designs and were not so designated. There are two types in the Stroud District Council stock, Hollow Panel and Conclad.
- (d) The Hollow Panel type of construction comprises wide, storey height, pre-cast, lightly reinforced concrete panels, the inner & outer leafs joined by vertical ribs. Steel reinforcement protrudes into the cast in-situ concrete column at panel junctions and corners. Each panel features channel shaped rebates on upper and vertical edges. These act as permanent shuttering for the in-situ concrete columns and reinforced ring beam. At corners and party walls quoins provide the shuttering and external finish.
- (e) The in-situ concrete joining the panels together and forming the columns and beams were protected from direct exposure to weather by the permanent shuttering provided by the panels.
- (f) The first floor construction in houses comprised PRC beams with timber boarding, illustrated in Appendix D9. The PRC beams were typically cast in pairs 406mm apart, joined by cross members (“ladder beams”). These were supported by the panels and cast into the in-situ ring beam to fix them in place at 610mm centres. In flats hollow precast concrete floor panels or cast in-situ concrete floors were adopted.
- (g) Roof construction was a timber joist/rafter arrangement bearing on a timber fillet which was introduced into the in-situ eaves ring beam. To make this possible, the ring beam was cast flush.
- (h) External walls were dry lined with fibre board to provide a surface for applying finishes.
- (i) Party walls were either external panels which may have been filled with sand or plaster board faced timber stud work, if load bearing was not required.
- (h) Internal partition walls were generally either PRC panels 75mm thick or non-load bearing timber stud with plasterboard.

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.1 General

- (a) Front, rear and side elevations of typical houses are illustrated in Appendix D3, Photographs S1 to S6, for a typical bungalow in Photographs S7 to S9, and for a typical flat in Photographs S10 to S12. There were many different house, flat and bungalow layouts within the stock, and we have not attempted to log them all. Photographs S1 to S12 are representative of the stock. On the accompanying disk there is a folder with photographs showing different elevations in each of the seven town/village sites.
- (b) Just from the properties we visited there were about four different layouts of semi-detached houses, two different layouts of terraces, three different layouts of bungalow, and two different layouts of flats. There was also a detached bungalow.
- (c) Photographs S13 & S14 show two variations of adjacent blocks in Forest Green, S13 has ground and first floor flats, S14 has a flat at first floor and a shop at ground floor. It is not known whether SDC also owns the shop.
- (d) There are 257 No properties in the stock, 65 No with existing EWI, but the majority (192 No) were as original, located as follows

| Town/Village | Road | Qty with EWI | Qty without EWI | Surveyed External | Surveyed Internal |
|-----------------|-----------------|--------------|-----------------|-------------------|-------------------|
| Cashes Green | Moorhall Place | 14 | | | |
| Cashes Green | Mosley Road | 6 | | | |
| Cashes Green | Queens Drive | 5 | | | |
| Cashes Green | Stanton Road | 22 | | | |
| Forest Green | Lawnside | | 65 | 8 | 6 |
| Leonard Stanley | Mankley Road | | 31 | 4 | 3 |
| Minchinhampton | Glebe Road | | 19 | 2 | 2 |
| Nailsworth | Ringfield Close | | 27 | | |
| Nailsworth | Tanners Piece | | 8 | | |
| Nailsworth | Upper Park Road | | 6 | 5 | 3 |
| Stonehouse | Midland Road | | 5 | 1 | 1 |
| Stonehouse | Willow Road | | 12 | 2 | 2 |
| Stroud | Gibson Close | 18 | | | |
| Whiteshill | Victory Road | | 18 | 2 | 2 |
| Woodchester | Blacklow Close | | 1 | 1 | 1 |
| | Total | 65 | 192 | 25 | 20 |

- (e) The 35 No properties at Ringfield Close & Tanners Piece in Nailsworth are scheduled for demolition and were not surveyed.
- (f) Those properties with existing EWI were not surveyed for this Report.

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.1 General (contd)

- (g) Two Reema houses were listed for Wharfedale Way, Bridgend, but inspection showed that the houses had been demolished, see Photograph S15.
- (h) Three Reema houses were listed for Brimley, Leonard Stanley, but inspection at showed that the houses examined were not of Reema construction (or any Non-Trad type), see Photograph S16.
- (i) During inspections we photographed issues such as structural defects, mould and items which might affect any EWI works in the future. Some of these photographs are referred to in the text and included in Appendix D3, but there were too many to include them all. On the accompanying disk we have included photographs which illustrate our observations, but they are not specifically cross referenced or referred to in the body text of this report.

8.2.2 Site Inspections at Lawnside, Forest Green

- (a) 12A Lawnside – Mid-Terrace House with alleyway. Externally, a previous repair to the rear lintel over the alleyway had cracked along the joint with the existing finishes, but otherwise was performing satisfactorily. Internally, there were two small areas of mould low down on the external front & alleyway walls, see Photograph S17, which were roughly square with a clear centre. In the Bedrooms there was mould around the window reveals, together with other instances of square mould shapes with clear middle parts, see Photograph S18 to S22.
- (b) 18 Lawnside – Semi-detached Bungalow. Externally, a short length of cracked/spalled concrete just above eaves level on the gable wall, see Photograph S23. Internally, the tenant mentioned damp in the Bedroom on the wall below the bed. We were unable to view this because of bed/furniture.
- (c) 21 Lawnside – Semi-detached House. No external or internal defects observed.
- (d) 24 Lawnside – Mid-Terrace House with alleyway. No external defects observed. Internally, small area of mould/damp in the corner of one of the rooms.
- (e) 25 Lawnside – Mid-Terrace House with alleyway. No external defects observed, there was no internal access.
- (f) 37 Lawnside – End Terrace House. No external defects observed. Internally, some mould on the window reveals and heads in the kitchen & bathroom.
- (g) 45 Lawnside – Semi-detached Bungalow. No external defects observed. Internally, some on the window reveals and head in the kitchen, and two areas of square stains (similar in shape and size to the mould seen in No 12A Lawnside), see Photographs S24 & S25. In the gable/rear wall corner there was a vertical crack 100mm each side of the corner, and what appeared to be mould staining, see Photograph S26. There were also two very faint square stains (similar to S25) either side of the cracking.

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.2 Site Inspections at Lawnside, Forest Green (contd)

- (h) 56 Lawnside – Mid-Terrace House with alleyway. Externally, on the front, low down by the front door, see Photograph S27, there was a very small area of spalled concrete, and a very short length of exposed, corroded steel. There was a short crack extending up and across to the door frame/reveal. Internally there was no access to inspect.
- (i) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below), except at Nos 45 & 56 Lawnside, on the front. At 18 Lawnside, front paving to the left of the front door was above the bottom of the panels, see Photograph S28.
- (j) Porches, Conservatories & Covered Ways – Some properties have additions to take into account in undertaking any EWI installations. Nos 18, 21, 24, 25, 37 and 45 all had these structures. Photographs are included for future reference on the accompanying disk in *S Series Folder, sub-folder D-EWI issues/Forest Green*.

8.2.3 Site Inspections at Mankley Road, Leonard Stanley

- (a) 26 Mankley Road – Semi-detached Bungalow. No external defects observed. Internally, small areas of mould in the bathroom & bedroom.
- (b) 39 Mankley Road – Semi-detached House. No external defects observed. Internally, there was significant mould in almost every room, mainly around the windows (on the frames, the cills, the head, the reveals), but also at ceiling level, and some on the walls. Photographs S29 and S30 show a typical reveal. The mould in this property was the most extensive in area and density of all the properties we inspected (and elsewhere). Photographs are included for future reference on the accompanying disk in *S Series Folder, sub-folder C-Defects/Leonard Stanley*.
- (c) 51 & 52 Mankley Road – Semi-detached ground & first floor flats. Externally, there was a crack on the front door step to No 52, see Photograph S31, which extends up onto the reveal. The step & reveal are part of the large PRC panel which forms the external wall. Internally there was no access to No 51. At No 52, there was some mould to the wall just inside the Hall (at the bottom of the stairs, an unheated and unventilated area), see Photograph S32. There was light mould in isolated patches on or around the bathroom and kitchen windows.
- (d) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below).
- (e) Porches, Conservatories & Covered Ways – No 39 has a dilapidated conservatory which will need to be taken into account in undertaking any EWI installations, see Photograph S33.
- (f) Gas meters & pipework – No 39 has a gas meter, see Photograph S34, and this house and Nos 51 & 52 has gas pipework running along the external elevations, see Photograph S35. Meters & pipework will need to be taken into account in undertaking any EWI installations.

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.4 Site Inspections at Glebe Road, Minchinhampton

- (a) 38 Glebe Road – Semi-detached Bungalow. No external defects observed. The panels had been drilled at regular intervals; we suspect that insulation has been injected into the cavity. Internally, small isolated areas of mould on/around the bedroom windows.
- (b) 89 Glebe Road – Semi-detached House. No external defects observed. Internally, small isolated patches of mould on/around the bedroom windows.
- (c) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below). At the rear party wall At No 89 the gravel level was locally higher than the bottom of the PRC panel over a short length, but it could be easily reduced. It was also too high at the front due to a kerb height planter.
- (d) Porches, Conservatories & Covered Ways – No 38 has joined the bungalow to the Outbuilding (which is assembled using Reema panels), see Photograph S36, which will need to be taken into account in undertaking any EWI installations.
- (e) Overhead electric cables – No 89 was served by overhead electric cables to the gable wall, see Photograph S37. From the fixing point the cables run down the gable to enter building at first floor level. There appears to be another cable running horizontally at first floor level to the rear eaves (maybe serving the adjoining house).
- (f) Gas meters & pipework – No 89 has a gas meter and pipework running along the front external wall. Meters & pipework will need to be taken into account in undertaking any EWI installation.

8.2.5 Site Inspections at Upper Park Road, Nailsworth

- (a) 1 & 2 Upper Park Road – Semi-detached ground & first floor flats. Externally no defects observed. Internally no defects observed in Flat No 1, the first floor flat. There was no access to the ground floor flat.
- (b) 3 & 4 Upper Park Road – Semi-detached ground & first floor flats. Externally no defects observed. Internally no defects observed in Flat No 4, the first floor flat. There was no access to the ground floor flat.
- (c) 6 Upper Park Road – Semi-detached House - External. There were no defects observed to the PRC panels. The house has a single storey side extension which also forms a porch over the “front” door, see Photographs S38 & S39. On the rear there was a crack at the junction of the extension and main house, see Photograph S40. The crack was from ridge to dpc, wider at the top and becoming thinner lower down. There was a similar crack on the front side, within the porch. At dpc level on the rear, to the left of the door there was a horizontal crack becoming vertical, see Photograph S41. There was a more evident crack above the door rising up to the roof verge, see Photograph S42. On the side elevation there was a crack along the dpc level, see Photographs S43 & S44.

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.5 Site Inspections at Upper Park Road, Nailsworth (contd)

- (d) 6 Upper Park Road – On the rear of the main house there was cast in-situ concrete between the underside of the panels and the foundation blockwork, see Photograph S45. The exposed footings are usually painted black, and the blockwork looks modern. We suspect that this corner of the house has been underpinned. The pattern of cracking to the side extension suggests some settlement has occurred.
- (e) 6 Upper Park Road – Semi-detached House - Internal. There was mould on and around the windows in the bedrooms (no photographs available)
- (f) Internal Investigations in Nos 3 & 6. In March 2017 we carried out some opening up of the floors, and have reported those findings to you at the time. For completeness we report on that investigation and also on the construction within the loft space.
- (g) First floors – In the flats, Nos 1 & 3, the first floor was cast in-situ concrete, see Photographs S46 & S47. Below the floorboards and battens there was building paper, which we ripped back to reveal a cast in-situ reinforced concrete floor slab. In house No 6, below the floorboards, see Photograph S48, was a PRC “ladder” beam (basically two long beams joined via cross beams at the ends and at regular intervals along its length). Photograph S49 shows a typical view of the floor with the ground floor ceiling taken down. Sets of “ladder” beams cover the whole of the floor. We often find that beams have been damaged during the installation of central heating pipe work and electric cables, but they can suffer from defects due to their construction. Photograph S50 shows a section of missing concrete due to poor construction, leaving the reinforcement exposed. More commonly there can be spalled or cracked concrete with exposed corroded reinforcement. It should be noted that Photographs S49 & S50 were not taken in houses in the Stroud District Council stock.
- (h) Loft space - In the flats, see Photograph S51, we could see that the party wall was of PRC panel construction, the same as the external walls. The chimney was rendered, but we suspect it was also of PRC construction. The roof purlins are supported onto the wall, see Photograph S52, and there was a large gap around the timber, leaving a hole in the party wall which would allow the spread of flames and smoke in the event of a fire. In the loft space of No 6, see Photographs S53 & S54, we could see that the party wall was of PRC panel construction, the same as the external walls. There were two chimneys (both shared with the adjoining property), and these were of PRC construction.
- (i) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below). At the rear of both blocks the ground level was significantly below dpc level.
- (j) Extensions – It was noted that the extension to No 5 (adjoining No 6) had a flat roof extension (see Photograph S55) rather than a lean-to roof (compare S55 with S39).
- (k) Overhead electric cables & Gas meters/pipework – All the properties were served by overhead electric cables, see Photographs S56 & S57, and had gas meters and pipework on the external walls (see Photograph S45 for No 6).

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.6 Site Inspection at Midland Road, Stonehouse

- (a) 155 Midland Road – Semi-detached House. Externally, there were no defects to the PRC panels observed except for a very small area of spalled concrete on the rear elevation. Internally, small isolated patches of mould on/around the bedroom windows. The tenants advised that they used a condensate trap in the small bedroom, where there was a damp stain on the ceiling due to a past gutter problem. There was some minor (normal) mould in the bathroom.
- (b) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below).
- (c) Porches, Conservatories & Covered Ways – No 155 did not have a porch, but No 147 and some others in the road did have them.
- (d) Overhead electric cables – There were no overhead electric cables.
- (e) Gas meters & pipework – Generally properties in the road had external gas meter boxes and pipework running on the external walls.
- (f) Chimneys – Nos 149 and 151 have had chimneys taken down to below roof level.

8.2.7 Site Inspections at Willow Road, Stonehouse

- (a) 22 Willow Road – Semi-detached Bungalow. Externally, there were no defects to the PRC panels observed except for a small length of the render below the panels had detached from the footing blockwork on the front elevation to the right of the door. Internally, there were no areas of concern.
- (b) 26 Willow Road – Mid-Terrace House with alleyway. Externally, there were no defects were observed to the PRC panels. At the rear a boiler overflow was constantly running, causing staining to the PRC wall panel below. Internally there was a small area of mould in the bathroom above the bath, and damp staining on the ceiling in a bedroom from a past ingress problem.
- (c) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below).
- (d) Porches, Conservatories & Covered Ways – Both had joined the Outbuilding to the house, see Photographs S58 & S59. The Outbuilding to No 22 was of Reema panel construction, and No 26 was blockwork.
- (e) Overhead electric cables – There were no overhead electric cables.
- (f) Gas meters & pipework – No 22 had a gas meter box and vertical pipework on the gable wall. There wasn't an external meter at No 26.

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.8 Site Inspections at Victory Road, Whiteshill

- (a) 26 Victory Road – End Terrace House. Externally, there were no defects were observed to the PRC panels. Internally there were no mould or damp problems.
- (b) 31 Victory Road – Semi-detached House. Externally, there were no defects were observed to the PRC panels. This property was the same style as No 6 Upper Park Road, Nailsworth, and also had a single storey side extension (with a flat concrete roof, not a timber lean-to roof, and no porch over the front door), see Photographs S60 & S61. On the side there was a crack above the window, see Photographs S62 & S63. Internally, there was cracking in a similar location to the outside cracking, see Photographs S64 & S65. Internally a general view of the ceiling is shown in Photograph S66. The ceiling was generally in poor condition, with spalling concrete and peeling finishes, see Photographs S67 & S68. In the front corner there was evidence of past (perhaps ongoing) damp ingress, see Photograph S69. Internally in the main house we observed mould in the rear bedroom. The tenant advised that he had dry lined the wall but the mould keeps reappearing. In the front bedroom, also now dry lined, there were no further mould issues.
- (c) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below).
- (d) Porches, Conservatories & Covered Ways – None to either house.
- (e) Overhead electric cables – Both properties are served by overhead electric cables. At No 26 the power lines are relatively close to the building, and the tenants advised that a recent project to provide new guttering and roofing was not carried out to their home (& another) due to the risk of arcing.
- (f) Gas meters & pipework – No 26 had a gas meter box on the front elevation by the party wall, and vertical & horizontal pipework on the front and gable walls. There wasn't an external meter at No 31.

8.2.9 Site Inspection at Blacklow Close, Woodchester

- (a) Highfield, Blacklow Close – Detached Bungalow. A general view of the bungalow is shown in Photograph S71. The original bungalow had a detached garage to the side, and this has been joined to the original building, to create a kitchen and other rooms. There was one defect noted to the external PRC panels, a crack below and to the right of the front window, see Photograph S72. The view was restricted in some areas due to excessive vegetation. Internally, there was no mould or other issues.
- (b) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below).
- (c) Porches, Conservatories & Covered Ways – None, but if EWI is being considered then a decision will be required as to whether it will include the extended parts to the right side of the original building.

8.0 Reema Hollow Panel

8.2 Visual Inspection



8.2.9 Site Inspection at Blacklow Close, Woodchester (contd)

- (d) Overhead electric cables – The building is served by an overhead electric cable, which enter at the rear. The cable pole is directly behind the extended part (& may interfere locally with EWI if installed). The pole appears to feed a number of properties.
- (e) Gas meters & pipework – There was a gas meter box on the side elevation by the door into the extended part. There was no gas pipework evident.

8.2.10 Factors affecting EWI

- (a) Gable & Hipped Roofs – Where there is a gable wall the gable roof ladder may need to be extended to accommodate the additional width of the overcladding. Where there is a hipped roof the width of the soffit should be able to accommodate the EWI. Those with hipped roofs are shown in the following table

| Town/Village | Road | Hipped | Gable | Comments |
|-----------------|-----------------|---------------|-------------|----------------------------------|
| Forest Green | Lawnside | | All in road | Verge on some may be wide enough |
| Leonard Stanley | Mankley Road | 26, 39, 51/52 | | All in road hipped |
| Minchinhampton | Glebe Road | | All in road | Verge on some may be wide enough |
| Nailsworth | Upper Park Road | 1-4, 5&6 | | 5&6 have gable with soffit |
| Stonehouse | Midland Road | | All in road | Verge on some may be wide enough |
| Stonehouse | Willow Road | | All in road | Verge on some may be wide enough |
| Whiteshill | Victory Road | 26 & 31 | | 31 has gable with soffit |
| Woodchester | Blacklow Close | High Field | | |

- (b) Ground levels – Ground and paving levels were generally below the bottom of the PRC panels (although not necessarily 150mm below). You will need to decide whether to risk later problems (cold bridging, mould) by leaving the path/paving levels high and raising the bottom track of the EWI.
- (c) Porches, Conservatories & Covered Ways – You will need to decide whether to overclad or leave. Some structures may need removal anyway, where dilapidated.
- (d) Overhead electric cables – Action will be required to divert, or box out the cabling.
- (e) Gas meters & pipework – Action will be required to extend pipework outwards prior to works commencing.

8.0 Reema Hollow Panel

8.3 Conclusions & Recommendations



Conclusions

8.3.1 General

- (a) Nos 8 & 10 Wharfdale Way, Bridgend, have been demolished, there were no Reema houses on the site.
- (b) Nos 53, 54 & 55 Brimley, Leonard Stanley, were not of Reema Hollow Panel construction, nor of any other Non-Trad type.
- (c) 19 No properties were not identified as Reema Hollow Panel were on the database of information supplied to us. Most of these were as original, but two were already overclad.
- (d) These conclusions and recommendations apply only to the Reema properties which have not been already overclad.

8.3.2 External PRC Walls

- (a) The PRC elements in the external walls are performing satisfactorily, and apart from some minor localised repairs to panels no further remedial action is required at the present time. Of the 25 No properties inspected there were only four minor localised cracking/spalling defects. Pro rata across the Hollow Panel stock we might expect about thirty to fifty minor repairs.
- (b) The properties are suitable for an external wall insulation system to be installed.

8.3.3 Internal

- (a) Minor mould was found in about three quarters of the properties inspected internally, sometimes around windows and/or in bathrooms and kitchens (where it might be expected). The mould varied from very minor to very significant, the worst being at No 39 Lawnside, Forest Green. There were two houses where there was peculiar patterns of mould (12A and 45 Lawnside), which we cannot explain without opening up. We suspect that there was something in the cavity causing localised cold bridging. Mould will be more prevalent in this property type due to cold bridging across the concrete panels. For most properties mould was not a major problem, and in some the level was such that it could almost be called "normal". No 39 Lawnside was particularly bad, and in this and a few others life-style may also have been a contributory factor.
- (b) The first floor construction of PRC "ladder" beams, was found by opening up at a property in Nailsworth. It is likely that they will be found in all other houses in the stock. Their condition may be good, but past experience has shown that they are often damaged during services installations such as central heating pipework and cabling.
- (c) In flats the first floor construction is likely to be cast in-situ concrete, also found by opening up in Nailsworth.
- (d) The party walls are likely to be PRC panels throughout the stock (again, as found in Nailsworth).
- (e) There may be potential for fire and/or smoke to spread across the party wall into (or from) the neighbouring house, especially where the gaps are significant around purlins and at the top of the PRC units (to the underside of the roof felt).
- (f) Chimneys may be of PRC or traditional construction.

8.0 Reema Hollow Panel

8.3 Conclusions & Recommendations



Conclusions (contd)

8.3.4 Extensions

- (a) Some houses have single storey side extensions, and both of the ones we inspected had defects. Some remedial works are required, and these could wait until an EWI contract is undertaken. However, some internal repairs are required to the extension at 31 Victory Road, Whitehill on a more urgent basis.

8.3.5 Factors affecting EWI installation

- (a) The following may affect any overcladding undertaken in the future
- (b) **Ground levels**, where ground, paving or decking is too high.
- (c) **Porches, conservatories and covered ways** may need to be taken down and rebuilt or disposed of. It may be possible to work around them, but installing EWI to the external walls within may not leave enough width for access. Each case will need to be determined on its merits.
- (d) **Roof verges** - the gable ladder may need to be extended to suit the thickness of the EWI on some properties, but generally there will be a wide enough verge soffit to avoid the need to extend the roof line.
- (e) **Overhead electric cables** - If the properties are overclad in the future any overhead electric cables will need to be dealt with. It was common practice for the incoming mains to be via overhead cable to one house of the pair, or the terrace, with cables routed along the eaves to the other property. If overcladding is carried out the cables should be routed underground, but this takes time to organise and should be carried out well in advance of EWI works. If the adjoining property is privately owned there may be a problem if the supply is interrupted to facilitate the diversion works.
- (f) **Gas meter boxes and pipework** - Many properties have external meters, and associated pipework. If EWI is installed the meters can be worked around, but the pipework will need to be brought forward outside of the cladding.

8.3.6 Remaining Life

- (a) The PRC wall panels should have a remaining life of 30 years from now, probably longer when protected by EWI.
- (b) Some remedial action may be required from time to time on the first floor "ladder" beams, and these will need to be inspected when practical to do so (eg at changes of tenancy).

8.0 Reema Hollow Panel

8.3 Conclusions & Recommendations



Recommendations

8.3.7 General

- (a) Amend your Masterlist/Database to record that Nos 8 & 10 Wharfdale, Bridgend have been demolished, and Nos 53, 54, & 55 Brimley, Leonard Stanley, are traditionally built, not Reema Hollow Panel.
- (b) Amend your Masterlist/Database to record the properties previously listed as trad or "no id" as Reema HP (see Appendix A6 for details).
- (c) You should confirm the ownership of the shop unit in Lawnside. It was not listed in the database provided, but that may have been because it was not residential. If it does belong to SDC you may wish to consider overcladding options.

8.3.8 External Walls

- (a) No remedial works are required to the external walls at the present time, any minor repairs to the PRC can be left until an EWI contract is undertaken.
- (b) We recommend the installation of EWI.
- (c) **All** properties should be subjected to a detailed pre-EWI installation inspection, and any repairs to the PRC undertaken as part of the EWI Contract.

8.3.9 Internal

- (a) No remedial works are required, but "whole house" ventilation systems should be installed as part of the EWI works. This should assist with mould issues in the majority of cases, but more extensive works may be required at 39 Lawnside, Forest Green.
- (b) No works are required to the PRC panels in the party wall
- (c) The risk of fire and/or smoke to spread across the party wall should be eliminated. The risk of fire is generally quite small, but when a fire occurs the consequences can be serious. We recommend that where the risk of spread is higher, ie where large gaps around purlins etc are identified, remedial works should be undertaken immediately. Stroud District Council should adopt a policy of inspecting for this defect at all changes of tenancy, and carrying out works to seal any gaps at that time. Whenever works are undertaken to a property there should be an inspection and remedial work undertaken if necessary. (Note: this applies to those already EWI'd too)
- (d) The first floor "ladder" beams should also be inspected at all changes of tenancy, and remedial works to any cracks and spalls carried out. If central heating and/or cabling works are proposed contractors should be warned in advance of their presence and instructed not to damage them in any way during their installation work. Pre and post M&E works inspections should be carried out. Failure of a "ladder" beam may well have serious consequences for occupants in the rooms below. (Note: this applies to those already EWI'd too)

8.3.10 Extensions

- (a) Carry out remedial works internally to No 31 Victory Road, Whiteshill in the short term, to make the room habitable again. External repairs can await an EWI contract.

8.0 Reema Hollow Panel

8.3 Conclusions & Recommendations



Recommendations (contd)

8.3.11 Factors affecting EWI installation

- (a) **Ground levels** - reduce ground & paving levels, ideally to below 150mm below dpc. This is not always possible or practical when there is a large area of paving adjacent to the external wall, but paving and decking should be taken down locally to just below dpc level, and soil or gravel must be reduced in level to suit where ground, paving or decking is too high.
- (b) **Porches, conservatories and covered ways** – carry out a survey of requirements in advance of any EWI contract. Each case will need to be determined on its merits.
- (c) **Roof verges** – extend the gable ladder where required as part of the EWI contract.
- (d) **Overhead electric cables** - Divert overhead electric supply cabling to below ground. This work should be initiated well in advance of the repair and EWI works. Involve private owners where there is a shared supply from existing overhead cabling.
- (e) **Gas meter boxes and pipework** - Gas pipework to be moved forward either in advance of, or as part of, the EWI Contract.

9.0 Stent

9.1 Construction



- (a) The Stent construction was *Designated Defective* under the Housing Defects Act 1984 and the Housing Act 1985.
- (b) Details of the standard form of construction can be found in the BRE Digest "The Structural Condition of Stent houses" published by BRE in 1984. The form of original construction is illustrated in Appendix C10.
- (c) The substructure was concrete strip footings, onto which sat a PRC plinth units of vertical channel section. The ground floor was concrete ground bearing slab, with the inner face of the channel section providing a permanent shutter to the concrete.
- (d) The external walls were formed from storey height 300mm wide by 300mm deep by 100mm thick T or L sections prefabricated reinforced concrete panels. The top of the T-section had double V-section vertical joints so that when the panels are butted together there is a vertical feature exterior face (although sometimes the exterior was rendered finish, hiding the vertical joints).
- (e) The panels were clamped at their bases onto the top of the channel section, with holding down bolts and mild steel plates.
- (f) The inner leaf was 50mm or 75mm clinker concrete blocks which abut the bottom of the T-section, the block being tied to the panels with steel ties. The cavity had glass fibre insulation.
- (g) At first floor level there was a PRC ring beam, with a splayed outer face (providing another feature to the exterior face). The channel of the ring beam had two reinforcing bars placed which was then filled with in-situ concrete.
- (h) The first floor panels were then fixed to the ring beam as for the ground floor panels. At eaves level was another PRC ring beam, this time with a horizontal projection forming the soffit. This too had two reinforcing bars before being filled with in-situ concrete.
- (i) The party wall was constructed of clinker concrete blockwork.
- (j) Partition walls which were load bearing were constructed with 100mm clinker concrete blocks and non-load bearing walls of 50mm clinker concrete blocks.
- (k) First floor construction was either timber joists or rolled steel joists, with timber floorboards.
- (l) The roof construction was supported off the eaves ring beam, comprising either rolled steel or timber rafters with felt, battens and concrete tiles. A variation to construction was to provide a flat roof with cover of bituminous felt.
- (m) Overall stability of the structure was provided by the combined stiffness of the panels/blockwork forming the external walls with additional bracing by the internal blockwork partitions.

9.0 Stent

9.2 Major Works Carried Out



- (a) Investigations by Mouchels (consulting engineers), in 1987 incorporated a large number of concrete tests to determine the chloride ion content level. In all tests the content was less than 0.6% of the cement content, indicating that chlorides were not added to the concrete during manufacture of the PRC components. Mouchels also found a number of areas of internal cracking.
- (b) Curtins further investigated the buildings in 1996, but found no evidence of the internal cracking reported by Mouchels in 1987.
- (c) Curtins recommended that the houses be overclad with an external wall insulation system (EWI), to protect the concrete frame. This work was undertaken by the Council in 1998.
- (d) We have no details of the overcladding system adopted.
- (e) The houses are located as follows

| Town/Village | Road | Qty |
|-----------------|--------------|-----------|
| Kingsway | Dursley | 26 |
| St Georges Road | Dursley | 29 |
| | Total | 55 |

- (f) It is now nineteen years since the overcladding works were carried out, and Curtins noted in the 2003 Report that an overcladding system can have an anticipated life of 20-30 years. It was suggested that patch repairs or re-painting of the EWI would be required from year 20 onwards.
- (g) The 2003 Report concluded that the properties had a future life of 30 years, subject to routine maintenance of the EWI to continue providing protection of the PRC.

9.0 Stent

9.3 Conclusions & Recommendations



Conclusions

9.3.1 External PRC Walls

- (a) Since 1998 the PRC external walls of the houses have been protected by EWI.
- (b) There is no reason to believe that the retained PRC has deteriorated, and the 30 year life expectancy estimated in 2003 may still hold true.

9.3.2 Internal Walls

- (a) Some internal cracking was reported in 1987, but was not found in 1996. It is likely to have been repaired during that period.
- (b) However, the internal walls, and the inner leaf of the external walls are clinker blockwork, so it is unlikely that any defects noted would be associated with deterioration of the outer PRC components.

Recommendations

9.3.3 External PRC Walls

- (a) No remedial works should be necessary to the PRC components to the external walls.
- (b) Carry out an inspection and assessment of the EWI in 2018, and again in 2023. Carry out any repairs to the finishes necessary to continue protection of the PRC.
- (c) The Council may wish to consider removing the existing and installing new EWI from about 2023 onwards, depending on the condition of the existing and energy efficiency targets in the 2020's. EWI installed in 1998 is unlikely to meet current standards, so certainly will not meet them in the next decade.
- (d) Whilst it may be possible to overclad the existing EWI, removing the overcladding would provide an opportunity to re-examine in detail the condition of the PRC. Although this is a much more expensive option for the Council, we would recommend removal and renewal in order to properly reassess the structural condition of the houses.

9.3.4 Internal Walls

- (a) Carry out inspections as follows whenever a property becomes vacant due to change of tenancy.
- (b) The PRC components are hidden from view externally by the EWI and internally by the clinker block inner leaf. Inspection internally may reveal cracking of the blockwork along the line of the T-section ribs in the external wall construction, providing some degree of early warning that deterioration is occurring.
- (c) If a property is likely to be vacant for a short period between tenancies (perhaps due to say new kitchen/bath/central heating being installed) the opportunity should be taken to carry out some localised opening up at random to view holding down bolts/straps at ground floor level, and the precast beams to first floor and eaves level.
- (d) The first floor and roof construction materials (timber or steel) should be recorded for future reference.
- (e) If steel first floor joists have been used, check their condition in locations vulnerable to corrosion, such as below the bath and WC.

10.0 Swedish

10.1 Construction



- (a) Swedish construction was not *Designated Defective* under the Housing Defects Act 1984 or the Housing Act 1985.
- (b) The Swedish Timber Framed Dwelling was one of a number of prefabricated house systems, utilised to meet the general demand for additional housing which developed after the end of the Second World War. Consequently, the vast number of these dwellings were built for Local Authorities and similar organisations to enhance their housing stocks. Between 1945 and 1951 about 4500 dwellings were built.
- (c) Details of the standard form can be found in the BRE Report "Timber Frame Housing System Built in the UK 1920 to 1965" published in 1995. The standard form of the main structure is described below and the various stages of construction are illustrated in Appendix D11.
- (d) Dwellings comprise semi-detached chalet bungalows and two storey houses. The external walls are clad in vertical timber boarding throughout, and the dwellings have steep pitch gable roofs covered with concrete tiles, slates or timber shingles. The chalet bungalows and some houses have single-storey gable roof extensions.
- (e) The external walls comprise storey height timber frame panels which were nailed together. The panels had 50mm x 125mm or 50mm x 75mm timber studs (the 50mm dimension was normal to the plane of the wall), spaced at centres of up to 1450mm, with horizontal timber noggings and, in some panels, timber diagonal braces. The panels are sheathed internally with 75mm x 20mm in tongued and grooved (T&G) vertical timber boarding, backed with building paper. The panels were lined with 3mm hardboard to provide a surface for decorating. Crude insulation was provided by 15mm thick 'Tentex' fibreboard which was located inside the cavity.
- (f) Externally the panels were directly clad with nail-fixed, half-checked and channeled 75mm x 20mm vertical timber boarding over a bituminous building paper breather membrane. The bottom rails of the panels were fixed to a separate timber sole plate (called a Keel plate), which also supported the pre-formed frame panels above.
- (g) The partition walls comprise 50mm x 75mm or 50mm x 50mm timber stud framing, which was faced on both sides with 22mm T&G vertical boards & 3mm hardboard, which was treated with a fire retardant paint on vertical inner surfaces to provide a suitable base for decoration.
- (e) The party wall was constructed of 225mm (9 inch, one brick thick) brickwork, plastered internally. This wall extended up into the loft space.
- (f) The substructure comprised concrete strip footings which support a 225mm brick perimeter wall and 225mm & 112mm brick honeycomb internal support walls. The underfloor depth varied, oversite cover was concrete. The underfloor space was ventilated by up to eight airbricks. A bituminous felt or asphalt dpc was laid along the perimeter and internal support walls.

10.0 Swedish

10.1 Construction



-
- (g) The suspended ground floor was of 22mm T&G boards, supported on 125mm x 50mm timber joists at 450mm centres, spanning between front and rear. Intermediate support was provided by the brick internal support walls. The joists were notched at one end to bear directly on both the dpc and the timber sole plate. The single storey extension generally had a concrete floor.
 - (i) The first floor was 22mm T&G boards, supported on 200mm x 50mm timber joists at 450mm centres, spanning between front and rear. Intermediate support was provided by a ground floor spine wall to which the joists are notched and nailed. The joists form part of the roof structure in the chalet bungalow, which encloses two bedrooms and has two dormer windows on the rear elevation
 - (h) The gabled roof was of about 45° pitch, covered with slates, tiles or timber shingles on timber battens on bituminous felt over 20mm T&G timber sarking boards. The roof was of framed timber construction, with 150mm x 50mm timber rafters, spaced at either 450mm or 915mm centres depending on the weight of roof cover. In the chalet bungalows the spacing was 450mm, except at dormer and porch positions, at each of which one rafter was omitted. At approximately the centre of each rafter, each rafter pair had a collar of two 100mm x 20mm timber members; one member was nailed to each side of the rafter pair. Ceiling ties, which form the first floor joists in the chalet bungalows, were connected to corresponding rafters by 22mm thick timber gussets, nailed to both faces of the members.

