



Social Return on Investment of Stage 3 Adaptations in Sheltered and Very Sheltered Housing

Briefing report

September 2011

Summary

Envoy Partnership has conducted a Social Return on Investment (SROI) study to examine the *value for money* of Stage 3 Adaptations for older people living in Sheltered and Very Sheltered Housing provided by **Bield**, **Hanover** and **Trust** housing associations. The study finds that this service plays a key role in the Scottish Government's programme for "shifting the balance of care"ⁱ away from care homes and hospitals. The study also demonstrates that adaptations have a fundamental role in "re-shaping care for older people"ⁱⁱ through reducing waste and reducing long-term costs, whilst improving the well-being and independence of older people.

The study examines the impact of adaptations on tenants in these settings, their families and the government. It finds that these adaptations generate additional savings and value for the government's health and social care budget, far in excess of the amount invested. The study also demonstrates that adaptations bring about increased independence, confidence, health and autonomy for tenants, and that for an average cost of £2,800, each adaptation leads to:

- A potential £7,500 saving through reduced need for publicly-funded care home provision
- A potential £1,100 saving through increased safety and reduced hospitalisation of tenants
- A potential £1,700 saving through reduced need for social care provision
- A potential £4,700 saving through reduced need for self-funded care home provision
- Substantial well-being benefits to tenants (such as independence, confidence, autonomy and relationships). Each adaptation leads to well-being benefits valued at £1,400

This study demonstrates that on average, **each adaptation in these settings saves the Scottish health and social care system over £10,000**. This is equivalent to 483 hours of home care, or 19 weeks in a Care Home with nursing care, or two orthopaedic operations.ⁱⁱⁱ

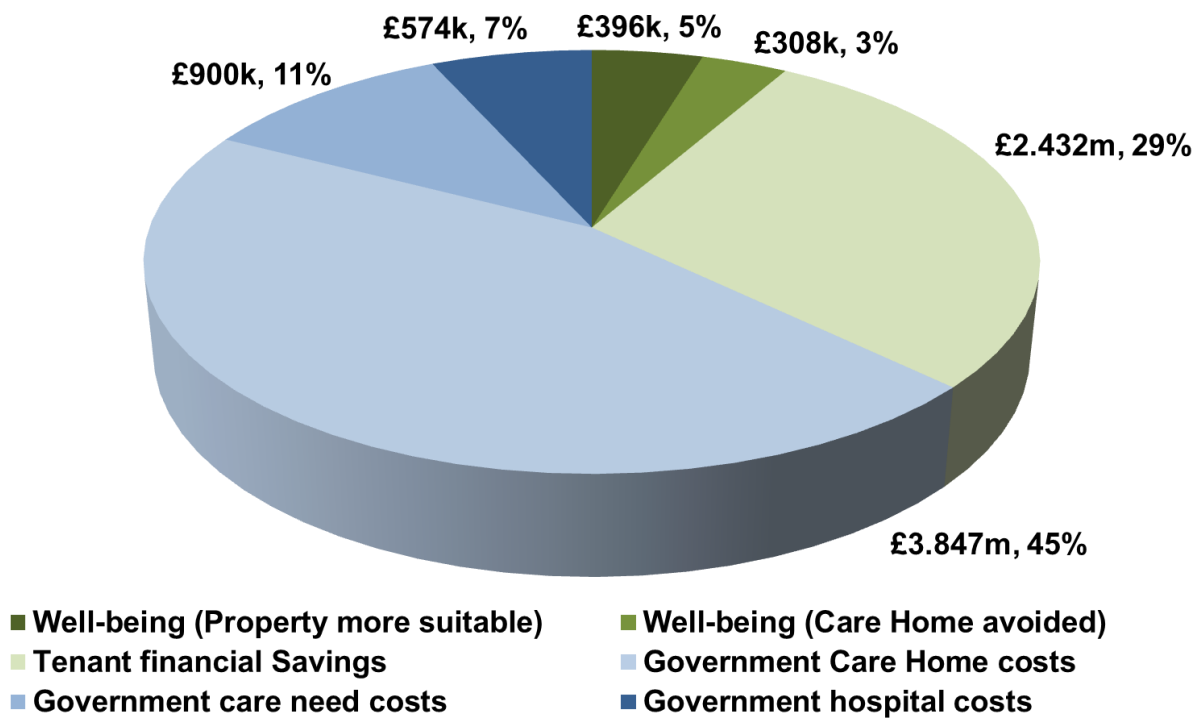
In total, the evidence from the study demonstrates £1.4 million invested in adaptations across the three housing associations *alone* creates approximately £5.3 million in cost savings to the Scottish Government, and £3.1 million in social and economic value for tenants. This gives a total return on investment of £5.50 to £6.00 for every £1 invested, and the Scottish

Government alone recoups £3.50 - £4.00 for every £1 it invests. Figure 1 below shows how this value is broken down.

