

# The social and economic value of wheelchair user homes

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## I. Background introduction to the research

A separate short summary of this report is available on the LSE Housing and Communities [website](#).

It is estimated that 400,000 wheelchair users in England are living in unsuitable accommodation, with 20,000 estimated to be on local authority waiting lists for a wheelchair user home. Research has shown that a wheelchair user joining a local authority waiting list in January 2023 could have to wait up to 47 years to be offered a suitable new-build property<sup>1</sup>.

Despite the backlog in suitable wheelchair accessible homes, the government has not introduced, and currently does not plan to introduce, any national policies or targets around the development of new, fully wheelchair accessible dwellings.

For all new buildings, major refurbishments, or change of use, planning guidelines currently set out three levels of 'accessibility'<sup>2</sup>:

- Category 1: Visitable dwellings M4(1)
- Category 2: Accessible and adaptable dwellings M4(2)
- Category 3: Wheelchair user dwellings M4(3), of which there are two standards – adaptable and accessible. M4(3) 'wheelchair user adaptable dwellings' are built to be adjustable for occupation by a wheelchair user, whereas accessible dwellings should be constructed for immediate occupation by a wheelchair user.

Following a consultation in 2020, government announced a raising of mandatory access standards in July 2022. New requirements will see M4(2) set as the minimum standard for all new homes, meaning all new homes will need step-free access to all entrance level rooms, as well as facilities and other features that make the homes more easily adaptable over time<sup>3</sup>. The adaptations that can easily be made such as installing a level access shower, stairlift or bathroom grab rails can make them more suited to disabled occupants they are not going to be the solution for all wheelchair users and such adaptations are achieved at significant cost to the individual unless funding can be gained through the UK Disabled Facilities Grants

Whilst raising of accessibility standards was a largely welcome step, there was no introduction of national policy or mandatory targets on the number of new homes built to M4(3) standards, as disability campaigners had hoped for. This standard of accessibility has been left to local authorities and local planning policy to determine, based on 'local demand' for wheelchair user homes. Government argued that including mandatory figures for wheelchair user M4(3) homes could reduce the overall number of homes being built as the costs may be seen as prohibitive to developers, and therefore reduce the overall supply of accessible housing.

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<sup>1</sup> <https://www.habinteg.org.uk/latest-news/wheelchair-users-subjected-to-decadeslong-wait-for-new-accessible-housing-2004/>

<sup>2</sup> <https://www.architecture.com/knowledge-and-resources/knowledge-landing-page/accessible-housing-in-england>

<sup>3</sup> <https://www.gov.uk/government/consultations/raising-accessibility-standards-for-new-homes/outcome/raising-accessibility-standards-for-new-homes-summary-of-consultation-responses-and-government-response>

However, whilst some local authorities currently include a mandated target for building new wheelchair user homes in their local planning policies, a BBC Investigation in December 2022 found that three of England's 10 major cities had no plans for providing wheelchair accessible homes; and 60% of councils responding to the BBC's survey had either no access standards in place or were using outdated policies<sup>4</sup>.

The shortage of accessible homes has serious impacts on wheelchair users, who risk injury, loss of independence, or face huge costs for adapting their existing homes or moving into specialist accommodation.

According to earlier research by the [Centre for Analysis of Social Exclusion](#) at the London School of Economics and Political Science (LSE) people with an unmet need for accessible housing are estimated to be four times more likely to be unemployed or not seeking work due to sickness/disability than disabled people without needs or whose needs are met<sup>5</sup>. According to the social model of disability, it is the barriers that society puts in place that makes a person disabled, rather than an individual's physical or mental impairment. Where a home is not accessible, or does not meet the needs of an individual, there can be significant social and physical impacts that entrenches 'disability'. This includes the inability to complete self-care (washing, changing clothes, reaching the bathroom) or home-care (house cleaning) activities; worsened mental health and wellbeing; or having to move to another residence or into a care environment<sup>6</sup>.

Conversely, an accessible home can have hugely positive impacts on a wheelchair user's health, wellbeing, independence, and general lifestyle, with economic and social benefits to the individual and to wider society. Currently, there is little understanding of these benefits, and therefore for the business case for building new wheelchair user homes. This research aims to fill that gap and show the social and economic value of building new wheelchair user homes.

In March 2023, Habinteg commissioned the Housing and Communities research group at LSE to undertake research into the social and economic value of wheelchair user homes. The research was designed to review and apply existing and extensive research evidence around the costs and benefits of accessible housing to the specific question of providing more new build wheelchair accessible homes.

The research has two main elements:

1. **A cost-benefit analysis**, assessing the economic and social value of wheelchair user homes. This is set out in three cost-benefit models based on three groups of wheelchair user households:
  - Households with children who use wheelchairs
  - Working age, adult, wheelchair user households
  - People in later life who use wheelchairs (aged 65 and over).

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<sup>4</sup> <https://www.bbc.co.uk/news/uk-62638644>

<sup>5</sup> Provan, Burchardt & Suh (July 2016) No Place Like an Accessible Home: Quality of life and opportunity for disabled people with accessible housing needs. London School of Economics: London  
<https://www.lse.ac.uk/business/consulting/reports/no-place-like-an-accessible>

<sup>6</sup> Weisel, Iland. (2020). *Living with disability in inaccessible housing: social, health and economic impacts*. The University of Melbourne: Melbourne:  
[https://disability.unimelb.edu.au/\\_data/assets/pdf\\_file/0010/3969109/Accessible-Housing-Research-Report-22-October-2020.pdf](https://disability.unimelb.edu.au/_data/assets/pdf_file/0010/3969109/Accessible-Housing-Research-Report-22-October-2020.pdf)

2. **A qualitative analysis** of 17 interviews with wheelchair users, to understand how living in a suitable wheelchair user home impacts them or how they are affected by the lack of a suitable home. These interviews provided insight into the impacts of a wheelchair user homes on varied aspects of life, including family cohesion, independence, parenting, community engagement, and physical and mental wellbeing. We have used quotes from the interviewees in this report with pseudonyms to protect participants' privacy.

## II. Cost benefit analysis

### Introduction

This part of the report aims to:

- Demonstrate the business case for accessible homes by exploring the economic and social impact they deliver
- Show the economic value (or social value) of wheelchair user homes
- Provide a scalable figure that summaries the value of each wheelchair user home to society, the analysis of which could include:
  - The impact of a person whose home meets their accessibility needs being four times more likely to be in employment<sup>7</sup>
  - Comparison with alternative accommodations such as residential care
  - NHS cost savings
  - Reduced demand on local authority social care budgets

In addition, this report considers wider issues to address:

- The need to press for a national mandatory minimum level provision of wheelchair user homes to be included in the National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG). It is Habinteg 's view that a minimum of 10% of all new homes built in each local authority area should be provided at "wheelchair users" standard, to meet local need;
- How to provide additional evidence to both local authorities and to house builders around the needs for and the benefits of building wheelchair user homes;
- How to identify and address other potential barriers for such provision of more wheelchair user homes.

In order to address this task, we have prepared a social cost-benefit analysis. This provides a way to compare the additional cost of providing a unit of wheelchair accessible housing to the benefits which are likely to be realised in terms of savings to the costs of other services, and increased opportunities and wellbeing for the residents in those homes. These costs and benefits are based on independent academic and official research and reports, and are summarised using a standard modelling approach. The actual model is provided in an attached Excel workbook, and the outcomes of these calculations are presented in this main report.

We have structured this report by exploring a series of issues:

- How is "wheelchair user home" defined in current Building Control regulations (in "Approved Documents M")?
- What requirements are in the current planning framework, and what changes are under review?
- What is the level of need for wheelchair housing?

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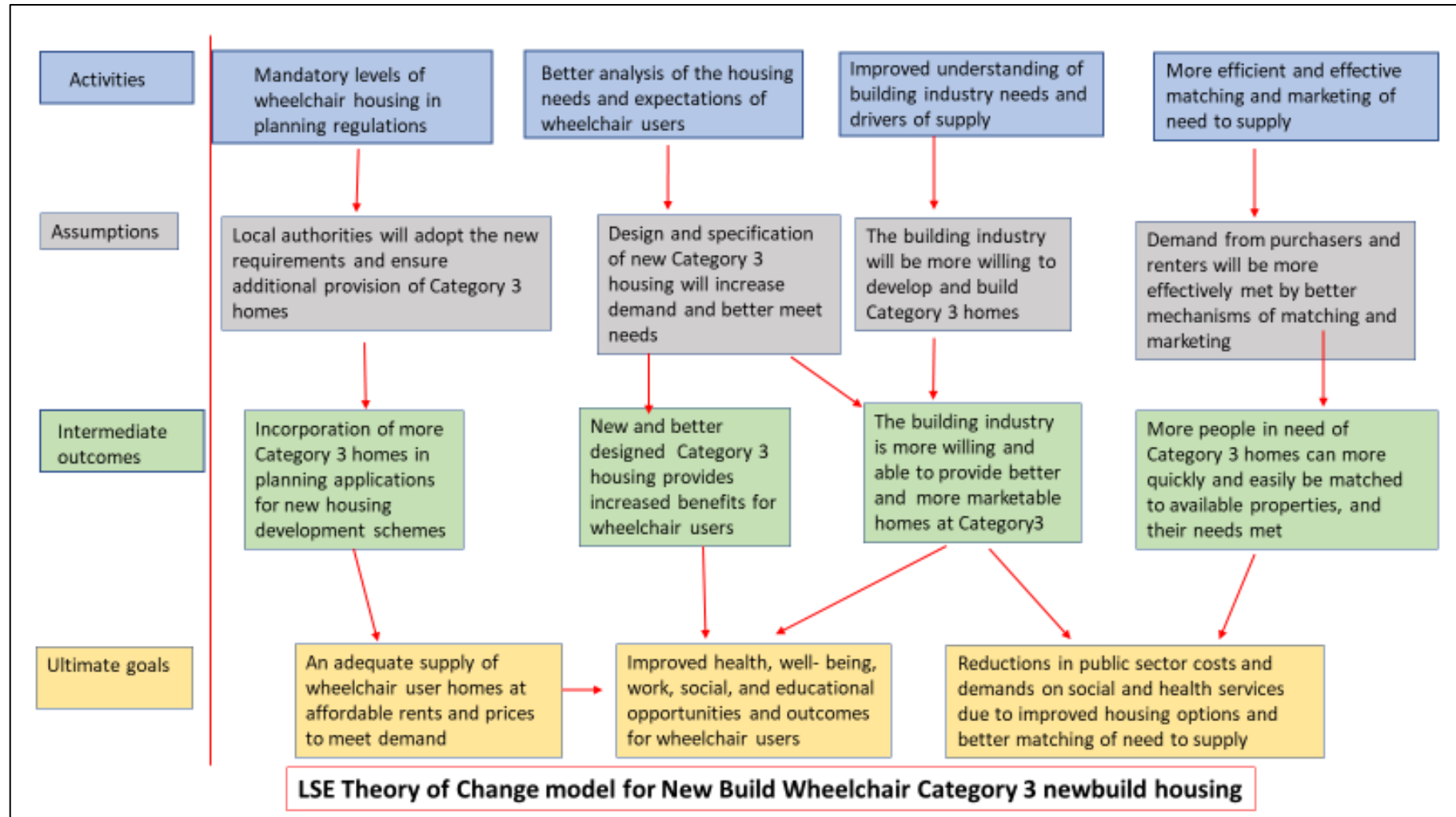
<sup>7</sup> Provan, Burchardt, and Suh (2016). *No Place Like an Accessible Home: Quality of life and opportunity for disabled people with accessible housing needs*. Habinteg: Papworth Trust: London.