10.0 Swedish

10.2 Visual Inspection



- (a) Front, rear and side elevations of a typical Dormer Bungalow are illustrated in Appendix D4, Photographs T1 to T3, and for a typical house in Photographs T4 to T6. It should be noted that the elevations shown are not of the same property in each case.
- (b) We are not aware of any investigations prior to Curtins investigations in 2003.
- (c) In 2003 Curtins noted that an extensive refurbishment programme had been undertaken during the preceding twelve months to repair any defective timber, to install insulation internally (Internal Wall Insulation – IWI), and to carry out any roof repairs required.
- (d) In 2003 Curtins carried out investigations to determine the condition of the sole plate & dpc, and found in every case that the frames were in good condition with little or no evidence of degradation. In 2003 it was concluded that the properties were in good condition and subject to regular maintenance will perform satisfactorily for the next thirty years.
- (e) In 2015 and 2016 Curtins carried out a number of intrusive investigations to the stock, and for this report the remaining properties were inspected without further opening up.
- (f) The location and recent surveys of the properties are listed in the following table

| Town/Village | Road | Qty | Surveyed 2015/2016 | Inspected 2017 |
|-------------------|--------------------|-----------|--------------------|----------------|
| North Nibley | Barrs Lane | 1 | - | 1 |
| Painswick | Parkfield Cottages | 6 | 6 | - |
| Stancombe | Swedale | 2 | 2 | - |
| Stinchcombe | The Avenue | 3 | 3 | - |
| The Camp | Bushy Beeches | 2 | 1 | 1 |
| Uley | The Knoll | 3 | 1 | 2 |
| Wotton-Under-Edge | Mount Pleasant | 3 | 1 | 2 |
| | Total | 20 | 14 | 6 |

- (g) At Parkfield Cottages, Painswick, Curtins opened up Nos 1, 3 & 5, and inspected Nos 2, 4, and 6. Curtins report was referenced BR1500C, dated December 2015. Nos 1 to 4 were chalet bungalows, Nos 5 & 6 were houses.
- (h) At Swedale, Stancombe, Curtins opened up both houses (Nos 1 & 2). Curtins report was referenced BR1500, dated October 2015. Subsequent to our Report, the houses were subject to extensive repair to the timber frame, followed by the installation of EWI overcladding.
- (i) At The Avenue, Stinchcombe, Curtins opened up all three chalet bungalows (Nos 1, 2 & 3). Curtins report was referenced BR1500E, dated August 2016).
- (j) At Bushey Beeches, The Camp, Curtins opened up chalet bungalow No 2. Curtins report was referenced BR1500D, dated December 2015.

10.0 Swedish

10.2 Visual Inspection



- (k) At The Knoll, Uley, Curtins opened up house No 5. Curtins report was referenced BR1500A, dated December 2015.
- (l) At Mount Pleasant, Wotton-Under-Edge, Curtins opened up No 1. Curtins report was referenced BR1500B, dated December 2015.
- (m) Copies of the reports on the surveys of 2015 and 2016 are included on the accompanying disk, and we will not repeat the findings in this report, other than to say that some of the repairs carried out to the properties in 2002 (and possibly since) had failed, and that in places the condition of the timber to the keel plate, and bottom sections of timber frame was very poor in many places, as was some of the outer timber boarding.
- (n) Viewing the outer boards alone will not give full picture of the condition of the property, particularly not the structural condition of the hidden frame timbers and inner boards. However, viewing the outer boards and comparing them with adjacent properties which have been opened up will allow some extrapolation to be made and a judgement made of the likely condition of the properties of the remaining dwellings.
- (o) The addresses of the properties inspected for this report were as follows

| Town/Village | Road | Qty | Inspected 2017 | Type |
|-------------------|--------------------|----------|----------------|------------------|
| North Nibley | Barrs Lane | 1 | No 32 | Chalet Bungalow |
| Painswick | Parkfield Cottages | | | - |
| Stancombe | Swedale | | | - |
| Stinchcombe | The Avenue | | | - |
| The Camp | Bushy Beeches | 1 | No 3 | House |
| Uley | The Knoll | 2 | Nos 5 & 8 | Houses |
| Wotton-Under-Edge | Mount Pleasant | 2 | Nos 3 & 7 | Chalet Bungalows |
| | Total | 6 | | |

- (p) The results of the inspections were as follows
- (q) **32 Barrs Lane, North Nibley** – This property was the only one in the village, so no comparison with an opened up property could be made. Mixture of original and replacement outer boards, and generally in reasonable condition. At the front the gutter was disconnected at the downpipe, see Photograph T7. On the side elevation there was extensive ivy growth, see Photograph T8. On the side elevation of the Outbuilding the ground level was too high at the corner, see Photograph T9, and also on this elevation the bottoms of some of the outer boards had rotted away, see Photograph T10. The incoming mains electricity supply cable was to the side elevation of the main house, see Photograph T11. On the rear, one of the dormer window timber side panels was in poor condition, see Photograph T12, and the party wall chimney capping was spalled/broken away, see Photograph T13. There was no internal access for inspection.

10.0 Swedish

10.2 Visual Inspection



- (r) **3 Bushey Beeches, The Camp** – On the front roof there was some distortion of the roof tiles below the gable chimney, see Photograph T14. On the front wall an architrave to a first floor window was rotted, see Photograph T15, with similar a defect to the patio door architrave (but not as advanced). Also on the front elevation a short length of first floor window cill was rotten, see Photograph T16, and one or two of the outer boards had “sprung” at the bottom of the first floor, see Photograph T17. Generally the outer boards appeared to be original and in reasonable condition. It was difficult to detect whether some boards were replacement, due to the thick coating of finishes applied. It is likely there were some replacements. On the side elevation there was some algae discolouration on the boards, see Photograph T18. The flashing at the junction of the Outbuilding and main roof appears to have been covered with “flashband” or similar, and was deteriorating, see Photograph T19. The incoming mains electricity supply cable was to the side elevation of the main house, see Photograph T20. Internally, there was minor mould on the frame of one of the bedroom windows, but otherwise no defects were noted.
- (s) **6 The Knoll, Uley** – This house is attached to No 5 which was opened up in 2015. The replacement canopy over the front door has left a small area of exposed untreated timber (as it was at No 5), see Photograph T21. On the Outbuilding front roof some of the tiles had slipped, see Photograph T22. On the front corner of the Outbuilding there was a poor repair to rotten fascia board, see Photograph T23. On the side elevation there was some rot and woodworm to the outer panels, see Photograph T24, and rotten timber at the corner of the bay window, see Photograph T25. Also at the rear at least one of the air vents to the subfloor appears to have been blocked, see Photograph T26. The outer boards were a mixture of original and replacements, some were rotted, se Photographs T27 (above the patio doors) and T28 (near the party wall). Internally there were no defects noted.
- (t) **8 The Knoll, Uley** – On the Outbuilding front roof some of the tiles had slipped, see Photograph T29. On the rear there was some rot to the lintel architrave to the patio doors, see Photograph T30. The outer boards were a mixture of original and replacements, all of which appeared to be in reasonable condition. There was no internal access for inspection.
- (u) **3 Mount Pleasant, Wotton-Under-Edge** – This house is attached to No 1 which was opened up in 2015. There was extensive ivy growth to the front elevation (as there was at No 1), see Photograph T31. On the front corner there was rot to the outer boards, see Photograph T32. On the side elevation there was rot to the small window architrave, see Photograph T33. The incoming mains electricity supply cable was to the side elevation of the main house, see Photograph T34. From here a second cable runs along the fascia to supply No 1. The rear gable chimney has been taken down, see Photograph T35. There was some rot to the dormer window architraves, see Photograph T36 for an example. There was no internal access for inspection.

10.0 Swedish

10.2 Visual Inspection



- (v) **7 Mount Pleasant, Wotton-Under-Edge** – The verge to the front left side of the porch was cracked and there had been some movement of the tiling above, see Photograph T37. On the rear at the junction of the main house and Outbuilding a slipped tile had become lodged in the gutter, see Photograph T38. There is a gap between the gutter end and the adjacent roof overhang, so rainwater falling on the roof can run off onto the timber wall below. On the rear there was rot to the outer boards, see Photograph T39. On the rear, one of the dormer window timber side panels was in poor condition, see Photograph T40, and there was vegetation in the gutter and dead/dormant vegetation below, see Photograph T41. There was no internal access for inspection.
- (w) **Ground levels** – apart from the side elevation of the Outbuilding at 32 Barrs Lane North Nibley (Photograph T9), ground levels were generally sufficiently below the underside of the outer boards.
- (x) **Overhead Electric Cables** – if the properties are overclad in the future any overhead electric cables will need to be dealt with. Apart from Uley the other sites all have overhead cabling to the side elevation, see Photographs T11 (North Nibley), T20 (The Camp), T34 (No 3 at Wotton). At No 7 Wotton the incoming mains appears to be routed via private house No 5. It was common practice for the incoming mains to be via overhead cable to one house of the pair, with cables routed along the eaves to the other property. If overcladding is carried out the cables should be routed underground, but this takes time to organise and should be carried out well in advance of EWI works. If the adjoining property is privately owned there may be a problem if the supply is interrupted to facilitate the diversion works.
- (y) **Gas meters and pipework** – Some properties have external meters (North Nibley and Wotton), and associated pipework. If EWI is installed the meters can be worked around, but the pipework will need to be brought forward outside of the cladding.
- (z) **Chimneys** – Properties have two chimneys as standard, to the party wall and the gable. In all six properties inspected both chimneys remain except for the gable chimney at No 3 at Wotton (Photograph T35).

10.0 Swedish

10.3 Conclusions & Recommendations



Conclusions

10.3.1 External

- (a) The general appearance of the elevations was good, but there was a mixture of original and replacement timber, and there were some areas of rotten timber at ground level. The general appearance matched that found when we carried out the opening up investigations at the same sites in 2015 and 2016.
- (b) We suspect that opening up will reveal similar defects to those identified by opening up, and similar remedial works would be required prior to overcladding.
- (c) There are maintenance works that could be carried out to reduce the risk of water ingress into the structure – cleaning gutters, removing ivy growth, reducing ground level, replacing slipped or missing tiles etc.
- (d) The conclusions reached in the individual site reports will apply to the properties not opened up.

10.3.2 Internal

- (a) Internal access was restricted as tenants were not at home during our visits, but for those inspected there was no evidence of significant structural defects to the internal walls.
- (b) There was no evidence of significant mould problems.

10.3.3 Remaining Life

- (a) The two houses at Stancombe have been repaired and EWI installed, and the timber frame should have 30 years life remaining.
- (b) For the remaining properties the remaining life is considered to be very limited unless extensive repairs are carried out in the short term.

Recommendations

10.3.4 External

- (a) Carry out repairs to the structures and install EWI, as recommended in the individual site reports (the site at Stancombe has already been completed).
- (b) There is no need to carry out further opening up works to investigate the structures, but extensive removal of outer boards will be required in order to carry out repairs in any event.
- (c) This work should be carried out within the next three years.

10.3.5 Internal

- (a) No remedial works are required to the internal walls, but “whole house” ventilation systems should be installed as part of the EWI works.

10.0 Swedish

10.3 Conclusions & Recommendations



Recommendations (contd)

10.3.6 Maintenance Works

- (a) Carry out the following in the current financial year
- (b) Ensure gutters and downpipes are cleaned and operating adequately.
- (c) Remove all ivy (& similar) growth on the elevations.
- (d) Carry out repairs and improvements to dormer windows, sides and surrounds.
- (e) Carry out repairs to chimneys
- (f) Replace missing and slipped roof tiles
- (g) Ensure that Outbuilding to main house flashing details are performing adequately, repair and replace as necessary.
- (h) Reduce ground level to minimum of 100mm below the underside of the outer boards.
- (i) Ensure underfloor vents are operating, not blocked off.

10.3.7 EWI Enabling Works

- (a) Divert overhead electric supply cabling to below ground. This work should be initiated well in advance of the repair and EWI works. Involve private owners where there is a shared supply from existing overhead cabling.
- (a) Gas pipework to be moved forward either in advance of, or as part of, the EWI Contract.

11.0 Unity

11.1 Construction



- (a) Unity construction was *Designated Defective* under the Housing Defects Act 1984 and the Housing Act 1985
- (b) Details of the standard form of construction can be found in the BRE Digest "The Structural Condition of Unity Houses" published by the BRE in 1983. The form of construction is illustrated in Appendix C12.
- (c) The PRC columns are sandwiched between an inner leaf of blockwork and an outer leaf proprietary blockwork panel.
- (d) Reinforced concrete lintels are fixed to the columns and partially support blockwork in both leaves above. The window columns are exposed in the form of mullions in the larger openings.
- (e) There are two basic types of Unity dwelling. The earlier version (Mark I) has outer cladding and inner block skin not fixed to the columns but tied across the cavity with copper ties. The later version (Mark II) has outer cladding fixed directly to the columns using copper straps. The columns are slightly different cross section; the Mark I columns have a slight recess in the side, the Mark II columns are of plain rectangular section.
- (f) The party wall was cavity blockwork, 65mm thick with similar sized cavity.
- (g) The partition walls were mainly constructed of blockwork, but could also be storey height reinforced plaster units.
- (h) The substructure was concrete strip footings, on which sat the PRC columns. The ground floor slab was then cast over the top, often with a infill gap between the underside of the slab and the top of the foundation. Sometimes this was filled with brickwork, sometimes just rubble. The floor was finished with vinyl tiles or mastic asphalt.
- (i) The first floor was tonged & grooved boards onto either timber joists, steel I-beams or steel lattice beams. The joists were fixed to the PRC columns via steel endplates.
- (j) The roof comprised timber rafters connected to column heads with steel plates, overlain by felt, battens and tiles.
- (k) Some properties have attached outbuildings as described in the BRE Digest.

11.0 Unity

11.2 Major Works Carried Out



- (a) We have no information on previous investigations.
- (b) Refurbishment works were undertaken in 2001 to provide an external wall insulation (EWI) system.
- (c) The properties in the stock are located as follows

| Town/Village | Road | Qty | Mk I or II |
|--------------|--------------------|-----------|------------|
| Cashes Green | Hillcrest Road | 30 | I |
| Ebley | Devereaux Crescent | 12 | I |
| Hardwicke | Springfields | 17 | II |
| | Total | 59 | |

- (d) We have no information whether the dwellings are houses, bungalows or flats.
- (e) Unlike some other PRC construction, the party, spine and partition walls were not of PRC construction.
- (f) In 2003 Curtins cut through the EWI (& outer leaf concrete panels) to access the PRC columns.
- (g) The columns were found to be visually in good condition, with no cracking or spalling. The copper ties (which hold the columns and panels together) were also found to be in good condition. Samples of concrete were taken from all the properties surveyed and laboratory analysis showed that no chlorides had been added to the concrete mix during manufacture. The risk of corrosion of the concrete was considered to be low.
- (h) It is now sixteen years since the overcladding works were carried out, and Curtins noted in the 2003 Report that patch repairs or re-painting of the EWI would be required from time to time.
- (i) The 2003 Report concluded that the properties had a future life of 30 years, subject to routine maintenance of the EWI to continue providing protection of the PRC.
- (j) Curtins also looked at the roof structures, and found timber trusses in reasonable condition. It was noted that due to the age of the properties some repairs to the roofs would be required after 16 to 20 years (ie 2019 to 2023), and beyond that some properties will require a complete re-roof.

11.0 Unity

11.3 Conclusions & Recommendations



Conclusions

11.3.1 External Walls

- (a) The PRC elements in the external walls were in good condition with a low risk of corrosion to the steel reinforcement, and of all the properties have been protected by the installation of EWl. No further action is required.

11.3.2 Internal Walls

- (a) The internal walls do not contain PRC components, so no further action is required.

11.3.3 Remaining Life

- (a) No change since 2003, the retained PRC components should still have a remaining life of 30 years from now, subject to routine maintenance of the EWl.

Recommendations

11.3.4 External Walls

- (a) No remedial works should be required to the PRC components in the external walls.
- (b) Carry out repairs and repainting of the EWl from time to time as required.

11.3.5 Internal Walls

- (a) No further action required.

12.0 Woolaway

12.1 Construction



- (a) Woolaway construction was *Designated Defective* under the Housing Defects Act 1984 and the Housing Act 1985
- (b) Details of the standard form of construction can be found in the BRE Digest “The Structural Condition of Woolaway Houses” published in 1983. The form of original construction is illustrated in Appendix C13.
- (c) The Woolaway house comprises storey height pre-cast columns, infilled with half storey height panels to form a discontinuous cavity, secured to columns with six bolts per panel.
- (d) At ground, first floor, and roof levels, pre-cast ring beam components are placed on the tops of the columns and panels, located via nibs on the tops and/or bottom as appropriate to hold the elements in position.
- (e) The first floor is supported by mild steel joist hangers fixed to the first floor ring beam, but does not offer significant lateral restraint to the external walls at first floor level.
- (f) A conventional pitched roof structure oversails the ring beam at roof level and is fixed to a wall plate which restrains the front and rear walls of the house.
- (g) The sub-structure consists of unreinforced concrete slab thickened for form footings under the walls, and with the pre-cast plinth unit set on top to receive the walls. A bitumastic asphalt covers the oversite concrete to form a damp proof course.
- (h) Window and door jambs are formed by the structural posts, & the cills are of pre-cast concrete.
- (i) Non loadbearing partitions are formed from timber studwork. Windows, doors, stairs, cupboards etc are of normal timber construction. Ceilings are of plasterboard. Internal walls are plastercoated, or dry lined onto woodwool slabs fixed to the walls.
- (j) The party wall was PRC construction, either with one row of posts with panels on each side, or two rows of posts separated by a small cavity with panels on the room side of each row of posts. In the loft space brickwork was built on top of the PRC wall to divide off adjacent properties.
- (k) The spine wall at ground floor level could be of PRC or blockwork construction. All first floor walls were of timber stud construction.
- (l) The external structure of the building was finished with machine applied roughcast render.
- (j) The overall stability of the structure is dependent mainly on the integrity of the external walls.

12.0 Woolaway

12.2 Major Works Carried Out



- (a) Previous investigations were undertaken by Mouchels in 1986, which showed concrete frames in poor condition. Further investigations in 1986 revealed similar defects on another site. Concrete testing in both investigations showed high levels of chloride ion content, and therefore a high risk of corrosion of the steel.
- (b) Further investigation at two other sites in 1992 confirmed the earlier findings, of poor condition and high risk of corrosion.
- (c) Mouchels recommended removal of the PRC components, but it was recognised that this would involve significant costs. Overcladding was undertaken in 1988, 1994 and 1996 on the basis that this would slow the rate of deterioration but not eliminate it completely, and a periodic inspection regime would be needed to monitor their condition (which is difficult when the PRC components are hidden from view externally by the EWI, and internally by wall boarding).
- (d) Curtins carried out investigations in 2003, including Linear Polarisation Rate Measurement (LPRM) to determine whether the rate was declining or not. Curtins found that the concrete was dry, and the rate of corrosion had appeared to have reduced. They recommended carrying out further testing in 5-10 years (ie 2008-2013), which was not achieved. They also noted that breaches of the EWI (damage, leakage, overflowing gutters) might affect the rate of corrosion, and *“have a significant effect on the structural integrity”*.
- (e) It was noted that corrosion had caused a total loss of reinforcement in a section of a property in Mankley Road, Leonard Stanley). In a further four houses (two of which were in Mankley Road) the rate of corrosion was found to be sufficiently high to suggest that *“structural damage could occur within the next five years”*.
- (f) Additionally, it was noted that voids existing within some of the columns and some had *“severe cracking”*.
- (g) Curtins concluded that despite the overcladding offering protection to the PRC external walls there was still cause for concern. The overcladding may have provided a short term solution but it will not provide for a further 30 years life.
- (h) Curtins recommended that removal of the PRC components and replacement with masonry cavity walling (a “walls out” solution) would be the most appropriate remedial solution, and this work should be undertaken within the next five years (ie by 2008).
- (i) No mention was made of the PRC components in the party wall and spine wall, but there would be options to have tested and retained them if found to be in acceptable condition.
- (j) If the Council wished to make them generally “mortgageable” for tenants to buy it would have been necessary to removal and replace these walls with masonry as well. This would have made the overall costs significantly higher (and disruption to tenants significantly greater).
- (k) The alternative strategy of redevelopment of the sites was not discussed in the 2003 report.

12.0 Woolaway

12.2 Major Works Carried Out



- (l) The Council have now decided to undertake redevelopment of the all the Woolaway sites, and most properties have already been demolished, and the sites redeveloped.
- (m) The properties in the stock are located as follows

| | | | Demolished | | Retained |
|-----------------|-----------------|-----------|------------|-------------|----------|
| Town/Village | Road | Qty 2015 | Qty | Years | Qty 2017 |
| Leonard Stanley | Mankley Road | 19 | 19 | 2013/4 & 16 | |
| Minchinhampton | Old Common | 18 | 18 | 2013 | |
| Minchinhampton | The Tynings | 17 | 17 | 2013 | |
| Stroud | Bisley Old Road | 6 | 6 | 2016 | |
| Stroud | Daniels Road | 5 | 3 | 2016 | 2 |
| Stroud | Mason Road | 17 | 14 | 2013 & 2016 | 3 |
| Stroud | Target Close | 12 | 12 | 2014 & 2015 | |
| Total | | 94 | 89 | | 5 |

- (n) Only five properties remain, in two locations, as follows

| Town/Village | Street | No | Post Code | Type | Works |
|--------------|--------------|----|-----------|------|-----------|
| Stroud | Daniels Road | 13 | GL5 1HX | ETH | EWI |
| Stroud | Daniels Road | 15 | GL5 1HX | MTH | EWI |
| Stroud | Mason Road | 35 | GL5 1HU | SDH | EWI |
| Stroud | Mason Road | 37 | GL5 1HU | SDH | Refurbish |
| Stroud | Mason Road | 43 | GL5 1HU | SDH | EWI |

- (o) Nos 13 & 15 Daniels Road are left hand houses in a terrace of four, the other two houses (17 & 19) are privately owned.
- (p) Nos 35 & 43 Mason Road are semi-detached houses where the adjoining property is privately owned.
- (q) No 37 Mason Road is a semi-detached house which has been refurbished. We do not know the extent of the works, but it would appear that the PRC components in the external walls have been taken down and replaced with traditional brick/block cavity walling. We do not know whether the PRC components in the party wall and the ground floor spine wall have been dealt with.

12.0 Woolaway

12.3 Conclusions & Recommendations



Conclusions

- (a) The problem has been resolved, apart from four of the five remaining.
- (b) These four are attached to privately owned properties, and we understand that SDC Development team will “deal” with them, either by sale or refurbishment.
- (c) One of the five has been refurbished, but we do not know whether the works included the party and spine walls.
- (d) The previous Reports indicate that the Council was right to decide to deal with this construction type by redevelopment of the sites.

Recommendations

- (a) We assume that demolition of the remaining houses will not be practical due to adjoining privately owned houses.
- (b) We recommend a “walls out” replacement of the external walls with traditional brick/block cavity walls.
- (c) If general “mortgageability” is required for tenants to buy their homes then it will be necessary to also deal with the PRC components in the party & spine walls. (Note: See comments on this in Section 14).

13.0 Notes on Mortgageability



13.1 General

- (a) The first and most important thing to note is that Curtins are not the arbiters of what is and is not “mortgageable”. We can give an opinion on what may be acceptable for lending, but it is only the lenders themselves that can make the decision lend or not. And it should be recognised that even amongst the lenders there are different attitudes to non-traditional housing.
- (b) If you are considering attempting to make your homes “mortgageable” for your tenants you should engage with a number of lenders and obtain from them a written commitment that if properties are presented having had works carried out they will be accepted. In our experience a single lender would not commit to making mortgages available to every house in a street, they will want to limit their exposure to a small percentage of the stock. You may need to find a number of lenders who will commit to each road or estate, and the more houses available the more lenders will be required.
- (c) The second aspect is that there are two types of borrower. The tenant, and the social landlord. For the tenant the “mortgageability” must be general – the homeowner will want to easily sell their home when the time comes. For the social landlord the lenders usually require a 30 year rental stream, and the non-traditional properties in your stock should achieve this longevity.
- (d) The third aspect concerns the construction type. The “mortgageability” problem arose in the early 1980’s, and the Housing Defects Act of 1984 and Housing Act of 1985 confirmed some construction types as being “*Designated Defective*”. This only applied to property which was of PRC (prefabricated reinforced concrete) construction, and these types of property became instantly unmortgageable from about 1982 onwards.
- (e) In theory, but not necessarily in practice, any construction type which was not “*Designated Defective*” should be mortgageable. However, the lenders, in protecting their own interests, have tended to put any Non-Trad type into the unmortgageable category.
- (f) Over the years the lenders have moved the goal posts to suit themselves, and in the years before the “prime and secondary” mortgages which lead to the credit crunch in 2008, the lenders were less fussy about what was acceptable and very fussy after 2008.
- (g) Curtins cannot therefore second guess the lenders, and the comments about each of the construction types that follow should be for general guidance only – to reiterate, it is only the individual lenders who can tell you what they will and will not accept.
- (h) Finally, for the “*Designated Defective*” construction types in the mid 1980’s the Government of the day passed legislation to enable homeowners at the time to be able to sell their homes on the open market as & when they wished. This involved having works carried out to remove or make structurally redundant all PRC components in the property. To achieve this provision was made for designers to submit schemes and receive Licences for the work to be carried out. Upon completion a “PRC Certificate” would be issued (this was actually a 10 year warranty similar to the NHBC warranty on a new property). There are no Licence schemes for construction types which are not “*Designated Defective*”.

13.0 Notes on Mortgageability



13.2 Airey

- (a) *Designated Defective*, a PRC type.
- (b) Works carried out to date – either External Walls only or the Leeds Scheme. The former did not reach Licence requirements. The Leeds scheme did have a Licence, No 033.
- (c) Retained PRC – the party wall and spine wall.
- (d) Works required to achieve mortgageability –
 - o External Walls scheme 18 No houses – replace the existing party wall with traditional masonry or structural timber stud in accordance with a Licence. Make spine wall redundant using timber stud.
 - o Leeds scheme 41 No houses – No works required, in theory already mortgageable, the problem may be having the documentation to prove it
- (e) Effect of works on tenants – very disruptive, would need to be temporarily decanted for several weeks.

13.3 BL8

- (a) Not *Designated Defective*, a steel frame construction type.
- (b) Works carried out to date – brick overcladding to external walls.
- (c) Works required to achieve mortgageability – No works required, in theory already mortgageable.

13.4 Cornish

- (a) *Designated Defective*, a PRC type.
- (b) Works carried out to date – replacement of PRC external walls with traditional masonry construction. Some houses may have internal PRC beams (see Section 5.2(e)), and if these were not dealt with (by removing or making redundant) then the Licence requirements would not have been met. Whilst the external walls were dealt with by a “walls out” scheme, the Council would need to prove it was to a PRC Homes Ltd Licence scheme.
- (c) Works required to achieve mortgageability – Check which of the stock has internal PRC beams, and any that do will need additional works to remove them or make them redundant. This would mean taking down ceilings to carry out the works required.
- (d) Effect of works on tenants – No effect if no PRC beams. Otherwise disruptive, may need to be temporarily decanted (for a few days). Less effect for the lounge beam(s) but kitchen would be unusable for most of the works.
- (e) First actions – proof of Licence and check PRC beams situation (it wont be every house).

13.0 Notes on Mortgageability



13.5 Dorlonco

- (a) Not *Designated Defective*, a steel frame construction type.
- (b) Works carried out to date – None.
- (c) Works required to achieve mortgageability – No works required, in theory already mortgageable.

13.6 Reema Conclad

- (a) Not *Designated Defective*, a PRC type.
- (b) Works carried out to date – None, but EWI recommended in this report.
- (c) Works required to achieve mortgageability – No works required, in theory already mortgageable.

13.7 Reema Hollow Panel

- (a) *Designated Defective*, a PRC type.
- (b) Works carried out to date – EWI to 65 No, 35 No to be demolished and no works to remaining 157 No, but EWI recommended in this report.
- (c) Works required to achieve mortgageability – removal of the PRC external walls and party walls (which will have added difficulty where adjoining house is private), and replacing them with traditional masonry construction. If the chimney is PRC that has to be dealt with as well to comply with Licence requirements. For houses removal of the first floor ladder beams and replacing them with timber joists. Extend foundations to carry increase width of wall. All that would remain of the original would be the ground floor slab, the internal stud/masonry partition walls and the roof. For the 65 No with EWI additional cost of removal.
- (d) Effect of works on tenants – very disruptive, would need to be temporarily decanted, probably for twenty weeks (depending on amount of improvements incorporated into the works – eg new central heating, rewiring, kitchens, bathrooms etc).
- (e) Flats – some lenders do not like to lend against flats, particularly where there is deck access. SDC do not have deck access flats, but nevertheless you should proceed with caution. Check and confirm that lenders will lend before spending significant sums to bring them up to mortgageable standard.
- (f) This is the largest of the Non-Trad stocks, and the cost for all would be somewhere in the order of £15m to £25m excluding decanting costs and loss of rental income during the works.
- (g) If SDC were to have a single contract for the works and started a new one every week (without any breaks), the Contract period would be about 5 years.

13.0 Notes on Mortgageability



13.8 Stent

- (a) *Designated Defective*, a PRC type.
- (b) Works carried out to date – EWI.
- (c) Works required to achieve mortgageability – removal of the PRC external walls, and replacing them with traditional masonry construction. Extend foundations to carry increase width of wall. Additional cost of removal of EWI.
- (d) Effect of works on tenants – very disruptive, would need to be temporarily decanted, probably for fourteen to eighteen weeks (depending on amount of improvements incorporated into the works – eg new central heating, rewiring, kitchens, bathrooms etc).
- (e) Additional costs for decanting and loss of rental income.

13.9 Swedish

- (a) Not *Designated Defective*, a timber frame construction type.
- (b) Works carried out to date – EWI to 2 No, remainder to have structural repairs and EWI recommended in this report.
- (c) Works required to achieve mortgageability – No works required, in theory already mortgageable.

13.10 Unity

- (a) *Designated Defective*, a PRC type.
- (b) Works carried out to date – EWI.
- (c) Works required to achieve mortgageability – removal or making structurally redundant the PRC external walls, and replacing them with traditional masonry construction. Extend foundations to carry increase width of wall. Additional cost of removal of EWI.
- (d) Effect of works on tenants – very disruptive, would need to be temporarily decanted, probably for twelve to sixteen weeks (depending on amount of improvements incorporated into the works – eg new central heating, rewiring, kitchens, bathrooms etc). There is less impact on the internal features as the inner leaf blockwork is retained, so probably less scope and need to undertake improvements than in other PRC types.
- (e) Additional costs for decanting and loss of rental income.
- (f) SDC have 42 No Mk I's and 17 No Mk II's. The Mk II's are the easier to do as the inner leaf is more stable than with the Mk I's. The Unity is probably the easier of the PRC types to deal with, compared to the Reema HP etc.

13.0 Notes on Mortgageability



13.11 Woolaway

- (a) *Designated Defective*, a PRC type.
- (b) Works carried out to date – EWI to four, external walls replaced with traditional masonry on one and the remainder have been demolished.
- (c) Works required to achieve mortgageability – removal of the PRC external walls, spine walls at ground floor level (if PRC) and party walls (which will have added difficulty where adjoining house is private), and replacing them with traditional masonry construction. Extend foundations to carry increase width of wall. All that would remain of the original would be the ground floor slab, the internal stud/masonry partition walls and the roof. For the 4 No with EWI additional cost of removal.
- (d) We do not know whether the one house which SDC have replaced the external walls the party wall and spine wall have also been dealt with. This house is adjoining a private house, and the procedure with the party wall would be to build a new party wall alongside the existing (ie the house become slightly smaller). We do not know if the house was done to a Licence or to a bespoke scheme designed by the Council. If the latter it may not be acceptable to lenders for mortgage purposes.
- (e) We would recommend that if you wish to sell the refurbished properties on the private market (rather than re-letting to your tenants) you should obtain documentation confirming the works were carried out to a Licence (which means approaching the Licence holders).

13.12 Other considerations

- (a) In addition to decanting and loss of rental income during the works, there will also be significant SDC management time to consider, both technical and housing management staff.
- (b) No Licences have been updated for twenty years, and any works “to the Licence” will also need to comply with current Building Regulations at the time of the works. For example the U-value to be achieved is far more onerous today than when the Licences were first written in the mid 1980’s, so for example wall thicknesses are greater to accommodate more insulation.
- (c) Proving that works to Airey & Cornish so many years ago were to a Licence may not be easy if the paperwork at the time has been lost.
- (d) Curtins have Licence schemes for all the different PRC types in your stock.

14.0 Summary



All

| Type | Construction | Designated Defective | Major Works | Qty | Mortgageable?* |
|----------|--------------|----------------------|----------------------|-----|-----------------------|
| Airey | PRC | Yes | External Walls | 59 | No, internal PRC |
| BL8 | Steel frame | No | Overcladding - Brick | 53 | Yes |
| Cornish | PRC | Yes | Walls Out | 52 | Yes, PRC removed |
| Dorlonco | Steel frame | No | As original | 13 | Yes |
| Reema HP | PRC | Yes | EWI & As Original | 256 | No, all PRC remain |
| Reema CC | PRC | No | As original | 36 | Yes |
| Stent | PRC | Yes | EWI | 55 | No, all PRC remain |
| Swedish | Timber Frame | No | EWI & As Original | 20 | Yes |
| Unity | PRC | Yes | EWI | 59 | No, all PRC remain |
| Woolaway | PRC | Yes | EWI & Demolished | 5 | No, all PRC remain |
| | | | | 608 | *Note: in theory only |

Airey

| Town/Village | Road | Qty | Scheme | Year |
|--------------|--------------------|-----------|----------------|-----------|
| Brownhill | Frith Wood | 7 | Leeds | 1994 |
| Coaley | Hamshill | 6 | External Walls | 1995 |
| Ebley | Orchard Road | 9 | Leeds | 1988 |
| Hardwicke | Elmgrove Road East | 3 | Leeds | 1988 |
| Hardwicke | Springfields | 14 | Leeds | 1988 |
| Kingswood | Chestnut Park | 1 | External Walls | 1994 |
| North Nibley | The Innocks | 9 | External Walls | 1993 |
| Slimbridge | Moorend Lane | 1 | External Walls | 1996 |
| Slimbridge | Tynning Crescent | 1 | External Walls | 1996 |
| Westrip | The Wordens | 8 | Leeds | 1988 |
| | Total | 59 | | |
| | Summary | 41 | Leeds | 1988 |
| | | 18 | External Walls | 1993-1996 |

Retained PRC Remaining Life – 30 years

Recommendations – Internal inspections of retained PRC in the party & spine walls whenever property vacant. Check risk of fire spread across party wall, seal where required.

14.0 Summary



BL8

| Town/Village | Road | Qty |
|-----------------|--------------|-----------|
| Cam | Fairmead | 6 |
| | Hadley Road | 9 |
| | Turner Road | 10 |
| | Tyndale Road | 7 |
| Leonard Stanley | Brimley | 21 |
| | Total | 53 |

Retained metal frame Remaining Life – 30 years

Recommendations – No further action required

Cornish

| Town/Village | Road | Qty |
|-------------------|-------------------|-----------|
| Bridgend | Wharfdale Way | 3 |
| Cam | Marment Road | 10 |
| Cam | Tilsdown Close | 12 |
| Coaley | Betworthy | 8 |
| Kingswood | Chestnut Park | 4 |
| Slimbridge | Tyning Crescent | 8 |
| Wotton-Under-Edge | Fountain Crescent | 7 |
| | Total | 52 |

Retained PRC Remaining Life – Not applicable, all PRC in external walls removed and replaced with traditional brick/block cavity walling

Recommendations – Internal inspections of support to first floor walls whenever property vacant, and action to improve support where required. Inspections of PRC constructed Outbuildings to build up database of structural condition, aim to remove all PRC Outbuildings within 20 years or less.