Given the growing requirements that the ageing electorate will have on the health and social care system today and in future, the evidence of the report and existing research clearly demonstrates that **it is essential to invest to save and increase the adaptations grant fund significantly.**

Without increased funding of adaptations to meet current and future housing and support needs, it will be more difficult to for older people to remain in their homes and accident free for as long as possible, and out of care homes and hospitals. **As a result, the Scottish Government’s “shifting the balance of care” and “re-shaping care” programmes will be significantly undermined.** Inadequate adaptations funding will also create further waste for the Scottish Government and taxpayers.

Figure 1: Total Attributable Value Created by 515 Stage 3 Adaptations in Sheltered and Very Sheltered Housing



Background

There is a significant evidence base to demonstrate that increased levels of independence, well-being, control and social interaction are likely to lead to maintained or enhanced levels of cognitive functioning^{iv}. This can have a significant long-term impact on the health and even life expectancy^v of tenants. It underpins the Scottish Government's programmes for "Shifting the Balance of Care" and "Re-Shaping Care", and also the Scottish Government's focus on prevention and re-enablement objectives for care support.

Stage 3 adaptations are modifications to a property to reduce a disabling effect on the tenant, and "suit the changing needs of the existing tenant"^{vi}. This study shows that adaptations to Sheltered or Very Sheltered Housing are aligned with the Scottish Government's focus on prevention^{vii} and re-ablement^{viii}, as they can reduce the need for hospitalisation from falls or accidents, and they reduce the need for additional nursing or social care. They also maintain and improve levels of independence, dignity, well-being, control and autonomy in day-to-day self management.

A considerable proportion of care needs can be avoided or significantly reduced if appropriate interventions (such as adaptations) are *timely*; it is "*always far better to prevent or postpone dependency than deal with the consequences*"^{ix} or for that matter, the cost to government services. By facilitating timely adaptations, housing providers play a major role in "*minimising delayed discharges and avoidable admissions to hospital*" while also "*reducing the burden on health and social care budgets*" (Scottish Government, 2009)^x.

Over the previous year (2009-2010), £1.4 million of the grant fund had been invested in 515 adaptations for the benefit of older tenants in **Bield**, **Hanover** and **Trust's** Sheltered and Very Sheltered Housing^{xi}.

The Scottish Government estimates that adaptations currently required are around 130,000 in Scotland across all categories, and that between 2013 to 2023 there will be over a 20% increase (from 72,578 to 87,660) in pensioner households "*with someone with a life-limiting illness with a need for adaptations*"^{xii}. That represents a total increase of 15,000 in ten years, at an average rate of 1,500 per year, which is over and above the 130,000 currently required (although some current and future adaptation need will be met by existing properties with adaptations).

Yet in 2010, a total of just under 3,600 Stage 3 adaptations for the elderly and disabled across all categories were completed, of which a high proportion would have been carried out for older people in Sheltered and Very Sheltered Housing. There is a proposed 20% spending reduction in 2011 for the Stage 3 adaptations grant fund (from £10 million to £8 million across all categories). This suggests that current investment is barely enough to address the existing needs of older people, let alone other beneficiary groups, and that the programme will be severely under-funded and unable provide for the future growth in demand from an increasing and longer-living older population. **Evidence shows that much of the waste in regard to adaptations comes from under-funding** (Department for Work and Pensions, 2007)^{xiii}, and this diminishes the full value of care service provision, through increased future costs and untapped potential.

Benefits of Adaptations

The average cost of adaptations in the Sheltered and Very Sheltered Housing examined in this study is £2,800, and can range from under £1,000 to over £30,000 in some very specific, specialised cases. Adaptations to older people's homes take many forms, but the main types are designed to make showers and bathrooms more accessible and minimise the risk of falls, and the provision of features to make homes more accessible such as hand rails, stair lifts and ramps.

Qualitative and quantitative research conducted for the study with tenants, their family members and managerial and support staff at the developments identified a range of benefits that arise from adaptations:

- In the first instance, adaptations make a tenant's property more suitable, allowing tenants to be more independent and to feel safer and more confident. They can also reduce tenants' care need, and through the prevention of accidents, their medical needs also.
- In the second instance, adaptations allow tenants to remain in their home for longer than would otherwise have been the case. This substantially reduces the cost burden when the need for more expensive care is avoided. The tenant also remains more independent, confident and maintains stronger relationships with friends and family than would be otherwise

The study finds that in the first instance, the immediate benefits through making a tenant's property more suitable include:

- An overall reduction in the need for care of 88 hours a year per adaptation while the tenant remains in their home^{xiv}. The net benefit is £1,700 per adaptation^{xv}
- A one-third reduction in hospitalisations for tenants (particularly a reduction in falls), worth £1,100 in potential cost savings per tenant per year^{xvi}
- Significantly increased confidence, privacy and independence for tenants^{xvii}
- Peace of mind for tenants' families, reducing levels of anxiety and reduced emotional stress^{xviii}

Data from the housing associations shows that on average, tenants remain in their property for at least five years *after the adaptation is complete*. Furthermore, the data in this study indicates that, on average, adaptations enable tenants to remain in their homes for an extra 2.7 years, when compared to tenants in the same setting *without* adaptations^{xix}. *Figure 2* below shows the proportion of tenants remaining in their homes post adaptation and the *likely* proportion of tenants remaining in their home were it not for the adaptation.