- Taking all these factors into account, and drawing on a range of previous related official and published cost benefit exercises, what are the additional costs of provision of more units of wheelchair housing, and what are the types and levels of benefit are likely to accrue to wheelchair users and to the public purse from this additional provision?
- What factors influence the level of demand from potential purchasers of wheelchair user housing, and stimulate provision of these homes by the building industry, so ensure an adequate supply matched efficiently to demand and need?

We have also developed a Theory of Change model to structure out approach to this report. This can be summarised as below:



Figure 1: Theory of Change



## What planning and building regulations apply to “wheelchair user homes”?

Changes to Building Regulations and the National Planning Policy Framework (NPPF) were introduced by the government following the Housing Standards Review, which was implemented in 2015. This provided a new set of definitions to be used nationally, including those relating to housing. The driver for change set out in the departmental impact assessments is:

*There are a large number of complex, overlapping or contradictory housing standards, which each local authority can require for new homes through the planning system. This can add unnecessary build costs for home builders. Housing standards taken cumulatively increase the development costs for home builders and can obstruct growth as the additional costs and effort involved in meeting different standards can cause delays or even make some developments economically unviable. The various local standards are designed to tackle a range of different perceived market and information failures in the construction of new homes. However, the lack of co-ordination across standards and the way they are introduced, modified and enforced result in unnecessary costs and complexity.<sup>8</sup>*

Changes made around standards for accessible housing to meet the needs of disabled people and older people included a new M4(1) (“Category 1”) standard for visitable dwellings; a new M4(2) (“Category 2”) standard for general accessible and adaptable dwellings; and a new M4(3) (“Category 3”) standard for wheelchair user dwellings.

There are in fact two versions of Category 3:

- 3a: for wheelchair adaptable housing which is a home which can easily be adapted to meet the needs of a household including wheelchair users; and
- 3b: for wheelchair accessible housing which is a home readily useable by a wheelchair user at the point of completion.

The current details of the design requirements for wheelchair user homes are set out in the building regulations at [Approved Documents M<sup>9</sup>](#). In brief, this Category 3 standard will be met where reasonable provision is made, either at completion (for 3b) or at a point following completion (for 3a), for a wheelchair user to live in the dwelling, **and** use associated private outdoor space, parking and communal facilities that may be provided for use of the occupants.

“Reasonable provision” is made if the dwelling complies with all of the following:

- Within the curtilage of the dwelling, or of the building containing the dwelling, a wheelchair user can approach and gain step-free access to every private entrance to the

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<sup>8</sup> DLCCG (2015). *Housing Standards Review Implementation, Impact Assessment*. UK Govt: London

<sup>9</sup> UK Govt (updated 2021). *Approved Document M: Access to and use of building*. Volume 1, dwellings.

dwelling and to every associated private outdoor space, parking space and communal facility for occupants' use.

- Access to the WC and other accommodation within the entrance storey is step-free and the dwelling is designed to have the potential for step-free access to all other parts.
- There is sufficient internal space to make accommodation within the dwelling suitable for a wheelchair user.
- The dwelling is wheelchair adaptable such that key parts of the accommodation, including sanitary facilities and kitchens, could be easily altered to meet the needs of a wheelchair user or, where required by a local planning authority, the dwellings is wheelchair accessible.
- Wall-mounted switches, controls and socket outlets are accessible to people who have reduced reach.

The current [National Planning Policy Framework](#) (NPPF) and [Planning Practice Guidance \(PPG\)](#) apply to Local Authority local plans and state that the Category 3b requirement (that the property should be readily usable by a wheelchair user) should only be applied to those dwellings where the local authority is responsible for allocating or nominating a person to live in that dwelling.

In June 2019, further planning policy guidance was published relating to housing for older and disabled people. The PPG identifies the benefits of building accessible and adaptable housing as follows:

*“Accessible and adaptable housing enables people to live more independently, while also saving on health and social costs in the future. It is better to build accessible housing from the outset rather than have to make adaptations at a later stage – both in terms of cost and with regard to people being able to remain safe and independent in their home” (our emphasis)<sup>10</sup>.*

In September 2020, government launched a further consultation on raising accessibility standards of new homes<sup>11</sup>. This was described as being:

*“...part of a full review of Part M of the Building Regulations, relating to access to, and use of, buildings. Other elements of the review include a research programme on the prevalence and demographics of impairment in England and ergonomic requirements and experiences of disabled people. It also reviews use of accessible and adaptable housing standards at the local level.”*

The [response to this consultation](#) in July 2022 set out:

*71. Government is committed to raising accessibility standards for new homes...*

*73. Government proposes that the most appropriate way forward is to mandate the current M4(2) (Category 2: Accessible and adaptable dwellings) requirement in Building Regulations as a minimum standard for all new homes – option 2 in the consultation. M4(1) will apply by exception only, where M4(2) is impractical and unachievable (as*

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<sup>10</sup> DLUHC/MHCLG (2019). *Guidance: Housing for older and disabled people*. UK Govt: London

<sup>11</sup> DLUHC/MHCLG (2020). *Raising accessibility standards for new homes: A consultation paper*. UK Govt: London

*detailed below). Subject to a further consultation on the draft technical details, we will implement this change in due course with a change to building regulations.*

***74. M4(3) (Category 3: Wheelchair user dwellings) would continue as now where there is a local planning policy in place in which a need has been identified and evidence. Local authorities will need to continue to tailor the supply of wheelchair user dwellings to local demand.***

***75. While no change is proposed to how M4(3) is applied and established through a local planning policy, one simple alteration to the hierarchy of optional technical standards within building regulations should have maximum impact. We expect the saved resource and expertise on making M4(2) policies will help local planning authorities focus on evidencing the need and proportion for wheelchair-user dwellings. [Our emphasis]<sup>12</sup>.***

A further report produced alongside this consultation is cited in [Research on Part M: access to and use of buildings<sup>13</sup>](#). This report is referred to in the section on benefits of wheelchair accessible housing below, and also in the later section on demand and supply for wheelchair housing.

It should be noted that the commitment to mandate M4(2) standards set out above has not yet been implemented. The exact implementation date for this depends on further consultation around some of the technical details, plus allowing for a transitional period for homes already in progress.

The context of this report, therefore, is that there is currently **no commitment to mandate any specific level of provision** of M4(3) housing standards in local planning policy. Instead, it is up to each local authority to comply with the requirement to assess local need and then tailor the supply of wheelchair user dwellings to local demand, albeit that there should be additional resource to do this as Category 2 is now mandatory. The next section considers how need for wheelchair user homes is assessed, and the likely levels of need.

Note that there are local authorities which do have commitments to provide a minimum provision of wheelchair accessible housing in their areas. One example is the GLA, where Policy 3.8 of the current London Plan sets out that:

*...boroughs should work with the Mayor and local communities to identify the range of needs likely to arise within their areas and ensure that.....*

*d. ten per cent of new housing meets Building Regulation requirement M4 (3) 'wheelchair user dwellings', i.e. is designed to be wheelchair accessible, or easily adaptable for residents who are wheelchair users<sup>14</sup>*

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<sup>12</sup> DLUHC/MHCLG (2022). *Raising accessibility standards for new homes: summary of consultation responses and government response*. UK Govt: London

<sup>13</sup> PRP Innovate (2021). *Research into Access to and Use of Buildings: Part 1: The benefits of accessible housing*. MHCLG; UK Govt: London

<sup>14</sup> Mayor of London. *M37 Accessible Housing*

[https://www.london.gov.uk/sites/default/files/mayor\\_of\\_london\\_-\\_m37\\_accessible\\_housing.pdf](https://www.london.gov.uk/sites/default/files/mayor_of_london_-_m37_accessible_housing.pdf)

However, research indicates that the majority of local authorities do not currently mandate for specific levels of wheelchair user housing to be included in housing policy or strategy.

## What is the level of need for wheelchair housing?

Understanding the level of need for wheelchair user housing, and the linked level of demand in both the rental and home ownership markets, is key to making policy decisions about the level of wheelchair user housing which should be mandated, and to any cost benefit analysis of proposals for policy change.

Recent government guidance states that “*local planning authorities [should] focus on evidencing the need and proportion for wheelchair-user dwellings*”. Sources of information to inform this needs analysis are provided by government in their 2015 “[Guide to available disability data](#)”, although several parts of the information provided in that guidance are considerably out of date<sup>15</sup>. There have been concerns expressed about the extent to which adequate assessment of needs have been undertaken by local authorities. For example the 2018 report by the Equality and Human Rights Commission on their inquiry into “[Housing for disabled people: Britain’s hidden crisis](#)”, which looked at whether the accessible and adaptable housing available in Great Britain is fulfilling disabled people’s rights to live independently, set out:

*Our survey of local authorities, undertaken as part of our evidential basis for the inquiry, found that the systems used to identify disabled people’s requirements and deliver accessible houses are weak (EHRC, 2018). Local authorities are making decisions about current need and future demand for accessible houses based on very limited data; only 12 per cent of local authorities rated the data available to them as ‘good’ or ‘very good’<sup>16</sup>.*

Habinteg have published a number of reports that provide guidance on assessing need, including a 2010 report on assessing needs in England, and an updated 2012 report on assessing need in Scotland<sup>17,18</sup>. The former report provides detailed analysis of the level of need nationally, and approaches to estimating need at local authority level in England. It also includes annexes with additional contemporary details of the types of wheelchair user, which showed, at 2010, the demographics of wheelchair users in England by: age (60% over 65, and 25% of working age 25-65); economic status (15% employed and 18% retired); ethnicity (91% white); gender (66% female); tenure (55% owner occupiers); and whether the wheelchair is used outdoors only (74%). Note that in relation to the cost-benefits in this report, we have assumed that any of the households who either purchase wheelchair user homes, or are allocated wheelchair user homes by a local authority, will need and make use of the internal accessibility features. Where they only use a wheelchair outside the home, it is unlikely that they would wish to pay for or need the Category 3 levels of provision and related costs.

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<sup>15</sup> MHCLG (2015). *Building regulations: guide to available disability data*. UK Govt: London

<sup>16</sup> Equality and Human Rights Commission (2018). *Housing for Disabled People: Britain’s Hidden Crisis*. EHRC. p.7

<sup>17</sup> Habinteg (2010). *Mind the Step: An estimation of housing need among wheelchair users in England*. Habinteg and London South Bank University, London

<sup>18</sup> Horizon Housing Association/CIH Scotland (2012). *Mind the step: An estimation of housing need among wheelchair users in Scotland*. CIH Scotland: Edinburgh. Available at <https://www.cih.org/media/jhkfpwcu/j13778-mind-the-step-november-2012.pdf>

An example of applying these and other means for assessing need can be found in a more recent, 2022 publication addressing need for wheelchair user homes in the Greater Manchester Combined Authority<sup>19</sup>. This report concludes that 23% of wheelchair users in the GMCA have unmet needs for adequate housing.