14.0 Summary



Dorlonco

| Town/Village | Road | Qty |
|--------------|-----------------|-----------|
| Cashes Green | Hyett Road | 3 |
| | Kingley Road | 2 |
| | Mosley Crescent | 8 |
| | Total | 13 |

Retained Steel Frame Remaining Life – 30 years

Recommendations –

- Install EWI, but also remove existing cavity fill & use the opportunity of opening up to inspect the steelwork within the cavity.
- Install “whole house” ventilation system in conjunction with EWI.
- Inspect chimneys during voids, and take down to below roof where deteriorated or not needed.
- Enabling works for EWI include dealing with overhead electric cables, reducing ground levels where too high, and moving gas pipework away from the building.

Reema Conclad

| Town/Village | Road | H/B/F | Qty |
|--------------|-----------------|-------|-----------|
| Forest Green | Badgers Way | SDH | 16 |
| | Nortonwood | SDH | 4 |
| | Nortonwood | Flats | 8 |
| | Woodpecker Walk | SDH | 8 |
| | Total | | 36 |

PRC Remaining Life – 30 years, more if EWI installed

Recommendations –

- Install EWI, inspect **all** properties and carry out repairs to the PRC in advance.
- Install “whole house” ventilation system in conjunction with EWI.
- Enabling works for EWI include dealing with reducing ground levels where too high, dealing with porches and rainwater down pipes, extending the roof gable ladder, re-locating radon gas pumps & ducts away from the buildings, and liaising with LA Planners regarding the existing tile hangings to the first floor.

14.0 Summary



Reema Hollow Panel

| Town/Village | Road | Qty with EWI | Qty without EWI | Surveyed |
|-----------------|-----------------|--------------|-----------------|----------|
| Cashes Green | Moorhall Place | 14 | | No |
| Cashes Green | Mosley Road | 6 | | No |
| Cashes Green | Queens Drive | 5 | | No |
| Cashes Green | Stanton Road | 22 | | No |
| Forest Green | Lawnside | | 65 | Yes |
| Leonard Stanley | Mankley Road | | 31 | Yes |
| Minchinhampton | Glebe Road | | 19 | Yes |
| Nailsworth | Ringfield Close | | 27 | No |
| Nailsworth | Tanners Piece | | 8 | No |
| Nailsworth | Upper Park Road | | 6 | Yes |
| Stonehouse | Midland Road | | 5 | Yes |
| Stonehouse | Willow Road | | 12 | Yes |
| Stroud | Gibson Close | 18 | | No |
| Whiteshill | Victory Road | | 18 | Yes |
| Woodchester | Blacklow Close | | 1 | Yes |
| | Total | 65 | 192 | |

Scheduled for Demolition – Ringfield Close & Tanner Place, Nailsworth (35 No)

PRC Remaining Life – 30 years, possibly more if EWI installed. May need to repair first floor PRC “ladder” beams from time to time.

Recommendations –

- Amend database to correct additions and deletions found during the survey
- Install EWI, inspect **all** properties and carry out repairs to the PRC in advance.
- Install “whole house” ventilation system in conjunction with EWI.
- Check for and seal gaps across the party walls where there is a risk of fire spread.
- Check “ladder” FF beams at all changes of tenancy.
- Repairs to single storey extension at 31 Victory Road, Whiteshill
- Enabling works for EWI include dealing with reducing ground levels where too high, dealing with overhead cabling, gas pipework, porches, conservatories, roof verges

14.0 Summary



Stent

| Town/Village | Road | Qty |
|-----------------|--------------|-----------|
| Kingsway | Dursley | 26 |
| St Georges Road | Dursley | 29 |
| | Total | 55 |

PRC Remaining Life – 30 years, subject to routine maintenance of the EWI (which is now 19 years old).

Recommendations –

- Assessment of the EWI in 2018, and 2023. Carry out any repairs to the finishes necessary to continue protection of the PRC.
- Consider new EWI from 2023.
- If new EWI, then remove existing to enable a full assessment of the condition of the PRC prior to installing new.
- Carry out internal inspections at changes of tenancy, including random opening up to view the PRC wall condition. Log the floor construction materials (steel or timber), check condition, and repair/replace as necessary.

Swedish Timber Frame

| Town/Village | Road | Qty | Type |
|-------------------|--------------------|-----------|---------------------------|
| North Nibley | Barrs Lane | 1 | Chalet Bungalow |
| Painswick | Parkfield Cottages | 6 | Chalet Bungalows & Houses |
| Stancombe | Swedale | 2 | Houses |
| Stinchcombe | The Avenue | 3 | Chalet Bungalows |
| The Camp | Bushy Beeches | 2 | House |
| Uley | The Knoll | 3 | Houses |
| Wotton-Under-Edge | Mount Pleasant | 3 | Chalet Bungalows |
| | Total | 20 | |

Timber Frame Remaining Life –

Stancombe - 30 years

Other sites – Limited without extensive repairs to the timber frame in the short term

Recommendations –

- Repairs & EWI to be installed within three years.
- Install “whole house” ventilation system in conjunction with EWI.
- Carry out maintenance works this year – gutters, ivy, dormer windows, chimneys, roof tiles, flashing, ground levels, underfloor vents all need attention to varying degrees.
- EWI enabling works prior to Repair & EWI Contract – overhead cables & gas pipework.

14.0 Summary



Unity

| Town/Village | Road | Qty |
|--------------|--------------------|-----------|
| Cashes Green | Hillcrest Road | 30 |
| Ebley | Devereaux Crescent | 12 |
| Hardwicke | Springfields | 17 |
| | Total | 59 |

PRC Remaining Life – 30 years, subject to routine maintenance of the EWI (which is now 16 years old).

Recommendations – Repairs to the EWI to continue protection of the PRC.

Woolaway

| | | | Demolished | | |
|-----------------|-----------------|-----------|------------|-------------|----------|
| Town/Village | Road | Qty 2015 | Qty | Years | Qty 2017 |
| Leonard Stanley | Mankley Road | 19 | 19 | 2013/4 & 16 | 0 |
| Minchinhampton | Old Common | 18 | 18 | 2013 | 0 |
| Minchinhampton | The Tynings | 17 | 17 | | 0 |
| Stroud | Bisley Old Road | 6 | 6 | 2016 | 0 |
| Stroud | Daniels Road | 5 | 3 | 2016 | 2 |
| Stroud | Mason Road | 17 | 14 | 2013 & 2016 | 3 |
| Stroud | Target Close | 12 | 12 | 2014 & 2015 | 0 |
| | Total | 94 | 89 | | 5 |

PRC Remaining Life – Limited

Recommendations – Demolition of the remaining houses, site redevelopment. If not, “walls out” replacement of external walls with traditional masonry construction (& if mortgageability required, the party & spine walls too).

Appendix A



List of Addresses

| No | Construction |
|----|--------------------|
| A1 | Airey |
| A2 | BL8 |
| A3 | Cornish |
| A4 | Dorlonco |
| A5 | Reema Conclad |
| A6 | Reema Hollow Panel |
| A7 | Stent |
| A8 | Swedish |
| A9 | Unity |
| 10 | Woolaway |

Appendix A1

List of Airey Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F/B | Scheme | Year |
|----------|--------------|--------------------|-----|-----------|-------|----------------|------|
| 72090020 | Brownhill | Frith Wood | 2 | GL6 8AE | SDH | Leeds | 1994 |
| 72090030 | Brownhill | Frith Wood | 3 | GL6 8AE | SDH | Leeds | 1994 |
| 72090040 | Brownhill | Frith Wood | 4 | GL6 8AE | SDH | Leeds | 1994 |
| 72090050 | Brownhill | Frith Wood | 5 | GL6 8AE | SDH | Leeds | 1994 |
| 72090060 | Brownhill | Frith Wood | 6 | GL6 8AE | SDH | Leeds | 1994 |
| 72090090 | Brownhill | Frith Wood | 9 | GL6 8AE | SDH | Leeds | 1994 |
| 72090100 | Brownhill | Frith Wood | 10 | GL6 8AE | SDH | Leeds | 1994 |
| 15030030 | Coaley | Hamshill | 3 | GL11 5EJ | SDH | External walls | 1995 |
| 15030040 | Coaley | Hamshill | 4 | GL11 5EJ | SDH | External walls | 1995 |
| 15030050 | Coaley | Hamshill | 5 | GL11 5EJ | SDH | External walls | 1995 |
| 15030060 | Coaley | Hamshill | 6 | GL11 5EJ | SDH | External walls | 1995 |
| 15030070 | Coaley | Hamshill | 7 | GL11 5EJ | SDH | External walls | 1995 |
| 15030080 | Coaley | Hamshill | 8 | GL11 5EJ | SDH | External walls | 1995 |
| 45090690 | Ebley | Orchard Road | 69 | GL5 4TZ | SDH | Leeds | 1988 |
| 45090710 | Ebley | Orchard Road | 71 | GL5 4TZ | SDH | Leeds | 1988 |
| 45091000 | Ebley | Orchard Road | 100 | GL5 4UA | SDH | Leeds | 1988 |
| 45091040 | Ebley | Orchard Road | 104 | GL5 4UA | SDH | Leeds | 1988 |
| 45091060 | Ebley | Orchard Road | 106 | GL5 4UA | SDH | Leeds | 1988 |
| 45091080 | Ebley | Orchard Road | 108 | GL5 4UA | SDH | Leeds | 1988 |
| 45091160 | Ebley | Orchard Road | 116 | GL5 4UA | SDH | Leeds | 1988 |
| 45091220 | Ebley | Orchard Road | 122 | GL5 4UA | SDH | Leeds | 1988 |
| 45091240 | Ebley | Orchard Road | 124 | GL5 4UA | SDH | Leeds | 1988 |
| 50010400 | Hardwicke | Elmgrove Road East | 40 | GL2 4PY | SDH | Leeds | 1988 |
| 50010440 | Hardwicke | Elmgrove Road East | 44 | GL2 4PY | SDH | Leeds | 1988 |
| 50010460 | Hardwicke | Elmgrove Road East | 46 | GL2 4PY | SDH | Leeds | 1988 |
| 50070030 | Hardwicke | Springfield | 3 | GL2 4PX | SDH | Leeds | 1988 |
| 50070040 | Hardwicke | Springfield | 4 | GL2 4PX | SDH | Leeds | 1988 |
| 50070050 | Hardwicke | Springfield | 5 | GL2 4PX | SDH | Leeds | 1988 |
| 50070070 | Hardwicke | Springfield | 7 | GL2 4PX | SDH | Leeds | 1988 |
| 50070080 | Hardwicke | Springfield | 8 | GL2 4PX | SDH | Leeds | 1988 |
| 50070090 | Hardwicke | Springfield | 9 | GL2 4PX | SDH | Leeds | 1988 |
| 50070100 | Hardwicke | Springfield | 10 | GL2 4PX | SDH | Leeds | 1988 |
| 50070110 | Hardwicke | Springfield | 11 | GL2 4PX | SDH | Leeds | 1988 |
| 50070150 | Hardwicke | Springfield | 15 | GL2 4PX | SDH | Leeds | 1988 |
| 50070180 | Hardwicke | Springfield | 18 | GL2 4PX | SDH | Leeds | 1988 |
| 50070200 | Hardwicke | Springfield | 20 | GL2 4PX | SDH | Leeds | 1988 |
| 50070220 | Hardwicke | Springfield | 22 | GL2 4PX | SDH | Leeds | 1988 |
| 50070240 | Hardwicke | Springfield | 24 | GL2 4PX | SDH | Leeds | 1988 |

Appendix A1

List of Airey Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F/B | Scheme | Year |
|----------|--------------|------------------|----|-----------|-------|----------------|------|
| 50070360 | Hardwicke | Springfield | 36 | GL2 4PX | SDH | Leeds | 1988 |
| 20010070 | Kingswood | Chestnut Park | 7 | GL12 8RJ | SDH | External walls | 1994 |
| 21050010 | North Nibley | The Innocks | 1 | GL11 6DP | SDH | External walls | 1993 |
| 21050020 | North Nibley | The Innocks | 2 | GL11 6DP | SDH | External walls | 1993 |
| 21050030 | North Nibley | The Innocks | 3 | GL11 6DP | SDH | External walls | 1993 |
| 21050040 | North Nibley | The Innocks | 4 | GL11 6DP | SDH | External walls | 1993 |
| 21050070 | North Nibley | The Innocks | 7 | GL11 6DP | SDH | External walls | 1993 |
| 21050080 | North Nibley | The Innocks | 8 | GL11 6DP | SDH | External walls | 1993 |
| 21050100 | North Nibley | The Innocks | 10 | GL11 6DP | SDH | External walls | 1993 |
| 21050110 | North Nibley | The Innocks | 11 | GL11 6DP | SDH | External walls | 1993 |
| 21050120 | North Nibley | The Innocks | 12 | GL11 6DP | SDH | External walls | 1993 |
| 23030170 | Slimbridge | Moorend Lane | 17 | GL2 7DG | SDH | External walls | 1996 |
| 23070080 | Slimbridge | Tynning Crescent | 8 | GL2 7DE | SDH | External walls | 1996 |
| 58070030 | Westrip | The Wordens | 3 | GL5 4RX | SDH | Leeds | 1988 |
| 58070040 | Westrip | The Wordens | 4 | GL5 4RX | SDH | Leeds | 1988 |
| 58070110 | Westrip | The Wordens | 11 | GL5 4RX | SDH | Leeds | 1988 |
| 58070120 | Westrip | The Wordens | 12 | GL5 4RX | SDH | Leeds | 1988 |
| 58070160 | Westrip | The Wordens | 16 | GL5 4RX | SDH | Leeds | 1988 |
| 58070190 | Westrip | The Wordens | 19 | GL5 4RX | SDH | Leeds | 1988 |
| 58070220 | Westrip | The Wordens | 22 | GL5 4RX | SDH | Leeds | 1988 |
| 58070290 | Westrip | The Wordens | 29 | GL5 4RX | SDH | Leeds | 1988 |

Summary:

| Town/Village | Road | Qty | Scheme | Year |
|--------------|--------------------|-----------|----------------|-----------|
| Brownshill | Frith Wood | 7 | Leeds | 1994 |
| Coaley | Hamshill | 6 | External Walls | 1995 |
| Ebley | Orchard Road | 9 | Leeds | 1988 |
| Hardwicke | Elmgrove Road East | 3 | Leeds | 1988 |
| Hardwicke | Springfields | 14 | Leeds | 1988 |
| Kingswood | Chestnut Park | 1 | External Walls | 1994 |
| North Nibley | The Innocks | 9 | External Walls | 1993 |
| Slimbridge | Moorend Lane | 1 | External Walls | 1996 |
| Slimbridge | Tynning Crescent | 1 | External Walls | 1996 |
| Westrip | The Wordens | 8 | Leeds | 1988 |
| | Total | 59 | | |
| | Summary | 41 | Leeds | 1988 |
| | | 18 | External Walls | 1993-1996 |

Appendix A2 List of BL8 Addresses



| UPNR | Town/Village | Street | No | Post Code |
|----------|-----------------|--------------|----|-----------|
| 14170690 | Cam | Fairmead | 69 | GL11 5JT |
| 14170710 | Cam | Fairmead | 71 | GL11 5JT |
| 14170750 | Cam | Fairmead | 75 | GL11 5JT |
| 14170770 | Cam | Fairmead | 77 | GL11 5JT |
| 14170810 | Cam | Fairmead | 81 | GL11 5JU |
| 14170850 | Cam | Fairmead | 85 | GL11 5JU |
| 14370070 | Cam | Hadley Road | 7 | GL11 6LU |
| 14370090 | Cam | Hadley Road | 9 | GL11 6LU |
| 14370110 | Cam | Hadley Road | 11 | GL11 6LU |
| 14370150 | Cam | Hadley Road | 15 | GL11 6LU |
| 14370160 | Cam | Hadley Road | 16 | GL11 6LU |
| 14370220 | Cam | Hadley Road | 22 | GL11 6LU |
| 14370260 | Cam | Hadley Road | 26 | GL11 6LU |
| 14370280 | Cam | Hadley Road | 28 | GL11 6LU |
| 14370300 | Cam | Hadley Road | 30 | GL11 6LU |
| 14470010 | Cam | Turner Road | 1 | GL11 6LT |
| 14470020 | Cam | Turner Road | 2 | GL11 6LS |
| 14470030 | Cam | Turner Road | 3 | GL11 6LT |
| 14470040 | Cam | Turner Road | 4 | GL11 6LS |
| 14470050 | Cam | Turner Road | 5 | GL11 6LT |
| 14470110 | Cam | Turner Road | 11 | GL11 6LT |
| 14470120 | Cam | Turner Road | 12 | GL11 6LS |
| 14470130 | Cam | Turner Road | 13 | GL11 6LT |
| 14470150 | Cam | Turner Road | 15 | GL11 6LT |
| 14470180 | Cam | Turner Road | 18 | GL11 6LS |
| 14490070 | Cam | Tyndale Road | 7 | GL11 6LH |
| 14490090 | Cam | Tyndale Road | 9 | GL11 6LH |
| 14490100 | Cam | Tyndale Road | 10 | GL11 6LH |
| 14490140 | Cam | Tyndale Road | 14 | GL11 6LH |
| 14490200 | Cam | Tyndale Road | 20 | GL11 6LH |
| 14490210 | Cam | Tyndale Road | 21 | GL11 6LH |
| 14490220 | Cam | Tyndale Road | 22 | GL11 6LH |
| 54010070 | Leonard Stanley | Brimley | 7 | GL10 3LZ |
| 54010090 | Leonard Stanley | Brimley | 9 | GL10 3LZ |
| 54010130 | Leonard Stanley | Brimley | 13 | GL10 3LZ |
| 54010150 | Leonard Stanley | Brimley | 15 | GL10 3LZ |
| 54010190 | Leonard Stanley | Brimley | 19 | GL10 3LZ |
| 54010200 | Leonard Stanley | Brimley | 20 | GL10 3LZ |

Appendix A2

List of BL8 Addresses



| UPNR | Town/Village | Street | No | Post Code |
|----------|-----------------|---------|----|-----------|
| 54010220 | Leonard Stanley | Brimley | 22 | GL10 3LZ |
| 54010260 | Leonard Stanley | Brimley | 26 | GL10 3LZ |
| 54010270 | Leonard Stanley | Brimley | 27 | GL10 3LZ |
| 54010300 | Leonard Stanley | Brimley | 30 | GL10 3LZ |
| 54010330 | Leonard Stanley | Brimley | 33 | GL10 3NA |
| 54010340 | Leonard Stanley | Brimley | 34 | GL10 3NA |
| 54010360 | Leonard Stanley | Brimley | 36 | GL10 3NA |
| 54010380 | Leonard Stanley | Brimley | 38 | GL10 3NA |
| 54010390 | Leonard Stanley | Brimley | 39 | GL10 3NA |
| 54010410 | Leonard Stanley | Brimley | 41 | GL10 3NA |
| 54010420 | Leonard Stanley | Brimley | 42 | GL10 3NA |
| 54010430 | Leonard Stanley | Brimley | 43 | GL10 3NA |
| 54010440 | Leonard Stanley | Brimley | 44 | GL10 3NA |
| 54010450 | Leonard Stanley | Brimley | 45 | GL10 3NA |
| 54010480 | Leonard Stanley | Brimley | 48 | GL10 3NA |

Notes:

All properties are semi-detached bungalows. All have had a brick overcladding.

Appendix A3 List of Cornish Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F/B | PRC OB |
|----------|--------------|----------------|----|-----------|-------|-----------|
| 60040330 | Bridgend | Wharfdale Way | 33 | GL10 2AJ | SDH | No |
| 60040350 | Bridgend | Wharfdale Way | 35 | GL10 2AJ | SDH | Yes |
| 60040370 | Bridgend | Wharfdale Way | 37 | GL10 2AJ | SDH | Yes |
| 14410070 | Cam | Marment Road | 7 | GL11 6LA | n/r | No |
| 14410080 | Cam | Marment Road | 8 | GL11 6LA | n/r | No |
| 14410090 | Cam | Marment Road | 9 | GL11 6LA | n/r | No |
| 14410100 | Cam | Marment Road | 10 | GL11 6LA | n/r | No |
| 14410110 | Cam | Marment Road | 11 | GL11 6LA | n/r | No |
| 14410160 | Cam | Marment Road | 16 | GL11 6LA | n/r | No |
| 14410170 | Cam | Marment Road | 17 | GL11 6LA | n/r | No |
| 14410180 | Cam | Marment Road | 18 | GL11 6LA | n/r | No |
| 14410190 | Cam | Marment Road | 19 | GL11 6LA | n/r | No |
| 14410200 | Cam | Marment Road | 20 | GL11 6LA | n/r | No |
| 14290060 | Cam | Tilsdown Close | 6 | GL11 6HG | SDH | No |
| 14290070 | Cam | Tilsdown Close | 7 | GL11 6HG | SDH | No |
| 14290090 | Cam | Tilsdown Close | 9 | GL11 6HG | SDH | No |
| 14290110 | Cam | Tilsdown Close | 11 | GL11 6HG | SDH | No |
| 14290130 | Cam | Tilsdown Close | 13 | GL11 6HG | SDH | No |
| 14290150 | Cam | Tilsdown Close | 15 | GL11 6HG | SDH | No |
| 14290160 | Cam | Tilsdown Close | 16 | GL11 6HG | SDH | No |
| 14290180 | Cam | Tilsdown Close | 18 | GL11 6HG | SDH | No |
| 14290250 | Cam | Tilsdown Close | 25 | GL11 6HG | SDH | No |
| 14290320 | Cam | Tilsdown Close | 32 | GL11 6HG | SDH | No |
| 14290340 | Cam | Tilsdown Close | 34 | GL11 6HG | SDH | No |
| 14290360 | Cam | Tilsdown Close | 36 | GL11 6HG | SDH | No |
| 15010070 | Coaley | Betworthy | 7 | GL11 5EF | SDH | No |
| 15010080 | Coaley | Betworthy | 8 | GL11 5EF | SDH | Yes |
| 15010090 | Coaley | Betworthy | 9 | GL11 5EF | SDH | No |
| 15010100 | Coaley | Betworthy | 10 | GL11 5EF | SDH | Yes |
| 15010130 | Coaley | Betworthy | 13 | GL11 5EF | SDH | No |
| 15010160 | Coaley | Betworthy | 16 | GL11 5EF | SDH | Yes |
| 15010220 | Coaley | Betworthy | 22 | GL11 5EF | SDH | Yes |
| 15010230 | Coaley | Betworthy | 23 | GL11 5EF | SDH | Yes |
| 20010140 | Kingswood | Chestnut Park | 14 | GL12 8RJ | SDH | No |
| 20010170 | Kingswood | Chestnut Park | 17 | GL12 8RJ | SDH | Yes |
| 20010200 | Kingswood | Chestnut Park | 20 | GL12 8RJ | SDH | Yes |
| 20010230 | Kingswood | Chestnut Park | 23 | GL12 8RJ | SDH | Yes |

Appendix A3 List of Cornish Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F/B | PRC OB |
|----------|-------------------|-------------------|----|-----------|-------|-----------|
| 23070110 | Slimbridge | Tyning Crescent | 11 | GL2 7DE | SDH | No |
| 23070130 | Slimbridge | Tyning Crescent | 13 | GL2 7DE | SDH | Yes |
| 23070180 | Slimbridge | Tyning Crescent | 18 | GL2 7DE | SDH | Yes |
| 23070200 | Slimbridge | Tyning Crescent | 20 | GL2 7DE | SDH | Yes |
| 23070220 | Slimbridge | Tyning Crescent | 22 | GL2 7DE | SDH | Yes |
| 23070240 | Slimbridge | Tyning Crescent | 24 | GL2 7DE | SDH | Yes |
| 23070260 | Slimbridge | Tyning Crescent | 26 | GL2 7DE | SDH | Yes |
| 23070270 | Slimbridge | Tyning Crescent | 27 | GL2 7DE | SDH | Yes |
| 26130150 | Wotton-Under-Edge | Fountain Crescent | 15 | GL12 7LD | SDH | No |
| 26130190 | Wotton-Under-Edge | Fountain Crescent | 19 | GL12 7LD | SDH | No |
| 26130210 | Wotton-Under-Edge | Fountain Crescent | 21 | GL12 7LD | SDH | No |
| 26130230 | Wotton-Under-Edge | Fountain Crescent | 23 | GL12 7LD | SDH | No |
| 26130270 | Wotton-Under-Edge | Fountain Crescent | 27 | GL12 7LD | SDH | No |
| 26130380 | Wotton-Under-Edge | Fountain Crescent | 38 | GL12 7LD | SDH | No |
| 26130400 | Wotton-Under-Edge | Fountain Crescent | 40 | GL12 7LD | SDH | No |

| Town/Village | Road | Qty |
|-------------------|-------------------|-----------|
| Bridgend | Wharfdale Way | 3 |
| Cam | Marment Road | 10 |
| Cam | Tilsdown Close | 12 |
| Coaley | Betworthy | 8 |
| Kingswood | Chestnut Park | 4 |
| Slimbridge | Tyning Crescent | 8 |
| Wotton-Under-Edge | Fountain Crescent | 7 |
| | Total | 52 |

Type codes:

SDH = Semi-detached house
 ETH = End Terraced house
 MTH = Mid Terraced house
 MTHa = Mid Terraced house with alleyway
 F0 = Ground floor flat
 F1 = First floor flat

Notes: Marment Road, Cam – n/r = no record of type, but were SDH, ETH & MTHa

Appendix A4 List of Dorlonco Addresses



| UPNR | Town/Village | Street | No | Post Code | Surveyed 2017 (External/Internal) |
|----------|--------------|-----------------|----|-----------|--------------------------------------|
| 14030720 | Cashes Green | Hyett Road | 12 | GL5 4LW | |
| 14030740 | Cashes Green | Hyett Road | 14 | GL5 4LW | Y/Y |
| 14030760 | Cashes Green | Hyett Road | 16 | GL5 4LW | |
| 14290400 | Cashes Green | Kingley Road | 10 | GL5 4LW | Y/N |
| 14490020 | Cashes Green | Kingley Road | 16 | GL5 4LS | |
| 1411104B | Cashes Green | Mosley Crescent | 11 | GL5 4LT | |
| 1411098A | Cashes Green | Mosley Crescent | 12 | GL5 4LT | |
| 43010350 | Cashes Green | Mosley Crescent | 13 | GL5 4LT | |
| 43010370 | Cashes Green | Mosley Crescent | 14 | GL5 4LT | Y/Y |
| 43010390 | Cashes Green | Mosley Crescent | 15 | GL5 4LT | |
| 43010410 | Cashes Green | Mosley Crescent | 16 | GL5 4LT | |
| 43010430 | Cashes Green | Mosley Crescent | 17 | GL5 4LT | |
| 43030020 | Cashes Green | Mosley Crescent | 18 | GL5 4LT | |

Note:

All properties are semi-detached houses.

Appendix A5 List of Reema Conclad Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F | Surveyed 2017 (External/Internal) |
|----------|--------------|-----------------|----|-----------|-----|--------------------------------------|
| 77290060 | Forest Green | Badgers Way | 1 | GL6 0HE | SDH | |
| 77310010 | Forest Green | Badgers Way | 2 | GL6 0HE | SDH | |
| 77310030 | Forest Green | Badgers Way | 3 | GL6 0HE | SDH | |
| 77310050 | Forest Green | Badgers Way | 5 | GL6 0HE | SDH | |
| 77310060 | Forest Green | Badgers Way | 6 | GL6 0HE | SDH | Y/Y |
| 77310070 | Forest Green | Badgers Way | 8 | GL6 0HE | SDH | |
| 77310090 | Forest Green | Badgers Way | 9 | GL6 0HE | SDH | |
| 77310100 | Forest Green | Badgers Way | 10 | GL6 0HE | SDH | |
| 77310110 | Forest Green | Badgers Way | 15 | GL6 0HE | SDH | |
| 77310120 | Forest Green | Badgers Way | 17 | GL6 0HE | SDH | Y/Y |
| 77310140 | Forest Green | Badgers Way | 19 | GL6 0HE | SDH | |
| 77310160 | Forest Green | Badgers Way | 20 | GL6 0HE | SDH | |
| 77310180 | Forest Green | Badgers Way | 22 | GL6 0HE | SDH | |
| 77310200 | Forest Green | Badgers Way | 26 | GL6 0HE | SDH | Y/N |
| 77310220 | Forest Green | Badgers Way | 27 | GL6 0HE | SDH | |
| 77330060 | Forest Green | Badgers Way | 29 | GL6 0HE | SDH | |
| 50090130 | Forest Green | Nortonwood | 1 | GL6 0HD | F1 | Y/N |
| 50090140 | Forest Green | Nortonwood | 3 | GL6 0HD | F0 | Y/Y |
| 50090150 | Forest Green | Nortonwood | 5 | GL6 0HD | F1 | |
| 50090160 | Forest Green | Nortonwood | 7 | GL6 0HD | F0 | |
| 50090170 | Forest Green | Nortonwood | 19 | GL6 0HD | SDH | Y/Y |
| 50090180 | Forest Green | Nortonwood | 29 | GL6 0HD | SDH | |
| 50090190 | Forest Green | Nortonwood | 31 | GL6 0HD | F1 | |
| 50090200 | Forest Green | Nortonwood | 33 | GL6 0HD | F0 | |
| 50090210 | Forest Green | Nortonwood | 35 | GL6 0HD | F1 | |
| 50090220 | Forest Green | Nortonwood | 37 | GL6 0HD | F0 | |
| 50090230 | Forest Green | Nortonwood | 41 | GL6 0HD | SDH | |
| 50090240 | Forest Green | Nortonwood | 43 | GL6 0HD | SDH | |
| 74030180 | Forest Green | Woodpecker Walk | 2 | GL6 0HQ | SDH | |
| 74030190 | Forest Green | Woodpecker Walk | 5 | GL6 0HQ | SDH | |
| 53010010 | Forest Green | Woodpecker Walk | 7 | GL6 0HQ | SDH | Y/N |
| 53010040 | Forest Green | Woodpecker Walk | 8 | GL6 0HQ | SDH | |
| 53010050 | Forest Green | Woodpecker Walk | 10 | GL6 0HQ | SDH | Y/Y |
| 53010060 | Forest Green | Woodpecker Walk | 15 | GL6 0HQ | SDH | |
| 53010070 | Forest Green | Woodpecker Walk | 19 | GL6 0HQ | SDH | |
| 53010080 | Forest Green | Woodpecker Walk | 25 | GL6 0HQ | SDH | |

Note: SDH = Semi-detached, F0 = Ground floor flat, F1 = First floor flat

Appendix A6

List of Reema Hollow Panel Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F | EWI | EWI Year | Survey 2017 (Ext/Int) | Sch for Dem |
|----------|--------------|----------------|----|-----------|-----|-----|----------|-----------------------|-------------|
| 43170010 | Cashes Green | Moorhall Place | 1 | GL5 4LY | | Y | 1998 | | |
| 43170020 | Cashes Green | Moorhall Place | 2 | GL5 4LY | | Y | 1998 | | |
| 43170030 | Cashes Green | Moorhall Place | 3 | GL5 4LY | | Y | 1998 | | |
| 43170040 | Cashes Green | Moorhall Place | 4 | GL5 4LY | | Y | 1998 | | |
| 43170060 | Cashes Green | Moorhall Place | 6 | GL5 4LY | | Y | 1998 | | |
| 43170080 | Cashes Green | Moorhall Place | 8 | GL5 4LY | | Y | 1998 | | |
| 43170090 | Cashes Green | Moorhall Place | 9 | GL5 4LY | | Y | 1998 | | |
| 43170100 | Cashes Green | Moorhall Place | 10 | GL5 4LY | | Y | 1998 | | |
| 43170110 | Cashes Green | Moorhall Place | 11 | GL5 4LY | | Y | 1998 | | |
| 43170120 | Cashes Green | Moorhall Place | 12 | GL5 4LY | | Y | 1998 | | |
| 43170130 | Cashes Green | Moorhall Place | 13 | GL5 4LY | | Y | 1998 | | |
| 43170140 | Cashes Green | Moorhall Place | 14 | GL5 4LY | | Y | 1998 | | |
| 43170150 | Cashes Green | Moorhall Place | 15 | GL5 4LY | | Y | 1998 | | |
| 43170160 | Cashes Green | Moorhall Place | 16 | GL5 4LY | | Y | 1998 | | |
| 43210680 | Cashes Green | Mosley Road | 68 | GL5 4LU | | Y | 1998 | | |
| 43210700 | Cashes Green | Mosley Road | 70 | GL5 4LU | | Y | 1998 | | |
| 43210720 | Cashes Green | Mosley Road | 72 | GL5 4LU | | Y | 1998 | | |
| 43210760 | Cashes Green | Mosley Road | 76 | GL5 4LU | | Y | 1998 | | |
| 43210780 | Cashes Green | Mosley Road | 78 | GL5 4LU | | Y | 1998 | | |
| 43210800 | Cashes Green | Mosley Road | 80 | GL5 4LU | | Y | 1998 | | |
| 43250150 | Cashes Green | Queens Drive | 15 | GL5 4NB | | Y | 1998 | | |
| 43250170 | Cashes Green | Queens Drive | 17 | GL5 4NB | | Y | 1998 | | |
| 43250190 | Cashes Green | Queens Drive | 19 | GL5 4NB | | Y | 1998 | | |
| 43250210 | Cashes Green | Queens Drive | 21 | GL5 4NB | | Y | 1998 | | |
| 43250230 | Cashes Green | Queens Drive | 23 | GL5 4NB | | Y | 1998 | | |
| 43270020 | Cashes Green | Stanton Road | 2 | GL5 4LX | SDH | Y | 1998 | | |
| 43270040 | Cashes Green | Stanton Road | 4 | GL5 4LX | SDH | Y | 1998 | | |
| 43270060 | Cashes Green | Stanton Road | 6 | GL5 4LX | SDH | Y | 1998 | | |
| 43270080 | Cashes Green | Stanton Road | 8 | GL5 4LX | SDH | Y | 1998 | | |
| 43270100 | Cashes Green | Stanton Road | 10 | GL5 4LX | SDH | Y | 1998 | | |
| 43270120 | Cashes Green | Stanton Road | 12 | GL5 4LX | SDH | Y | 1998 | | |
| 43270140 | Cashes Green | Stanton Road | 14 | GL5 4LX | SDH | Y | 1998 | | |
| 43270160 | Cashes Green | Stanton Road | 16 | GL5 4LX | SDH | Y | 1998 | | |
| 43270170 | Cashes Green | Stanton Road | 17 | GL5 4LX | SDH | Y | 1998 | | |
| 43270180 | Cashes Green | Stanton Road | 18 | GL5 4LX | SDH | Y | 1998 | | |
| 43270190 | Cashes Green | Stanton Road | 19 | GL5 4LX | SDH | Y | 1998 | | |
| 43270200 | Cashes Green | Stanton Road | 20 | GL5 4LX | SDH | Y | 1998 | | |
| 43270210 | Cashes Green | Stanton Road | 21 | GL5 4LX | SDH | Y | 1998 | | |
| 43270230 | Cashes Green | Stanton Road | 23 | GL5 4LX | SDH | Y | 1998 | | |
| 43270250 | Cashes Green | Stanton Road | 25 | GL5 4LX | SDH | Y | 1998 | | |
| 43270270 | Cashes Green | Stanton Road | 27 | GL5 4LX | SDH | Y | 1998 | | |
| 43270290 | Cashes Green | Stanton Road | 29 | GL5 4LX | SDH | Y | 1998 | | |
| 43270310 | Cashes Green | Stanton Road | 31 | GL5 4LX | SDH | Y | 1998 | | |
| 43270330 | Cashes Green | Stanton Road | 33 | GL5 4LX | SDH | Y | 1998 | | |
| 43270350 | Cashes Green | Stanton Road | 35 | GL5 4LX | SDH | Y | 1998 | | |
| 43270370 | Cashes Green | Stanton Road | 37 | GL5 4LX | SDH | Y | 1998 | | |
| 43270390 | Cashes Green | Stanton Road | 39 | GL5 4LX | SDH | Y | 1998 | | |