The study demonstrates in the second instance both tenants and the Scottish Government benefit in the *longer term*, through the tenant being able to remain in their own home for longer, as follows:

- Greater levels of autonomy, independence, well-being and quality relationships (referenced as *well-being benefits* below) for those tenants that would have had to move into a Care Home (or equivalent provision) were it not for the adaptation^{xx}.
- Care Home costs are reduced by £12,200 per adaptation, over 60% of which would have been paid by the Scottish Government, rather than the tenant.^{xxi}

Figure 3 shows the comparison with levels of autonomy, independence, safety, well-being and quality relationships in Care Homes^{xxii}. It is worth noting that perceived safety is actually higher in Care Homes.

Figure 2: Length of tenancy in Sheltered and Very Sheltered Housing post-adaptation

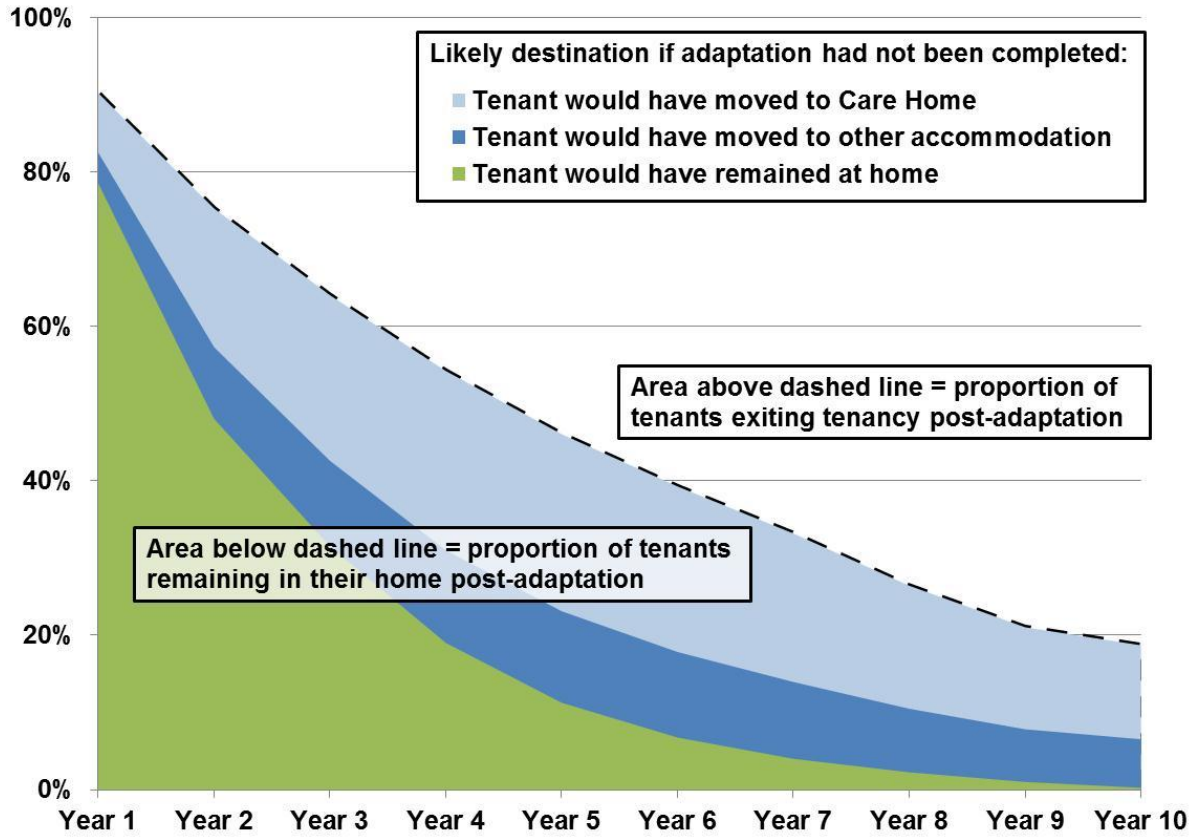
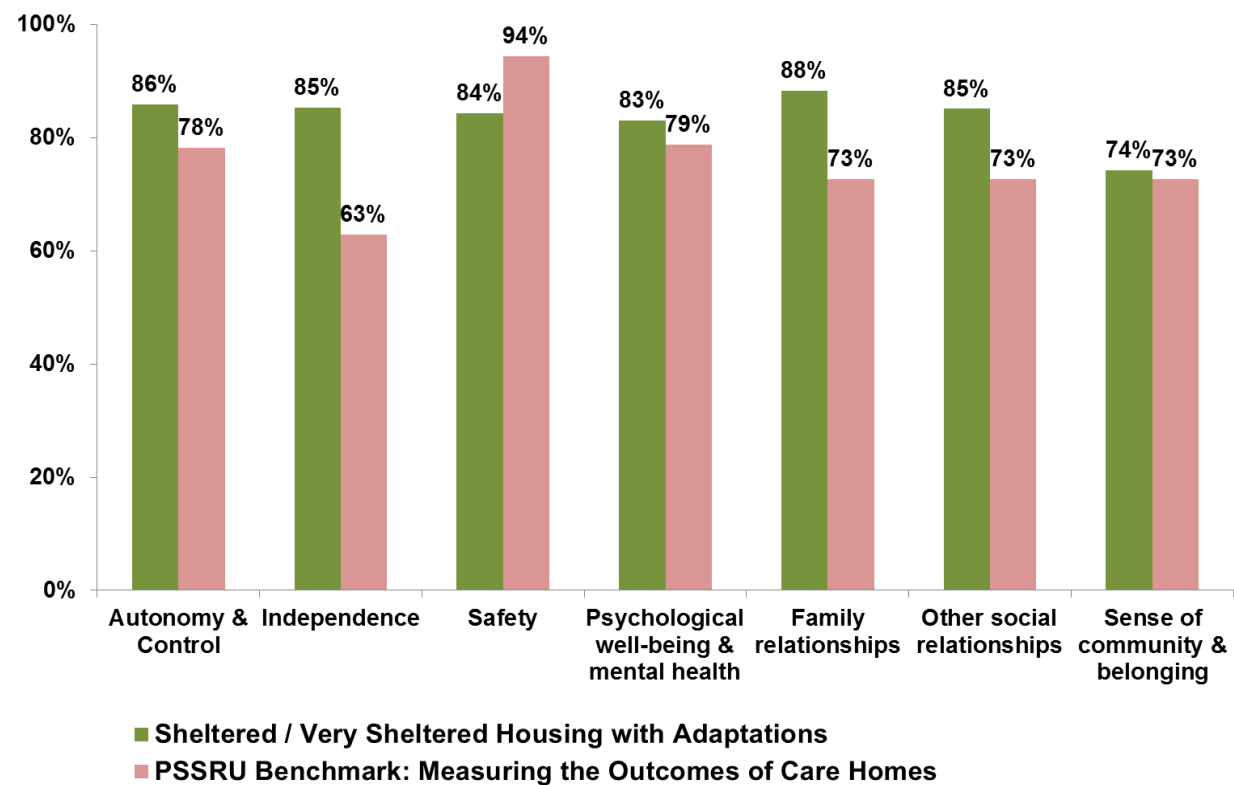