In terms of wider national information on the proportion of the population who are currently wheelchair users, it is unfortunately the case that only limited official national data is available. The Greater Manchester Combined Authority report cited above noted that “*The English Housing Survey identifies that 3.3% of all households has one or more wheelchair users*” although this was based on the English Housing Survey (EHS) 2011 to 2012 household report, and this information is no longer available in later EHS reports.

The Census does not include a question on wheelchair user. This was raised as an issue following the 2011 census. In a report in 2014, the Office for National Statistics, set out that: *In response to this consultation [“2011 Census: Initial view on content for England and Wales”] there was some demand for information on wheelchair or mobility vehicle use to be collected in the census. This was evaluated using the criteria detailed in the consultation document and a scoring system to rank topics according to the strength of user requirement. The decision was that **the user need for the information was not strong enough to justify the inclusion of a question on wheelchair use** [our emphasis]<sup>20</sup>.*

There is detailed NHS [information](#), however, at both national and [NHS Integrated Care Board level](#), about provision of wheelchairs to people in need of them. This sets out, at several geographic and needs levels, the total number of patients currently registered with the service.

*“This will be the total number of patients (split by adults and children) registered with the service at the end of the reporting period, either through the long term loan of a piece of equipment or through an open episode of care or a provision of a budget ‘including those who are in receipt of a third party personal wheelchair budget’. The collection is solely concerned with new or open episodes of care on the wheelchair pathway which require equipment on a long-term basis (For the purpose of this dataset it is understood that broadly long-term means six months or more). There is no requirement to record short-term loans of equipment (for example, a six week loan period to address an acute medical episode which is recoverable)”<sup>21</sup>.*

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<sup>19</sup> Places for Everyone (2022). *Housing Technical Standards*, Helen Wilson Consultancy Ltd. See sections 3.38-3.43: <https://www.hwa.uk.com/site/wp-content/uploads/2022/03/5.2-PfE-Accessibility-Housing-technical-standards-report.pdf>

<sup>20</sup> ONS (2014), *Number of Wheelchair Users*: <https://www.ons.gov.uk/aboutus/transparencyandgovernance/freedomofinformationfoi/numberofwheelchairusers>

<sup>21</sup> NHS England and NHS Improvement. (2020). *National Wheelchair Data Collection Guidance*: <https://www.england.nhs.uk/wp-content/uploads/2017/01/National-Wheelchair-Data-Collection-Guidance-2020-update-Final.pdf>



In Quarter 4, 2022-23, there were a total of 575,837 patients in England (0.9% of the population) in need of a wheelchair. This is likely to underestimate the demand, as some wheelchair users will independently obtain their own wheelchairs.

Additional indications of the extent of need is provided by a 2022 [report from Frontier Economics](#), on behalf of the Wheelchair Alliance. which includes estimates of the need for wheelchair services alongside recommendations about improvements to services.

*“ This report aims to provide robust evidence and data on the scale of current issues in wheelchair provision, potential beneficial interventions and highlight best practices. Some of the existing evidence on the challenges that exist in the provision of wheelchair services is either out of date or anecdotal and high level. This study provides an evidence-based articulation of current issues and quantify variation in geographic service provision”<sup>22</sup>*

Using a variety of sources, the research report notes that around 1.2% of the population are estimated to be wheelchair users:

*In 2018-19, we estimate that there were between 688,000 and 860,000 users in England, with a central estimate of around 780,000 users (or up to 1.37 million users if we consider users of powered mobility scooters). The estimated range is very large to reflect the uncertainty due to the lack of robust evidence to back our assumptions.*

Finally, the [Housing Standards Review Implementation, Impact Assessment](#) noted that:

*There are an estimated 10 million disabled people in the United Kingdom, including estimates of between 605-720,000 wheelchair users<sup>23</sup>.*

In summary, although there appears to be limited robust collection of information at local authority level, at a national level there are likely to be in excess of 700,000 wheelchair users, a number representing significant potential demand for appropriately accessible housing.

One aspect of the need for wheelchair user housing, which we explore in this paper, is the need to address the wishes and aspirations of different types of wheelchair users. We have provided information around cost-benefits in relation to three types of households with wheelchair users:

- households with children who use wheelchairs,
- working age adult householders who use wheelchairs,
- people in later life who use wheelchairs

There are also differences between the needs of people who primarily use wheelchairs outside the home compared to those who use them inside, but for the purposes of this report we have not focused on that distinction, but considered that use would be both

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<sup>22</sup> Frontier Economics (2022). *An Economic Assessment of Wheelchair Provision in England. A report commissioned by Motability and The Wheelchair Alliance.* Frontier Economics Ltd: London.

<sup>23</sup> DCLG (2015). *Housing Standards Review: Final Implementation Impact Assessment.* Paragraph 249, p.48: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/418414/150327\\_-\\_HSR\\_IA\\_Final\\_Web\\_Version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/418414/150327_-_HSR_IA_Final_Web_Version.pdf)



outside and inside. These points are discussed in more detail below in the section on the assumptions behind the cost-benefit model.

Part of the cost-benefit consideration is whether there will be a demand for new market homes built to Category 3 standard. This raises issues about developing the market provision of appropriately accessible wheelchair housing, including design, marketing, and customer satisfaction. In brief, will people be willing and able to buy the new homes, or to rent them? If not, house builders will be unwilling to provide them, and local authorities will be unwilling to fund or mandate their construction. These issues are considered in the later section on demand and provision.

## Modelling the costs and benefits of wheelchair user housing

We have adopted the government's recommended "Green Book" approach of modelling the costs and benefits of building new wheelchair user homes to Category 3 accessibility standard over ten years, and providing a net present value of costs and benefits over the ten year period. The costs included are capital costs, payable at the point of purchase of the home by a local authority or private individual (owner occupier or landlord). That capital cost could be paid off as a Public Works Loan Board debt, a private mortgage, from the sale of a previous property, or by other means. We have not addressed this, but simply included the full capital cost at the point of purchase. We have assumed that the costs will be accrued in Year 0, at point of purchase, and the benefits incur in the subsequent years.

In relation to benefits, we have identified both one-off benefits and also recurring benefits. For example, where the provision of wheelchair user housing results in a continuing reduction of the provision of home care, which would otherwise have been needed each year, the annual benefit of a reduced need for home care is added in each year. In contrast, other benefits, such as gaining a sense of dignity and independence, have been sourced from evidence which provides a one-off value, which is then spread over the ten-year period. These annual amounts are discounted and summed to provide a 10 year net present value figure for costs and benefits.

We have divided wheelchair users into three key groups for the purpose of this model, who we have assumed will have slightly different benefits, which will need to be modelled separately. The three groups are:

- **households with children who use wheelchairs.** Our assumption for this cost-benefit model is that any new property will be a family dwelling including one or two parents and one or more children. The benefits here will potentially include those linked to enabling a better environment for play, socialisation with childhood friends, including socialising with other wheelchair using children, supporting educational development, and building confidence and independence during childhood and adolescence; all of which will have potentially lifelong benefits for these young people. We assume that any home care which may be needed will be primarily provided by the child's parent(s).
- **working age adult householders who use wheelchairs.** We assume that benefits for this group of people can potentially include individuals being enabled to access work opportunities, including both remote working and outside the home. Any enhanced ability to work will generate gains in terms of income and reduce reliance on welfare benefits to provide basic income, as well as potentially widening opportunities to socialise with family members, neighbours and work colleagues, and to engage in their local community. These households will include a mix of single people, couples, and families with children. They may well currently (prior to moving to a new home) be in receipt of regular home care to assist with regular tasks, and we assume that that assistance can be reduced once a wheelchair home is available. Benefits can also include possibly being able to move from a family home to independent living elsewhere.
- **people in later life who use wheelchairs.** Here we assume that it is unlikely that there will be children in the household, and that households will be made up of single people or

couples. We also assume that they are less likely to be seeking regular paid employment. Benefits can include greater opportunities to welcome family and friends to a wheelchair accessible home, and also to become less reliant on home care support, at least for a significant period. Reducing the risk of falls and other accidents due to the provision of a wheelchair user home will be a particular benefit for people in this group. They may also be more able to remain living independently at home for longer, rather than needing to move to permanent residential care of some kind.

The costs and benefits for each of these groups are different. The sizes of homes needed will be different, and consequently the costs for each household type. For these reasons we have modelled separate estimates of the costs and benefits of each of these types of household, with consequent differences of outcomes and ratios of cost to benefits. In the attached Excel cost-benefit modelling analysis, there are specific sheets for each of these types of wheelchair user, and the different household costs and benefit that affect each group. We believe this breakdown of wheelchair users into three key groups provides a more accurate and clearer picture for each group, in preference to a more generic estimate, and helps to understand the benefits of new wheelchair user homes to different wheelchair users across the life cycle.

## Modelling benefits

There are a range of recent reports which have addressed the cost-benefits of accessible housing, including wheelchair user housing. As noted above, many of these wider (Category 2) benefits are also of direct relevance in identifying the benefits of wheelchair user housing (Category 3). In Annex 1, we review four of these reports in more detail. We set out a summary of the reports here, listing briefly the scope of each report, and providing a summary table of where the benefits listed in each report overlap with other reports. We have taken these overlapping benefits as basis for the 'main benefits' that we model in our cost-benefit analysis.

Four reports have been included to reflect different points of view and areas of expertise: a government policy change impact assessment; a government commissioned review of the provision and benefits of accessible housing and non-housing spaces; an independent academic study of benefits of adapted and accessible housing; and a short report commissioned by a disability charity. Three of these are meta-studies, reviewing a wide range of primary literature around benefits. The four together provide triangulation from slightly different points of view, and a wide range of different evidence reviews of existing literature, all with a focus on the costs and benefits of accessible housing.

The most recent report cited is [Research on Part M: access to and use of buildings](#)<sup>24</sup>. This report was produced as part of the 2020 process of review and consultation around accessible housing and building standards (Part M) that we discussed earlier.