Appendix A6

List of Reema Hollow Panel Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F | EWI | EWI Year | Survey 2017 (Ext/Int) | Sch for Dem |
|----------|--------------|----------|-----|-----------|------|-----|----------|-----------------------|-------------|
| 77170010 | Forest Green | Lawnside | 1 | GL6 0ER | ETH | N | | | |
| 77170020 | Forest Green | Lawnside | 2 | GL6 0ER | MTHa | N | | | |
| 77170030 | Forest Green | Lawnside | 3 | GL6 0ER | MTHa | N | | | |
| 77170040 | Forest Green | Lawnside | 4 | GL6 0ER | ETH | N | | | |
| 7717005A | Forest Green | Lawnside | 5A | GL6 0ER | F1 | N | | | |
| 77170060 | Forest Green | Lawnside | 6 | GL6 0ER | F1 | N | | | |
| 7717006A | Forest Green | Lawnside | 6A | GL6 0ER | F1 | N | | | |
| 77170070 | Forest Green | Lawnside | 7 | GL6 0ER | ETH | N | | | |
| 77170080 | Forest Green | Lawnside | 8 | GL6 0ER | MTHa | N | | | |
| 77170090 | Forest Green | Lawnside | 9 | GL6 0ER | MTHa | N | | | |
| 77170100 | Forest Green | Lawnside | 10 | GL6 0ER | ETH | N | | | |
| 77170110 | Forest Green | Lawnside | 11 | GL6 0ER | ETH | N | | | |
| 77170120 | Forest Green | Lawnside | 12 | GL6 0ER | MTHa | N | | | |
| 7717012A | Forest Green | Lawnside | 12A | GL6 0ER | MTHa | N | | Y/Y | |
| 77170140 | Forest Green | Lawnside | 14 | GL6 0ER | ETH | N | | | |
| 77170150 | Forest Green | Lawnside | 15 | GL6 0ER | SDB | N | | | |
| 77170160 | Forest Green | Lawnside | 16 | GL6 0ER | SDB | N | | | |
| 77170170 | Forest Green | Lawnside | 17 | GL6 0ER | SDB | N | | | |
| 77170180 | Forest Green | Lawnside | 18 | GL6 0ER | SDB | N | | Y/Y | |
| 77170190 | Forest Green | Lawnside | 19 | GL6 0ER | SDB | N | | | |
| 77170200 | Forest Green | Lawnside | 20 | GL6 0ER | SDB | N | | | |
| 77170210 | Forest Green | Lawnside | 21 | GL6 0ER | SDH | N | | Y/Y | |
| 77170220 | Forest Green | Lawnside | 22 | GL6 0ER | SDH | N | | | |
| 77170230 | Forest Green | Lawnside | 23 | GL6 0ER | ETH | N | | | |
| 77170240 | Forest Green | Lawnside | 24 | GL6 0ER | MTHa | N | | Y/Y | |
| 77170250 | Forest Green | Lawnside | 25 | GL6 0ER | MTHa | N | | Y/N | |
| 77170260 | Forest Green | Lawnside | 26 | GL6 0ER | ETH | N | | | |
| 77170270 | Forest Green | Lawnside | 27 | GL6 0ER | ETH | N | | | |
| 77170280 | Forest Green | Lawnside | 28 | GL6 0ER | MTHa | N | | | |
| 77170290 | Forest Green | Lawnside | 29 | GL6 0ER | MTHa | N | | | |
| 77170300 | Forest Green | Lawnside | 30 | GL6 0ER | ETH | N | | | |
| 77170310 | Forest Green | Lawnside | 31 | GL6 0ER | SDH | N | | | |
| 77170320 | Forest Green | Lawnside | 32 | GL6 0ER | SDH | N | | | |
| 77170330 | Forest Green | Lawnside | 33 | GL6 0ER | SDH | N | | | |
| 77170340 | Forest Green | Lawnside | 34 | GL6 0ER | SDH | N | | | |
| 77170350 | Forest Green | Lawnside | 35 | GL6 0ER | SDH | N | | | |
| 77170360 | Forest Green | Lawnside | 36 | GL6 0ER | SDH | N | | | |
| 77170370 | Forest Green | Lawnside | 37 | GL6 0ER | ETH | N | | Y/Y | |
| 77170380 | Forest Green | Lawnside | 38 | GL6 0ER | MTHa | N | | | |
| 77170390 | Forest Green | Lawnside | 39 | GL6 0ER | MTHa | N | | | |
| 77170400 | Forest Green | Lawnside | 40 | GL6 0ER | ETH | N | | | |
| 77170410 | Forest Green | Lawnside | 41 | GL6 0ER | ETH | N | | | |
| 77170420 | Forest Green | Lawnside | 42 | GL6 0ER | MTHa | N | | | |
| 77170430 | Forest Green | Lawnside | 43 | GL6 0ER | MTHa | N | | | |
| 77170440 | Forest Green | Lawnside | 44 | GL6 0ER | ETH | N | | Y/N | |
| 77170450 | Forest Green | Lawnside | 45 | GL6 0ER | SDB | N | | | |
| 77170460 | Forest Green | Lawnside | 46 | GL6 0ER | SDB | N | | | |

Appendix A6

List of Reema Hollow Panel Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F | EWI | EWI Year | Survey 2017 (Ext/Int) | Sch for Dem |
|----------|-----------------|--------------|----|-----------|------|-----|----------|-----------------------|-------------|
| 77170470 | Forest Green | Lawnside | 47 | GL6 0ER | SDB | N | | | |
| 77170480 | Forest Green | Lawnside | 48 | GL6 0ER | SDB | N | | | |
| 77170490 | Forest Green | Lawnside | 49 | GL6 0ER | SDB | N | | | |
| 77170500 | Forest Green | Lawnside | 50 | GL6 0ER | SDB | N | | | |
| 77170510 | Forest Green | Lawnside | 51 | GL6 0ER | SDB | N | | | |
| 77170520 | Forest Green | Lawnside | 52 | GL6 0ER | SDB | N | | | |
| 77170530 | Forest Green | Lawnside | 53 | GL6 0ER | SDB | N | | | |
| 77170540 | Forest Green | Lawnside | 54 | GL6 0ER | SDB | N | | | |
| 77170550 | Forest Green | Lawnside | 55 | GL6 0ER | ETH | N | | | |
| 77170560 | Forest Green | Lawnside | 56 | GL6 0ER | MTHa | N | | Y/Y | |
| 77170570 | Forest Green | Lawnside | 57 | GL6 0ER | MTHa | N | | | |
| 77170580 | Forest Green | Lawnside | 58 | GL6 0ER | ETH | N | | | |
| 77170590 | Forest Green | Lawnside | 59 | GL6 0ER | ETH | N | | | |
| 77170600 | Forest Green | Lawnside | 60 | GL6 0ER | MTHa | N | | | |
| 77170610 | Forest Green | Lawnside | 61 | GL6 0ER | MTHa | N | | | |
| 77170620 | Forest Green | Lawnside | 62 | GL6 0ER | ETH | N | | | |
| 77170630 | Forest Green | Lawnside | 63 | GL6 0ER | SDH | N | | | |
| 77170640 | Forest Green | Lawnside | 64 | GL6 0ER | SDH | N | | | |
| 54030230 | Leonard Stanley | Mankley Road | 23 | GL10 3LX | SDB | N | | | |
| 54030240 | Leonard Stanley | Mankley Road | 24 | GL10 3LX | SDB | N | | | |
| 54030250 | Leonard Stanley | Mankley Road | 25 | GL10 3LX | SDB | N | | | |
| 54030260 | Leonard Stanley | Mankley Road | 26 | GL10 3LX | SDB | N | | Y/Y | |
| 54030270 | Leonard Stanley | Mankley Road | 27 | GL10 3LX | F0 | N | | | |
| 54030280 | Leonard Stanley | Mankley Road | 28 | GL10 3LX | F1 | N | | | |
| 54030290 | Leonard Stanley | Mankley Road | 29 | GL10 3LX | F1 | N | | | |
| 54030300 | Leonard Stanley | Mankley Road | 30 | GL10 3LX | F0 | N | | | |
| 54030310 | Leonard Stanley | Mankley Road | 31 | GL10 3LX | F0 | N | | | |
| 54030320 | Leonard Stanley | Mankley Road | 32 | GL10 3LX | F1 | N | | | |
| 54030330 | Leonard Stanley | Mankley Road | 33 | GL10 3LX | F0 | N | | | |
| 54030340 | Leonard Stanley | Mankley Road | 34 | GL10 3LX | F1 | N | | | |
| 54030350 | Leonard Stanley | Mankley Road | 35 | GL10 3LX | F0 | N | | | |
| 54030360 | Leonard Stanley | Mankley Road | 36 | GL10 3LX | SDB | N | | | |
| 54030370 | Leonard Stanley | Mankley Road | 37 | GL10 3LX | SDH | N | | | |
| 54030380 | Leonard Stanley | Mankley Road | 38 | GL10 3LX | SDH | N | | | |
| 54030390 | Leonard Stanley | Mankley Road | 39 | GL10 3LX | SDH | N | | Y/Y | |
| 54030410 | Leonard Stanley | Mankley Road | 41 | GL10 3LX | SDH | N | | | |
| 54030430 | Leonard Stanley | Mankley Road | 43 | GL10 3LX | SDH | N | | | |
| 54030440 | Leonard Stanley | Mankley Road | 44 | GL10 3LX | SDH | N | | | |
| 54030460 | Leonard Stanley | Mankley Road | 46 | GL10 3LX | MTH | N | | | |
| 54030470 | Leonard Stanley | Mankley Road | 47 | GL10 3LX | MTH | N | | | |
| 54030480 | Leonard Stanley | Mankley Road | 48 | GL10 3LX | ETH | N | | | |
| 54030490 | Leonard Stanley | Mankley Road | 49 | GL10 3LX | SDH | N | | | |
| 54030500 | Leonard Stanley | Mankley Road | 50 | GL10 3LX | SDB | N | | | |
| 54030510 | Leonard Stanley | Mankley Road | 51 | GL10 3LX | F0 | N | | Y/N | |
| 54030520 | Leonard Stanley | Mankley Road | 52 | GL10 3LX | F1 | N | | Y/Y | |
| 54030530 | Leonard Stanley | Mankley Road | 53 | GL10 3LX | F1 | N | | | |
| 54030540 | Leonard Stanley | Mankley Road | 54 | GL10 3LX | F0 | N | | | |

Appendix A6

List of Reema Hollow Panel Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F | EWI | EWI Year | Survey 2017 (Ext/Int) | Sch for Dem |
|----------|-----------------|-----------------|-----|-----------|-----|-----|----------|-----------------------|-------------|
| 54030550 | Leonard Stanley | Mankley Road | 55 | GL10 3LX | SDB | N | | | |
| 54030560 | Leonard Stanley | Mankley Road | 56 | GL10 3LX | SDB | N | | | |
| 75190340 | Minchinhampton | Glebe Road | 34 | GL6 9JZ | SDB | N | | | |
| 75190360 | Minchinhampton | Glebe Road | 36 | GL6 9JZ | SDB | N | | | |
| 75190380 | Minchinhampton | Glebe Road | 38 | GL6 9JZ | SDB | N | | Y/Y | |
| 75190400 | Minchinhampton | Glebe Road | 40 | GL6 9JZ | SDB | N | | | |
| 75190420 | Minchinhampton | Glebe Road | 42 | GL6 9JZ | SDB | N | | | |
| 75190440 | Minchinhampton | Glebe Road | 44 | GL6 9JZ | SDB | N | | | |
| 75190460 | Minchinhampton | Glebe Road | 46 | GL6 9JZ | SDB | N | | | |
| 75190480 | Minchinhampton | Glebe Road | 48 | GL6 9JZ | SDB | N | | | |
| 75190870 | Minchinhampton | Glebe Road | 87 | GL6 9JY | SDH | N | | | |
| 75190890 | Minchinhampton | Glebe Road | 89 | GL6 9JY | SDH | N | | Y/Y | |
| 75190910 | Minchinhampton | Glebe Road | 91 | GL6 9JY | SDH | N | | | |
| 75190930 | Minchinhampton | Glebe Road | 93 | GL6 9JY | SDH | N | | | |
| 75190950 | Minchinhampton | Glebe Road | 95 | GL6 9JY | SDH | N | | | |
| 75190970 | Minchinhampton | Glebe Road | 97 | GL6 9JY | SDH | N | | | |
| 75191010 | Minchinhampton | Glebe Road | 101 | GL6 9JY | SDH | N | | | |
| 75191030 | Minchinhampton | Glebe Road | 103 | GL6 9JY | SDH | N | | | |
| 75191050 | Minchinhampton | Glebe Road | 105 | GL6 9JY | SDH | N | | | |
| 75191070 | Minchinhampton | Glebe Road | 107 | GL6 9JY | SDH | N | | | |
| 75191090 | Minchinhampton | Glebe Road | 109 | GL6 9JY | SDH | N | | | |
| 77490010 | Nailsworth | Ringfield Close | 1 | GL6 0HY | | N | | | Y |
| 77490020 | Nailsworth | Ringfield Close | 2 | GL6 0HY | | N | | | Y |
| 77490030 | Nailsworth | Ringfield Close | 3 | GL6 0HY | | N | | | Y |
| 77490040 | Nailsworth | Ringfield Close | 4 | GL6 0HY | | N | | | Y |
| 77490050 | Nailsworth | Ringfield Close | 5 | GL6 0HY | | N | | | Y |
| 77490060 | Nailsworth | Ringfield Close | 6 | GL6 0HY | | N | | | Y |
| 77490070 | Nailsworth | Ringfield Close | 7 | GL6 0HY | | N | | | Y |
| 77490080 | Nailsworth | Ringfield Close | 8 | GL6 0HY | | N | | | Y |
| 77490090 | Nailsworth | Ringfield Close | 9 | GL6 0HY | | N | | | Y |
| 77490100 | Nailsworth | Ringfield Close | 10 | GL6 0HY | | N | | | Y |
| 77490110 | Nailsworth | Ringfield Close | 11 | GL6 0HY | | N | | | Y |
| 77490120 | Nailsworth | Ringfield Close | 12 | GL6 0HY | | N | | | Y |
| 7749012A | Nailsworth | Ringfield Close | 12A | GL6 0HY | | N | | | Y |
| 77490140 | Nailsworth | Ringfield Close | 14 | GL6 0HY | | N | | | Y |
| 77490150 | Nailsworth | Ringfield Close | 15 | GL6 0HY | | N | | | Y |
| 77490160 | Nailsworth | Ringfield Close | 16 | GL6 0HY | | N | | | Y |
| 77490170 | Nailsworth | Ringfield Close | 17 | GL6 0HY | | N | | | Y |
| 77490180 | Nailsworth | Ringfield Close | 18 | GL6 0HY | | N | | | Y |
| 77490190 | Nailsworth | Ringfield Close | 19 | GL6 0HY | | N | | | Y |
| 77490200 | Nailsworth | Ringfield Close | 20 | GL6 0HY | | N | | | Y |
| 77490210 | Nailsworth | Ringfield Close | 21 | GL6 0HY | | N | | | Y |
| 77490220 | Nailsworth | Ringfield Close | 22 | GL6 0HY | | N | | | Y |
| 77490230 | Nailsworth | Ringfield Close | 23 | GL6 0HY | | N | | | Y |
| 77490240 | Nailsworth | Ringfield Close | 24 | GL6 0HY | | N | | | Y |
| 77490250 | Nailsworth | Ringfield Close | 25 | GL6 0HY | | N | | | Y |
| 77490260 | Nailsworth | Ringfield Close | 26 | GL6 0HY | | N | | | Y |
| 77490280 | Nailsworth | Ringfield Close | 28 | GL6 0HY | | N | | | Y |

Appendix A6

List of Reema Hollow Panel Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F | EWI | EWI Year | Survey 2017 (Ext/Int) | Sch for Dem |
|----------|--------------|-----------------|-----|-----------|------|-----|----------|-----------------------|-------------|
| 77510010 | Nailsworth | Tanners Piece | 1 | GL6 0LN | | N | | | Y |
| 77510020 | Nailsworth | Tanners Piece | 2 | GL6 0LN | | N | | | Y |
| 77510030 | Nailsworth | Tanners Piece | 3 | GL6 0LN | | N | | | Y |
| 77510040 | Nailsworth | Tanners Piece | 4 | GL6 0LN | | N | | | Y |
| 77510050 | Nailsworth | Tanners Piece | 5 | GL6 0LN | | N | | | Y |
| 77510060 | Nailsworth | Tanners Piece | 6 | GL6 0HS | | N | | | Y |
| 77510070 | Nailsworth | Tanners Piece | 7 | GL6 0LN | | N | | | Y |
| 77510080 | Nailsworth | Tanners Piece | 8 | GL6 0LN | | N | | | Y |
| 77530010 | Nailsworth | Upper Park Road | 1 | GL6 0HU | F0 | N | | Y/Y | |
| 77530020 | Nailsworth | Upper Park Road | 2 | GL6 0HU | F1 | N | | Y/N | |
| 77530030 | Nailsworth | Upper Park Road | 3 | GL6 0HU | F1 | N | | Y/Y | |
| 77530040 | Nailsworth | Upper Park Road | 4 | GL6 0HU | F0 | N | | Y/N | |
| 77530050 | Nailsworth | Upper Park Road | 5 | GL6 0HU | SDH | N | | | |
| 77530060 | Nailsworth | Upper Park Road | 6 | GL6 0HU | SDH | N | | Y/Y | |
| 60251470 | Stonehouse | Midland Road | 147 | GL10 2DT | SDH | N | | | |
| 60251490 | Stonehouse | Midland Road | 149 | GL10 2DT | SDH | N | | | |
| 60251510 | Stonehouse | Midland Road | 151 | GL10 2DT | SDH | N | | | |
| 60251530 | Stonehouse | Midland Road | 153 | GL10 2DT | SDH | N | | | |
| 60251550 | Stonehouse | Midland Road | 155 | GL10 2DT | SDH | N | | Y/Y | |
| 60350040 | Stonehouse | Willow Road | 4 | GL10 2DS | ETH | N | | | |
| 60350060 | Stonehouse | Willow Road | 6 | GL10 2DS | MTHa | N | | | |
| 60350080 | Stonehouse | Willow Road | 8 | GL10 2DS | MTHa | N | | | |
| 60350120 | Stonehouse | Willow Road | 12 | GL10 2DS | SDB | N | | | |
| 60350140 | Stonehouse | Willow Road | 14 | GL10 2DS | SDB | N | | | |
| 60350160 | Stonehouse | Willow Road | 16 | GL10 2DS | SDH | N | | | |
| 60350180 | Stonehouse | Willow Road | 18 | GL10 2DS | SDH | N | | | |
| 60350200 | Stonehouse | Willow Road | 20 | GL10 2DS | SDB | N | | | |
| 60350220 | Stonehouse | Willow Road | 22 | GL10 2DS | SDB | N | | Y/Y | |
| 60350240 | Stonehouse | Willow Road | 24 | GL10 2DS | ETH | N | | | |
| 60350260 | Stonehouse | Willow Road | 26 | GL10 2DS | MTHa | N | | Y/Y | |
| 60350280 | Stonehouse | Willow Road | 28 | GL10 2DS | MTHa | N | | | |
| 83150010 | Stroud | Gibson Close | 1 | GL5 1HZ | | Y | 1998 | | |
| 83150030 | Stroud | Gibson Close | 3 | GL5 1HZ | | Y | 1998 | | |
| 83150050 | Stroud | Gibson Close | 5 | GL5 1HZ | | Y | 1998 | | |
| 83150060 | Stroud | Gibson Close | 6 | GL5 1HZ | | Y | 1998 | | |
| 83150070 | Stroud | Gibson Close | 7 | GL5 1HZ | | Y | 1998 | | |
| 83150080 | Stroud | Gibson Close | 8 | GL5 1HZ | | Y | 1998 | | |
| 83150090 | Stroud | Gibson Close | 9 | GL5 1HZ | | Y | 1998 | | |
| 83150100 | Stroud | Gibson Close | 10 | GL5 1HZ | | Y | 1998 | | |
| 83150120 | Stroud | Gibson Close | 12 | GL5 1HZ | | Y | 1998 | | |
| 83150130 | Stroud | Gibson Close | 13 | GL5 1HZ | | Y | 1998 | | |
| 83150140 | Stroud | Gibson Close | 14 | GL5 1HZ | | Y | 1998 | | |
| 83150150 | Stroud | Gibson Close | 15 | GL5 1HZ | | Y | 1998 | | |
| 83150160 | Stroud | Gibson Close | 16 | GL5 1HZ | | Y | 1998 | | |
| 83150170 | Stroud | Gibson Close | 17 | GL5 1HZ | | Y | 1998 | | |
| 83150180 | Stroud | Gibson Close | 18 | GL5 1HZ | | Y | 1998 | | |
| 83150190 | Stroud | Gibson Close | 19 | GL5 1HZ | | Y | 1998 | | |

Appendix A6

List of Reema Hollow Panel Addresses



| UPNR | Town/Village | Street | No | Post Code | H/F | EWI | EWI Year | Survey 2017 (Ext/Int) | Sch for Dem |
|----------|--------------|----------------|------------|-----------|-----|-----|----------|-----------------------|-------------|
| 83150200 | Stroud | Gibson Close | 20 | GL5 1HZ | | Y | 1998 | | |
| 83150220 | Stroud | Gibson Close | 22 | GL5 1HZ | | Y | 1998 | | |
| 86050130 | Whiteshill | Victory Road | 13 | GL6 6BD | SDH | N | | | |
| 86050140 | Whiteshill | Victory Road | 14 | GL6 6BD | SDH | N | | | |
| 86050150 | Whiteshill | Victory Road | 15 | GL6 6BD | SDH | N | | | |
| 86050190 | Whiteshill | Victory Road | 19 | GL6 6BD | SDH | N | | | |
| 86050200 | Whiteshill | Victory Road | 20 | GL6 6BD | SDH | N | | | |
| 86050230 | Whiteshill | Victory Road | 23 | GL6 6BD | ETH | N | | | |
| 86050240 | Whiteshill | Victory Road | 24 | GL6 6BD | MTH | N | | | |
| 86050250 | Whiteshill | Victory Road | 25 | GL6 6BS | MTH | N | | | |
| 86050260 | Whiteshill | Victory Road | 26 | GL6 6BD | ETH | N | | Y/Y | |
| 86050270 | Whiteshill | Victory Road | 27 | GL6 6BD | SDH | N | | | |
| 86050280 | Whiteshill | Victory Road | 28 | GL6 6BD | SDH | N | | | |
| 86050290 | Whiteshill | Victory Road | 29 | GL6 6BD | SDH | N | | | |
| 86050300 | Whiteshill | Victory Road | 30 | GL6 6BD | SDH | N | | | |
| 86050310 | Whiteshill | Victory Road | 31 | GL6 6BD | SDH | N | | Y/Y | |
| 86050320 | Whiteshill | Victory Road | 32 | GL6 6BD | SDH | N | | | |
| 86050420 | Whiteshill | Victory Road | 42 | GL6 6BD | SDB | N | | | |
| 86050430 | Whiteshill | Victory Road | 43 | GL6 6BD | SDB | N | | | |
| 86050450 | Whiteshill | Victory Road | 45 | GL6 6BD | SDH | N | | | |
| 87219970 | Woodchester | Blacklow Close | High Field | GL5 5PT | DB | N | | Y/Y | |

Notes:

Properties which were not listed as Reema Hollow Panel by SDC

| UPNR | Town/Village | Street | No | Post Code | H/F | EWI | EWI Year | Survey 2017 (Ext/Int) | Sch for Dem |
|----------|-----------------|--------------|-----|-----------|------|-----|----------|-----------------------|-------------|
| 43270190 | Cashes Green | Stanton Road | 19 | GL5 4LX | SDH | Y | 1998 | | |
| 43270210 | Cashes Green | Stanton Road | 21 | GL5 4LX | SDH | Y | 1998 | | |
| 7717012A | Forest Green | Lawnside | 12A | GL6 0ER | MTHa | N | | Y/Y | |
| 77170550 | Forest Green | Lawnside | 55 | GL6 0ER | ETH | N | | | |
| 77170560 | Forest Green | Lawnside | 56 | GL6 0ER | MTHa | N | | Y/Y | |
| 77170570 | Forest Green | Lawnside | 57 | GL6 0ER | MTHa | N | | | |
| 77170580 | Forest Green | Lawnside | 58 | GL6 0ER | ETH | N | | | |
| 77170590 | Forest Green | Lawnside | 59 | GL6 0ER | ETH | N | | | |
| 77170600 | Forest Green | Lawnside | 60 | GL6 0ER | MTHa | N | | | |
| 77170610 | Forest Green | Lawnside | 61 | GL6 0ER | MTHa | N | | | |
| 77170620 | Forest Green | Lawnside | 62 | GL6 0ER | ETH | N | | | |
| 77170630 | Forest Green | Lawnside | 63 | GL6 0ER | SDH | N | | | |
| 77170640 | Forest Green | Lawnside | 64 | GL6 0ER | SDH | N | | | |
| 54030270 | Leonard Stanley | Mankley Road | 27 | GL10 3LX | F0 | N | | | |
| 54030280 | Leonard Stanley | Mankley Road | 28 | GL10 3LX | F1 | N | | | |
| 54030290 | Leonard Stanley | Mankley Road | 29 | GL10 3LX | F1 | N | | | |
| 54030300 | Leonard Stanley | Mankley Road | 30 | GL10 3LX | F0 | N | | | |
| 54030550 | Leonard Stanley | Mankley Road | 55 | GL10 3LX | SDB | N | | | |
| 54030560 | Leonard Stanley | Mankley Road | 56 | GL10 3LX | SDB | N | | | |

Appendix A6 List of Reema Hollow Panel Addresses



Nos 53, 54 & 55 Brimley, Leonard Stanley were listed by SDC as Reema Hollow Panel but are traditional construction.

Properties which were listed as Reema Hollow Panel by SDC but have been demolished

| UPNR | Town/Village | Street | No | Post Code |
|----------|--------------|---------------|----|-----------|
| 60040080 | Bridgend | Wharfdale Way | 8 | GL10 2AQ |
| 60040100 | Bridgend | Wharfdale Way | 10 | GL10 2AQ |

Properties scheduled for demolition by SDC, so not included in the survey population

| UPNR | Town/Village | Street | No | Post Code |
|----------|--------------|-----------------|-----|-----------|
| 77490010 | Nailsworth | Ringfield Close | 1 | GL6 0HY |
| 77490020 | Nailsworth | Ringfield Close | 2 | GL6 0HY |
| 77490030 | Nailsworth | Ringfield Close | 3 | GL6 0HY |
| 77490040 | Nailsworth | Ringfield Close | 4 | GL6 0HY |
| 77490050 | Nailsworth | Ringfield Close | 5 | GL6 0HY |
| 77490060 | Nailsworth | Ringfield Close | 6 | GL6 0HY |
| 77490070 | Nailsworth | Ringfield Close | 7 | GL6 0HY |
| 77490080 | Nailsworth | Ringfield Close | 8 | GL6 0HY |
| 77490090 | Nailsworth | Ringfield Close | 9 | GL6 0HY |
| 77490100 | Nailsworth | Ringfield Close | 10 | GL6 0HY |
| 77490110 | Nailsworth | Ringfield Close | 11 | GL6 0HY |
| 77490120 | Nailsworth | Ringfield Close | 12 | GL6 0HY |
| 7749012A | Nailsworth | Ringfield Close | 12A | GL6 0HY |
| 77490140 | Nailsworth | Ringfield Close | 14 | GL6 0HY |
| 77490150 | Nailsworth | Ringfield Close | 15 | GL6 0HY |
| 77490160 | Nailsworth | Ringfield Close | 16 | GL6 0HY |
| 77490170 | Nailsworth | Ringfield Close | 17 | GL6 0HY |
| 77490180 | Nailsworth | Ringfield Close | 18 | GL6 0HY |
| 77490190 | Nailsworth | Ringfield Close | 19 | GL6 0HY |
| 77490200 | Nailsworth | Ringfield Close | 20 | GL6 0HY |
| 77490210 | Nailsworth | Ringfield Close | 21 | GL6 0HY |
| 77490220 | Nailsworth | Ringfield Close | 22 | GL6 0HY |
| 77490230 | Nailsworth | Ringfield Close | 23 | GL6 0HY |
| 77490240 | Nailsworth | Ringfield Close | 24 | GL6 0HY |
| 77490250 | Nailsworth | Ringfield Close | 25 | GL6 0HY |
| 77490260 | Nailsworth | Ringfield Close | 26 | GL6 0HY |
| 77490280 | Nailsworth | Ringfield Close | 28 | GL6 0HY |
| 77510010 | Nailsworth | Tanners Piece | 1 | GL6 0LN |
| 77510020 | Nailsworth | Tanners Piece | 2 | GL6 0LN |
| 77510030 | Nailsworth | Tanners Piece | 3 | GL6 0LN |
| 77510040 | Nailsworth | Tanners Piece | 4 | GL6 0LN |
| 77510050 | Nailsworth | Tanners Piece | 5 | GL6 0LN |
| 77510060 | Nailsworth | Tanners Piece | 6 | GL6 0HS |
| 77510070 | Nailsworth | Tanners Piece | 7 | GL6 0LN |
| 77510080 | Nailsworth | Tanners Piece | 8 | GL6 0LN |

Appendix A7 List of Stent Addresses



| UPNR | Town/Village | Street | No | Post Code |
|----------|--------------|-----------------|----|-----------|
| 16290010 | Dursley | Kingsway | 1 | GL11 4DJ |
| 16290020 | Dursley | Kingsway | 2 | GL11 4DL |
| 16290030 | Dursley | Kingsway | 3 | GL11 4DJ |
| 16290040 | Dursley | Kingsway | 4 | GL11 4DL |
| 16290060 | Dursley | Kingsway | 6 | GL11 4DL |
| 16290080 | Dursley | Kingsway | 8 | GL11 4DL |
| 16290090 | Dursley | Kingsway | 9 | GL11 4DJ |
| 16290100 | Dursley | Kingsway | 10 | GL11 4DL |
| 16290110 | Dursley | Kingsway | 11 | GL11 4DJ |
| 16290130 | Dursley | Kingsway | 13 | GL11 4DJ |
| 16290140 | Dursley | Kingsway | 14 | GL11 4DL |
| 16290150 | Dursley | Kingsway | 15 | GL11 4DJ |
| 16290160 | Dursley | Kingsway | 16 | GL11 4DL |
| 16290200 | Dursley | Kingsway | 20 | GL11 4DL |
| 16290220 | Dursley | Kingsway | 22 | GL11 4DL |
| 16290230 | Dursley | Kingsway | 23 | GL11 4DJ |
| 16290240 | Dursley | Kingsway | 24 | GL11 4DL |
| 16290260 | Dursley | Kingsway | 26 | GL11 4DL |
| 16290270 | Dursley | Kingsway | 27 | GL11 4DJ |
| 16290280 | Dursley | Kingsway | 28 | GL11 4DL |
| 16290300 | Dursley | Kingsway | 30 | GL11 4DL |
| 16290320 | Dursley | Kingsway | 32 | GL11 4DL |
| 16290330 | Dursley | Kingsway | 33 | GL11 4DJ |
| 16290350 | Dursley | Kingsway | 35 | GL11 4DJ |
| 16290360 | Dursley | Kingsway | 36 | GL11 4DL |
| 16290380 | Dursley | Kingsway | 38 | GL11 4DL |
| 16370020 | Dursley | St Georges Road | 2 | GL11 4DW |
| 16370030 | Dursley | St Georges Road | 3 | GL11 4DN |
| 16370040 | Dursley | St Georges Road | 4 | GL11 4DW |
| 16370070 | Dursley | St Georges Road | 7 | GL11 4DN |
| 16370080 | Dursley | St Georges Road | 8 | GL11 4DW |
| 16370110 | Dursley | St Georges Road | 11 | GL11 4DN |
| 16370120 | Dursley | St Georges Road | 12 | GL11 4DW |
| 16370130 | Dursley | St Georges Road | 13 | GL11 4DN |
| 16370140 | Dursley | St Georges Road | 14 | GL11 4DW |
| 16370150 | Dursley | St Georges Road | 15 | GL11 4DN |
| 16370160 | Dursley | St Georges Road | 16 | GL11 4DW |
| 16370180 | Dursley | St Georges Road | 18 | GL11 4DW |

Appendix A7 List of Stent Addresses



| UPNR | Town/Village | Street | No | Post Code |
|----------|--------------|-----------------|----|-----------|
| 16370200 | Dursley | St Georges Road | 20 | GL11 4DW |
| 16370220 | Dursley | St Georges Road | 22 | GL11 4DW |
| 16370230 | Dursley | St Georges Road | 23 | GL11 4DN |
| 16370240 | Dursley | St Georges Road | 24 | GL11 4DW |
| 16370250 | Dursley | St Georges Road | 25 | GL11 4DN |
| 16370260 | Dursley | St Georges Road | 26 | GL11 4DW |
| 16370270 | Dursley | St Georges Road | 27 | GL11 4DN |
| 16370280 | Dursley | St Georges Road | 28 | GL11 4DW |
| 16370290 | Dursley | St Georges Road | 29 | GL11 4DN |
| 16370300 | Dursley | St Georges Road | 30 | GL11 4DW |
| 16370310 | Dursley | St Georges Road | 31 | GL11 4DN |
| 16370320 | Dursley | St Georges Road | 32 | GL11 4DW |
| 16370330 | Dursley | St Georges Road | 33 | GL11 4DN |
| 16370340 | Dursley | St Georges Road | 34 | GL11 4DW |
| 16370350 | Dursley | St Georges Road | 35 | GL11 4DN |
| 16370370 | Dursley | St Georges Road | 37 | GL11 4DN |
| 16370380 | Dursley | St Georges Road | 38 | GL11 4DW |

Notes:

All properties have had an External Wall Insulation (EWI) system installed in 1998.