Figure 3: Well-being comparison: Sheltered & Very Sheltered Housing with Adaptations, and Care Homes



Valuing the benefits of adaptations in Sheltered and Very Sheltered Housing

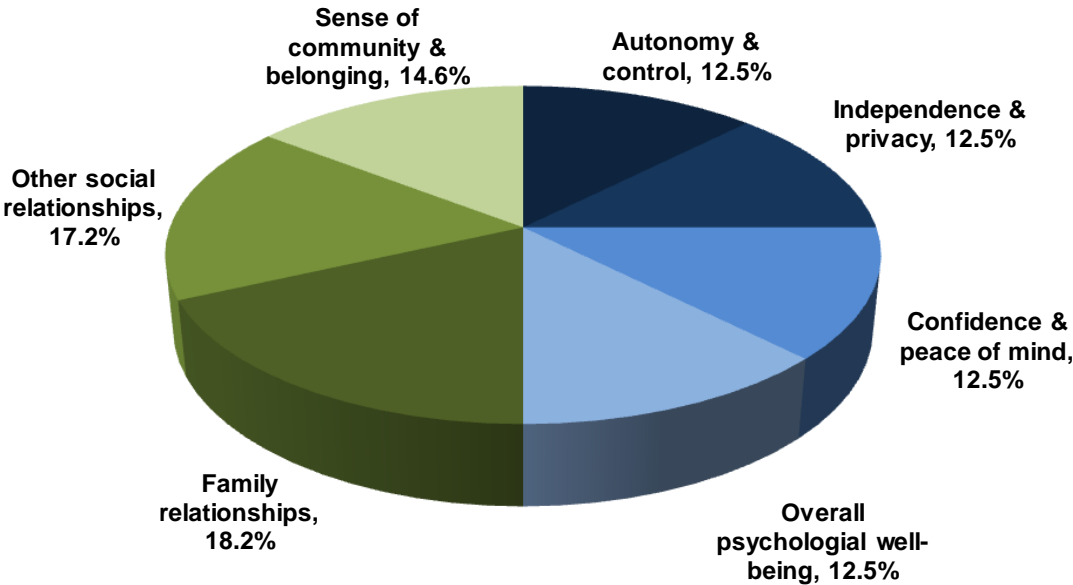
In the study, benefits that arise from reduced use of services, (reduction in social care need, care home requirement, and hospitalisations) have been calculated using government cost data.^{xxiii}

The well-being benefits to tenants have also been valued as part of the total SROI calculation. Well-being is harder to value than reduction in service use, but the *Centre for Mental Health* has attempted to put a cost on mental illness through the use of QALYs (Quality Adjusted Life Years).^{xxiv} Equating well-being with mental health allows a valuation of *overall* well-being of £10,560.^{xxv} The result is divided between different domains of well-being as shown in Figure 4 below^{xxvi}.