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<sup>24</sup> Ministry of Housing, Communities and Local Government (20210). *Research on Part M: Access to and use of buildings*. Report by PRP Innovate on behalf of MHCLG

Part One of this document includes details of the outcome of an investigation with the research questions:

- *Needs: What evidence exists to characterise the nature of the benefits provided by accessible housing?*
- *Benefits: What evidence exists to characterise and quantify the benefits provided by the provision of accessible housing and accessible housing standards?*
- *Benefits: Are there potential savings/costs to public and private sectors that can be achieved by changes to Part M? Do the existing measures already result in potential savings/costs to the public and private sectors?*

The report provides details of the investigation and sources used, which are cited at appropriate points throughout the report:

*Evidence for the two key research questions identified above are collected from a variety of sources, including government, disability groups, access consultants, housing providers, building owners (including Facilities Management teams), local authorities, designers and other stakeholders from across the industry.*

Second, [Living with disability in inaccessible housing: social, health and economic impacts](#) is a recent and well evidenced report, which includes an extensive bibliography of a wide international range of sources for the benefits of accessible housing<sup>25</sup>. The study included an online questionnaire that elicited 1,187 responses, followed by 45 in-depth interviews, conducted in August 2020. It was initiated in response to the Australian Building Codes Board's (ABCB) consultation on a proposal to include minimum accessibility standards for housing in the National Construction Code. The aim of the study was to address a gap in both qualitative and quantitative data about the lived experience, and social, health and economic benefits of accessible housing. The study covered adults, but also recognised that "further research is also needed on the impact of inaccessible housing on families with children with disability." This appears to be an area with less specific evidence about the impact of accessible housing provision on children's wellbeing, education, and later outcomes. In addition to the four main sources, we have reviewed a 2008 report, [Housing and disabled children](#), which identifies many of the impacts and likely benefits of providing better accommodation, but not specifically in relation to the need for wheelchair user housing<sup>26</sup>. We have therefore used other evidence in relation to potential benefits to children in terms of improved social engagement.

The third key report is the [Final Implementation Impact Assessment for the Housing Standards Review](#), published by the then Department of Communities and Local Government in March 2015, which provides costs and benefits of the changes to building regulations and planning guidance introduced in 2015<sup>27</sup>. This impact appraisal related to the proposed policy to introduce a new set of national standards around accessible housing, rather than a set of

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<sup>25</sup> Weisel, Ilan (2020). Living with disability in inaccessible housing: social, health and economic impacts. Final Report. School of Geography; University of Melbourne: Melbourne.

<sup>26</sup> Bryony Beresford, with David Rhodes (2008). *Housing and Disabled Children*. Joseph Rowntree Foundation: <https://www.jrf.org.uk/report/housing-and-disabled-children>

<sup>27</sup> DCLG/MHCLG (2015). *Final Implementation Impact Assessment for the Housing Standards Review*. UK Govt: London

local standards, but as noted above its evidence around benefits (and costs) is relevant to wheelchair users. Again, this report cites a range of primary sources in evidence of benefits likely to be consequent on the provision of accessible housing.

Finally, *The Fiscal Impact of the Lack of Accessible Housing in the UK and the Returns to Investment in Accessible Newbuild Social Housing*, is an unpublished 2015 report written by Howard Reed of Landman Economics for Leonard Cheshire Disability<sup>28</sup>. Although unpublished, this presents a further set of overlapping potential areas of benefit and additional references to background literature. It also more specifically addresses investment in new build accessible housing. We have been granted permission by the author to use the report here.

In the Annex we have provided much fuller descriptions of the nature of the benefits identified in each of the reports, the evidence cited in support of those claimed benefits, and the likely scale and monetised value of each. How exactly this information has been used has also been detailed in the notes provided in the Excel workbook of the cost-benefit analysis calculations which accompanies this report and summary. In this main section of the report, we have provided below an overview summary of the main types of benefit identified by each of four reports. This shows a considerable amount of overlap and agreement between those sources in relation to likely areas of benefit to wheelchair users moving into accessible housing.

Figure 2: Summary of main benefits identified by the four key reports

Area of benefit identified	MHCLG Access and Use	U of Melbourne accessibility issues	DCLG Housing Standards Review	Reed newbuild benefit review
<b>Reductions in public expenditure</b>				
Reduction in delay of hospital discharges	x		x	x
Reduction in trips and falls in the home	x	x	x	x
Avoiding the need for <u>permanent</u> residential care	x		x	x
Remove or reduce the cost of care assistance at home	x	x	x	x
Reduced welfare benefits and greater contribution to tax and NI	x	x		x
<b>Benefits primarily for the individual</b>				
Higher disposable income	x	x		x
Improved confidence, independence and self esteem	x	x	x	x
Greater social inclusion and community participation in a secure and appropriate home		x	x	

<sup>28</sup> Reed, H., (2015) *The Fiscal Impact of the Lack of Accessible Housing in the UK, and the Returns on Investment in Accessible Newbuild Social Housing*. Landman Economics, London. Available direct from Landman Economics at [howard@landman-economics.co.uk](mailto:howard@landman-economics.co.uk)

The four reports above cited both overlapping and different sources from different years, as well as international sources. In the attached analysis workbook, we have set out exactly which sources we have used to monetise the current likely costs and benefits of new build wheelchair user homes, based on the benefits evidence from the reports above. Updated information on current costs of local authority services, including day care and residential care (and hence benefits in terms of reduced need for these services) has been evidenced using the details provided by the [Unit Costs of Health and Social Care 2022 Manual](#)<sup>29</sup>. This is a collaborative project involving Personal Social Services Research Unit (PSSRU) at the University of Kent and the Centre for Health Economics (CHE) at the University of York. We have also cited a previous report on the business case for adaptations, [Building a business case for investing in adaptive technologies in England](#)<sup>30</sup>. This provides additional evidence for the likely level of demand for health and social care services, particularly around falls in the home, as well as the levels of quality of life gains which could be expected.

There are two categories of benefits ascribed to the cost-benefit model: first “one off” benefits where we have estimated the likelihood of an event occurring (such as a fall) over the entire 10-year period; second, “annual” benefits, such as the income from getting a job, or needing less local authority home care assistance, where the amount of the benefit is extended at a discounted rate over the ten year period, using the HMT Social Time preference rate of discount. The way we have approached each benefit type, and some details on variations are set out in detail in the attached workbook.

To work out the benefits for a group of people, we have used best evidence to estimate how many people in a hundred might be affected by the benefit – for example what percentage of people in a specific household type have been estimated to be likely to have a fall during any one year (e.g. 6.2% of wheelchair users are expected to have a fall in any one year). In this particular case the costs to the NHS of one fall is included once, but assumed to only occur in just over six people in a hundred, so a fall is modelled at 6.2% of the total cost to the NHS for each individual person. We have also spread this cost over the ten year period, with specific adjustments about how many falls might affect the small population of people who gain access to Category 3 new homes over that 10 year period. This is all set out for each type of benefit and household type in the excel workbook and summarised briefly below.

Below we have listed the main benefits in terms of those which lead to reduced reliance on public services, then those which have direct wellbeing or financial benefits to individuals. Each list is ordered in terms of the importance in the specific category.

#### Benefits also generating savings for public services

- **Remove or reduce the cost of care assistance at home:** based on the MHCLG review of Part M potential benefits, we have estimated that the provision of Category 3 accommodation will save a modest 4.5 hours a week in the amount of home care and

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<sup>29</sup> Jones, Weatherly, et al (2023) Unit Costs of Health and Social Care 2022 Manual. Technical report. Personal Social Services Research Unit (University of Kent) & Centre for Health Economics (University of York), Kent, UK

<sup>30</sup> Snell, Fernandez, and Forder, *Building a business case for investing in adaptive technologies in England*. PSSRU at LSE Discussion Paper 2831, July 2012

support provided to all groups. Pressure on adult care service represents a major element of local authority revenue expenditure and even a small reduction is important to helping to reduce growing demands for these services.

- **Reduced welfare benefits and greater contribution to tax and NI:** for the working age wheelchair users, and based on the Labour Force Survey figures that there are 28% fewer wheelchair user working age people in employment than the general population (53% of 81%) we have estimated that 15% of the working age population gaining new Category 3 homes will enter full time employment; and that in the case of households with children using wheelchairs, 10% of the partners of the main (able bodied) earner will be able to move into part time work due to less need for continuous care to be provided to the child. This also provides income for Government in the form of tax and national insurance contributions (NI), as well as reductions in expenditure on welfare benefits, which have been included in the figures.
- **Avoiding the need for permanent residential care:** The adaptive technology assessment study cited above<sup>31</sup> suggested that this could affect 5.5% of people with unmet disability accessibility needs. We applied this figure to all of the later life group over the 10-year period, halved the incidence for the working age group, and assumed it would not affect children in the family group at all.
- **Reduction in delay of hospital discharges:** the lack of an accessible home is well recognised in the literature as a major issue in hospital discharge. Using the [NHS 2023 review](#) of the barriers to hospital discharge as a guide, we have made the very cautious assumption of a one week delayed discharge from hospital over the ten year period for 30% of all of the household types, which is to say three people in a hundred having a delayed discharge of one week in the ten year period<sup>32</sup>.
- **Reduction in trips and falls in the home:** we have used the business case for adaptive technology study cited above to estimate the incidence of falls requiring ambulance assistance and requiring hospital treatment. This suggests that falls requiring ambulance and hospital assistance could affect 6.2% of people with unmet accessibility needs each year (as mentioned in the example cited above). We reduced this as the provision here is specifically related to wheelchair accessibility, and assumed two falls are prevented in a ten year period for 6.2% of the working age and later age groups, with more intensive NHS treatment for fractures for the more vulnerable later age group. We assumed children are likely to have one fall every two years prevented in this ten year period, as they would be more likely to be out engaging in robust play with friends, indoors or in the garden areas.

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<sup>31</sup> Ibid

<sup>32</sup> DHSC (2023). *Delivery plan for recovering urgent and emergency services*. NHS England: London



#### Benefits primarily for the individual

- **Higher disposable income:** this is based on the estimates of increased ability to work set out above, and is monetised net of tax and NI paid.
- **Improved confidence, independence and self esteem:** this benefit has been identified and monetised as part of the [UK Social Value Bank](#) developed and validated by the Housing Association Charitable Trust. This social value bank estimates and monetises the social value of improved housing. These figures are based on several years of social value based research and economic analysis by the [Simetrica-Jacobs](#) research consultancy which draws on the work of Daniel Fujiwara, conducted for the UK government and at LSE. Confidence and independence have been identified as key benefits in the wider literature around the benefits of accessible housing and this specific evidence provides a robust basis to monetise the value. This measure applies more to adults, and we have estimated that it would be relevant to 20% of working age wheelchair users, and 30% of later years households, as loss of confidence and lack of independence can be a growing concern for that group. This is applied as a one-off benefit during the ten-year period as the social value research provides a one-off value.
- **Greater social inclusion and community participation in a secure and appropriate home:** this has also been monetised using the UK Social Value Bank values as outlined above, where the value is related to having a home which is appropriate to the needs of the householder, and is secure that it has been obtained (owned or rented) specifically in order to address the long term needs of the wheelchair user. The HACT estimate for the lifetime value of this is £1,717. We have estimated that there will be a particular benefit for all groups and have applied the social value to half of them, as a one-off benefit during the ten year period as the social value research provides a one off value.

## Modelling costs of building new wheelchair user homes

The main source of information and evidence on the costs involved in building new homes to Category 3 wheelchair user standard is the original Housing Standards Review Impact Assessment cited above, including and in particular, the specific source document for many of the costs cited in that Impact assessment, the [2014 Housing Standards Review Cost Impacts report](#) by the EC Harris Building Assets Consultancy<sup>33</sup>.