Appendix A8

List of Swedish Timber Frame Addresses



| UPNR | Town/Village | Street | No | Post Code | H/B/F | Survey 2017 (External/Internal) | Survey Year |
|----------|-------------------|-----------------------------------|----|-----------|-------|------------------------------------|-------------|
| 21010320 | North Nibley | Barrs Lane | 32 | GL11 6DT | SDcB | Y/N | |
| 81130010 | Painswick | Parkfield Cottages | 1 | GL6 6SW | SDcB | | 2015 |
| 81130020 | Painswick | Parkfield Cottages | 2 | GL6 6SW | SDcB | | 2015 |
| 81130030 | Painswick | Parkfield Cottages | 3 | GL6 6SW | SDcB | | 2015 |
| 81130040 | Painswick | Parkfield Cottages | 4 | GL6 6SW | SDcB | | 2015 |
| 81130050 | Painswick | Parkfield Cottages | 5 | GL6 6SW | SDH | | 2015 |
| 81130060 | Painswick | Parkfield Cottages | 6 | GL6 6SW | SDH | | 2015 |
| 71050010 | Stacombe | Swedale | 1 | GL6 7NF | SDH | | 2015 |
| 71050020 | Stacombe | Swedale | 2 | GL6 7NF | SDH | | 2015 |
| 24010010 | Stinchcombe | The Avenue | 1 | GL11 6AJ | SDcB | | 2016 |
| 24010020 | Stinchcombe | The Avenue | 2 | GL11 6AJ | SDcB | | 2016 |
| 24010030 | Stinchcombe | The Avenue | 3 | GL11 6AJ | SDcB | | 2016 |
| 76010020 | The Camp | Bushy Beeches, Honeycombe Lane | 2 | GL6 7HN | SDcB | | 2015 |
| 76010030 | The Camp | Bushy Beeches, Honeycombe Lane | 3 | GL6 7HN | SDH | Y/Y | |
| 25010050 | Uley | The Knoll | 5 | GL11 5SR | SDH | | 2015 |
| 25010060 | Uley | The Knoll | 6 | GL11 5SR | SDH | Y/Y | |
| 25010080 | Uley | The Knoll | 8 | GL11 5SR | SDH | Y/N | |
| 26230010 | Wotton-Under-Edge | Mount Pleasant | 1 | GL12 7JS | SDcB | | 2015 |
| 26230030 | Wotton-Under-Edge | Mount Pleasant | 3 | GL12 7JS | SDcB | Y/N | |
| 26230070 | Wotton-Under-Edge | Mount Pleasant | 7 | GL12 7JS | SDcB | Y/N | |

Summary:

| Town/Village | Road | Qty | 2015/16 Report Reference |
|-------------------|--------------------|-----------|--------------------------|
| North Nibley | Barrs Lane | 1 | |
| Painswick | Parkfield Cottages | 6 | BR1500C December 2015 |
| Stacombe | Swedale | 2 | BR1500 October 2015 |
| Stinchcombe | The Avenue | 3 | BR1500E August 2016 |
| The Camp | Bushy Beeches | 2 | BR1500D December 2015 |
| Uley | The Knoll | 3 | BR1500A December 2015 |
| Wotton-Under-Edge | Mount Pleasant | 3 | BR1500B December 2015 |
| | Total | 20 | |

Type codes: SDH = Semi-detached house
SDcB = Semi-detached Chalet Bungalow

Houses at Swedale, Stancob,e have had EWI installed in 2016.

Appendix A9

List of Unity Addresses



| UPRN | Town/Village | Street | No | Post Code | Mark I or II | EWI Year |
|----------|--------------|--------------------|----|-----------|--------------|----------|
| 43090010 | Cashes Green | Hillcrest Road | 1 | GL5 4NL | I | 1998 |
| 43090030 | Cashes Green | Hillcrest Road | 3 | GL5 4NL | I | 1998 |
| 43090070 | Cashes Green | Hillcrest Road | 7 | GL5 4NL | I | 1998 |
| 43090090 | Cashes Green | Hillcrest Road | 9 | GL5 4NL | I | 1998 |
| 43090200 | Cashes Green | Hillcrest Road | 20 | GL5 4NN | I | 1998 |
| 43090210 | Cashes Green | Hillcrest Road | 21 | GL5 4NN | I | 1998 |
| 43090250 | Cashes Green | Hillcrest Road | 25 | GL5 4NN | I | 1998 |
| 43090270 | Cashes Green | Hillcrest Road | 27 | GL5 4NN | I | 1998 |
| 43090280 | Cashes Green | Hillcrest Road | 28 | GL5 4NN | I | 1998 |
| 43090290 | Cashes Green | Hillcrest Road | 29 | GL5 4NN | I | 1998 |
| 43090300 | Cashes Green | Hillcrest Road | 30 | GL5 4NN | I | 1998 |
| 43090310 | Cashes Green | Hillcrest Road | 31 | GL5 4NN | I | 1998 |
| 43090330 | Cashes Green | Hillcrest Road | 33 | GL5 4NW | I | 1998 |
| 43090350 | Cashes Green | Hillcrest Road | 35 | GL5 4NW | I | 1998 |
| 43090360 | Cashes Green | Hillcrest Road | 36 | GL5 4NW | I | 1998 |
| 43090370 | Cashes Green | Hillcrest Road | 37 | GL5 4NW | I | 1998 |
| 43090380 | Cashes Green | Hillcrest Road | 38 | GL5 4NW | I | 1998 |
| 43090390 | Cashes Green | Hillcrest Road | 39 | GL5 4NW | I | 1998 |
| 43090410 | Cashes Green | Hillcrest Road | 41 | GL5 4NW | I | 1998 |
| 43090430 | Cashes Green | Hillcrest Road | 43 | GL5 4NW | I | 1998 |
| 43090450 | Cashes Green | Hillcrest Road | 45 | GL5 4NW | I | 1998 |
| 43090470 | Cashes Green | Hillcrest Road | 47 | GL5 4NW | I | 1998 |
| 43090490 | Cashes Green | Hillcrest Road | 49 | GL5 4NE | I | 1998 |
| 43090510 | Cashes Green | Hillcrest Road | 51 | GL5 4NE | I | 1998 |
| 43090530 | Cashes Green | Hillcrest Road | 53 | GL5 4NE | I | 1998 |
| 43090550 | Cashes Green | Hillcrest Road | 55 | GL5 4NE | I | 1998 |
| 43090570 | Cashes Green | Hillcrest Road | 57 | GL5 4NE | I | 1998 |
| 43090590 | Cashes Green | Hillcrest Road | 59 | GL5 4NE | I | 1998 |
| 43090610 | Cashes Green | Hillcrest Road | 61 | GL5 4NE | I | 1998 |
| 43090630 | Cashes Green | Hillcrest Road | 63 | GL5 4NE | I | 1998 |
| 45030300 | Ebley | Devereaux Crescent | 30 | GL5 4PY | I | 1998 |
| 45030320 | Ebley | Devereaux Crescent | 32 | GL5 4PY | I | 1998 |
| 45030340 | Ebley | Devereaux Crescent | 34 | GL5 4PY | I | 1998 |
| 45030360 | Ebley | Devereaux Crescent | 36 | GL5 4PY | I | 1998 |
| 45030370 | Ebley | Devereaux Crescent | 37 | GL5 4PX | I | 1998 |
| 45030410 | Ebley | Devereaux Crescent | 41 | GL5 4PX | I | 1998 |
| 45030470 | Ebley | Devereaux Crescent | 47 | GL5 4PX | I | 1998 |
| 45030490 | Ebley | Devereaux Crescent | 49 | GL5 4PX | I | 1998 |

Appendix A9 List of Unity Addresses



| UPRN | Town/Village | Street | No | Post Code | Mark I or II | EWI Year |
|----------|--------------|--------------------|----|-----------|--------------|----------|
| 45030530 | Ebley | Devereaux Crescent | 53 | GL5 4PX | I | 1998 |
| 45030550 | Ebley | Devereaux Crescent | 55 | GL5 4PX | I | 1998 |
| 45030590 | Ebley | Devereaux Crescent | 59 | GL5 4PX | I | 1998 |
| 45030610 | Ebley | Devereaux Crescent | 61 | GL5 4PX | I | 1998 |
| 50070190 | Hardwicke | Springfield | 19 | GL2 4PX | II | 1999 |
| 50070210 | Hardwicke | Springfield | 21 | GL2 4PX | II | 1999 |
| 50070230 | Hardwicke | Springfield | 23 | GL2 4PX | II | 1999 |
| 50070250 | Hardwicke | Springfield | 25 | GL2 4PX | II | 1999 |
| 50070270 | Hardwicke | Springfield | 27 | GL2 4PX | II | 1999 |
| 50070290 | Hardwicke | Springfield | 29 | GL2 4PX | II | 1999 |
| 50070310 | Hardwicke | Springfield | 31 | GL2 4PX | II | 1999 |
| 50070390 | Hardwicke | Springfield | 39 | GL2 4PX | II | 1999 |
| 50070420 | Hardwicke | Springfield | 42 | GL2 4PX | II | 1999 |
| 50070440 | Hardwicke | Springfield | 44 | GL2 4PX | II | 1999 |
| 50070460 | Hardwicke | Springfield | 46 | GL2 4PX | II | 1999 |
| 50070480 | Hardwicke | Springfield | 48 | GL2 4PX | II | 1999 |
| 50070520 | Hardwicke | Springfield | 52 | GL2 4PX | II | 1999 |
| 50070540 | Hardwicke | Springfield | 54 | GL2 4PX | II | 1999 |
| 50070600 | Hardwicke | Springfield | 60 | GL2 4PX | II | 1999 |
| 50070620 | Hardwicke | Springfield | 62 | GL2 4PX | II | 1999 |
| 50070660 | Hardwicke | Springfield | 66 | GL2 4PX | II | 1999 |

Summary

| Town/Village | Road | Qty | Mk I or II |
|--------------|--------------------|-----------|------------|
| Cashes Green | Hillcrest Road | 30 | I |
| Ebley | Devereaux Crescent | 12 | I |
| Hardwicke | Springfields | 17 | II |
| | Total | 59 | |

Appendix A10

List of Woolaway Addresses



| UPNR | Town/Village | Street | No | Post Code | Type | Year Demolish | Works | Works Year |
|----------|-----------------|--------------|----|-----------|------|---------------|-----------|------------|
| 54030150 | Leonard Stanley | Mankley Road | 15 | GL10 3LX | | 2013 | Redevelop | 2016 |
| 54030160 | Leonard Stanley | Mankley Road | 16 | GL10 3LX | | 2013 | Redevelop | 2016 |
| 54030170 | Leonard Stanley | Mankley Road | 17 | GL10 3LX | | 2013 | Redevelop | 2016 |
| 54030180 | Leonard Stanley | Mankley Road | 18 | GL10 3LX | | 2013 | Redevelop | 2016 |
| 54030190 | Leonard Stanley | Mankley Road | 19 | GL10 3LX | | 2013 | Redevelop | 2016 |
| 54030200 | Leonard Stanley | Mankley Road | 20 | GL10 3LX | | 2013 | Redevelop | 2016 |
| 54030210 | Leonard Stanley | Mankley Road | 21 | GL10 3LX | | 2016 | Redevelop | 2016 |
| 54030600 | Leonard Stanley | Mankley Road | 60 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030610 | Leonard Stanley | Mankley Road | 61 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030640 | Leonard Stanley | Mankley Road | 64 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030650 | Leonard Stanley | Mankley Road | 65 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030660 | Leonard Stanley | Mankley Road | 66 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030670 | Leonard Stanley | Mankley Road | 67 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030680 | Leonard Stanley | Mankley Road | 68 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030690 | Leonard Stanley | Mankley Road | 69 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030700 | Leonard Stanley | Mankley Road | 70 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030710 | Leonard Stanley | Mankley Road | 71 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030720 | Leonard Stanley | Mankley Road | 72 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 54030730 | Leonard Stanley | Mankley Road | 73 | GL10 3LY | | 2014 | Redevelop | 2016 |
| 75290010 | Minchinhampton | Old Common | 1 | GL6 9EH | | 2013 | Redevelop | |
| 75290020 | Minchinhampton | Old Common | 2 | GL6 9EH | | 2013 | Redevelop | |
| 75290030 | Minchinhampton | Old Common | 3 | GL6 9EH | | 2013 | Redevelop | |
| 75290040 | Minchinhampton | Old Common | 4 | GL6 9EH | | 2013 | Redevelop | |
| 75290050 | Minchinhampton | Old Common | 5 | GL6 9EH | | 2013 | Redevelop | |
| 75290060 | Minchinhampton | Old Common | 6 | GL6 9EH | | 2013 | Redevelop | |
| 75290070 | Minchinhampton | Old Common | 7 | GL6 9EH | | 2013 | Redevelop | |
| 75290080 | Minchinhampton | Old Common | 8 | GL6 9EH | | 2013 | Redevelop | |
| 75290090 | Minchinhampton | Old Common | 9 | GL6 9EH | | 2013 | Redevelop | |
| 75290100 | Minchinhampton | Old Common | 10 | GL6 9EH | | 2013 | Redevelop | |
| 75290110 | Minchinhampton | Old Common | 11 | GL6 9EH | | 2013 | Redevelop | |
| 75290120 | Minchinhampton | Old Common | 12 | GL6 9EH | | 2013 | Redevelop | |
| 75290130 | Minchinhampton | Old Common | 13 | GL6 9EH | | 2013 | Redevelop | |
| 75290160 | Minchinhampton | Old Common | 16 | GL6 9EH | | 2013 | Redevelop | |
| 75290170 | Minchinhampton | Old Common | 17 | GL6 9EH | | 2013 | Redevelop | |
| 75290180 | Minchinhampton | Old Common | 18 | GL6 9EH | | 2013 | Redevelop | |
| 75290190 | Minchinhampton | Old Common | 19 | GL6 9EH | | 2013 | Redevelop | |
| 75290200 | Minchinhampton | Old Common | 20 | GL6 9EH | | 2013 | Redevelop | |

Appendix A10

List of Woolaway Addresses



| UPNR | Town/Village | Street | No | Post Code | Type | Year Demolish | Works | Works Year |
|----------|----------------|-----------------|-----|-----------|------|---------------|-----------|------------|
| 75350010 | Minchinhampton | The Tynings | 1 | GL6 9EJ | | 2013 | Redevelop | |
| 75350020 | Minchinhampton | The Tynings | 2 | GL6 9EJ | | 2013 | Redevelop | |
| 75350030 | Minchinhampton | The Tynings | 3 | GL6 9EJ | | 2013 | Redevelop | |
| 75350040 | Minchinhampton | The Tynings | 4 | GL6 9EJ | | 2013 | Redevelop | |
| 75350050 | Minchinhampton | The Tynings | 5 | GL6 9EJ | | 2013 | Redevelop | |
| 75350070 | Minchinhampton | The Tynings | 7 | GL6 9EJ | | 2013 | Redevelop | |
| 75350080 | Minchinhampton | The Tynings | 8 | GL6 9EJ | | 2013 | Redevelop | |
| 75350090 | Minchinhampton | The Tynings | 9 | GL6 9EJ | | 2013 | Redevelop | |
| 75350100 | Minchinhampton | The Tynings | 10 | GL6 9EJ | | 2013 | Redevelop | |
| 75350110 | Minchinhampton | The Tynings | 11 | GL6 9EJ | | 2013 | Redevelop | |
| 75350120 | Minchinhampton | The Tynings | 12 | GL6 9EJ | | 2013 | Redevelop | |
| 75350130 | Minchinhampton | The Tynings | 13 | GL6 9EJ | | 2013 | Redevelop | |
| 75350140 | Minchinhampton | The Tynings | 14 | GL6 9EJ | | 2013 | Redevelop | |
| 75350370 | Minchinhampton | The Tynings | 37 | GL6 9EW | | 2013 | Redevelop | |
| 75350390 | Minchinhampton | The Tynings | 39 | GL6 9EW | | 2013 | Redevelop | |
| 75350400 | Minchinhampton | The Tynings | 40 | GL6 9EW | | 2013 | Redevelop | |
| 75350410 | Minchinhampton | The Tynings | 41 | GL6 9EW | | 2013 | Redevelop | |
| 83031760 | Stroud | Bisley Old Road | 176 | GL5 1NN | | 2016 | Redevelop | |
| 83031780 | Stroud | Bisley Old Road | 178 | GL5 1NN | | 2016 | Redevelop | |
| 83031800 | Stroud | Bisley Old Road | 180 | GL5 1NN | | 2016 | Redevelop | |
| 83031820 | Stroud | Bisley Old Road | 182 | GL5 1NN | | 2016 | Redevelop | |
| 83031840 | Stroud | Bisley Old Road | 184 | GL5 1NN | | 2016 | Redevelop | |
| 83031860 | Stroud | Bisley Old Road | 186 | GL5 1NN | | 2016 | Redevelop | |
| 83110130 | Stroud | Daniels Road | 13 | GL5 1HX | ETH | | EWI | |
| 83110150 | Stroud | Daniels Road | 15 | GL5 1HX | MTH | | EWI | |
| 83110310 | Stroud | Daniels Road | 31 | GL5 1HX | | 2016 | Redevelop | 2017 |
| 83110330 | Stroud | Daniels Road | 33 | GL5 1HX | | 2016 | Redevelop | 2017 |
| 83110350 | Stroud | Daniels Road | 35 | GL5 1HX | | 2016 | Redevelop | 2017 |
| 83190130 | Stroud | Mason Road | 13 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190150 | Stroud | Mason Road | 15 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190170 | Stroud | Mason Road | 17 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190190 | Stroud | Mason Road | 19 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190210 | Stroud | Mason Road | 21 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190220 | Stroud | Mason Road | 22 | GL5 1HU | | 2013 | Redevelop | 2016 |
| 83190230 | Stroud | Mason Road | 23 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190240 | Stroud | Mason Road | 24 | GL5 1HU | | 2013 | Redevelop | 2016 |
| 83190250 | Stroud | Mason Road | 25 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190260 | Stroud | Mason Road | 26 | GL5 1HU | | 2013 | Redevelop | 2016 |

Appendix A10

List of Woolaway Addresses



| UPNR | Town/Village | Street | No | Post Code | Type | Year Demolish | Works | Works Year |
|----------|--------------|--------------|----|-----------|------|---------------|-----------|------------|
| 83190270 | Stroud | Mason Road | 27 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190280 | Stroud | Mason Road | 28 | GL5 1HU | | 2013 | Redevelop | 2016 |
| 83190290 | Stroud | Mason Road | 29 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190310 | Stroud | Mason Road | 31 | GL5 1HU | | 2016 | Redevelop | 2016 |
| 83190350 | Stroud | Mason Road | 35 | GL5 1HU | SDH | | EWI | |
| 83190370 | Stroud | Mason Road | 37 | GL5 1HU | SDH | | Refurbish | 2017 |
| 83190430 | Stroud | Mason Road | 43 | GL5 1HU | SDH | | EWI | |
| 83310010 | Stroud | Target Close | 1 | GL5 1JA | | 2014 | Redevelop | |
| 83310020 | Stroud | Target Close | 2 | GL5 1JA | | 2014 | Redevelop | |
| 83310030 | Stroud | Target Close | 3 | GL5 1JA | | 2014 | Redevelop | |
| 83310040 | Stroud | Target Close | 4 | GL5 1JA | | 2014 | Redevelop | |
| 83310050 | Stroud | Target Close | 5 | GL5 1JA | | 2014 | Redevelop | |
| 83310070 | Stroud | Target Close | 7 | GL5 1JA | | 2014 | Redevelop | |
| 83310090 | Stroud | Target Close | 9 | GL5 1JA | | 2014 | Redevelop | |
| 83310110 | Stroud | Target Close | 11 | GL5 1JA | | 2014 | Redevelop | |
| 83310130 | Stroud | Target Close | 13 | GL5 1JA | | 2014 | Redevelop | |
| 83310150 | Stroud | Target Close | 15 | GL5 1JA | | 2014 | Redevelop | |
| 83310190 | Stroud | Target Close | 19 | GL5 1JA | | 2014 | Redevelop | |
| 83310200 | Stroud | Target Close | 20 | GL5 1JA | | 2014 | Redevelop | |

Summary of Remaining Stock

| UPNR | Town/Village | Street | No | Post Code | Type | Year Demolish | Works | Works Year |
|----------|--------------|--------------|----|-----------|------|---------------|-----------|------------|
| 83110130 | Stroud | Daniels Road | 13 | GL5 1HX | ETH | | EWI | |
| 83110150 | Stroud | Daniels Road | 15 | GL5 1HX | MTH | - | EWI | |
| 83190350 | Stroud | Mason Road | 35 | GL5 1HU | SDH | - | EWI | |
| 83190370 | Stroud | Mason Road | 37 | GL5 1HU | SDH | - | Refurbish | 2017 |
| 83190430 | Stroud | Mason Road | 43 | GL5 1HU | SDH | - | EWI | |

Type codes:

SDH = Semi-detached house
ETH = End Terraced house
MTH = Mid Terraced house

Appendix B



List of Survey Addresses

| No | Construction |
|----|----------------------|
| 1 | Dorlonco |
| 2 | Reema Conclad |
| 3 | Reema Hollow Panel |
| 5 | Swedish Timber Frame |

Appendix B

List of Survey Addresses



| UPRN | Construction | Town/Village | Street | No | Post Code | H/B/F | Surveyed 2017 (Ext/Int) |
|----------|--------------|-----------------|-----------------|------------|-----------|-------|-------------------------|
| 14030740 | Dorlonco | Cashes Green | Hyett Road | 14 | GL5 4LW | SDH | Y/Y |
| 14290400 | Dorlonco | Cashes Green | Kingley Road | 10 | GL5 4LW | SDH | Y/N |
| 43010370 | Dorlonco | Cashes Green | Mosley Crescent | 14 | GL5 4LT | SDH | Y/Y |
| 77310060 | Reema CC | Forest Green | Badgers Way | 6 | GL6 0HE | SDH | Y/Y |
| 77310120 | Reema CC | Forest Green | Badgers Way | 17 | GL6 0HE | SDH | Y/Y |
| 77310200 | Reema CC | Forest Green | Badgers Way | 26 | GL6 0HE | SDH | Y/N |
| 50090130 | Reema CC | Forest Green | Nortonwood | 1 | GL6 0HD | F1 | Y/N |
| 50090140 | Reema CC | Forest Green | Nortonwood | 3 | GL6 0HD | F0 | Y/Y |
| 50090170 | Reema CC | Forest Green | Nortonwood | 19 | GL6 0HD | SDH | Y/Y |
| 53010010 | Reema CC | Forest Green | Woodpecker Walk | 7 | GL6 0HQ | SDH | Y/N |
| 53010050 | Reema CC | Forest Green | Woodpecker Walk | 10 | GL6 0HQ | SDH | Y/Y |
| 7717012A | Reema HP | Forest Green | Lawnside | 12A | GL6 0ER | MTHa | Y/Y |
| 77170180 | Reema HP | Forest Green | Lawnside | 18 | GL6 0ER | SDB | Y/Y |
| 77170210 | Reema HP | Forest Green | Lawnside | 21 | GL6 0ER | SDH | Y/Y |
| 77170240 | Reema HP | Forest Green | Lawnside | 24 | GL6 0ER | MTHa | Y/Y |
| 77170250 | Reema HP | Forest Green | Lawnside | 25 | GL6 0ER | MTHa | Y/N |
| 77170370 | Reema HP | Forest Green | Lawnside | 37 | GL6 0ER | ETH | Y/Y |
| 77170440 | Reema HP | Forest Green | Lawnside | 44 | GL6 0ER | ETH | Y/N |
| 77170560 | Reema HP | Forest Green | Lawnside | 56 | GL6 0ER | MTHa | Y/Y |
| 54030260 | Reema HP | Leonard Stanley | Mankley Road | 26 | GL10 3LX | SDB | Y/Y |
| 54030390 | Reema HP | Leonard Stanley | Mankley Road | 39 | GL10 3LX | SDH | Y/Y |
| 54030510 | Reema HP | Leonard Stanley | Mankley Road | 51 | GL10 3LX | F0 | Y/N |
| 54030520 | Reema HP | Leonard Stanley | Mankley Road | 52 | GL10 3LX | F1 | Y/Y |
| 75190380 | Reema HP | Minchinhampton | Glebe Road | 38 | GL6 9JZ | SDB | Y/Y |
| 75190890 | Reema HP | Minchinhampton | Glebe Road | 89 | GL6 9JY | SDH | Y/Y |
| 77530010 | Reema HP | Nailsworth | Upper Park Road | 1 | GL6 0HU | F0 | Y/Y |
| 77530020 | Reema HP | Nailsworth | Upper Park Road | 2 | GL6 0HU | F1 | Y/N |
| 77530030 | Reema HP | Nailsworth | Upper Park Road | 3 | GL6 0HU | F1 | Y/Y |
| 77530040 | Reema HP | Nailsworth | Upper Park Road | 4 | GL6 0HU | F0 | Y/N |
| 77530060 | Reema HP | Nailsworth | Upper Park Road | 6 | GL6 0HU | SDH | Y/Y |
| 60251550 | Reema HP | Stonehouse | Midland Road | 155 | GL10 2DT | SDH | Y/Y |
| 60350220 | Reema HP | Stonehouse | Willow Road | 22 | GL10 2DS | SDB | Y/Y |
| 60350260 | Reema HP | Stonehouse | Willow Road | 26 | GL10 2DS | MTHa | Y/Y |
| 86050260 | Reema HP | Whiteshill | Victory Road | 26 | GL6 6BD | ETH | Y/Y |
| 86050310 | Reema HP | Whiteshill | Victory Road | 31 | GL6 6BD | SDH | Y/Y |
| 87219970 | Reema HP | Woodchester | Blacklow Close | High Field | GL5 5PT | DB | Y/Y |

Appendix B List of Survey Addresses



| UPRN | Construction | Town/Village | Street | No | Post Code | H/B/F | Surveyed 2017 (Ext/Int) |
|----------|--------------|-------------------|-----------------------------------|----|-----------|-------|-------------------------|
| 21010320 | Swedish | North Nibley | Barrs Lane | 32 | GL11 6DT | SDcB | Y/N |
| 76010030 | Swedish | The Camp | Bushy Beeches, Honeycombe Lane | 3 | GL6 7HN | SDH | Y/Y |
| 25010060 | Swedish | Uley | The Knoll | 6 | GL11 5SR | SDH | Y/Y |
| 25010080 | Swedish | Uley | The Knoll | 8 | GL11 5SR | SDH | Y/N |
| 26230030 | Swedish | Wotton-Under-Edge | Mount Pleasant | 3 | GL12 7JS | SDcB | Y/N |
| 26230070 | Swedish | Wotton-Under-Edge | Mount Pleasant | 7 | GL12 7JS | SDcB | Y/N |

Appendix C

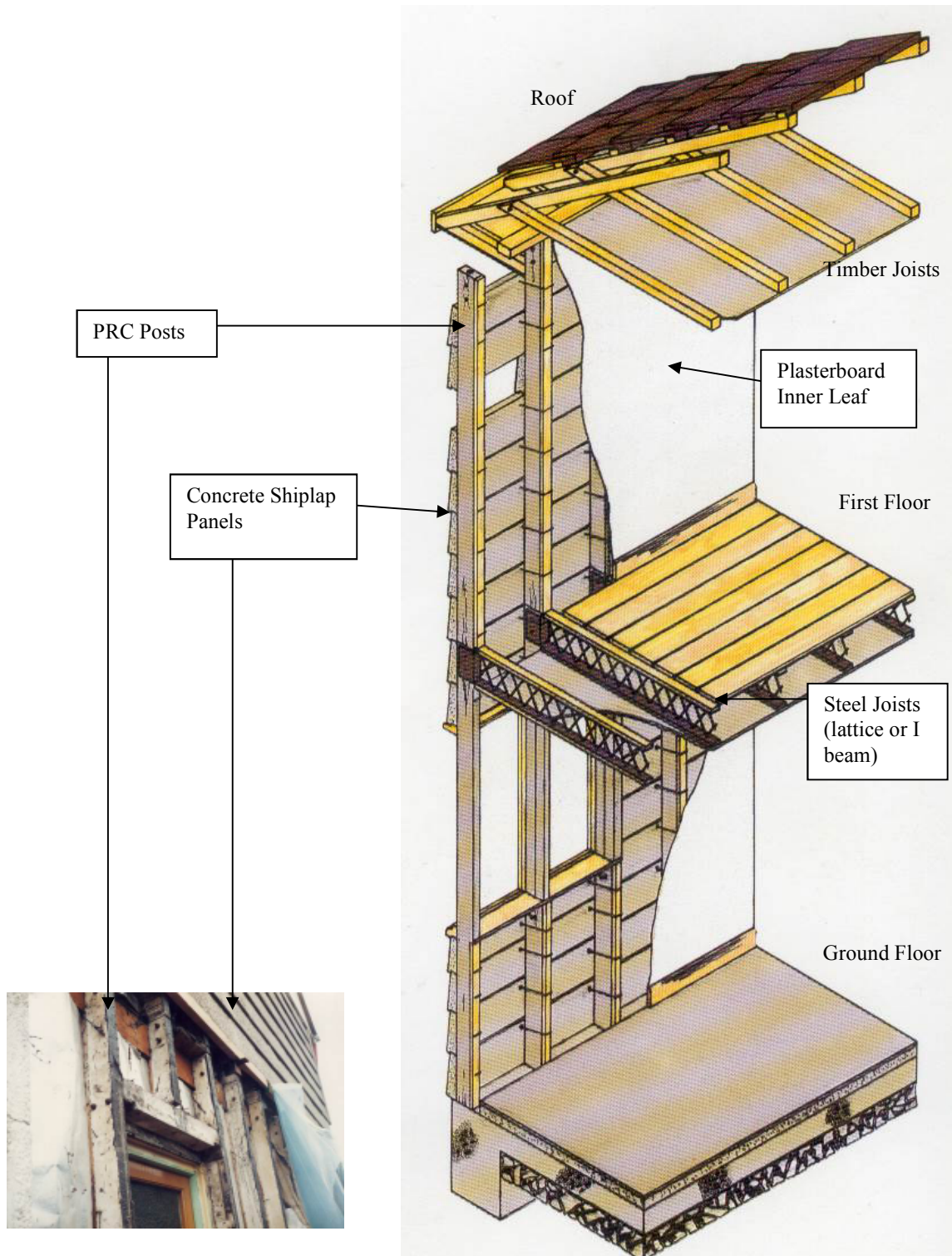


Forms of Construction

| No | Construction |
|-----|----------------------------------|
| C1 | Airey – Original Construction |
| C2 | Airey – Existing Construction |
| C3 | BL8 |
| C4 | Cornish – Original Construction |
| C5 | Cornish – Existing Construction |
| C6 | Dorlonco |
| C7 | Reema Conclad |
| C8 | Reema Hollow Panel - Walls |
| C9 | Reema Hollow Panel – Floor Beams |
| C10 | Stent |
| C11 | Swedish |
| C12 | Unity |
| C13 | Woolaway |

AIREY

FORM OF ORIGINAL CONSTRUCTION



TYPICAL ELEVATION
Panels removed showing columns

TYPICAL ISOMETRIC VIEW OF AIREY CONSTRUCTION

AIREY

EXTERNAL WALL REPAIR SCHEME

Works carried out by Stroud District Council in 1990's:

1. External walls - brick, insulated cavity, block.
2. PRC party wall retained.
3. PRC spine wall retained

PRC Posts retained, except at windows, doors and corners.