Two further considerations are also factored in the study. Firstly, many of the benefits arise directly from the adaptation, but others come about because the adaptation allows the tenant to maximise the benefit of their Sheltered or Very Sheltered care package. To reflect this, a conservative *attribution rate* of 50% has been defined in the study so only half of the value created has been directly attributed to the investment in adaptations. Secondly, benefits accrued in the future have been discounted by 3.5% for each year, according to Government guidance from HM Treasury.^{xxvii}

Figure 4: Valuing well-being outcomes

Division of value between different domains of well-being

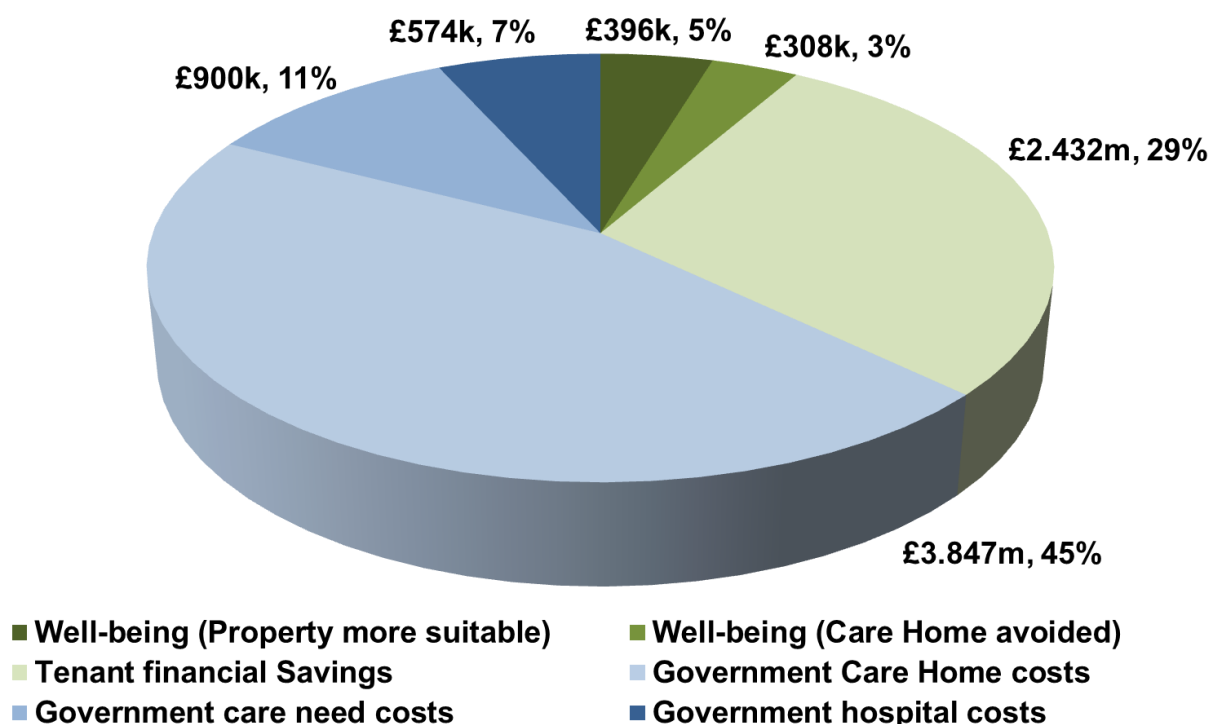


As a result, the study finds that every £1 invested in Stage 3 adaptations in Sheltered and Very Sheltered Housing creates:

- Benefits to tenants of £1.50 to £2.00 (through improved well-being and reduction in self-funded Care Home cost)
- Savings in Care Home costs to the government of £2.50 to £3.00
- Savings in medical and social care costs to the government of around £1.00
- **A total Social Return of between £5.50 and £6.00**

The study shows a total investment of £1.4 million leads to a total return of £8.5 million based on the analysis of adaptations in Bield, Hanover and Trust’s Sheltered and Very Sheltered Housing. Figure 5 below shows the breakdown of value between different outcomes (as displayed in Figure 1).

Figure 5: Total Attributable Value Created by 515 Stage 3 Adaptations in Sheltered and Very Sheltered Housing



The study demonstrates that the *return on investment* is very high for Stage 3 adaptations in these settings. This is because a one-off, relatively low cost investment in an adaptation produces substantial cost savings to the health and social care system, and leads to well-being benefits that last a number of years. Put simply, an average adaptation saves the Scottish Government the equivalent of 19 weeks of Care Home provision with nursing care, but only costs the equivalent to 5 weeks.^{xxviii} This is before benefits to tenants are factored in. This is an excellent example of the Scottish Government’s current “Re-shaping care for older people” agenda, which seeks to “*maximise benefits for older people while minimising the cost to the taxpayer*”, and “*to promote an enabling approach*”^{xxix}.

National implications

According to Scottish Government, just under 3,600 Stage 3 Adaptations were carried out in 2009-2010, a proportion of which were for older people in Sheltered or Very Sheltered Housing. There is no available official data on this proportion, but Bield, Hanover and Trust between them carry out over 500 adaptations per year in these settings. If one third of all adaptations (1,200 adaptations, or £2.65 million of the £8 million grant fund) were carried out for older people in these settings, the evidence in this study suggests this could lead to between £9 and £10 million in total cost savings per year to the social and health care systems.