This report sets out estimates, at 2014-15, of the costs of providing additional accessibility features in a new home, and also the costs of providing additional space for these features. There are tables in the document that relate to each of these elements of additional cost, and also a detailed discussion and cost adjustment in relation to “space cost recovery” which is an adjustment of cost in relation to a range of criteria (set out at 4.3.9 to 4.3.19) including local housing market pressures, the willingness of buyers to pay the full costs, and other factors. To arrive at costs for this cost benefit report we have consolidated the original

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<sup>33</sup>EC Harris Built Asset Consultancy (2014) *Housing Standards Review: Cost impacts*. DCLG: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/353387/021c\\_Cost\\_Report\\_11th\\_Sept\\_2014\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/353387/021c_Cost_Report_11th_Sept_2014_FINAL.pdf)



tables detailing the cost of providing both the accessibility features and the additional space provision net of “space cost recovery”, then uprated the values to 2021-2 prices. This is set out below.

Figure 3: Cost of providing accessibility features and additional space provision to Category 3 wheelchair user home standard, uprated to 2021-22 prices

<b>Accessibility costs (Table 45) and access related space cost after Space cost recovery (Table 45b) uprated to 2021-22 prices</b>					
	1 B	2B	2B Terrace	3B Semi- detached	4B
	apartment	Apartment			Detached
3a Adaptable	£11,430	£13,755	£28,718	£19,868	£32,152
3b Accessible	£11,611	£20,926	£32,621	£34,257	£34,558

There are also difference between the costs of wheelchair accessible housing (Category 3b) in the social housing sector compared to wheelchair adaptable housing (Category 3a) in the owner-occupied sector. Here we have data from the English Housing Survey and the Census 2021, as well as other studies of tenure and household size, including the Disability Survey 2021, to generate estimates of the tenure breakdown and bedroom sizes for each group. These are also in the “tenure and house type” sheet of the attached workbook. These cost calculations are also set out below. The overview outcome is:

Figure 4: Tenure breakdown of working age wheelchair users

Tenure, by different sources of information	Owner occupier %	Social rented housing %	Private rented housing %	Other %
Disability and housing UK 2021	54	25	16	7
Disability Survey 2021 (working age)	51			
Outcomes for disabled people UK 2021 (working age)	40	25	n/a	16
Habinteg 2010	55			

The ratio of owner occupiers to social housing tenants is important in balancing the proportion of 3a adaptable (owners) to 3b accessible (social housing tenants). It can be seen from the above table, which is about working age wheelchair users, that if we leave aside private renting and other tenures, that there is a 2:1 ratio of owner occupiers likely to be represented in the groups of working age, and so probably also later life, wheelchair users. This leaves approximately 33% of wheelchair users living in social housing, which should be provided at Category 3b standard of accessibility.

It is, however, more probable that households with a child wheelchair user will be more representative of the wider population, where 64% of the total population are owners, and 17% live in social housing – a ratio of 3.8:1, meaning around 20% of these households live in social housing<sup>34</sup>.

<sup>34</sup> DLUHC (2022). *English Housing Survey 2021 to 2022: Headline report*. <https://www.gov.uk/government/statistics/english-housing-survey-2021-to-2022-headline-report/english-housing-survey-2021-to-2022-headline-report#section-1-households>

In relation to number of bedrooms, the Census 2021 indicates that:

- 11.4% of households had one bedroom
- 27.1% had two bedrooms.
- 40.4% had three bedrooms
- 21.1% had four or more bedrooms

Using these figures and rounding them, we have arrived at the following estimates of the distribution of the stock likely to be required. Rounded totals are in the Figure 9 below. In relation to **working age people who are wheelchair users**, some will be single and others will have partners or families. We have used the two to one ratio of working age disabled owners as noted above, and the distribution of bedroom sizes in the English Housing Survey, but omitting the need for 4 bedroom property as being less likely to appear. We similarly assume that all owner occupiers will choose terraced two bedroom properties as they are more likely to have outdoor garden areas, and incorporate the EHS data on 11.4% of households being in one bedroom properties.

*Figure 5: Estimated distribution of housing stock lived in by working age wheelchair users*

<b>Working age wheelchair user</b>	Tenure	Bed size	Totals
<b>In owner occupation</b>	66%		
Of whom in one bedroom flats		14%	10%
of whom in 2 bedroom flats		0%	0%
of whom in 2 bedroom terraced homes		34%	23%
of whom in 3 bedroom terraced homes		51%	34%
<b>In social housing</b>	33%		
Of whom in one bedroom flats		14%	5%
of whom in 2 bedroom flats		34%	11%
of whom in 2 bedroom terraced homes		0%	0%
of whom in 3 bedroom terraced homes		51%	17%

In relation to **households in later years**, we assume that there is 2:1 distribution of two to one bedroom homes, and that the distribution of ownership to social housing is similar to the working age distribution set out above.

*Figure 6: Estimated distribution of housing stock lived in by later years wheelchair users*

<b>Later years wheelchair user</b>	Tenure	Bed size	Totals
<b>In owner occupation</b>	66%		
Of whom in one bedroom flats		30%	20%
of whom in 2 bedroom flats		0%	0%
of whom in 2 bedroom terraced homes		70%	46%
<b>In social housing</b>	33%		
Of whom in one bedroom flats		30%	10%
of whom in 2 bedroom flats		70%	23%
of whom in 2 bedroom terraced homes		0%	0%

In relation to **families with a child who is a wheelchair user**, 80% are likely to be in owner occupation, in line with the national average for owner occupation. None are likely to be one bedroom flats and the distribution of bedrooms will be in line with Census figures (excluding one bedroom flats).

*Figure 7: Estimated distribution of housing stock lived in by households with a child wheelchair user*

<b>Family with child wheelchair user</b>	Tenure	Bed size	Totals
<b>In owner occupation (and assuming none in flats)</b>	80%		
of whom in 2 bedroom homes (none in flats)		31%	24%
of whom in 3 bedroom homes		46%	36%
of whom in 4 bedroom homes		24%	19%
<b>In social housing</b>	20%		
of whom in 2 bedroom homes (all flats)		31%	6%
of whom in 3 bedroom homes		46%	9%
of whom in 4 bedroom homes		24%	5%

## Summary and discussion of costs and benefits

The details of all the assumptions, calculations, discounting and comparisons around cost benefits are set out in the Excel Workbook which accompanies this report and summary.

The overall outcomes of the cost-benefit analysis calculations are summarised below. The first table looks at the impact of moving to a Category 3 home on each of the household groups. These costs and benefits are for **one household moving to new build Category 3 housing**. The costs and benefits have been modelled over a ten year period, which is the recommended approach set out in the Government's [Green Book](#) on approaching these issues.

Figure 8: Summary of new present value of costs and benefits, and ranges

<b>Net present value of benefits over 10 years starting in Year One</b>			
	<b>Working age</b>	<b>In later years</b>	<b>Household with child wheelchair user</b>
<b>Total benefits 10 year NPV</b>	<b>£94,098</b>	<b>£101,077</b>	<b>£66,902</b>
<b>Capital costs (on purchase in Year 0)</b>			
<b>Average capital investment cost</b>	<b>£21,923</b>	<b>£18,023</b>	<b>£26,220</b>
<b>Cost benefit ratios</b>	<b>4.3</b>	<b>5.6</b>	<b>2.6</b>
<b>Adjustment for uncertainty and risk - best</b>	<b>5.2</b>	<b>6.9</b>	<b>3.1</b>
<b>Adjustment for uncertainty and risk - worst</b>	<b>3.5</b>	<b>4.6</b>	<b>2.1</b>

The **benefit to cost ratio** indicates the overall value for money from building a new wheelchair user home. It shows that across all groups, there is greater financial and social benefits, both to individuals and to the public purse, than the costs incurred. **Each new wheelchair user home built would therefore contribute significant financial and social benefits for individuals and wider society.**

- For a working age wheelchair user adult, the benefit of living in a wheelchair user home could be over £94,000, compared to a cost of just under £22,000 – which suggests around four times the benefits compared to the costs;
- For a later years wheelchair user household (aged 66 and over), the benefit could be £101,077, with a cost of around £18,000 – which suggests around five times the benefits compared to the costs;
- For a household with a child who is a wheelchair user, the benefit of living in a suitable wheelchair user home could be £66,000, with costs incurred around £26,000 – which suggests about two and a half times the benefit compared to the costs.

An analysis of the positive financial impact of wheelchair user housing which could be attributed to different areas of public services is below. This analysis, expressed **per household type, per year** shows that for each new wheelchair user home built, there are significant savings to the NHS and government, and particularly to local authorities. Moreover, government also benefits from revenue gains in uplifted tax and NI contributions when wheelchair users are able to take up employment due to having a home that meets their needs. These benefits are calculated per single new wheelchair

user dwelling. So, if one hundred new homes were provided, the net gain to the public purse would be 100 times greater.

Figure 9: Benefits accruing to different public sector stakeholders, per household

<b>Benefits to different stakeholder groups, per household type per year</b>			
	<b>Working age</b>	<b>In later years</b>	<b>Household with child wheelchair user</b>
Benefits to NHS	£104	£96	£386
Benefits to Local Authorities	£4,778	£9,218	£1,960
Benefits to Government through tax, NI, and reduced benefit expenditure	£2,423	£0	£731

**NOTE:** To estimate the main benefits of building new wheelchair user homes, the research team reviewed a wide range of existing research and government documents to establish understand the range of evidenced benefits to wheelchair user or suitably accessible new homes. There is an accompanying excel workbook which is published alongside this report. That workbook and the main report provide details of each source for all the estimates of incidence of cost and benefits, and the level of costs and benefits for each of the figures used in the report (including in the “Inputs” worksheet). This is set out in more detail in this report, which also includes full references to those sources. and any specific explanations about how the figures in this summary have been arrived at. The accompanying workbook also sets out how benefits are allocated to the different groups of people and how the costs and benefits are used to estimate the final values and ratios. Wheelchair users have a wide range of specific needs and although we have tried to take account of three main groups of needs in the household type approach, it is nevertheless the case that these estimates of costs and benefits are likely to provide only a general indication of the extent of the costs and benefits involved. Although specific figures have been arrived at, these should be regarded as indicative. The amounts and ratios cited are important in that they indicate that benefits are likely to be greater than costs, but individual cases are likely to show considerable variation. In addition, it would be reasonable to suggests that there should be around 10% likely plus or minus variation in terms of the confidence levels of the overall figures for both costs and benefits. This variation has also been set out above, comparing the best (i.e. lower cost and greater benefit) and worst (i.e. higher cost and lower benefit) variations.

These tables indicate that there are positive cost benefit ratios which can be achieved by the provision of new Category 3 housing. We would reiterate that it is not at all assumed that the full value of the potential benefit of, for example, a delayed hospital discharge is “counted” as accruing to every individual in the groups above. On the contrary we have assumed that only a small percentage of individuals will actually have specific benefits – and that has been done by estimating how many out of a hundred households might receive the specific benefit. This produces a savings total which is then distributed across a hundred people in the group (based on the percentage incidence). If one person in a hundred (1%) was likely to have a benefit of £2,000 from avoiding a fall (for example) we would allocate £20 to each of the hundred people.