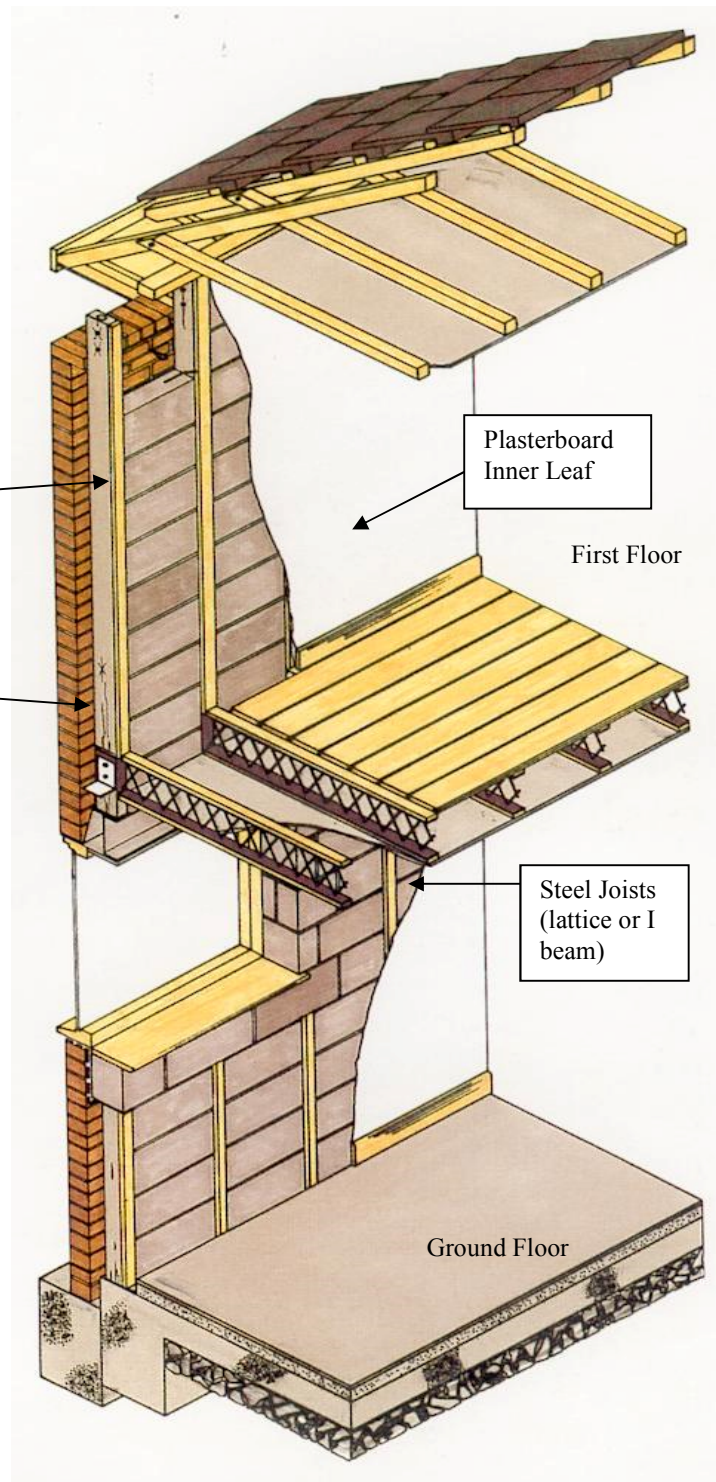
Insulated cavity walls (insulation not shown)



TYPICAL PARTY WALL
Finishes removed showing columns



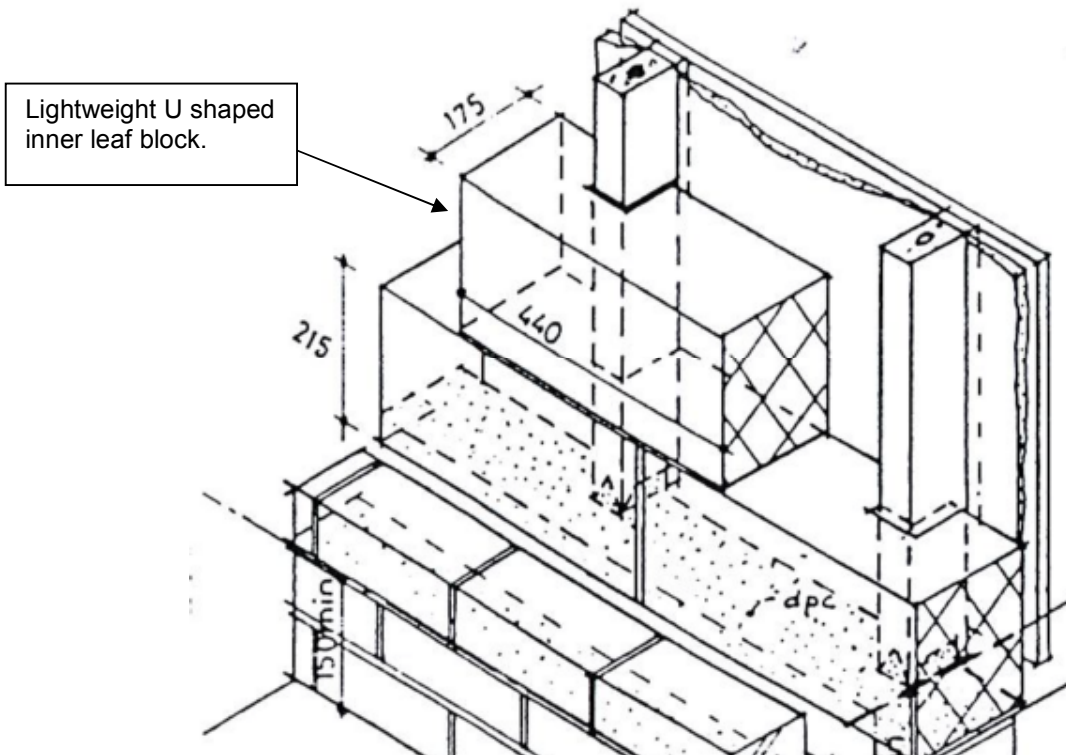
TYPICAL SPINE WALL
Finishes removed showing columns
& steel joists



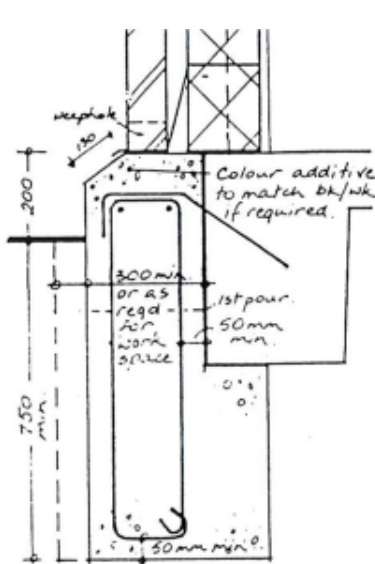
Typical Isometric View Of External Wall Scheme

AIREY EXTERNAL WALL REPAIR SCHEME

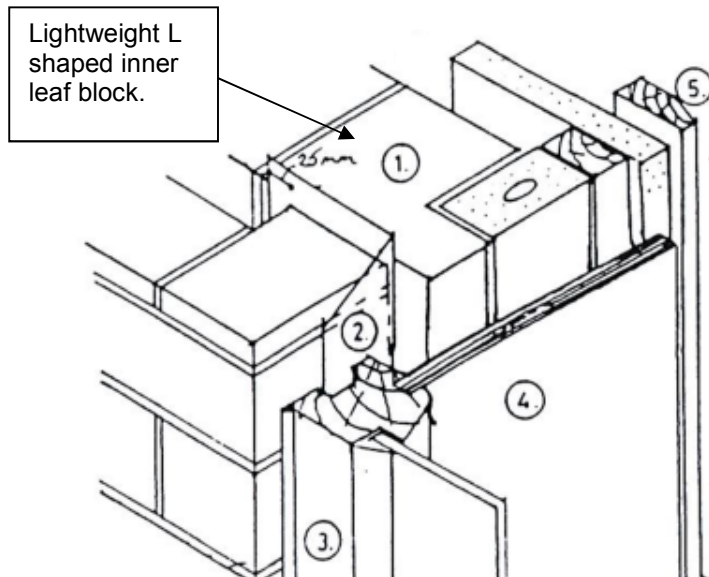
The Leeds Scheme



Typical External Wall Construction



Typical Foundation

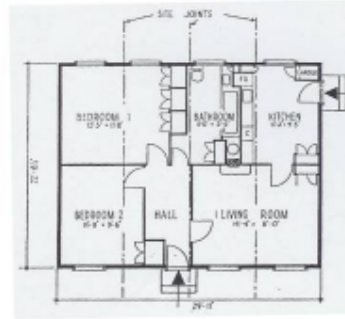


Typical Detail at Window Opening

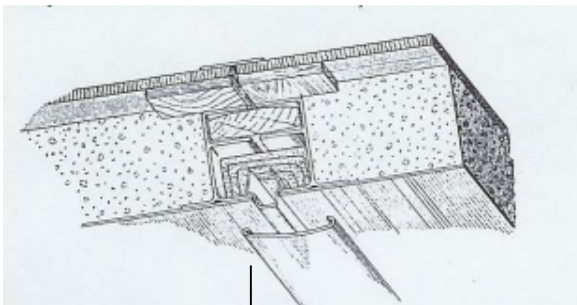
BL8 FORM OF CONSTRUCTION



Roof construction



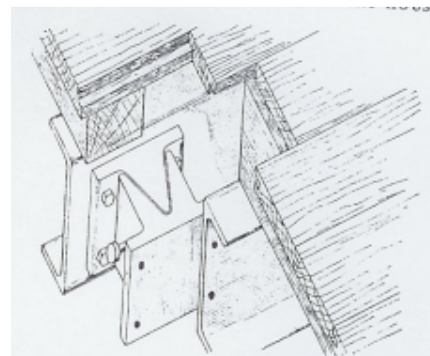
Typical Floor Plan



Typical Front Elevation

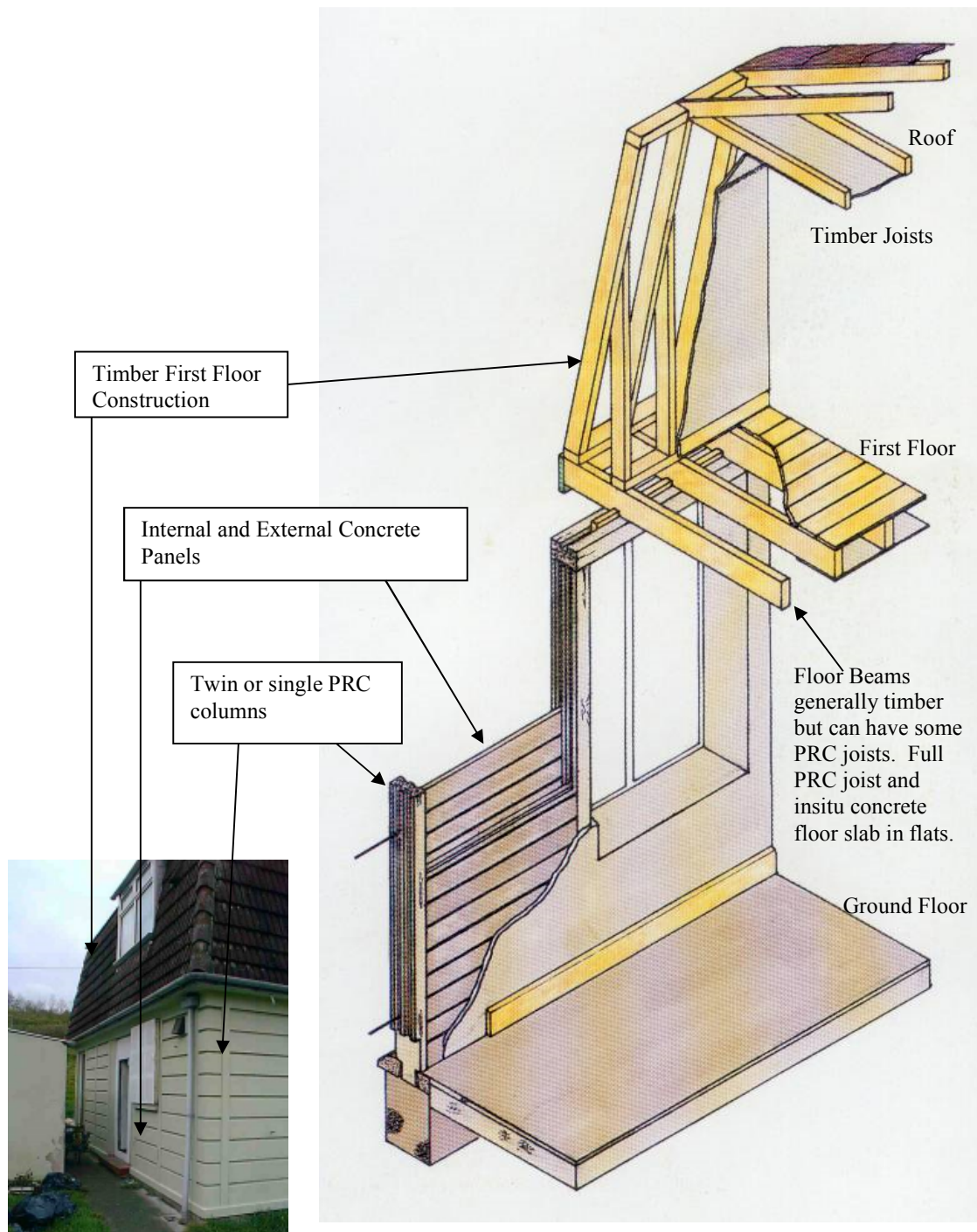


Typical Rear Elevation



TYPICAL PREFAB BL8 CONSTRUCTION

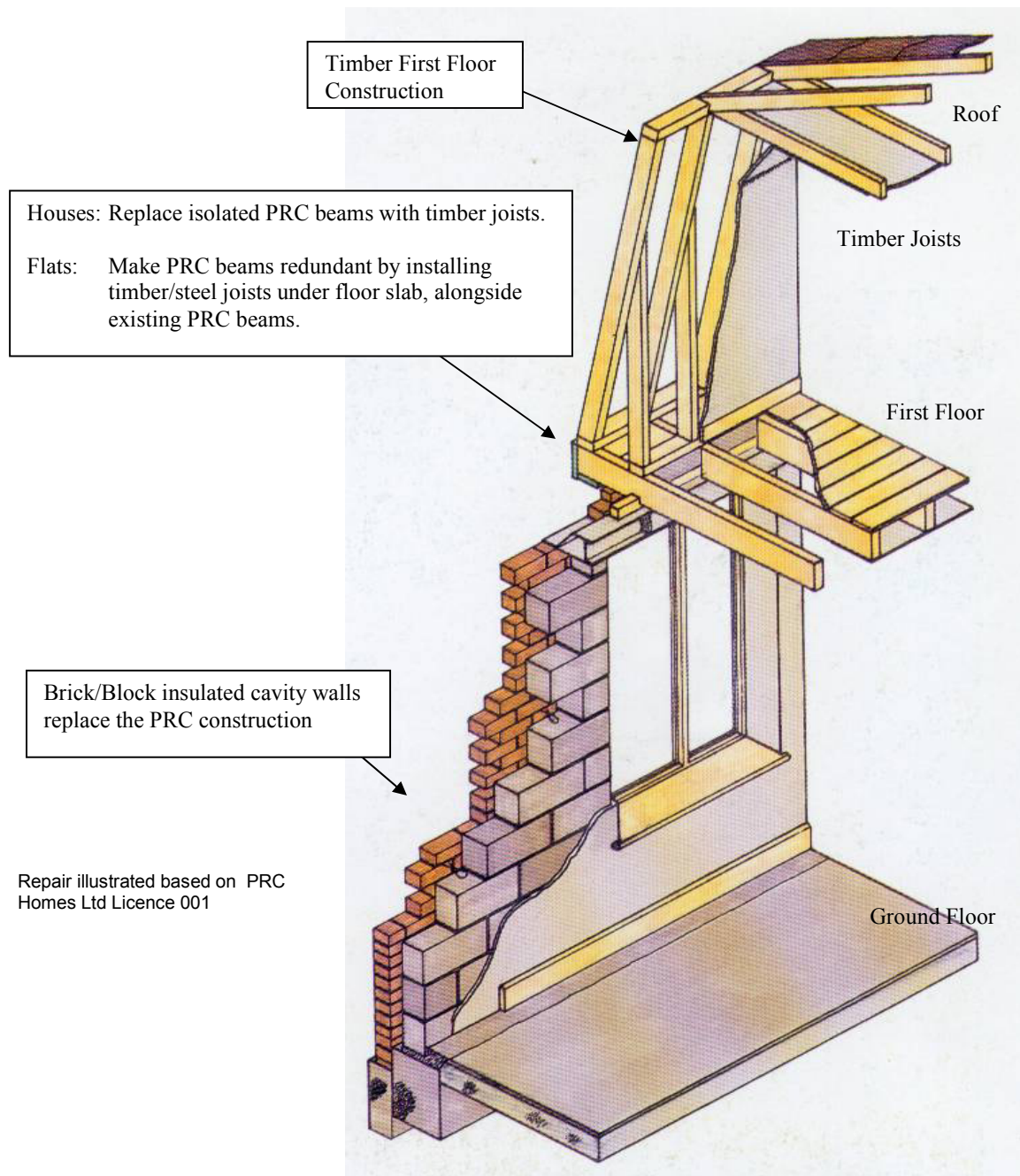
CORNISH TYPE I FORM OF ORIGINAL CONSTRUCTION



TYPICAL ELEVATION

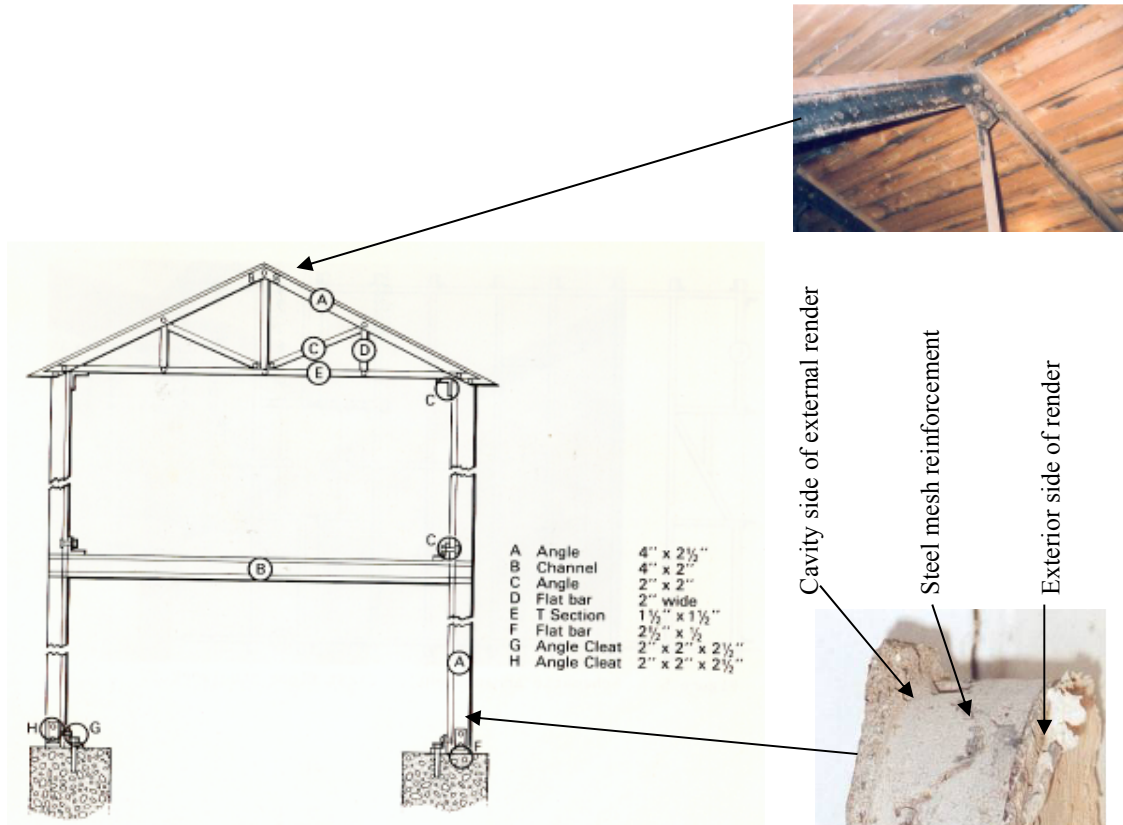
TYPICAL ISOMETRIC VIEW OF CORNISH CONSTRUCTION

CORNISH TYPE I WALL REPLACEMENT REPAIR SCHEME



TYPICAL ISOMETRIC VIEW OF REFURBISHED CONSTRUCTION

DORLONCO FORM OF CONSTRUCTION



Cavity side of external render

Steel mesh reinforcement

Exterior side of render



TYPICAL CROSS SECTION



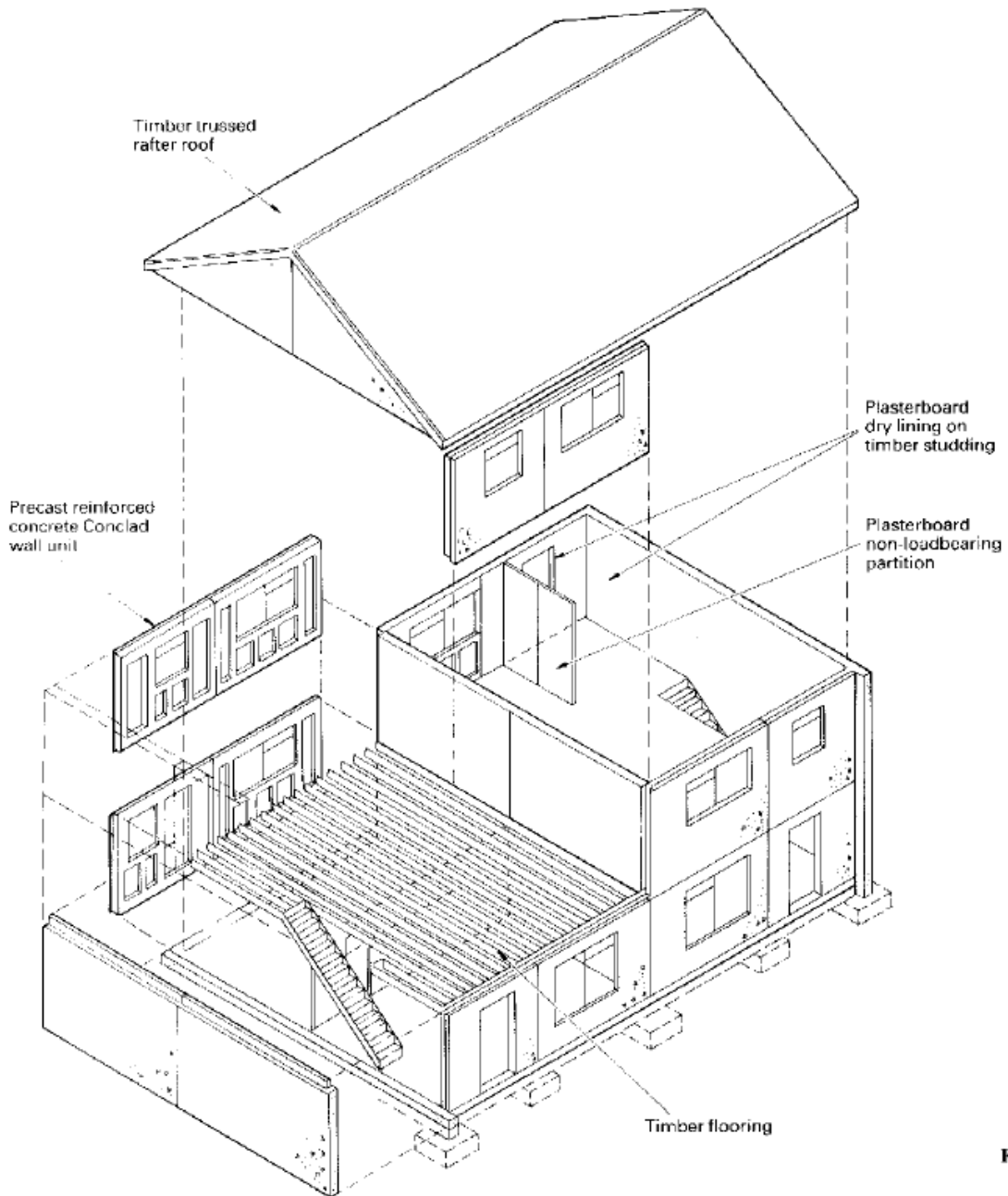
TYPICAL ELEVATION



SECTION THROUGH RENDER

Note: Rendered blockwork outer leaf as shown above left. Usual render on mesh shown above right.

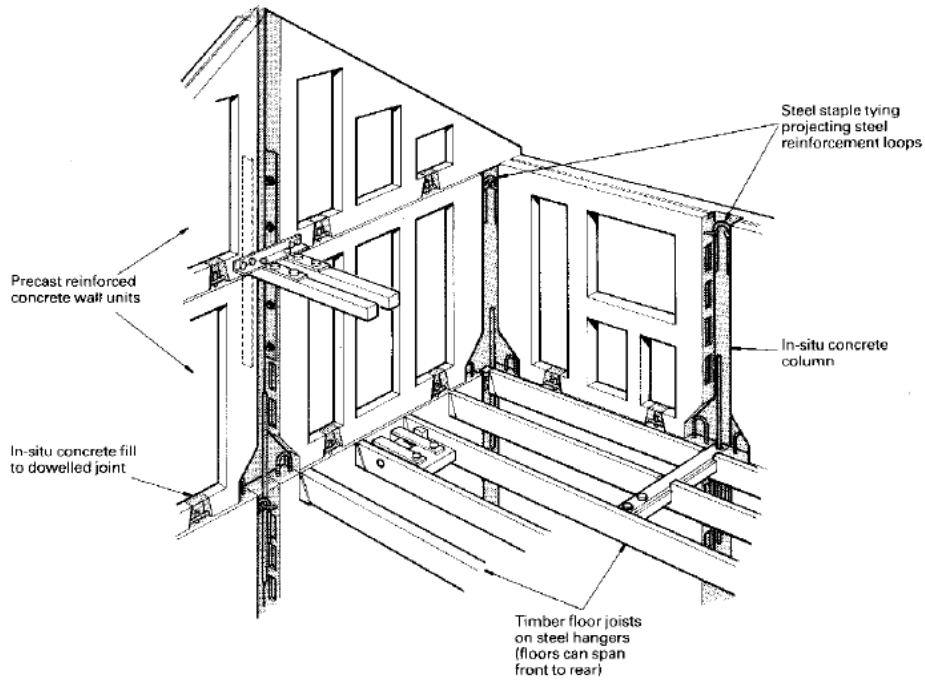
REEMA CONCLAD FORM OF CONSTRUCTION



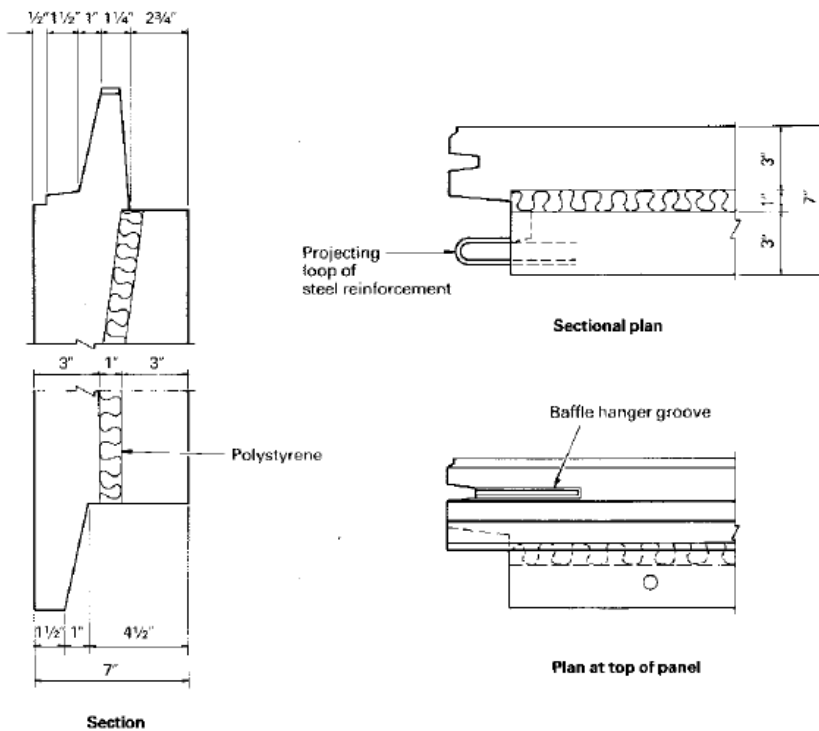
Figur

ISOMETRIC VIEW

REEMA CONCLAD FORM OF CONSTRUCTION

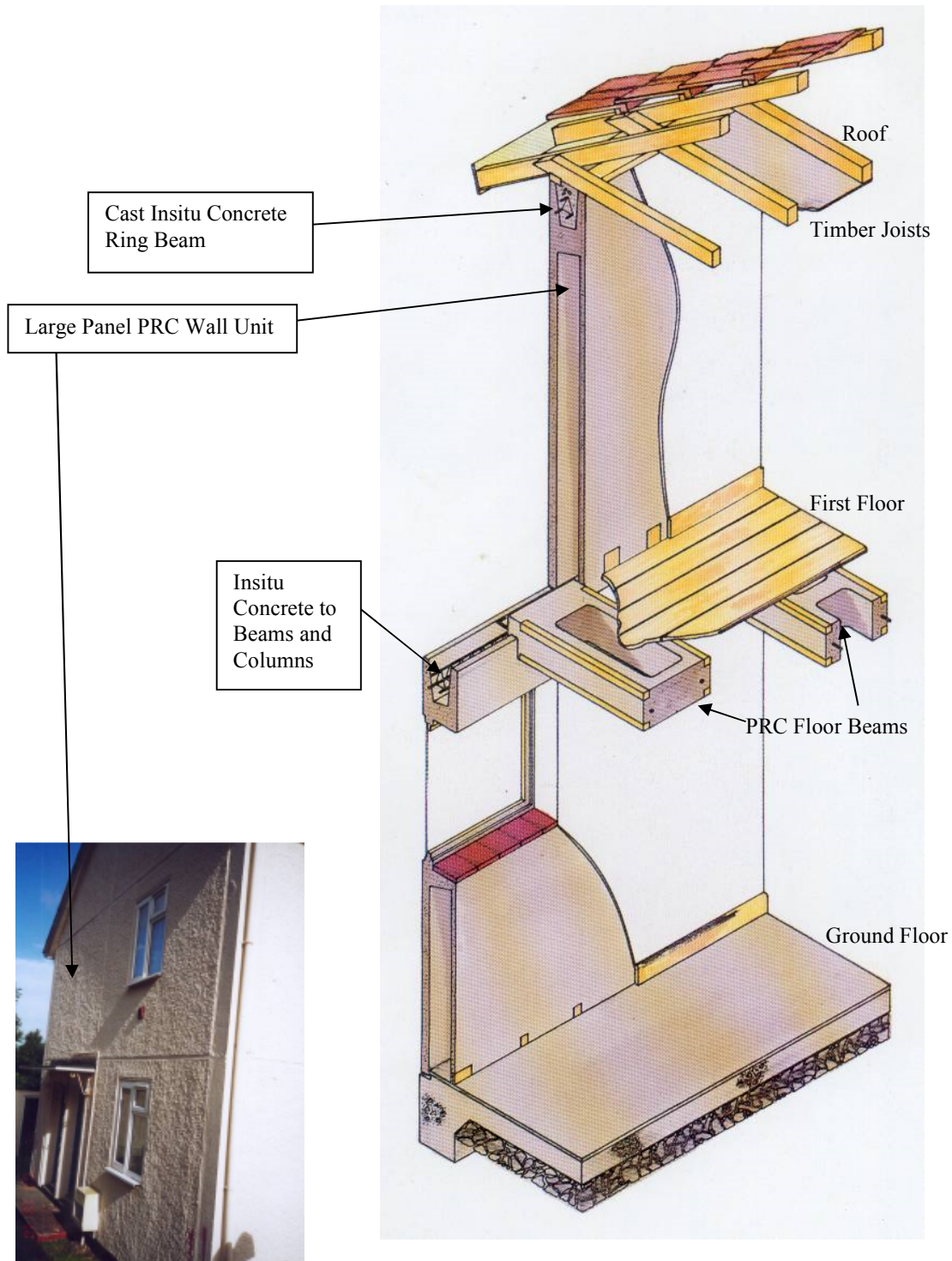


ISOMETRIC VIEW SHOWING PANEL CONNECTIONS, IN-SITU ELEMENTS, FLOOR JOISTS AND RESTRAINT STRAPS



SECTIONS AND PLANS THROUGH PANELS

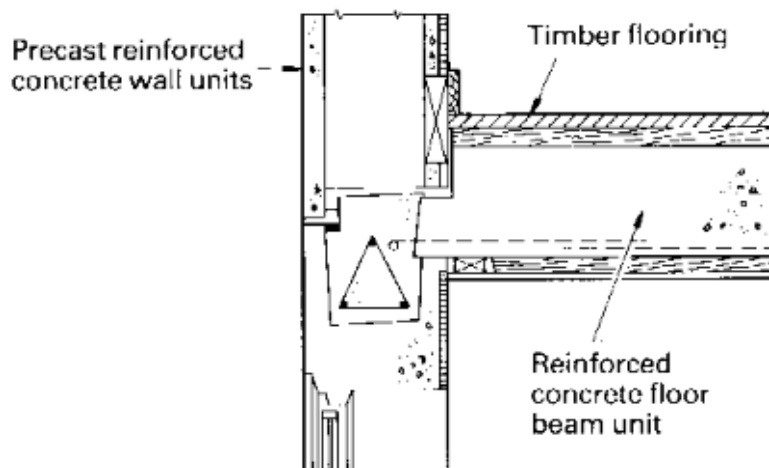
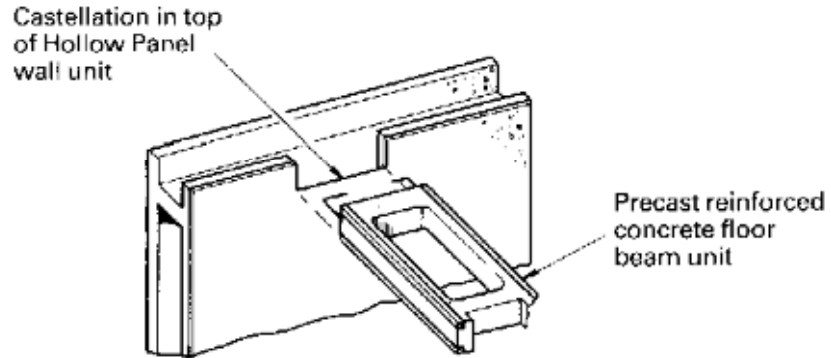
REEMA HOLLOW PANEL FORM OF CONSTRUCTION



TYPICAL ELEVATION

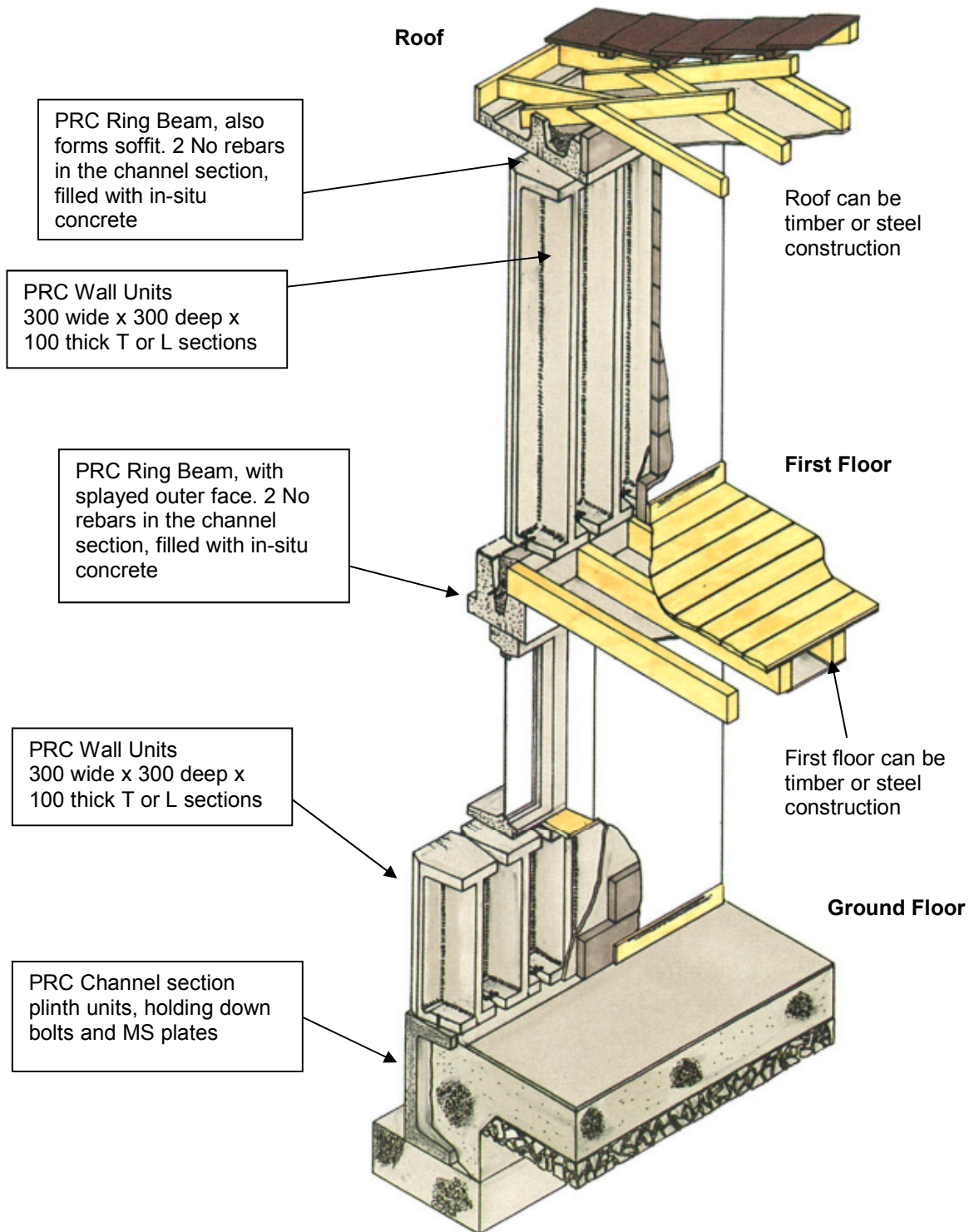
TYPICAL ISOMETRIC VIEW OF REEMA HOLLOW PANEL
CONSTRUCTION

REEMA HOLLOW PANEL FORM OF CONSTRUCTION FLOOR BEAMS



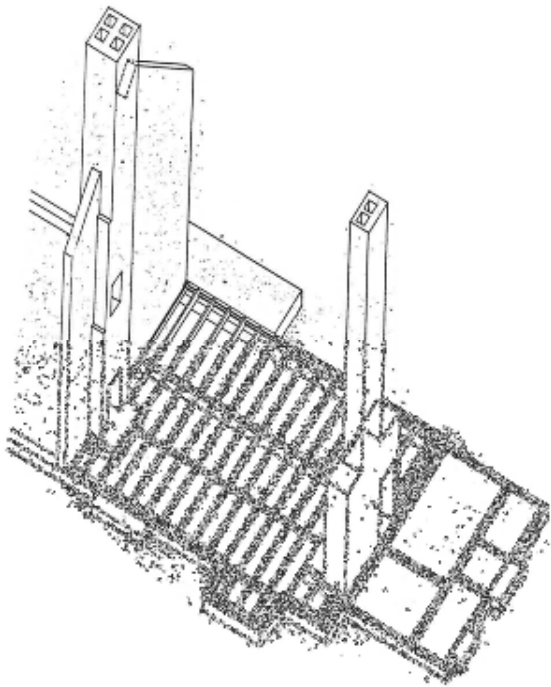
Note: Photograph not taken within Stroud DC area