Summary Recommendations

The SROI study contributes significant evidence for the Scottish Government in terms of their current consultation on adaptations funding and their consideration of the wider policy issues around efficient and effective delivery of adaptations. The study also contributes evidence to discussions on the “Shifting the Balance of Care” and “Re-shaping Care” programmes and the practicalities of achieving these objectives for older people and the disabled. The study quantifies the attributable social return on investment and cost savings created by adaptations in Sheltered and Very Sheltered Housing.

Scotland’s ageing population will have a substantial impact on the health and social care budget today and in future. The evidence of this study and previous research demonstrates that it is essential to invest to save, enhance well-being, and reduce waste by increasing the grant fund for adaptations significantly.

A core outcome of the study was to place the clients at the heart of the evidence, therefore feeding into the person-centred approach which forms the basis of much of current government policy. The study demonstrates that that well-being outcomes for are superior overall to Care Homes. Furthermore, tenants’ families also reported reduced family anxiety and higher family well-being. In some cases, time savings and increased peace of mind have allowed them to perform better and longer in paid work.

Considering the Scottish Government’s estimates and projections for adaptations need, at a national scale the current adaptations grant fund of £8 million appears not to meet current or future need for adaptations.

Key recommendations of this study are that:

- The adaptations grant fund is increased to ensure that necessary adaptations are adequately funded.
- Housing providers are supported in administering timely adaptations, to optimise waste reduction and cost reduction in the care system.
- That the economic and well-being benefits of Very Sheltered Housing are more widely promoted to older people, their families, and wider stakeholders (including Commissioners) in the health sector and local authorities.
- That a key part of future specialist housing strategy be to grant fund the remodelling where appropriate of Sheltered and Very Sheltered Housing
- That Government consider the application of the savings, health and benefits in the longer term with regard to demographic changes likely to take place.
- That a social-value approach is applied more widely to build evidence of the overall quality of housing for older people and value to the State.
- That ways of further integrating Sheltered and Very Sheltered Housing developments as assets within local communities are examined

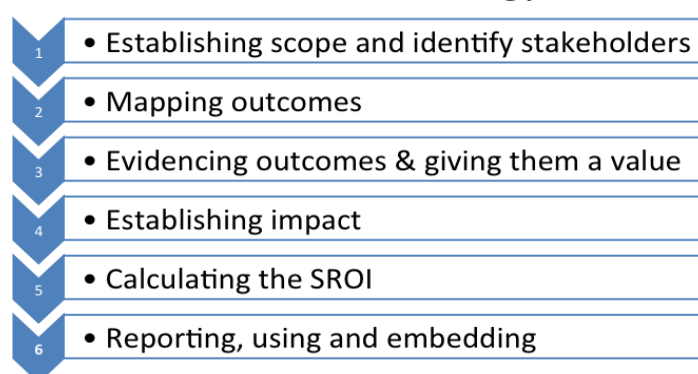
Methodology

SROI is a stakeholder-informed cost-benefit analysis that uses a broader understanding of value for money. It assigns values to social and environmental outcomes as well as economic outcomes, and helps organisations make improved spending decisions^{xxx}. Its development in the UK has been driven by organisations such as the *new economics foundation* and the *SROI Network*, and has been funded by the UK Office for Civil Society and the Scottish Government (through the *SROI Project*).^{xxxii} It is increasingly used to measure value-for-money and is recommended by the National Audit Office.^{xxxii}

Its successful application to strategic decision-making across a wide range of funding policy areas is evident among organisations in the UK and abroad, including various NHS Trusts, the NHS Institute for Innovation and national housing associations. It has also informed funding decisions for major development projects in heritage and town planning (including a £1.5billion development in Sydney, Australia).^{xxxiii}

Steps followed in this SROI study draw from the UK Cabinet Office guide and Scottish Government's SROI Project, and are as follows^{xxxiv}:

SROI Methodology



Examples of financial proxies and costs (such as the use of Quality Adjusted Life Years) and the use of well-being benchmarks (particularly PSSRU Care Home benchmarks), are provided in the endnotes section.

New primary research was carried out for the study as follows:

- Qualitative research carried out at five residences run by the three housing associations in Scotland. 50 interviews were conducted with tenants, family members and staff.
- 448 quantitative surveys of tenants in Sheltered or Very Sheltered properties that had had adaptations.
- A further 482 quantitative surveys of tenants living in Very Sheltered Housing.
- A survey of 25 residence managers, which analyse the impact of 333 adaptations.