In terms of where the main benefits are to be found, falls are a risk, particularly for people in later life, which easy wheelchair access to all the main facilities in the kitchen, bathroom, and living rooms in the home can reduce significantly. A major related element is the increased confidence of being able to more easily and safely undertake routine daily activities in the home. This also can provide a greater sense of independence, and lead to a greater ability to live at home without needing to move to permanent residential care. In addition, the provision of an accessible home can enable faster discharge from hospital where this is an issue.

For working age wheelchair users, an accessible Category 3 home can increase the likelihood of being able to work, from home or in an office environment. This can increase the household disposable income, and enable the development of a career and increased self-esteem. It also can reduce the reliance on and costs of welfare benefits as well as providing tax income, as a direct consequence. For families with disabled children there are likely to additional benefits in enabling more access to part time work, often for the partners of the main household income provider.

An important element of this provision is the reduction in the need for regular local authority Adult Services home care and support services. This is a major and growing element of pressure on local authority revenue expenditure, and enabling wheelchair users to be more independent in washing, dressing, cooking, and other routine activities can reduce the need for these regular home care services to an important degree.

Finally, the independence and ability to use a wheelchair inside and outside the home can greatly increase opportunities for social and community participation in the local neighbourhood. This can be particularly important for children who use wheelchairs, but also for people in later life who can both invite and entertain neighbours in their home, and take part in local activities.

### **Risk and uncertainty**

With any cost-benefit analysis there is also the dimension of uncertainty, optimism bias, and risk to take account of. This report has approached the cost benefits by using a three category division into household types, which has been reflected in the costs (including careful consideration of the house types and tenures likely for each household type), and in relation to the different types of benefit more likely to accrue to the different household types. We have also included in the summary tables an allowance for 10% variation upwards or downwards in both the costs and the benefits. We have then compared the worst case (higher costs and lower benefits) with the best case (lower costs and higher benefits). The pattern of higher benefits to costs is maintained in each of these cases, and is shown in the table above.

## What factors influence demand and stimulate provision?

In this section we ask what wheelchair users want by way of wheelchair accessible housing, and what they see as the aspirations and wishes that can be realised by the provision of appropriate housing, across all three groups outlined above. Understanding what potential purchasers, or renters, of wheelchair user housing want is, or should be, the starting point for programmes to understand and meet need.

The second issue concerns how builders of wheelchair user housing – for rent or for purchase – get to a position of understanding the functional and design requirements for wheelchair user housing which can meet today's needs and aspirations across the different types of households who need it. Having this understanding means they could then be in a better position to provide what is needed.

The third issue being considered in this section is how available wheelchair user housing and people actively seeking it can be brought together. This is a continual problem. A market need can be met more fully if all market actors have good information about each other's requirements and products. If builders create wheelchair user housing but the availability of that housing is not clearly communicated to the people who need it, renters or purchasers, then major benefits could be lost.

Approaching this can be done by questioning whether the current standards (Part M) capture fully the range and variety of contemporary need for wheelchair user housing. The report cited above [Research on Part M: access to and use of buildings](#) has provided evidence around benefits of accessible housing. There is also, in part two of the report, a review of available evidence about how well current guidance in Part M is meeting the needs of disabled people in relation to buildings other than dwellings. Although not specifically about the requirements for housing provision, the evidence here has clear cross overs to wider issues about design of buildings accessible for wheelchair use:

*The scope for the statutory guidance in Part M is sufficient to meet the needs of a wide range of users. However it is acknowledged that the current guidance has not been developed to address the needs of users with more specific needs, particularly for groups of people with needs that sit outside the more common types of disability, and for demographic groups whose number increased significantly since Part M was last updated in 2004.*

*Comprehensive ergonomic studies have not been carried out of the needs of this wider range of disabled people. Whilst Part M will always need to address the most common needs in a shared built environment, **further research is necessary to understand how these more diverse needs could be integrated into regulation to improve further benefits. A wider study looking at anthropometric and ergonomic data (in order to update the evidence base supporting guidance in Approved Document M as a whole), as well as the needs and capabilities of disabled users across the UK may be helpful in establishing an up-to date basis on which the guidance can be developed further.** [our emphasis added]*

The suggested work has some clear objectives, in terms of not only identifying specific needs and aspirations of a wide range of types of users, but also pinning down what this would mean for new standards to be introduced to meet the more diverse needs. Accessible housing built to contemporary and forward looking standards will be more attractive to buyers and renters

One important dimension to this is the post-pandemic context of highly e-enabled communication and working, including online care and support services. This also includes the increasing flexibility of controlling and managing day to day tasks in the home through the greater use of “smart home” technology. It is important to review how wheelchair user homes could be provided with an enhanced level of “smart” devices to provide increased opportunities to be able to control and manage everyday tasks. This includes reviewing how to enable more effective home working, communications with family and friends, and managing the provision of at-home services.

We therefore raise the issue of where the work is or could be going on to identify and mainstream these opportunities, driven by the community of wheelchair users, then feed them into standards, design, and development departments of mainstream builders of housing. This could well be what wheelchair users would now want in a well designed and built wheelchair home. The further research government suggests would also need to include the views of developers, architects, surveyors, engineers, and planners as to how best to incorporate the needs and wishes of wheelchair users into practical and affordable building designs and linked building control standards and planning guidance. There are likely to be a range of solutions available, at different costs and levels of technical difficulty, through which an increasing number of better designed wheelchair homes could be provided at affordable costs, and getting these stakeholders involved at an early stage is essential. This also would address the current problem that in many cases building professionals know little about the costs of wheelchair accessibility as an area at all. Although the sums required to make good provision for wheelchair accessible housing are generally relatively low, there is not enough evidence about the amounts involved and what determines them, and very little awareness of what are in fact relatively modest scale of costs. Consequently, many market actors simply reject the idea of building these wheelchair homes because they are not aware of either the actual scale of costs, or of the level of demand.

That said, the question of immediate upfront cost is very important to both local authorities, other social housing providers, and buyers on the private market. We have outlined the cost benefits of wheelchair user housing, but in reality, any estimates of overall cost benefits have to recognise that the actual price of a wheelchair home – the amount which a local authority or individual buyer has to find at the point of sale – is a huge constraint on what can be built and sold. A working age wheelchair user may be well aware of the potential savings to the NHS from preventing their falls, or the potential savings to local authorities from not needing to fund their provision of carers, but in the here and now a prospective owner-occupier will need to provide the down payment and find a mortgage, while a local authority will need grant, loan, or cross subsidy funding for the initial purchase from the builder. So, the actual price at the point of sale is a major constraint.



This matter was considered in the 2015 Housing Standards Review impact assessment and policy appraisal process. That review set out, in a short section, some issues about prices:

***Willingness to pay***

*The primary social benefit of space standards is a general aspiration amongst home buyers for more space. Whilst this is not necessarily the overriding factor in a purchaser's decisions to buy a new home, it is certainly the case that where they are able to do so (i.e., can afford to do so), home buyers are willing to pay more for a larger property, all other factors being equal (e.g. location, property type etc). EC Harris have set out the extent to which this 'willingness to pay' works in their cost report accompanying this impact assessment. The willingness to pay is however reliant on larger homes being viable within a given localised housing market<sup>35</sup>.*

One additional point to note here in relation to understanding the needs for this housing is that of location. It is not just that the building requirements of wheelchair user housing should meet needs within the home, but also that the location relative to shops, GPs and other medical centres, transport, and local community facilities can also be crucial to the suitability of the home for a wide range of potential residents. Building in an "indiscriminate" manner as part of all housing developments could undermine the attractiveness and overall accessibility of the homes for many potential purchasers or residents.

This links to the third point, bringing together those looking for wheelchair accessible homes with the available provision in the rented and purchase markets. The public sector has information on demand for wheelchair accessible housing from its waiting list and other local social services and public health records. It also has access to information about available accessible social housing which becomes available to allocate. This information may or may not be systematically organised locally, to match need with supply. It is also unlikely to be compiled regionally or nationally. In terms of improving this area and better matching of needs and availability of wheelchair housing, [Research on Part M: access to and use of buildings](#) suggests that:

- *as well as encouraging local authorities to require the construction of a range of accessible homes in every new planning application, there is a benefit in setting up and maintaining a local register of accessible homes, and the ability to identify them easily through a vehicle such as a National Register of Accessible homes.*
- *this would rely on local authorities employing Housing-related Occupational Therapists who could act quickly to assess people's needs and match them up with the relevant accommodation, wherever possible, or identify any adaptations required.*
- *additionally, there may be a need for advice for people who own their own home, whose needs may not so easily be met. Occupational Therapists are well suited to providing this sort of service, in addition to their practical support.<sup>36</sup>*

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<sup>35</sup> DLCG (2015). *Housing Standards Review Implementation, Impact Assessment*. UK Govt: London

<sup>36</sup> PRP Innovate (2021), [Research on Part M: access to and use of buildings](#) p44

This matching of buyers to available stock when properties are being sold on the open market can also be a problem. A 2015 [report by The House Shop](#) addressing how accessible housing enquiries made to London developers were handled indicated that:

*While the government and the Mayor of London have issued detailed guidance to developers on construction of accessible units, there has been little practical guidance on how accessible units will be managed and marketed after construction has been completed. One of the main concerns here is that there has been no preparation or training of front-line sales staff with regards to the Lifetime Homes standards that all developments are built to, or the 10% of all new developments that must be wheelchair accessible. This raised concerns at The House Shop that disabled home-hunters were not being made aware of the accessible properties that have been built for their use – therefore invalidating and undermining the purpose of the accessibility regulations<sup>37</sup>*

The report was, it should be noted, based on a small sample survey, but the document did highlight several main areas of problem:

- *Only 3 out of 15 sales reps mentioned Lifetime Homes standards when asked about accessibility, even though all new-build properties are built to these standards.*
- *Only 1 out of 15 sales reps were aware of the minimum 10% wheelchair accessible requirement, but they were unsure of whether or not their development adhered to these requirements.*
- *The term “accessible” was not recognised or understood (with regards to disabled-access) by the majority of sales reps.*
- *When asked what accessibility features were present in the property, sales reps provided vague and inaccurate information.*
- *8 out of 15 developments incorrectly put forward “wheelchair accessible” properties, which would have been inaccessible should a wheelchair user attempt to live in them.*

While more extensive research would provide more robust information on the levels of awareness of wheelchair user housing and consumer needs, this is likely to be a major area for increased focus. If builders fear (or complain) that wheelchair user properties are difficult to sell, this may well be due to a failure in the process of marketing them, rather than a lack of demand.