STENT FORM OF CONSTRUCTION

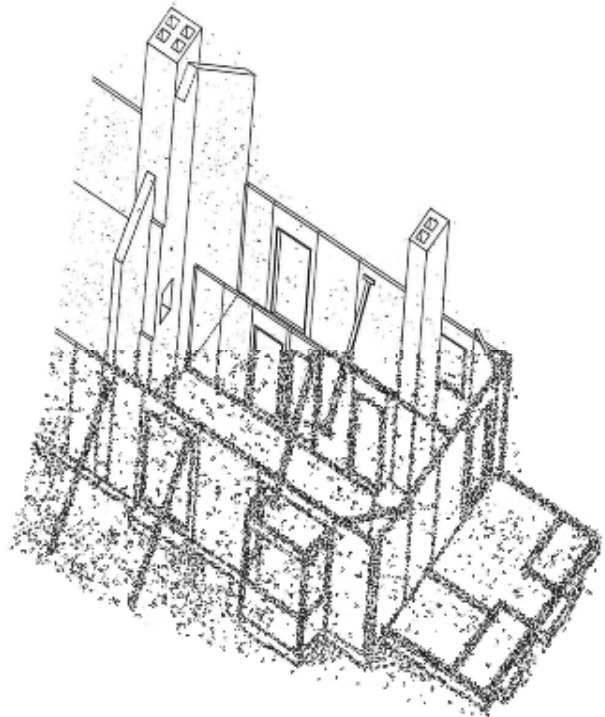


TYPICAL ISOMETRIC VIEW OF STENT CONSTRUCTION

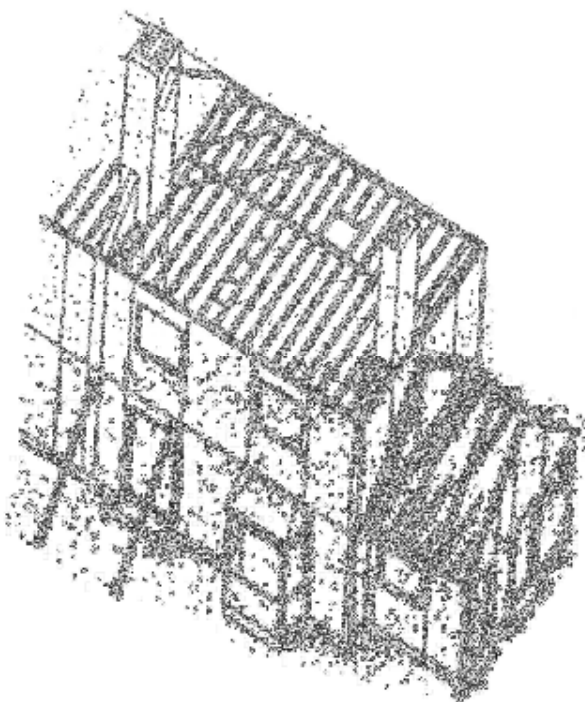
SWEDISH TIMBER FRAME FORM OF CONSTRUCTION



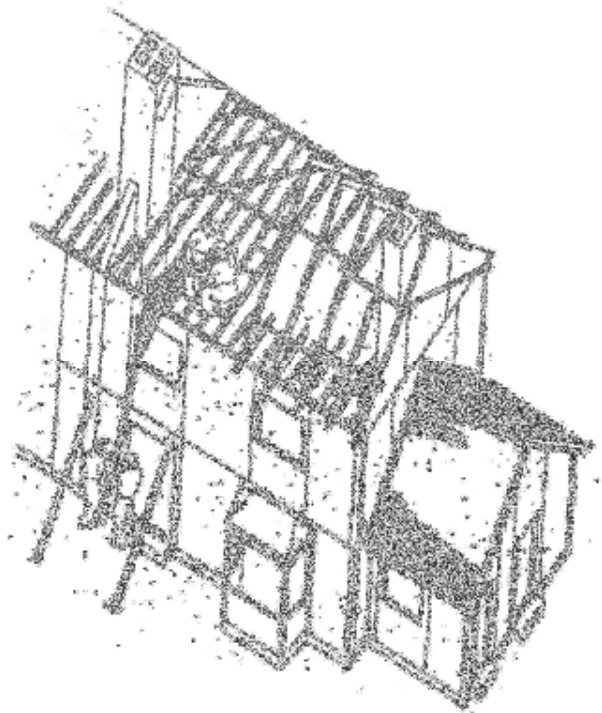
Stage 1 – Foundations & Timber Floor



Stage 2 – External & Internal Wall

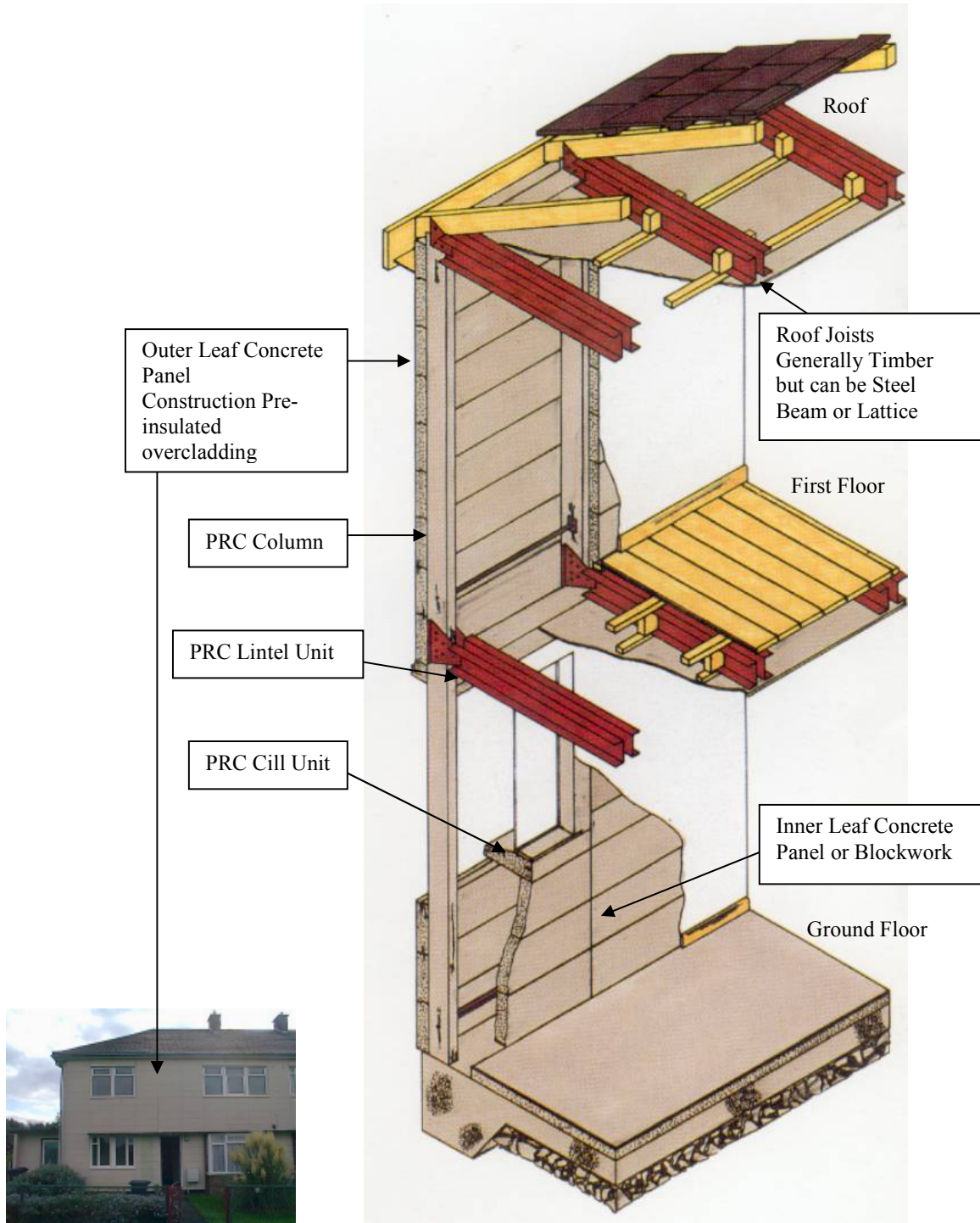


Stage 3 – Walls & Floor complete



Stage 4 – Roof

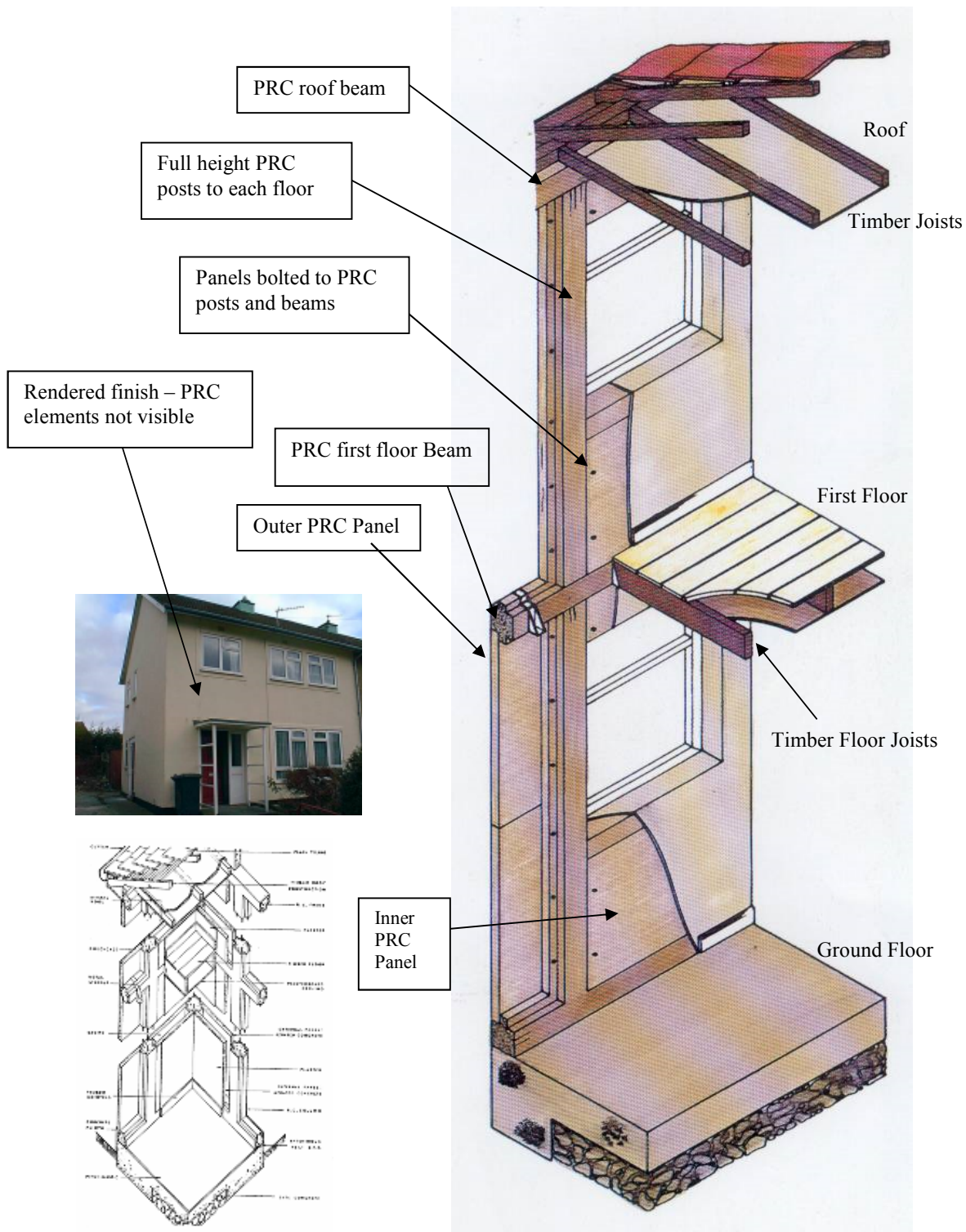
UNITY FORM OF CONSTRUCTION



TYPICAL ELEVATION

TYPICAL ISOMETRIC VIEW OF UNITY CONSTRUCTION

WOOLAWAY FORM OF CONSTRUCTION



ISOMETRIC SKETCH

TYPICAL ISOMETRIC VIEW OF WOOLAWAY CONSTRUCTION

Appendix D



Photographs

| No | References | Construction |
|----|----------------------------|----------------------|
| D1 | P Series Photograph P1-P11 | Dorlonco |
| D2 | Q Series Photograph Q1-Q17 | Reema Conclad |
| D3 | S Series Photograph S1-S72 | Reema Hollow Panel |
| D4 | T Series Photograph T1-T41 | Swedish Timber Frame |

Note: Full sized copies of the Photographs in this Appendix are provided on the accompanying disk. For the Reema Hollow Panel properties there were too many photographs to include in Appendix D3, so on the accompanying disk we have provided additional photographs in folders as follows

| Folder Name | Sub-Folders | Sub-Folders |
|--------------------------------|---------------------------|-------------------|
| A - Photographs in Appendix D3 | | |
| B - Typical Elevations | One for each Town/Village | |
| C - Defects | One for each Town/Village | One for each road |
| D - EWI Issues | One for each Town/Village | One for each road |

The additional photographs (in folders B, C & D) are not specifically cross referenced in the body of the Report. The photographs in folder A are cross referenced.

Appendix D1 – Dorlonco

Photographs



P1 – Typical Front Elevation



P2 – Typical Side Elevation



P3 – Typical Rear Elevation



P4 – 14 Hyett Road, Cashes Green, Rear single storey extension



P5 – 14 Hyett Road, Cashes Green, Rear single storey extension



P6 – 14 Mosley Crescent, Cashes Green, ground level at rear too high

Appendix D1 – Dorlonco

Photographs



P7 – 14 Mosley Cresnet, Cashes Green, mould in front ground floor room used as bedroom



P8 – 14 Mosley Cresnet, Cashes Green, mould on window frame in rear bedroom



P9 – Typical overhead power supply cables between buildings (this one at 14 Mosley Cresnet, Cashes Green)



P10 – Overhead power supply fixing at wall, at 10 Kingley Road, Cashes Green



P11 – Overhead power supply fixing at wall, at 14 Hyett Road, Cashes Green

Note:

A disk containing full sized copies of these photographs is included with the paper copy of the Report.

Appendix D1 – Reema Conclad



Photographs



Q1 – Typical Front Elevation House



Q2 – Typical Side Elevation House



Q3 – Typical Rear Elevation House



Q4 – Typical Front Elevation Flats



Q5 – Typical Side Elevation Flats



Q6 – Typical Rear Elevation Flats

Appendix D1 – Reema Conclad

Photographs



Q7 – Typical front porch with door



Q8 – Typical front porch without door



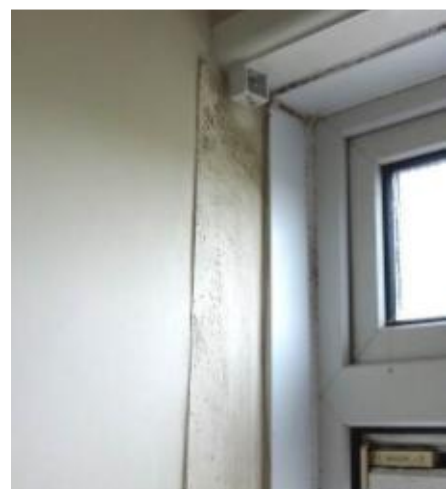
Q9 – 6 Badgers Way, Forest Green, broken panel section to right of front door (within porch)



Q10 – 3 Nortonwood, Forest Green, mould in single storey entrance porch



Q11 – 19 Nortonwood, Forest Green, mould in bathroom above window & over bath



Q12 – 19 Nortonwood, Forest Green, mould in bathroom in window reveal

Appendix D1 – Reema Conclad

Photographs



Q13 – Example of porch door away from rainwater downpipe & corner



Q14 – Example of porch door close to rainwater downpipe & corner (problem with EWI)



Q15 – Example of roof verge close to external wall (need to extend roof for EWI)



Q16 – Example of Radon Pump (to 1 No in Badgers Way, and 3 No in Woodpecker Way)



Q17 – Example of Radon ducting from pump

Note:

A disk containing full sized copies of these photographs is included with the paper copy of the Report.

Appendix D3 – Reema Hollow Panel

Photographs



S1 – Typical Front Elevation, semi-detached house A



S2 – Typical Side Elevation, semi-detached house A



S3 – Typical Rear Elevation, semi-detached house A



S4 – Typical Front Elevation, semi-detached house B



S5 – Typical Side Elevation, semi-detached house B



S6 – Typical Rear Elevation, semi-detached house B

Appendix D3 – Reema Hollow Panel

Photographs



S7 – Typical Front Elevation, bungalow



S8 – Typical Side Elevation, bungalow



S9 – Typical Rear Elevation, bungalow



S10 – Typical Front Elevation, flats



S11 – Typical Side Elevation, flats



S12 – Typical Rear Elevation, flats

Appendix D3 – Reema Hollow Panel

Photographs



S13 – Flats in Lawnside, Forest Green



S14 – Flat & Shop in Lawnside, Forest Green



S15 – Site at Wharfedale Way, Bridgend, two Reema houses demolished (Nos 8 & 10)



S16 – Brimley, Leonard Stanley, three houses (Nos 53, 54 & 55) not Reema construction



S17 – 12A Lawnside, Forest Green, Hall mould in square shapes on front & alleyway walls



S18 – 12A Lawnside, Forest Green, Bedroom mould to right of window high level

Appendix D3 – Reema Hollow Panel

Photographs



S19 – 12A Lawnside, Forest Green, Bedroom
mould to left of window high level



S20 – 12A Lawnside, Forest Green, Bedroom
mould to left of window mid height



S21 – 12A Lawnside, Forest Green, Bedroom
mould to right of window mid height



S22 – 12A Lawnside, Forest Green, Bedroom 2
mould on window reveal & head



S23 – 18 Lawnside, Forest Green, crack/spall on
gable elevation just above eaves level



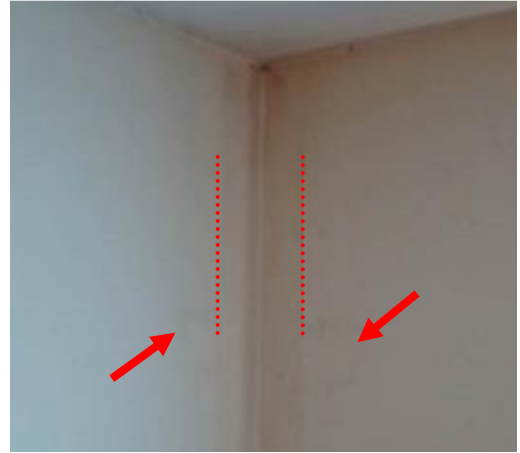
S24 – 45 Lawnside, Forest Green, bedroom gable
wall, two small square areas of staining
(arrowed). Photo S26 is to the right side.

Appendix D3 – Reema Hollow Panel

Photographs



S25 – 45 Lawnside, Forest Green, bedroom gable wall, left hand staining detail



S26 – 45 Lawnside, Forest Green, bedroom gable rear corner, two vertical cracks (dotted), floor to ceiling, and two small stains (arrowed)



S27 – 56 Lawnside, Forest Green, front spalling to right of front door. Corroded steel & crack



S28 – 18 Lawnside, Forest Green, paving to left of front door too high



S29 – 39 Mankley Road, Leonard Stanley. Mould in window reveal at sill



S30 – 39 Mankley Road, Leonard Stanley. Mould in window reveal at head (one of many windows affected)

Appendix D3 – Reema Hollow Panel

Photographs



S31 – 51/52 Mankley Road, Leonard Stanley. Crack on door step extending up onto reveal



S32 – 51/52 Mankley Road, Leonard Stanley. Mould on external wall at bottom of stairs to first floor flat.



S33 – 39 Mankley Road, Leonard Stanley. Rear conservatory.



S34 – 39 Mankley Road, Leonard Stanley. Gas meter box & pipework



S35 – 51/52 Mankley Road, Leonard Stanley. Gas pipework on external wall



S36 – 38 Glebe Road, Minchinhampton. Outbuilding of Reema panel construction jointed to bungalow

Note: Photographs S28, and S33 to S37 illustrate issues to be dealt with if EWI is installed; ground level too high, conservatories and covered ways, gas meters and pipework.

Appendix D3 – Reema Hollow Panel

Photographs



S37 – 38 Glebe Road, Minchinhampton. Overhead electric cables to gable



S38 – 6 Upper Park Road, Nailsworth. Side extension (in blockwork) & porch



S39 – 6 Upper Park Road, Nailsworth. Side extension from rear



S40 – 6 Upper Park Road, Nailsworth. Cracking at junction of side extension & main house



S41 – 6 Upper Park Road, Nailsworth. Cracking at dpc to side of door



S42 – 6 Upper Park Road, Nailsworth. Cracking above door

Appendix D3 – Reema Hollow Panel

Photographs



S43 – 6 Upper Park Road, Nailsworth. Side extension, cracking at dpc level



S44 – 6 Upper Park Road, Nailsworth. Side extension, cracking at dpc level detail



S45 – 6 Upper Park Road, Nailsworth. Rear corner main house. Cast in-situ concrete (arrowed) & blockwork suggests underpinning



S46 – 3 Upper Park Road, Nailsworth. First floor construction (S47 circled)



S47 – 3 Upper Park Road, Nailsworth. First floor, suspended cast in-situ concrete slab under floorboards and battens.



S48 – 6 Upper Park Road, Nailsworth. First floor construction, PRC ladder beams (see S49 for general view, taken in another house not in SDC stock)

Appendix D3 – Reema Hollow Panel

Photographs



S49 – View of typical PRC "ladder" beams from below (not SDC stock photo)



S50 – Typical PRC beam defect (not taken in SDC stock)



S51 – 3 Upper Park Road, Nailsworth. General View in Loft towards the party wall (S52 circled)



S52 – 3 Upper Park Road, Nailsworth. Roof purlin at party wall. Hole through to other side of wall, risk of fire spread.



S53 – 6 Upper Park Road, Nailsworth. General view in loft towards rear & party wall



S54 – 6 Upper Park Road, Nailsworth. General view in loft towards party wall showing front chimney.

Appendix D3 – Reema Hollow Panel

Photographs



S55 – 5 Upper Park Road, Nailsworth. Flat roof side extension (compare with S39, lean-to roof No 6)



S56 – 3 Upper Park Road, Nailsworth. Overhead electric cables



S57 – 6 Upper Park Road, Nailsworth. Overhead electric cables



S58 – 22 Willow Road, Stonehouse. Outbuilding joined to the bungalow (note: Outbuilding is of Reema panel construction)



S59 – 26 Willow Road, Stonehouse. Outbuilding joined to the bungalow (note: Outbuilding is blockwork construction)



S62

S60 – 31 Victory Road, Whiteshill. Side extension view from front

Appendix D3 – Reema Hollow Panel

Photographs



S61 – 31 Victory Road, Whiteshill. Side extension view from rear



S62 – 31 Victory Road, Whiteshill. Side extension cracking above window (S63 circled)



S63 – 31 Victory Road, Whiteshill. Side extension cracking above window detail



S64 – 31 Victory Road, Whiteshill. Side extension cracking above window viewed internally



S65 – 31 Victory Road, Whiteshill. Side extension cracking above window viewed internally, detail



S66 – 31 Victory Road, Whiteshill. Side extension general view of concrete ceiling (note: S67 is just off picture to right)

Appendix D3 – Reema Hollow Panel

Photographs



S67 – 31 Victory Road, Whiteshill. Side extension spalling concrete to ceiling



S68 – 31 Victory Road, Whiteshill. Side extension poor finishes to ceiling



S69 – 31 Victory Road, Whiteshill. Side extension mould & damp ingress staining in front corner



S70 – 26 Victory Road, Whiteshill. Power lines close to the building



S71 – High Field, Woodchester, general view



S71 – High Field, crack under front window

Note:

A disk containing full sized copies of these photographs is included with the paper copy of the Report.

Appendix D4 – Swedish Timber Frame

Photographs



T1 – Typical Front Elevation Chalet Bungalow



T2 – Typical Side Elevation Chalet Bungalow



T3 – Typical Rear Elevation Chalet Bungalow



T4 – Typical Front Elevation House



T5 – Typical Side Elevation House



T6 – Typical Rear Elevation House

Note: The elevations shown above are not from the same property. T1 is No 3 Mount Pleasant, Wotton, T2 & T3 are No 7 Mount Pleasant. T4 & T6 are No 6 The Knoll, Uley, and T5 is No 8 The Knoll

Appendix D4 – Swedish Timber Frame

Photographs



T7 – 32 Barrs Lane, North Nibley. Front gutter disconnected at downpipe bracket (arrowed)



T8 – 32 Barrs Lane, North Nibley. Side, extensive ivy growth



T9 – 32 Barrs Lane, North Nibley. Outbuilding side, ground level too high (circled). Rot to outer boards at dpc level (T10 circled)



T10 – 32 Barrs Lane, North Nibley. Outbuilding side, rotten timber outer boards & keel plate



T11 – 32 Barrs Lane, North Nibley. Incoming mains electrics on side elevation



T12 – 32 Barrs Lane, North Nibley. Rear, poor timber to dormer side and architrave

Appendix D4 – Swedish Timber Frame

Photographs



T13 – 32 Barrs Lane, North Nibley. Rear party wall chimney capping broken away (arrowed)



T14 – 3 Bushey Beeches, The Camp. Distortion of roof tiles on line below chimney (arrowed)



T15 – 3 Bushey Beeches, The Camp. Front first floor window, rot to architrave



T16 – 3 Bushey Beeches, The Camp. First floor window, rot to window cill



T17 – 3 Bushey Beeches, The Camp. First floor outer boards, board “sprung” due to failed fixing



T18 – 3 Bushey Beeches, The Camp. Side elevation, algae growth on outer boards

Appendix D4 – Swedish Timber Frame

Photographs



T19 – 3 Bushey Beeches, The Camp. Flashing at junction of Outbuilding & main house. Original flashing covered by “flashband” type repair, starting to disintegrate (arrowed)



T20 – 3 Bushey Beeches, The Camp. Incoming mains electrics on side elevation



T21 – 6 The Knoll, Uley. Front, replacement canopy leaves untreated timber outer boards



T22 – 6 The Knoll, Uley. Outbuilding front roof, slipped & missing tiles



T23 – 6 The Knoll, Uley. Outbuilding roof, poor repair to verge fascia at eaves



T24 – 6 The Knoll, Uley. Side, rot & woodworm to outer boards at dpc level

Photographs



T25 – 6 The Knoll, Uley. Rear, rot to bay window corner architrave



T26 – 6 The Knoll, Uley. Rear, blocked off vent to underfloor void



T27 – 6 The Knoll, Uley. Rear, example of rot & split outer boards above patio doors



T28 – 6 The Knoll, Uley. Rear, example of rot & split outer boards near party wall



T29 – 8 The Knoll, Uley. Outbuilding front, slipped & missing roof tiles



T30 – 8 The Knoll, Uley. Rear, rotten timber architrave above patio doors

Photographs



T31 – 3 Mount Pleasant, Wotton-Under-Edge. Front, extensive ivy growth



T32 – 3 Mount Pleasant, Wotton-Under-Edge. Front corner, rot & woodworm to outer boards & keel plate.



T33 – 3 Mount Pleasant, Wotton-Under-Edge. Side, rot to window architrave



T34 – 3 Mount Pleasant, Wotton-Under-Edge. Incoming mains electrics on side elevation



T35 – 3 Mount Pleasant, Wotton-Under-Edge. Gable chimney taken down



T36 – 3 Mount Pleasant, Wotton-Under-Edge. Rear dormer window poor paint finishes to framing & architrave

Appendix D4 – Swedish Timber Frame

Photographs



T37 – 7 Mount Pleasant, Wotton-Under-Edge. Front porch, cracking at verge (arrowed)



T38 – 7 Mount Pleasant, Wotton-Under-Edge. Rear slipped tiles (arrowed) & gap between gutter & roof (circled)



T39 – 7 Mount Pleasant, Wotton-Under-Edge. Rear, rotten outer boards at dpc level



T40 – 7 Mount Pleasant, Wotton-Under-Edge. Rear, poor timber to dormer side, and architrave rotten near roof tiles (arrowed)



T41 – 7 Mount Pleasant, Wotton-Under-Edge. Rear, gutter vegetation & dead/dormant ivy growth

Appendix D4 – Swedish Timber Frame

Photographs

Note:

A disk containing full sized copies of these photographs is included with the paper copy of the Report.

HOUSING COMMITTEE

27 MARCH 2018

10

| | |
|----------------------------------|--|
| Report Title | The Changing Future of Tenant Involvement |
| Purpose of Report | To consider the way we consult, support and seek positive outcomes from tenant engagement. |
| Decision(s) | <p>The Committee RESOLVES to:</p> <ol style="list-style-type: none"> 1. Continue to support existing tenant groups with the commitment that funding will have defined outcomes evidencing the benefit to the community and the council. 2. Implement a programme of digital access consultation through social media to achieve a varying consultative audience. 3. The re-development of Tenant Inspectors to scrutinise the service as part of an agreed work programme with defined outcomes and recommendations to be reported to Housing Committee. 4. Development of Tenant Reps to Neighbourhood Ambassadors. 5. Utilise £10K from the environment fund to be dedicated to training Tenant Inspectors and Neighbourhood Ambassadors to ensure levels of professionalism are enhanced. 6. Review the tenant grants process to ensure the values are fit for purpose and funding is proportionate (see 6.2). |
| Consultation and Feedback | Chair and Vice Chair of Housing Committee Representatives of established tenant groups (19 Feb 2018) Tenant Reps: Ian Allen and Sadie Tazewell |

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|--|--|
| <p>Financial Implications and Risk Assessment</p> | <p>There are no direct financial implications as all funding is within existing budgets.</p> <p>Lucy Clothier – Principal Accountant Tel: 01453 754313 Email: lucy.clothier@stroud.gov.uk</p> <p>Report author to comment on the Risk Assessment Compliance with the regulators requirements must be met and these are fairly broad in their direction. Consultation may take many forms including moving towards more online engagement where appropriate and the raising of professional standards and capabilities of those directly involved in improvements to the housing function.</p> |
| <p>Legal Implications</p> | <p>The key points (on which the legal implications are drafted) of this report appear to be:</p> <ul style="list-style-type: none"> • Improve communication with our tenants, through in part the development and training of tenant representatives; and, • Improve consultation through the use of Social Media. <p>Heads of Service may exercise virement on budgets under their control for amounts up to £20,000. However, the committee will recognise that this reallocation of funding will mean there is £10,000 less in the Environment Fund.</p> <p>If training involves financial assistance for any formal qualifications unless the person is subject to the Learning & Development Policy or another formal agreement, then SDC may not be able to recoup any financial assistance for said qualification (as part of any training programme), should the Neighbourhood Ambassadors leave their role significantly sooner than expected.</p> <p>Where funding is provided by way of a grant it may be appropriate to be secured by a grant agreement, which ensures it is used for the purposes intended by SDC and allows appropriate provisions for clawback/termination if it is not.</p> <p>Craig Hallett, Solicitor & Deputy Monitoring Officer Tel: 01453 754364 Email: craig.hallett@stroud.gov.uk (Ref: r5.3c12.3d13.3)</p> |

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|---|---|
| Report Author | Kevin Topping, Head of Housing Services Tel: 01453 754196 Email: Kevin.topping@stroud.gov.uk |
| Performance Management Follow Up | Updates to be added to the 2018/19 work programme as Housing Committee agrees |
| Background Papers/ Appendices | |

1. Background

- 1.1. Tenant involvement at Stroud District Council has been key to some of the innovative transformations (Tenant scrutiny inspectors, repairs inspectors, development of service standards) we have seen in the delivery of our housing service. A range of forums have operated over a number of years with varying degrees of success.
- 1.2. Tenant involvement has experienced a slow evolution over the last few years as the housing sector has come to recognise that traditional forms of involvement have a tendency to be inaccessible to the majority of tenants, unrepresentative of all but a limited few and expensive to develop and maintain. This realisation and greater flexibility by the regulator to develop local approaches to involvement, have given landlords the ability to embrace the more commercial principle - that tenants are individual consumers of services and interaction and influence should be focused at an individual rather than a collective level.

2.0. Introduction

- 2.1. Henry Ford is attributed with the statement “If I had asked people what they wanted, they would have said faster horses”
- 2.2. It’s an interesting point and particularly pertinent when we consider how we define and refine tenant involvement. Mr Ford’s customers might have asked for faster horses, but they were delighted to be offered something else in the form of a Ford Model T.
- 2.3. To fully understand what tenants want, and how that will impact and shape operational improvements, we need to take a far more bottom-up, holistic and all-encompassing approach.
- 2.4. However, like everything in life, it’s all about balance; and relying too heavily on what non proportionately representative tenant groups tell us – and shaping services around a relatively small number of them – has the potential to lead us down an unintended path.

- 2.5. Critics could legitimately argue that current tenant groups are artificial compared to the lived experiences of the majority of tenants in their day-to-day lives.
- 2.6. In a post-Grenfell world we must have the right kind of relationship – one that comes from a place of trust –The question is: how do we best achieve that?
- 2.7. Our approach must move towards seeking to engage with all of our tenants, and learn from the feedback we collect each year, as well as themes picked up by our complaints service and, of course, through social media.
- 2.8. Though we have a long way to go, we are increasingly trying to involve our tenants in helping us shape practical solutions through tests and pilots.
- 2.9. An example being our repairs inspector programmes seeking to coach new and existing tenants in how to challenge what we do and why we do it. Also the handyman service which additionally completes some basic repairs and maintenance around the home and showing tenants how they can take ownership for themselves– things like bleeding radiators and fixing cupboard hinges.
- 2.10. This stemmed from tenants telling us they were open to taking on more responsibility for simple DIY fixes, but lacked the tools and the confidence to be able to.
- 2.11. We want tenants to tell us how the proposed solution to a problem was working, rather than to simply tell us there was a problem.

3.0. Opportunities and potential

- 3.1. Perhaps our greatest opportunities could include development of tenant reps into neighbourhood ambassadors (Decision 4) without the use of a formal group This would afford the opportunity to use their smaller patches to pick up feedback, opinions and suggestions on a daily or weekly basis while out in their communities which could offer more to both residents and the Council. If agreed it, would be expected that ambassadors will have sound interpersonal skills and effective methods of communication to ensure that respective communities are kept informed and feedback is concise, relevant and timely. This will also hopefully develop more proportional representation with the opportunity to engage at a much more local level.
- 3.2. We would also be looking to encourage ambassadors who have never engaged before, the ability to opt in and out if there were specific issues they may have as a community interest.
- 3.3. Training and development needs to be approached professionally and as such there will be a role description and defined objectives as a requirement

to deliver the tenant inspectors role and candidates must demonstrate the skills required for logical analysis of strategies, policies and procedures and the application into service delivery.

- 3.4. Future tenants should also have the opportunity to engage regarding the type of service they would like when they are afforded the opportunity to become a tenant, this to a degree future proofs the direction that we may take.
- 3.5. Consultations also take place with tenants on kitchen open days as part of the cyclical programme where tenants are invited to an open day (at a local venue to where the works take place) so that they can choose their own door front, work tops, tiles, flooring and paint. The open days have been going for a number of years now and it enables the tenants so see the ranges available to them on a larger scale.

4.0. Regulator compliance

- 4.1. The flexibility of the current regulatory framework allows organisations to move away from traditional involvement practice which has the potential to offer greater levels of influence to a larger number and more diverse range of tenants, increasing the objectivity of tenant led influence.