Endnotes

- ⁱ Scottish Government (2010) *Wider Planning for an Ageing Population*
- ⁱⁱ Scottish Government (2010) *Re-shaping care for older people*
- ⁱⁱⁱ Home care is costed at £21.40 per hour, Care Home with nursing care is costed at £540 per week, and orthopaedic operations for older people are costed at £5,000 each. See footnotes vii, xiv and viii for more details
- ^{iv} For example, New Economics Foundation, (2009) *National Accounts of Well-being*
- ^v Government Office for Science, (2008) *Foresight Report: Mental Capital and Well-being*
- ^{vi} Performance Department, Strategy, Performance & Regulation, *Procedures for HAG Funding of Stage Three Adaptations*
- ^{vii} NHS Quality Improvement Scotland (2010) *Up and About - Pathways for the prevention and management of falls and fragility fractures" Stage 1: Supporting health improvement and self management to reduce the risk of falls and fragility fractures.*
- ^{viii} Department of Health (2010) *A Vision for Adult Social Care*
- ^{ix} Department of Health (2010) *A Vision for Adult Social Care*
- ^x Scottish Government (2009) *The Effectiveness of Equipment and Adaptations*
- ^{xi} Sheltered and Very Sheltered Housing (also termed as "Extra Care housing") provide enhanced staff cover and additional welfare checks compared to other forms of non-care home housing for older people; Developments in our analysis consisted of self-contained flats or houses for those who need regular support, 24-hour cover, and onsite communal meal services. They enable tenants to maintain levels of independence, autonomy, and social inclusion than would otherwise be the case.
- ^{xii} Scottish Government (2010) *The Impact of Population Ageing on Housing in Scotland*
- ^{xiii} Heywood, F. & Turner, L., (2007) *Better Outcomes, Lower Cost*, Department for Work and Pension: Office for Disability Issues
- ^{xiv} Data on the amount of care required was sourced from a survey of residence managers. It showed that adaptations reduced care need for 47% of tenants, and the average reduction across all adaptations was 1.7 hours per week
- ^{xv} Hourly cost taken as £21.40. (One hour per week of local authority-organised home care. PSSRU: Unit Costs of Health & Social Care 2010, Page 129). As with all other benefits in this study, a discount rate of 3.5% per year has been applied.
- ^{xvi} As with care need, information on hospitalisations for tenants was taken from the residence managers' survey. It suggests a reduction of 2.4 hospitalisations per year per adaptation *while the tenant remains in their home*. A conservative estimate of the potential cost saving of £5,000 per hospitalisation has been drawn from information provided by the Scottish Government and ISD (Information Services Division) as follows. They provided the following in response to the request for information: "*The Scottish Government does not publish official data on the costs of unplanned admissions to hospitals. However, one estimate of the possible amount of such costs can be obtained by using admissions to an orthopaedic ward as a typical example of the type of unplanned admission that may be avoided by an adaptation (e.g. due to avoiding slips or falls). Unpublished ISD data suggests that the average length of stay following an emergency admission following a fall for people aged 50 and over is around 7 days, and multiplying this by the average cost per day for a stay in an orthopaedic ward gives an indicative cost of around £5,000. Note that this excludes additional costs such as conveying the person to hospital in an ambulance and possibly returning them home, treatment in an A&E Department, GP and intermediate care team support, and social work support (e.g. re-ablement team) or subsequent home care hours in the medium or longer term.*"
- ^{xvii} In a survey of tenants of properties with adaptations, 84% of said the adaptation made them feel much more a little more confident, 76% said it made them feel much more or a little more independent, and 63% said it reduced their care need substantially or a little. To avoid danger of over claiming, the study uses the net difference between a) those answering much more confident / independent and substantially reduced care need, b) those answering much less confident / independent and substantially increased their care need. The result is a 29% increase in confidence, 23% increase in independence, and 18% reduction in privacy arising from reduced care need.
- ^{xviii} Families as well as tenants were interviewed as part of the qualitative research, and the survey of tenants asked about family relationships. However, a quantitative survey of family members has not been undertaken, and the positive impact on families identified in the qualitative research has not been quantified and valued in the SROI model.
- ^{xix} Tenant data from the housing association shows an average length of tenancy in Sheltered / Very Sheltered Housing of 5.2 years, up to 7.9 years when an adaptation is provided. While this is not a perfect control group (tenants of properties without adaptations will not be exactly the same as tenants of properties with adaptations) it is the best available and demonstrates a substantial increase in tenancy length.
- ^{xx} A tenants' survey was undertaken and questions asked about tenants' sense of autonomy, independence, safety, overall well-being, quality and importance of relationships with families and with others, sense of and importance of community and belonging. Most of the questions were drawn from ASCOT (Adult Social Care Outcomes Toolkit, published by PSSRU www.pssru.ac.uk/ascot/), although some were also drawn from the *National Accounts of Well-being* (the new economics foundation, www.nationalaccountsofwellbeing.org). No benefit is claimed for those tenants who would have moved into other forms of provision (e.g. other housing association properties, family care or joint tenancy).