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<sup>37</sup> The House Shop (2015). *Accessible Housing Policies Failing in Practice: Disabled Community Failed by Policies Designed To Help*: <https://www.thehouseshop.com/accessible-housing-report>

### III. Qualitative research with wheelchair users

In addition to the cost-benefit analysis work, the LSE Housing and Communities team also spoke to 17 wheelchair users. Interviews took place online, or by telephone. Many of the wheelchair users that we interviewed were living in a suitable, wheelchair accessible property, but several of them were not. Our interviews captured the experiences of the benefits that living in a property that meets someone's needs can bring, and conversely, the additional challenges placed on a wheelchair user when they live in a property that is not suitable for their needs.

We have used the qualitative research with wheelchair users to develop short case studies, that illustrate individual's experiences. We have used quotes in the case studies, to try and ensure that the voices of wheelchair users themselves come through. The case studies have been anonymised, with pseudonyms used for the participants. Interviewees told us how their home impacts on their wellbeing, their work opportunities, family cohesion, and their sense of dignity and independence. The interviews also highlighted a number of additional findings around four main themes:

- Wellbeing
- Housing choice
- Housing allocations and management
- Funding

#### Interview Findings

As well as providing valuable reflection on the benefits of living in a wheelchair accessible home, the interview participants spoke about their experiences in searching for and securing suitable places to live. Their valuable insights have been summarised into four main themes: wellbeing, housing choice, housing allocations and marketing, and funding.

##### Wellbeing

- Living in a home that is fit for purpose and meets people's needs has a clear impact on wellbeing and health.
- Interview participants talked about *living rather than existing* when in a home that was accessible and met their needs. The cost-benefit analysis has also shown there are measurable and quantifiable improvements in wheelchair user's sense of independence and dignity when in a suitable home.
- Interview participants shared how important it was for their home to be a haven and a place that meets their needs, in contrast to challenges in other places and spaces. Many interviewees talked about the lack of accessibility in public places and buildings including offices, shops, public transport, friends and family homes not being visitable, and how that impacted on their wellbeing and feeling of inclusion.

- For participants who were not living in a wheelchair accessible home that met their needs, their wellbeing was impacted negatively with many day-to-day and long-term challenges encountered. Even small things inside the home, termed *micro-annoyances* by one interviewee, could compound other difficulties encountered when adapting to changing circumstances and challenges outside the home.

### **Housing choice**

- Respondents had low expectations that a home that will meet the needs of wheelchair users will be available quickly and easily – both for social rent and for purchase. Interviewees offered a wide understanding of the potential in existing homes that can be adapted, which is crucial when too little accessible stock is currently available.
- The vast majority of those we spoke to had moved into properties with potential to meet their needs – both social housing and owner occupier properties. Building more new wheelchair user housing could vastly increase the housing choices of wheelchair users, and mean that they do not have to undertake costly and difficult adaptations.
- The size of homes and rooms is very important to wheelchair users, as well as having suitable storage options and access to outside space.
- Interviewees talked of a lack of family sized (3 bedroom +) wheelchair user homes, and limitations on bungalows as only available for the over 65s.
- Interviewees felt that there is no one size fits all solution for disabled people and wheelchair users. People will want different things from their home and will have different access requirements and priorities. Homes need to have basic accessibility features and the capacity to be adapted easily, which newbuild wheelchair user homes could provide.
- We need to be designing and building new homes that incorporate smart home features, and forward looking design, to create modern wheelchair user homes.

### **Housing allocation and management**

- A number of people talked about the importance of identifying and maintaining accessible homes for future use by wheelchair users. We found examples of accessible homes not being recorded as such, and being used as general needs housing instead.
- Statutory ‘gatekeepers’, such as local authority housing departments and occupational therapists, play a crucial role in supporting wheelchair users to find a home that suits their needs. They sometimes lack appropriate training and awareness of what can be done to properties, and also about access to funding.
- For some interviewees, it was felt there is an emphasis on wheelchair users themselves to advocate for what they need, and to be aware of what technologies are available, or what interventions are needed.

- Many of the participants had found their homes by accident rather than design, for example by knowing the local area, having a contact, or being in the right place at the right time.
- There are systemic issues related to the allocation of the housing that is available, and housing being offered because it is classed as 'accessible', even when it does not meet the individual needs of the potential household. There was a sense that "any adaptation will do", for example, homes with a stairlift being offered even if that was unsuitable for the needs of the individual wheelchair user.
- There is a challenge of matching supply with demand, due to the lack of accessibility data held by estate agents and developers, and a lack of understanding by them of both the needs of wheelchair users, and how to quickly match new supply to demand for this housing.

### **Funding**

- There is a significant funding challenge for those who own their own homes, but are unable to move on to a property that will meet their needs in the same area. Often, there is an 'equity gap' between the sales price of existing homes that wheelchair users own and are looking to sell, and the properties they are looking to buy to provide a suitable replacement that meets all their needs.
- Due to the current lack of newbuild wheelchair user homes, the Disabled Facilities Grant plays a vital role in enabling adaptations to existing properties, but again there are gaps for those who do not meet the requirements of the grant, but who may struggle to self-finance the necessary works.

## Case studies

### *Ricky*

Ricky lives with his family in a home that they have owned for many years. The house had previously worked for him but as his needs have changed, the home is now unsuited to his needs. He has found ways to get about in his home when he can, but this often involves steadying himself on furniture and sometimes being limited to either the ground or the first floor for long periods of time.

Living in a home that is unsuitable for his needs affects how he feels and also his physical wellbeing as some days he is in a lot of pain.

Adaptations have proved difficult because of the particular structure and layout of the home but Ricky has also struggled to access grants and support, including Disabled Facilities Grant (DFG). His experience has also been that local builders and contractors are not keen to work with DFG because of possible delays with payment from the council and the extra bureaucracy involved.

Ricky has previously looked at selling up and buying something more suitable but sadly there are not any appropriate properties in their local area. Ricky sees his options only really as being to move away from their home area if they want to be able to afford something wheelchair accessible and suitable for his needs. This is challenging as the family have well established links and support networks, as well as family responsibilities, in their current area.

*So if we move, we've got to leave everything and everybody... There is nothing we can do.*

Ricky had been in touch with the leader of the local council who acknowledged the difficulties and understood the difficulty of H1's position.

*He said this is absolutely crazy. We are going to build more homes. And there will be a larger percentage than required for disabled folk because I know your situation. You can't afford to move because even though you'll get a good price for yours, a four-bedroom detached house, it wouldn't buy a 2 bedroom detached bungalow or even a decent terrace bungalow that's accessible. And you need a place that's level for the car outside He said it's just crazy if we don't build them and do something. Then we're letting you down.*

Ricky believes that there should be more accessible social housing as well as more adaptable housing built given that we have an ageing population.

## Robert

Robert lives with his family in a bungalow that they bought a few years ago. The property has been adapted to meet his needs including installing a wet room. The family have funded these adaptations themselves through loans. For now, his home meets most of his needs:

*For now, yeah, there's a few of the things that I would probably like to do: some more grab handles here and there. But yeah, for now. You know, I'd, I'd say probably 90% there.*

The changes have made a big difference to his wellbeing and quality of life as previously in the bathroom that didn't meet his needs, he would worry about potentially hurting himself:

*I don't have, you know, I don't have the anxiety of - am I gonna slip? And really hurt myself. You know the whole process of having a shower as opposed to what I was doing before makes it quite nice experience. And I've never had that where I've had no concerns or anxieties or worries about falls or equipment not working.*

*I'm just honestly, and it sounds so small, it changes you complete mindset. You know everyone should have access to safe facilities in their own home.*

Robert has experience of the challenges of finding accessible housing through his work. He is particularly aware of the difficulties of young people being able to access independent housing, including graduates moving on from university accommodation. This impacts on all aspects of people's lives as unsuitable accommodation can have a detrimental effect on being able to work:

*So, let's say you go on and do your masters. You have what five or six years of complete independence. You had that little insight into what your life could potentially be and when you leave the bubble of a campus, you know you're back to square one again...Let's say you know above the ground floor, lots of issues with lifts not working, people being trapped in their flats for up to 10 days until the lift gets repaired. So, if you if you're in a job where you had to be there in person, you've got to have an understanding employer when you call and say I'm sorry, I can't come in today because the lift isn't working and it's going to take 10 to 14 days for them to get an engineer out.*

It took Robert a long time to find the property he now has, and he believes that there should be a requirement that estate agents have some basic equality and diversity training to ensure that those who have access requirements are able to advocate for what they need and have their basic needs understood and met. There will not be a one size fits all solution as individuals will all have individual requirements but to meet the most basic of physical accessibility needs, with people making adaptations themselves after, should be possible.

Robert believes that there should be more of a requirement on builders and developers to build more accessible and affordable housing:

*There's a lot of new housing estates as I call them going up and there's a requirement to make certain percentage of those social housing or affordable housing. There is not the same compulsion to make any of that percentage wheelchair or accessible as they can, they are not mandated by government to do that.*

He also believes that more accessible housing will be good for everyone as they are homes that can be used by all, including an ageing population who will have a home that works for them as their needs change.

## *Julia*

Julia lives with her partner in a home they rent from a social landlord. She is happy in her home and it meets her needs as a wheelchair user.

She has lived there for a number of years, having moved from another socially rented home that was unsuited to her needs.

*The place we lived before was a 3 bedroomed house and you had to go down 12 steps to get to the front door. I couldn't use a wheelchair inside because there was just not enough room and they couldn't adapt the property at all.*

She spent around three years looking for alternative accommodation and found this a challenging and tiring process:

*Yeah. it didn't affect so much as I was frustrated. It didn't cause any problems mental health wise, because every week I'd go on their website which was home seeker and look and somehow lose out, then I'd be on the blower to the surveyor and the occupational therapist, and I said, what about this one? Can we look at that one? Oh, I've seen this. Would this be possible? So I was on. I was constantly, on-the-go, actively looking.*

She can move around her entire home independently although there are some access issues with the garden which means she can't enjoy all of the outside space.

Some adaptations and changes have been made and the social landlord was able to do these, including changing the bathroom to accommodate for a wider turning circle when her wheelchair was changed. The family were put up in a hotel while the works were done.

Julia is very aware of the lack of suitable accessible homes for families, feeling that she could have found accommodation more quickly if they only needed a one- or two-bedroom property.

She thinks that we should be building more modular homes that are quick to build and can be built according to the needs of those waiting for homes.



*We don't have homes that are modular and can look like an ordinary brick house, and I've done a lot of research into this because I think that's the way forward when we can get them built quicker than what 18 months, you know, get the ground work done and just put it up... and also internally if after that tenant moves out and another one is due to come in and there's something needed internally you can change the walls quite easily.*

For Julia, the most important parts of accessibility for her are an accessible wet room and enough space to get around.

## *Will*

Will lives in a Habinteg property which he rents. He has lived in the home for over 20 years. He is really happy with his home which meets his needs:

*It's brilliant. It really is, it's fully accessible. I use an electric wheelchair and a manual wheelchair and I've got room to get round. Let's say it's all on one level, a bungalow so I don't have any problems accessing any part of the house or the garden, so it's brilliant.*

Originally, Will was told by the local authority where he lives that he could have an accessible home but that his family would have to be housed elsewhere as there weren't any family sized accessible home available, which was not an acceptable solution.