5.0. Current make up

- 5.1. We have two tenant representatives involved directly with the service and communities and who have a role on Housing Committee. There is an opportunity to further develop this role into a conduit for feedback to Housing Committee of common themes and resolutions being expressed to them in the form of a report either written or verbal.
- 5.2. Seven established tenant groups spread across Cam, Dursley, Nailsworth and Stroud and five rural village voices and street reps covering Bisley, North Nibley, Frithwood, Slimbridge and Stroud.
- 5.3. Feedback has been positive towards the proposed changes including statements such as “things must change” “I’m pleased things are moving on and looking forwards” Really pleased that training is given priority”. “100% support for training for ambassadors” There were different views on the use of social media, some did not like the idea and others embrace it seeing it as an area where greater numbers of younger tenants could be reached. Tenant groups who have been part of the discussion have agreed with the 6 proposals and have asked for the following to be considered:

- Established groups would like to be renamed Community Groups
- Would like hard copies of committee papers in advance to discuss and contribute
- Would like a forward plan of Housing Committee meetings
- ID cards to be updated

- Would like to be involved in estate walkabouts with Neighbourhood Wardens
- Would like their public liability insurance increased to £2 million

Other views expressed included a request that more have your say type events are programmed, more engagement is needed with general needs tenants and development of good neighbour approaches. A really positive quote was that “the council are not just a remote provider, they are great at community building” it would be good to see local businesses getting involved with local events to support and share their expertise.

6.0. Funding

6.1. The recognised tenant groups currently have access to the following funds:

- Environment fund £19,700
- Grants - £150 for each new group to set up (commonly called start up grants)

6.2 Established groups receive an annual grant which is based on a formula of how many people they work with starting from £200 (up to 50 tenants) up to £400 (200+ tenants). This grant is paid out after they have held their AGM and submitted their accounts. All groups have now been paid for 2017/18, however, no further payments will be paid for 2018/19 until after a decision has been made by Housing Committee (see decision 6).

7.0. Social Media

7.1. Tenant Services has a Facebook page (SDC Tenants), that was re-launched in January 2018 and is proving very successful in promoting our services/council messages and community services:

- announcing the publication of Keynotes
- Sheltered Modernisation News
- advertising for tenant repairs inspectors
- ending of Mears contract etc.
- vacancies
- recycling
- reposting education
- volunteering from partners such as GL1, Learn Direct

7.3. Increasing success is being made in tenant involvement - by writing a post then sharing it to community groups such as:

- Dursley Matters - 6,176 members*
- Stonehouse, GL10 community discussion – 2,644 members
- Nailsworth Chat & Information – 4,444 members

- Nailsworth Town – 3,518 followers*
- Wotton Noticeboard – 946 members
- I love Wotton – 2,972 members
- Berkeley Town Council – 223 followers

*(*note – the difference between members and followers is - closed groups must approve members; anyone can follow an open group)*

- 7.4. By sharing to community groups our messages reach a huge number of readers, not all of which will be tenants of course, but many are.
- 7.5. The post to advertise the publication of the last Sheltered Modernisation News reached over 3,000 people within one week
- 7.6. Every share to a community group page drives tenants to follow our own Facebook page. This form of engaging with tenants is becoming increasingly popular. It is informal, quick, people can engage in their own time, take as long as they like, can have conversations, receive often immediate responses, and get through to someone who can act on their feedback.
- 7.7. It's important that apart from promoting ourselves on Facebook we highlight issues that provoke engagement and we shouldn't shy away from controversy. There are always two sides to every story and ours is sometimes not always shared leading to misconceptions of Tenant Services and the Council generally being in the wrong.
- 7.8. A post that was added to our Facebook page, within 24 hours had reached 356 people, and attracted comment and debate on the subject of tenancy inspections – without the time, effort and money a formal tenant meeting would take.

8.0. Summary

- 8.1. We should always be mindful of improving our service and how tenants both current and future can, through mutual trust and professionalism develop and enhance the service we provide from strategic direction, development of policies to delivery of services. The report sets out a number of recommendations on this basis.
- 8.2. Tenant engagement is not about settling for things as they are, or always have been, it's about continually looking to the future and having aspirations that are achievable both from the landlord's perspective but crucially the satisfaction of its tenants.

STROUD DISTRICT COUNCIL
HOUSING COMMITTEE

AGENDA
ITEM NO

27 MARCH 2018

11

| | |
|---|--|
| Report Title | SHELTERED MODERNISATION PROJECT |
| Purpose of Report | To inform the Committee of progress on the Sheltered Modernisation Project and to gain approval to the 2018/19 and 2019/20 programme. |
| Decisions | Housing Committee RESOLVES to approve the programme of improvements for the communal areas for the amber schemes for the next two years as Concord, Nailsworth in 2018/19 and George Pearce House, Minchinhampton in 2019/20. |
| Consultation and Feedback | Budget setting has previously been agreed at Council. Progress has been discussed with the Tenant Reps for Housing Committee and the Chair and Vice Chair of Housing Committee. |
| Financial Implications and Risk Assessment | <p>This report sets out major areas of spend within the agreed budget and funding period and so there are no direct financial implications.</p> <p>Sheltered Housing Modernisation is one of the HRA priorities and as such is a significant programme of works within the HRAs Medium Term Financial Plan. A total budget allocation of £8.3m has been approved (starting from 2016/17), funded by £2.5m capital receipts (of which £2.3m is from the sale of sheltered assets) and £5.8m sheltered housing reserve which is funded by HRA revenue resources (i.e. rental income).</p> <p>As detailed in Section 4, this funding allocation represents the first phase of the programme, up to 2021/22. Funding beyond this first phase is not currently approved.</p> <p>Lucy Clothier, Principal Accountant Tel: 01453 754343 Email: lucy.clothier@stroud.gov.uk</p> |

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| Legal Implications | <p>It is understood that the Committee is being asked to note the difference between the forecast and actual spending in relation to the “red” schemes. Subject to the shortfall of £612,456 being addressed by the re-allocation of funds as part of a wider scheme, the funding of which has already been approved together with the delegated authority to allocate such funds, there are no legal implications in this regard.</p> <p>It would appear that the Committee is being asked to determine the order of works to “amber” schemes. There are no legal implications in this regard although it is noted that no alternative options have been considered. (Ref: r0703/c2703/d1203)</p> <p>Mike Wallbank Solicitor Advocate and Deputy Monitoring Officer Tel: 01453 754362 Email: mike.wallbank@stroud.gov.uk</p> |
| Report Author (s) | <p>Kimberley Read, Sheltered Housing Project Manager Tel: 01453 754175 Email: kimberley.read@stroud.gov.uk</p> |
| Performance Management Follow Up | <p>Update reports will be reported to this committee within the Capital Project Monitoring Report.</p> |
| Background Papers/ Appendices | <p>Appendix A – Ark report: Executive Summary</p> |

SHELTERED MODERNISATION PROJECT

1.0. Introduction

- 1.1. The following report provides an update on the sheltered modernisation project and benchmarks progress of the red schemes against the original approvals by Housing Committee in June 2016.
- 1.2. The Sheltered Housing Asset Review was undertaken by Ark Consultancy in 2015 and was presented to Housing Committee in October the same year. The Ark report was used as a starting point for the Council. This created a framework upon which a programme of improvement works is being developed and implemented.
- 1.3. Option appraisals were undertaken on the schemes which were identified as ‘red’ within the report (a summary of the Ark Report can be found in Appendix A of this report). These options were presented to Housing Committee in June 2016 and approval was granted to dispose of the Council’s freehold interest in Drylease Court, Wotton-under-Edge, Ringfield Close, Nailsworth and Cambridge House, Dursley. Approval was also granted to redevelop the sheltered scheme at Glebelands, Cam in partnership with another provider and to consider redeveloping Willow Road, Stonehouse as part of a wider estate regeneration programme.

- 1.4. Burdett House, Stonehouse was initially identified as a 'red/amber' scheme, but subsequently re-categorised as 'amber' due to the limited potential for redevelopment. This was approved by Housing Committee in the June 2015 report.

2.0. Programme – Red Schemes

- 2.1. Since the previous Housing Committee approvals, regular updates have been provided to Housing Committee either as information sheets or more recently as part of the Capital Project Monitoring report. This report provides a more detailed overview of the project status and provides Committee with an up to date position relating to the previous approvals.
- 2.2. Dryleaze Court, Wotton-under-Edge – is now empty and is currently being marketed for sale. The new laundry facility has been provided for residents to use.
- 2.3. Ringfield Close, Nailsworth – is now empty and will be marketed for sale following the construction of the new older person's apartments at Tanners Piece. It will be needed for use as a building compound to help ease congestion, access and parking problems for local residents and the contractor during construction.
- 2.4. Cambridge House, Dursley – tenants are being re-housed to suitable alternative accommodation. The scheme is expected to be empty towards the end of 2019. The timescale will be dependent upon the number of suitable voids becoming available to re-house the existing residents.
- 2.5. Glebelands, Cam – consultation to re-house residents will begin in early 2019.
- 2.6. Willow Road, Stonehouse – options for this scheme are currently being considered.

3.0. Programme for 2018/19 & 2019/20

- 3.1. The Ark Report suggested that a good sheltered housing model moving forward would be to identify a number of 'hubs'. SDC explored this idea and have identified number of schemes which lend themselves as hubs. The schemes identified have a mixture of qualities from; popular and thriving communal lounges, good accessibility to properties, popular accommodation and a close proximity to town centre facilities. The first scheme which has been identified as a hub is Sherborne House, Stonehouse.
- 3.2. The Sheltered Modernisation Project Steering Group, comprising of senior management and colleagues, is recommending the following two schemes for the next two year programme of improvements. The reasons for these recommendations are summarised in the table below.

| | Medium Term Financial Plan | |
|--|--|--|
| | Year 3 | Year 4 |
| Funding Year | 2018/19 | 2019/20 |
| Scheme Name | Concord, Nailsworth | George Pearce House, Minchinhampton |
| Ark Report Category | Amber | Amber |
| Ark Option Recommendation | Continue as older persons accommodation | Continue as older persons accommodation |
| Number & Type of Properties | 26 flats and 4 bungalows | 23 bungalows and 2 flats |
| Associated Properties Linked to Scheme | 8 flats at the Long Ground | 10 bungalows and 2 flats at Trinity Drive and 8 bungalows at Glebe Road |
| Total Number of Properties using Communal Facilities | 38 | 37 |
| Other Key Factors | <p>Scheme very dated; long dark corridors with dark ceilings. Storage cupboards protruding into walkways (fire hazard for egress and also due to storage of possessions on top of the cupboards). Scheme very popular and well used.</p> <p>Ringfield Close and Tanners Piece in Nailsworth have recently been closed.</p> <p>Lends itself to a hub due to size of communal lounge and level access which is split on two levels. Mobility scooter access could be achieved for ground floor properties.</p> | <p>Scheme has had four additional units added from ex-scheme manager conversions.</p> <p>Scheme is very well used by tenants and wider community and could be a possible hub due to level access across site; mobility scooter provision could be achieved to most units (except the 3 first floor flats).</p> |

- 3.2. It is recommended that these two projects should be prioritised for the next two years, based on the information considered above. The improvements will be tied in with the planned team to coordinate ongoing cyclical and maintenance programmes.
- 3.3. A programme for the remainder of the amber and green schemes is currently being considered. There are a number of internal and external factors to consider and the programme will need to remain under review for the next few years.

4.0. **Funding**

- 4.1. The Sheltered Modernisation Programme was initially spread over 10 years, with funding secured for the first 5 years as part of the Medium Term Financial Plan. The first five years allocated a budget to address the majority of red schemes (apart from Willow Road). It also contained a budget for a number of amber and green schemes which were due to be improved. It is important to highlight that there were still a number of these schemes which sat outside of the 'funded period'.
- 4.2. As members are aware, there are pressures on the Housing Revenue Account (HRA), which highlights the importance of the red schemes being partially self financing. Any new build on the red scheme sites is currently part funded through sales of other red schemes.

A summary of the original red scheme costs is detailed below, alongside the actual costs to date.

| | Original Forecast (June 16) | Current Forecast (March 18) | Difference +/- |
|---|------------------------------------|------------------------------------|-----------------------|
| <u>Red Scheme Costs</u> | | | |
| New Build at Tanners Piece | £1,100,000 | £1,674,546 | +£574,546 |
| New Build at Glebelands | £1,500,000 | £1,500,000 | £0 |
| Remodel Burdett House | £450,000 | £450,000 | £0 |
| <u>Asset Sales</u> | | | |
| Two properties at Ringfield Close | (£300,000) | (£262,000) | +£38,000 |
| Dryleaze Court | (£800,000) | (£800,000) | £0 |
| Ringfield Close | (£800,000) | (£800,000) | £0 |
| Cambridge House | (£400,000) | (£400,000) | £0 |
| <u>Funding Required from Sheltered Reserve to cover Red Scheme Costs</u> | £750,000 | £1,362,546 | +£612,546 |

- 4.3. The total scheme costs for the construction of the new build apartments at Tanners Piece have increased, firstly because two additional units have been created (increasing density from 9 – 11), and secondly due to the increase in construction costs and a number of technical site constraints; which have become evident as the scheme has been developed to planning stage. The figure now detailed is based on a tender sum and is an accurate reflection of the costs of the project.
- 4.4. The current allocation for Glebelands is £1.5 million and is based on developing new housing on the site in a joint venture approach similar to that undertaken by SDC at 'The Old Common and The Tynings, Minchinhampton'. In this scenario, SDC would only develop new housing on part of the site, whilst a developer would build out the rest of the development. The budget for Glebelands will be reviewed when detailed feasibility options are developed, but is likely to increase with rising building costs.

- 4.5. The current forecast will place additional strain on the Sheltered Reserve, particularly when combined with the increased build costs for the amber schemes which are set to be improved. The tender returns recently received for Sherborne House, Stonehouse (the first amber pilot scheme) are higher than initially budgeted. This is partly due to increased build costs and also to achieving full mobility access throughout the scheme. It is likely that these costs will be similar for the other amber schemes in the programme, particularly those identified as a possible hub. These costs can still be accommodated within the budget approved as part of the Medium Term Financial Plan; however it is likely that this will need to be achieved by extending the programme and addressing less of the amber schemes in the first five years.
- 4.6. There is potential for additional income to be achieved if the sites sell for a greater value than those estimated, which would assist in reducing the pressure on the Sheltered Reserve. The budget is reviewed regularly with SDC's Principal Accountant and further updates will continue to be provided to Committee. However, if additional budget is required the programme will have to be spread over time and will take longer to deliver, if further resource is available.

5.0. Communication

- 5.1. Consultation and communication is a key priority for this project. Communication has been improved by implementing a regular quarterly newsletter 'Sheltered Modernisation News' which continues to keep residents up to date with progress on the project.
- 5.2. Feedback from residents was encouraged in the latest edition of the newsletter. The feedback has been very positive with a number of useful suggestions offered from residents. Officers are currently reviewing this feedback to see how it can be used to further improve communication throughout the term of the project.
- 5.3. The project team works closely with Ward Councillors to keep them involved in changes in their area and provides regular updates at Housing Committee.

6.0. Summary

- 6.1. **It is recommended that Committee approves the programme of improvements for the communal areas for the amber schemes for the next two years as Concord, Nailsworth in 2018/19 and George Pearce House, Minchinhampton in 2019/20.**

Sheltered Housing - Getting Better, Getting Fit for the Future



Executive Summary - July 2015

1. Introduction

1.1 Stroud District Council commissioned Ark to carry out an in-depth review of its sheltered housing portfolio to assess the viable options for achieving a sustainable sheltered housing service and to advise on a modernisation strategy. The review involved a number of carefully sequenced steps including:

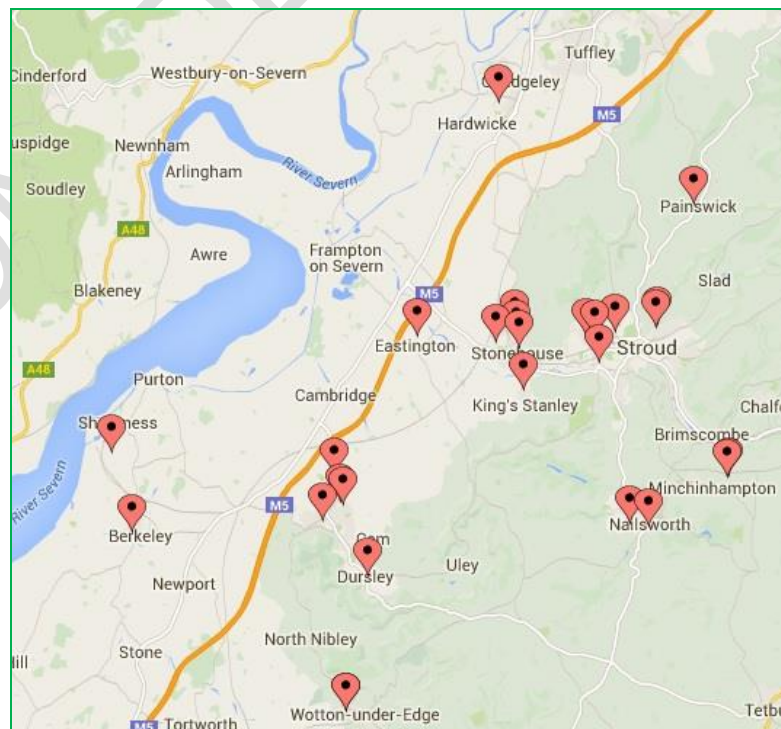
- A 'document review' of the Council's plans and those of key stakeholders, including Gloucestershire County Council, to understand strategic context;
- A review of stock information including investment plans and forecasts, repairs history and void times and costs;
- Undertaking on-site inspections of the schemes to assess its physical characteristics, the scheme's setting and neighbourhood surroundings;
- Reviewing the 'market' - the location of alternative 'competing' provision and likely demand for sheltered housing in the future; and
- Considering the available options and producing a preferred option for each scheme that forms part of an overarching strategy.

2. Scheme profile

2.1 The Council's sheltered housing stock consists of 788 homes in 28 schemes. Almost all the schemes are purpose built and all are at least 25 years old. Over 40 per cent was built over 45 years ago, in the 1960s.

2.2 The stock at an individual scheme level is diverse. Half the schemes comprise of purpose built blocks containing solely flats, while almost a third (32 per cent) comprises a combination of both flats and bungalows. Four schemes (14 per cent) contain just bungalows.

2.3 In terms of size, almost three quarters of the homes have one bedroom. Bedsits account for around 11 per cent and bungalows account for almost 40 per cent of the stock. Only 5 per cent of homes have more than one bedroom. The distribution of the schemes across the district is shown below:

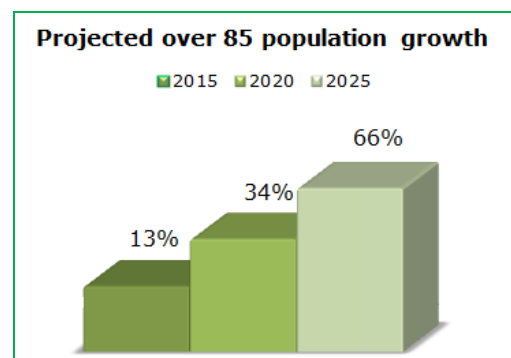
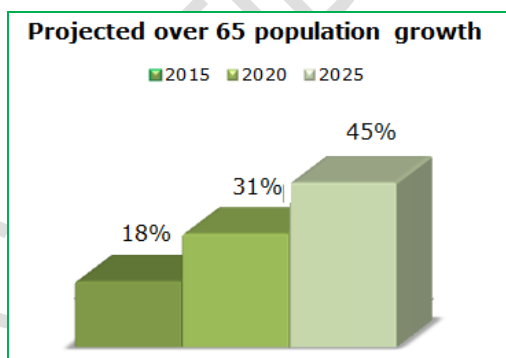


3. Resident profile

- 3.1 Demographic changes means that sheltered housing tenants are increasingly diverse with a much wider range of expectations, needs and ages. Sheltered housing tenants in 2015 are older and frailer than those who lived in the schemes when originally built – often living with dementia or chronic ill-health. For example, 11 schemes have more than 10 per cent of the residents aged over 90 while nine schemes have more than 40 per cent of residents aged over 80.
- 3.2 Alongside demographic changes, allocation policies mean that younger people are moving into sheltered housing, some having no care or support needs but others have complex needs, such as substance misuse or with a history of homelessness. Stroud has 3 schemes where more than 10 per cent of residents are aged under 60.
- 3.3 These ‘imbalances’ make it harder to provide a service that meets all tenants needs and aspirations. Willow Road - a scheme with 24 units serves as an example of this trend. This scheme has over a quarter of residents over 80 and a quarter under 60. Interestingly over 16 per cent of residents are currently working.

4. The local housing market

- 4.1 Stroud district has a population of 112,779 (2011 census) of which 21,977 (around 20 per cent) are aged 65 and over – higher than the Gloucestershire average. The population has increased by 5 per cent in the last decade with the number of over 65s expected to increase by over 60 per cent by 2031.
- 4.2 Most UK household growth is driven by older people. Overall, 41.0 per cent of households in Stroud are made up of only older people (aged 55 or over) and a further 11.7 per cent contain both older and non-older people. Older people in Stroud are slightly more likely than average to live in social rented housing.
- 4.3 Analysis carried out by GCC in 2012 on the need for older people’s services identified significant projected growth in the 65+ and 85+ populations over the next 10 years (shown below).



- 4.4 In Stroud a significant source of growth in household numbers is the projected increase in the number of single people of pensionable age by 78.5% and 2+ pensioner households by 52.9%. This in part reflects Stroud’s appeal to older people. For example, about a third (31 per cent) of market demand across the Stroud and Dursley area originates from retired households.
- 4.5 In total there are 844 households registered for accommodation suited to older households on the Gloucestershire Homeseeker database - 493 where the head of

household is aged over 65 and a further 351 in the 55-64 age bracket. Over half (58 per cent) of the 65+ group specifically require ground floor accommodation. This means that almost 6 out of every 10 'typical' applicants for sheltered housing (aged 65+) would not wish to be housed in first floor flats at a number of the Council's homes for example, at Glebelands, Ringfield Close and Jenner Court.

- 4.6 Overall, we believe that there are over 2000 sheltered homes serving Stroud. This figure includes other 'competing' schemes that fall within a natural catchment area that goes beyond the postcode and Stroud's geographical boundaries.
- 4.7 The level of competing provision is very high in some areas. For example, in the GL2 area in the north which includes parts of the Gloucester urban area including Hardwicke, the Council's stock consists of less than 10 per cent of the available provision for rent. Over 30 per cent of sheltered housing provision that may serve residents in the district is found in this postcode area. In addition, competing provision is high in the GL5 postcode area covering Stroud and GL6 which includes Nailsworth and Minchinhampton.

5. Communication and Consultation

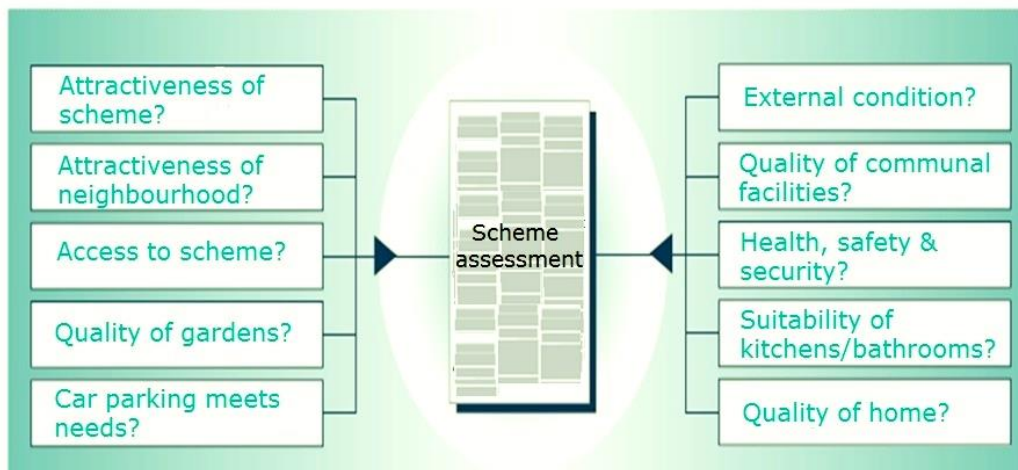
- 5.1 As part of any review of this nature one of the major challenges is to engage with all the stakeholders in an appropriate and timely way. The Council's 'Older Persons Housing Project Board' decided it was best to defer detailed consultation until the outcomes of the review were completed and 'at risk' schemes identified. In this way, we will be able to talk to residents, their families/advocates in a more informed and constructive way, encouraging greater ownership and empowerment of residents and in turn leading to increased satisfaction and individual well-being.
- 5.3 Ark also met with some key external and internal stakeholders over the course of our assignment. The key findings from the consultation are set out in the main report.

6. Asset performance

- 6.1 Stroud provided void data for the last three years for each of the schemes. This allowed us to review the performance of the schemes from a number of perspectives.
- 6.2 Our key findings are as follows:
- Repair numbers and costs too high in some schemes
 - Void costs in small number of schemes consistently high
 - Turnover in some schemes over 20 per cent
 - 'Demand' problems in some schemes (bedsit and unit size)
 - Void times can be too long and some schemes have long-term voids
 - The Council needs to ensure its plans are based on robust stock condition data

7. Scheme Assessments

- 7.1 The most significant stage of this review was the assessment of the schemes. This involved reviewing the asset performance data and local housing market information collected. Most importantly, this stage was informed by an on-site inspection and discussions with local staff.
- 7.2 Each scheme inspection involves an appraisal of the schemes from a number of perspectives illustrated in the figure below.



7.3 Schemes were categorised using a simple traffic light (Red/Amber/Green) system to reflect the degree of 'risk' they present to Stroud's ongoing business. The breakdown of results is shown below:

| Category | Scheme | Number of Homes |
|------------------|---|--|
| RED | Cambridge House, Dryleaze Court, Glebelands, Ringfield Close, Willow Road (5 schemes) | 173 homes – (57 of 86 bedsits) 22 per cent of homes |
| RED/AMBER | Burdett House (1 scheme) | 25 homes (6 bedsits) 3 per cent of homes |
| AMBER | Archway Gardens, Ashcroft House, Chapel Lane, Concord, George Pearce House and Trinity Drive, Grange View, Grove Park Road, Jenner Court, Malvern Gardens, Sherborne House, Springfields Court, The Beeches, Vizard Close (13 schemes) | 336 homes 43 per cent of homes |
| GREEN | Ashwell House, Broadfield Road, Draycott, Dryleaze House, Hamfallow Court, Hazelwood, The Corriett, St Nicholas Court, Walter Preston Court (9 schemes) | 254 homes 32 per cent of homes |

7.4 The recommendations based on the findings are that:

- 13 schemes including almost half of homes are retained in the longer term in their current form to continue providing older people's housing. These should benefit from improvements such as:
 - Improving communal entrance, lounge and garden;
 - creation of scooter stores and improving car parking; and
 - Lift installation where practicable
- 5 schemes are improved for an alternative use. These schemes are not suited to specialist older people's housing. However, they are probably sustainable as 'age-exclusive or 'age preferred' for people aged 50+.
- 3 schemes should be remodelled for continued older peoples use. To ensure these schemes are fit for the future the Council needs to invest in remodelling to

address problems around the quality of the 'offer'. In this way, the modernised schemes will better meet the needs of older people and ensure they are sustainable in the longer-term. Typical works proposed include:

- Remove bedsits and improve space standards;
 - Introduce some 2 bed accommodation; and
 - Maximising return by converting 'specialist' facilities or other assets
- One scheme should be remodelled for alternative use. In this case the scheme, Chapel Lane, is best suited to return to more general needs provision - probably 'age-exclusive' for people aged 50+. Opportunities for redevelopment to provide additional units and revenue returns should also be explored on this site.
 - 6 schemes should be decommissioned as older people's housing. The performance and quality of these schemes is poor and remodelling to meet modern and future needs is not an economic or practical solution. Our presumption is that most of these sites could form part of the Council's active development programme although a more detailed feasibility study is needed to make an informed decision on redevelopment or disposal.

7.5 Ark has completed a breakdown by scheme of the outline costs to deliver a programme flowing from the preferred option. The total cost is **£4,678,800** which captures the improvements or remodelling identified and associated fees. The Council should test the proposed capital costs, unit changes and revenue impacts of the programme with its HRA Business Plan in order better to gauge its capacity to support the proposed changes.

7.6 Below is a 'pen picture' review of the Council's highest risk schemes.

Burdett House, Stonehouse GL10 2LS

Burdett House was built in 1977 in a predominantly residential area approximately 1 mile away from Stonehouse. It consists of 25 homes – 6 small bedsits, 10 one person flats, (8 can accommodate two people) and 9 one bed bungalows of which 3 are big enough for two people. The flats and bungalows are in a linked block with 8 properties in a lower section away from the main scheme and communal areas.

Car parking is satisfactory but the scheme is not served by a local bus service. This means that some residents (over a quarter of whom are over 80) find it difficult to access local amenities (shops, GPs, PO etc.) and relevant activities.

Access around the scheme is difficult for some less mobile residents. There is no scooter store and the site is sloping. Access to communal facilities for lower section residents is via an external path or a stairlift in the main corridor.

The overall quality of accommodation at Burdett House is poor – although homes have benefitted from improvements the bedsits are small and relatively unpopular. Although there is little 'competing' provision the area is well-served by alternative Council accommodation. These factors contribute to very long void times and high level of refusals.

The number and cost of repairs raised each year appear satisfactory. The communal lounge, although well used has an unwelcoming 'institutional' feel.



Categorisation for Action: Red/Amber
Preferred Option: Redevelop/Dispose

Cambridge House, Dursley GL11 4AZ

Cambridge House is in Dursley in a residential area close to the town centre. It consists of 20 homes - 18 one-bed bungalows, 4 of which can accommodate two people and 2 bedsits. The former wardens' flat has been converted to create two first floor flats. It was built in 1962 with bungalows arranged as a long terrace accessed off a rear open walkway.

The scheme is not popular and 'lettability' is difficult despite being set in an attractive site that is well-maintained and well located for easy access to local amenities. The décor, fixtures and fittings in the communal lounge and kitchen are dated.

There is a high number of long-standing residents with a third over 80 and with 15 per cent over 90. Despite this, the turnover of tenancies and the number of refusals are high. The most common reasons given for refusals are that the property or area is unsuitable or the home is too small.

The overall design and construction falls well below modern standards. Homes are often small, badly arranged with poor natural lighting and insulation. The number of repairs appears satisfactory but repair costs are relatively high which may reflect the age and construction of the scheme.



Categorisation for Action: Red
Preferred Option: Redevelop/Dispose

Dryleaze Court, Wotton-under-Edge GL12 7BA

Dryleaze Court was built in 1969 in an attractive residential area close to the town centre and local amenities. There are 63 homes in total. 21 one-bed bungalows, (18 big enough for two people), 21 one-bed flats, 3 two-bed flats and 18 small bedsits.

Dryleaze Court benefits from close proximity to a range of local shops and other amenities. However, access to and from the town is difficult for some residents due to a very steep hill. Despite this, there is no scooter store and limited car parking. This is particularly important as over a third of existing residents are over 80.

Dryleaze Court's biggest weakness is the poor quality of accommodation. There is a high concentration of bedsits which are small and difficult to let. The scheme itself is relatively unattractive with some evidence of under investment in maintenance and decorative repair.

The number of repairs carried out and spend on repairs and voids are in line with the expected benchmark but arguably lower than the scheme needs. Some homes do not currently meet the Decent Homes Standard and some first floor flats are not served by a lift. Consequently, Dryleaze Court has 18 long-term voids with an average void time of over 850 days.



***Categorisation for Action: Red
Preferred Option: Redevelop/Dispose***

Glebelands, Cam, Dursley, Gloucestershire, GL11 5NE

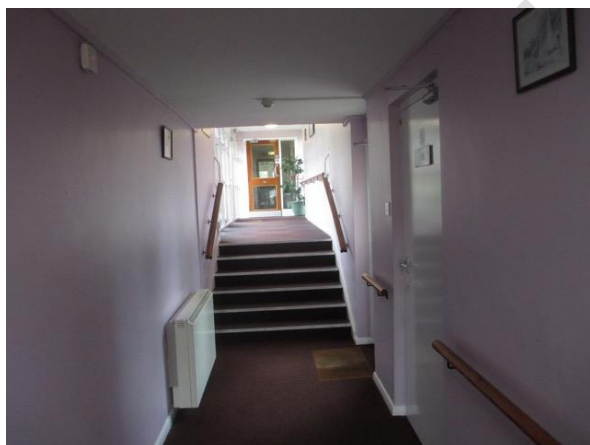
Glebelands was built in 1969 and comprises 40 homes of which 23 are bedsits. There are 12 one-bed flats mostly big enough for two people, four two-bedroom flats and 1 one-bed bungalow which can accommodate two people.

The scheme is in a good location, close to the town centre which has lots of amenities including a nearby medical centre. The location does mean that car parking at times can be difficult. A range of communal facilities are provided although they need updating to make them more appealing.

The scheme's sloping topography and layout with connecting corridors and steps can make access difficult for some residents (over a quarter are over 80). There is no lift access to the first floor or a suitably sited scooter store.

These issues contribute to a high number of refusals, long-term voids and some very long void times. Turnover in the scheme is also very high which is likely to be a reflection of the large number of small bedsits.

The number of repairs carried out is in line with the expected benchmark and the data suggests repairs spend is very low. The reliability of this data should be reviewed as we do not believe that all homes currently meet the minimum Decent Homes Standard.



***Categorisation for Action: Red
Preferred Option: Redevelop/Dispose***

Ringfield Close, Nailsworth GL6 0HY

Ringfield, Close (including Tanners Piece and Upper Park Road) was built in 1963 in a largely residential area. The split site comprises 26 homes made up of 16 flats, 4 of which have two bedrooms and 10 bungalows, 2 of which have two bedrooms.

All the homes are pebble-dashed Reema 'Hollow-land' – a "non-traditional" construction form built to address the acute housing shortage in the post-war era.

The properties are 'as built' with patch repairs and some remedial work carried out to sustain their ongoing use.

Inevitably, these homes experience a very high level of repairs and spend. This presents a number of risks to the Council and will continue to do so without significant investment to protect the structure and fabric of homes.

The properties are spacious and in a popular location. The large communal lounge is regularly used. However, turnover of tenancies is high. Car parking is insufficient for resident's needs, there is no lift access to first floor flats and the scooter store does not meet modern standards.



Categorisation for Action: Red
Preferred Option: Redevelop/Dispose

Willow Road, Stonehouse GL10 2DS

Willow Road comprises 1 one-bed (2-person) flat and 23 one bed bungalows, some small studio-style and 10 that can accommodate two people. It was built in 1965 and has a diverse resident population with over a quarter of residents over 80 and a quarter under 60.

The scheme has an unusual arrangement – sitting as an 'island' at the centre of a relatively unpopular housing estate surrounded by roads on all sides.

The location means that some residents may feel concerned about safety and security. In addition, access to local shops and amenities is difficult for some residents (about 10- 15 minutes' walk to nearest bus stop, GP and Post Office).

The bungalows themselves form a linked triangular shape with the communal facilities including a relatively small lounge easily accessed at the centre.

Homes often have narrow doorways with raised entrance thresholds. Some of the homes suffer from disrepair and need investment in external elements such as fascias, soffits and windows.

Tenancy turnover is high and the smaller bungalows can be hard to let.



***Categorisation for Action: Red
Preferred Option: Redevelop/Dispose***

8. Recommendations

8.1 To assist the Council we would make the following interim recommendations subject to further discussion and scoping with the Council.

- Consider the draft report and the findings
- Begin process to conduct the design feasibility work
- Work with residents to set the 'Stroud standard' for sheltered housing and improvement and remodelling plans
- Work with partners to improve local knowledge on 'demand'
- Improve financial performance and make best use of assets by:
 - understanding stock condition, unit costs and lifecycles
 - Address long-term voids and reduce 'avoidable' turnover
- Further improve service quality and efficiency by:
 - Fully understanding service charges
 - Explore opportunities around hub activities
- Develop a clear communication plan