^{xxi} ISD Scotland's *Care Home Census 2010* gives the following costs for provision: Publicly funded long stay residents without nursing care: £465 per week (£24,263 per year), Publicly funded long stay residents with nursing care: £540 per week (£28,176 per year), Self-funding residents without nursing care: £582 per week (£30,367 per year), Self-funding residents with nursing care: £657 per week (£34,281 per year). The Free Personal and Nursing Care statistics published August 2011 show that over the last 5 years around 30 to 31 per cent of long-stay care home residents were self-funders. (See table 1 in www.scotland.gov.uk/Publications/2011/08/30153211/0). The Care Homes Census provides a good estimate of the number of residents who receive nursing care (59% in 2010). The Free Personal and Nursing Care publication shows that 63% of self-funders receive nursing care. It is perhaps not surprising that more self-funders require nursing care than publicly funded residents; this demonstrates that self-funders tend to have higher levels of need before entering a care home. Using these statistics, and on advice from the Scottish government, this study uses the following breakdown between the different provision types: public without nursing care: 30%, public with nursing care: 39%, private without nursing care: 11%, private with nursing care: 20%. However, this potential saving is reduced by £3,800 to take account of government funded social provided to tenants while they are in Sheltered / Very Sheltered Housing that would no longer be necessary once they enter a Care Home. Current pilot studies being undertaken by the housing associations suggest that the amount of such care provided is on average 3.8 hours per week, and for the purposes of this study the hourly cost of care is taken as £21.40. (One hour per week of local authority-organised home care. PSSRU: Unit Costs of Health & Social Care 2010, Page 129). Finally, it should be noticed that care home residents do contribute towards their provision even if they qualify here as publically funded; they contribute all of their pension and other income (less the Personal Expenses Allowance). Breaking down this division is beyond the scope of this study.

^{xxii} The 2010 PSSRU report "Measuring the outcomes of care homes" measures the well-being of care home residents according to ASCOT domains. It examines older adults and those with learning difficulties, and the scores for older adults were compared against the primary research carried out for this SROI report among tenants of properties with adaptations. The PSSRU report's care home survey uses the three-point Likert scale and, the views of staff and interviewers were drawn upon when interviewees were too cognitively impaired to be interviewed. The primary research conducted for this SROI report was calibrated to a ten-point scale to allow for more granularity, and the responses were all self-completed, (with assistance from staff where necessary). This allows an estimate to be made of the likely level of well-being of those tenants in properties with adaptations who would otherwise be in a care home (i.e. the counterfactual). See Netten, A., Beadle-Brown, J., Trukeschitz, B., Towers, A-M., Welch, E., Forder, J., Smith, J., Alden, E., (2010), *Measuring Outcomes for Public Service Users' Project: Final Report*, PSSRU Discussion Paper 2696/2, Personal Social Services Research Unit, University of Kent. Many thanks to Ann-Marie Towers, University of Kent, for her invaluable advice in utilising this research.

^{xxiii} Throughout the study *unit costs* have been used (i.e. the cost of providing one unit of a service), rather than *marginal costs* (the actual cost saving that arises through a reduction in service usage of one unit). Data for marginal costs is rarely available, and in any case the *unit cost* better represents the *value* to the government of reduced service use. However this does mean that values reflect the freeing up of government resources as well as actual cashable savings.

^{xxiv} Centre for Mental Health, *The economic and social costs of mental illness*, June 03, updated October 10

^{xxv} The report looks at the average loss of health status in QALYs from a level 3 mental health problem, i.e. severe problem, (0.352 QALYs) and values this by using the NICE (National Institute for Health and Clinical Excellence) *cost effectiveness* threshold of £30,000 per QALY.

^{xxvi} Overall well-being is divided evenly into *Personal* and *social* well-being, which is the approach taken in the *National Accounts of Well-being*. Personal well-being is further sub-divided evenly into the different domains, but the division of social well-being is weighted according to responses from the tenants survey about the importance of the different domains.

^{xxvii} See: London: TSO, *GREEN BOOK: Appraisal and Evaluation in Central Government*, Updated July 2011, page 26: "The discount rate is used to convert all costs and benefits to 'present values', so that they can be compared. The recommended discount rate is 3.5%. Calculating the present value of the differences between the streams of costs and benefits provides the net present value (NPV) of an option. The NPV is the primary criterion for deciding whether government action can be justified." www.hm-treasury.gov.uk/d/green_book_complete.pdf

^{xxviii} Care Home Census 2010 gives the following costs for provision: Publicly funded long stay residents with nursing care: £540 per week (£28,176 per year)

^{xxix} Scottish Government (2010) "Re-shaping care for older people"

^{xxx} For more information see the SROI guide, published by the UK Cabinet Office, and available here: http://www.thesroinetwork.org/publications/doc_download/51-sroi-guide-2009-for-printing-out

^{xxxi} <http://www.socialimpactscotland.org.uk/about-sroi-project.aspx>

^{xxxii} See: [www.nao.org.uk/sectors/civil_society/successful_commissioning/successful_commissioning/general_principles/value_for_mon](http://www.nao.org.uk/sectors/civil_society/successful_commissioning/successful_commissioning/general_principles/value_for_money/vfm_and_tsos.aspx)
[ey/vfm_and_tsos.aspx](http://www.nao.org.uk/sectors/civil_society/successful_commissioning/successful_commissioning/general_principles/value_for_mon)

^{xxxiii} Barangaroo Development Authority Sydney Australia (www.barangaroo.com)

^{xxxiv} For more details see www.thesroinetwork.org/sroi-analysis/the-sroi-guide