His current home meets his needs, and he feels it has a positive impact on his wellbeing.

He feels that it makes sense for government and local authorities to invest in building accessible and adaptable homes and that it will be cost effective to do this rather than having to retrofit properties later down the line.

*I think mainly with the government, they need to stop looking at oh it's gonna be too expensive to build houses that are wheelchair friendly... Basically, it's not all that expensive to actually construct / build a house from scratch that has wide access doors and has flat access into the house than it is to spend maybe £10-20 thousand later on in life in making sure somebody can stay where they are.*

## *Joe*

Joe lives alone in a property he purchased around 10 years ago. The property was not wheelchair accessible when he viewed it, but he saw that there was the potential to create a home that would work for his needs.

*I saved up to buy a property in 2014 and I had some help from family with the deposit which I know is very much the way if you can, and I know that I'm very lucky in that respect, so yeah we but we had looked around for a property that was already accessible and we couldn't find any and we looked at the most accessible we can find.*

Joe feels lucky that he was able to purchase a property and make the adaptations necessary, he understands that this isn't an option that is available to all.

Joe values the independence that his home enables him to have. Prior to moving here, he lived in his family home, he felt that it was important for him to live a full life as a young man in his own home with independence.

*It's fantastic and it's been fantastic since I've moved in it. It enables me to have independence from my parents. It means that I don't always have to live with them, and they don't always have to put up with me!*

*And so yeah, it enables me to live independently, and it means that I can do everything I need to do care wise and then I've got height adjustable desks and everything so I can work. It enables me to work and live my life.*

It took over 6 months for Joe to find the property. When searching for homes, he prioritized area – close to family and friends – and also potential to adapt to meet his needs. He also only looked at ground floor properties to avoid any issues with emergency access and evacuation:

*It's a ground floor flat and ...I only looked at ground floor places and I didn't want anything on another floor with a lift, in case there were fires.*

The area was important to Joe to enable him to socialize with friends and go out to a number of venues that were accessible. He identified clearly how his home and his parents' home were the only accessible homes he could be in, visiting friends at home is generally not possible.

*And that wasn't possible. So, you noticed that basically my place and my parents place are they only dwellings that I can actually get in ever.*

Joe made some significant changes to the property including widening doorways, replacing floors, installing a wet room, making doors electronic key fob access. He is grateful to the Disabled Facilities Grant and believes that the work would not have been possible for him without access to the fund.

For Joe, the independence of a home of his own, in which he can move around freely and access all areas of the home, provides a strong boost to his wellbeing.

*Yeah, absolutely. I honestly think that it played a big part in keeping my mental health stable and because I have as a lot of people do, and possibly even more disabled people, I have some mental problems as well. I have anxiety, OCD and occasional depression but fortunately none of them just to very severe levels and so on but I'm absolutely sure that having my own independence keeps my mental health at a reasonable level.*

## **Edward**

Edward rents his home for a social landlord. He has lived there for several years and is very happy with his home. His property was built as an accessible home in the late 90s and Edward is only the second tenant to have lived there.

For Edward, his home is incredibly important as a foundation for other aspects of his life. His home is large enough and has sufficient storage for the equipment he needs to do his job. Outside space is also really important for Edward, including having access to a garden and a dedicated car parking space for his vehicle.

*All of the design criteria meet standard M4(3) as it is now, there's also a very generous wheelchair storage area. And that's fortunate because I use all terrain wheelchairs for work, so I can store those outside of the main living areas at, so they can be muddy and wet and they're out there separate from the living area....I've got a garden and that's very important to me. We've seen over the pandemic how important access to outdoor space is for mental health.*

Edward is aware that his home isn't specifically classed as accessible housing and is concerned that this reduces further the stock available for wheelchair users seeking appropriate accommodation:

*The landlord reclassified the property from specialist housing and well, wheelchair user housing specifically, to general housing. So, when I leave here, the next tenant may not use a wheelchair and this is something I'm quite keen to get out there. And you know, we've got very, very few properties like this around the country.*

When we discussed whether his home impacts on his wellbeing and ability to live as independently as he wished to, Edward was clear that his home plays a big role in his capacity to live his life well.

*I'm a lot more confident about thinking about the future and any like a change in employment or and a new relationship, things like that. I know what my needs are. If I had to move, it would be very, very difficult to find somewhere as good as this. I know how fortunate I am and I do get a bit anxious when I think about having to move because it's taking a long time to organize my life and everything around me. You know where I live. The support that I get both from technology and from people,*

*if any one element of that was taken away permanently, then I wouldn't be able to live the life that I want to live.*

Edward feels privileged to be in a home that suits his needs and understands that many other disabled people face many challenges in accessing housing that works for them:

*And it's that...what's the word - fragility. That's the word, it's that fragility that makes me anxious at times. And I can understand why so many disabled people get depressed because they're in homes that are unsuitable for them, not only in terms of size and facilities, but often in the structural fabric and or damp that, that sort of thing, which effects our health. I can understand how they feel trapped and just can't live their lives to the fullest.*

Edward feels that currently the policies needed to ensure more wheelchair accessible homes are built are already in place but that the challenge is in getting local authorities to enforce this, and housebuilders themselves to deliver on their obligations.

*I don't think there's a problem with policy. The policies are there, and councils will apply them. Conditions will be attached to planning permissions, but then once they've got their permission, the house builders will appeal against the conditions then wriggle out of their responsibility is to provide those homes and because councils are, and the government itself are, relying on the private house builders to build homes and all too often they give in, and the housebuilders don't have to provide these accessible homes.*

He believes that it will be difficult to effect the systemic change needed to ensure these commitments are delivered and suggests instead that more power and capacity to build should go to smaller, community-led housing cooperatives.

*I think a better way to approach this is to support Housing cooperatives for disabled people...And again, I don't think it would involve any change in legislation or even policy because the government has been encouraging self-build and encouraging councils to put land aside for self-builders. So, a National Housing cooperative or a coalition of local cooperatives coming together, and if properly supported by the government, could address the shortage, either by being given land by the volume house builders...one way in which a section 106 and agreement could help is by saying to a developer we give you permission, but we want you to leave this area of land free because it's closest to public transport and services and so on and work with this housing cooperative to provide a wheelchair, accessible housing or and not necessarily, wheelchair accessible, but also housing for people with learning disabilities because that they have particular needs around housing as well and all sorts of specialist housing needs. So, the volume house builders aren't having to provide these themselves and they get kudos from gifting the land to a cooperative and people who are going to live in those homes hopefully will be involved in the design and building.*

## *Eva*

Eva is currently living in a socially rented home with her family, rented from her local council. Their home does not meet her needs and she describes it as a “*living hell*”.

She only moved into the property fairly recently (from another property that also was unsuitable) but it quickly became apparent that it was not well suited to her requirements. Because they have requested a transfer now, she feels that the council are unwilling to do any of the necessary adaptations to make the home work for her, even temporarily.

*It's like living in a rabbit hutch, to be honest, it's like because we've had the fire brigade come out and done the assessment because we can't widen the back door and we only have one access for at the front door. It's absolutely fine, apparently, but yet because they said it's small, it's like we've got to move. So, the Council and OT have turned around and said that because we're to move, they won't do anything else here.*

She has had negative experiences with her local authority in terms of finding solutions to her housing challenges. The home she currently lives in severely impacts on her wellbeing and mental health and she feels desperate to move.

*I have also a learning disability with cerebral palsy and stress related epilepsy, so all this stress and all this thing is setting my epilepsy off the roof. I'm going down being tested for autism and ADHD, so constant meltdowns. I've got bad triggers and this area anyway from the past, so staying here I just feel like it's a rabbit hutch. I mean, I was trapped in my old bedroom when we had the house because I couldn't get downstairs because I fell down and damaged my leg even more.*

*So being in, stuck in the bedroom all day, every day for five years isn't great. But then coming here. It's like I've got to force myself to walk from the bedroom into the living room because I can't get my power chair through. We're trying to make it at home, but it's caused constant meltdowns. It's caused constant arguments.*

The family are planning to move to another area of the country where she has some links and where the chances of finding suitable accommodation are higher.

Eva feels that there is a lack of real lived experience within council and government decision making around the needs of wheelchair users and disabled people. There is also a lack of understanding of the variety of different needs disabled people will have and therefore need different solutions and accessibility adaptations.

*It's very rare seeing someone in a wheelchair working for government. So, they need to get a group of people that are having these troubles and having the team and saying, look, can we, you know, what do we need to make this more wheelchair user friendly... You need to have a group of people that are saying look the doors need to*

*be wider and there needs to be an adequate wet room, access in and out of the garden.*

*And for me, sitting outside, it's a lot better than being in all the time, so they need to get the funds done properly and, you know, have a group of people and sit down but with people with different disabilities and saying everyone's disabilities are not the same and so not everyone needs the same sort equipment - we all come in different shapes and sizes.*

## **Peter**

Peter is a homeowner living in a home that has been converted to be fully accessible. When he first became a wheelchair user his home was not suitable and so Peter was limited to having a hospital bed in the downstairs dining room and was able to use a local medical facility for showers and toilets before initial adaptations could be done to his home.

*So, it was like that for the first four or five months till the...So I had a lift put in the house, a garage converted to the lift can go up somewhere else. And then I had a wet room built downstairs in part of the garage as well so that sort of functioned... it worked in that sense. Probably fortunate and we were able to get a builder fairly quickly because we knew somebody. So again, those things fell into place, but it's still three or four months of effectively living without access to any proper facilities.*

Peter understands the challenges that living in an unsuitable home present:

*Yeah, it is frustrating. It's hugely frustrating and as somebody pointed out to me, in those sort of situations you have to leave your dignity at the door because you just ...you have to be helped places if you have to go somewhere else...Life became difficult because you have to do everything differently and that stuff it's almost as what people take for the simple things in life like going to the toilet, like going into your garden like having a shower. Yeah, you can't do those as you'd like to.*

He then moved a few years later and has lived in his current property with his family for around 15 years. They were able to make the necessary changes including widening doors, installing a wet room, and putting in a lift to make a home that is now fully accessible. The family funded the adaptations themselves.

Peter is aware of the difficulties of finding an accessible home so feels there is absolutely no chance they will move again. He is unable to visit the homes of family members, including his adult children due to the inaccessibility of most houses.

Peter believes that all homes should be built to the minimum M4(2) standard in order to build homes that meet current and future demand:

*But I think it's very much at the top. So that the planning policy where at the moment as you'll be familiar with, you've got the three housing standards...I think there's a lot of myths about it that suddenly is going to cost a lot more money and everything else, but I would argue...I understand why you're not gonna build every house with wheelchair access standard – the M4(3) standard but M4(2) is a minimum to me. Should be the standard, and that's got benefits not just for people in wheelchairs or with mobility issues, you know... people with pushchairs, older people, you know there's lots of benefits aside and even if you do that, of course you're only affecting the new build now you're only I think we worked out is gonna take 30/40 years to get into the old stock that's not retrofitting or anything else. So it's got to be M4(2) and got to bite the bullet and we've got to do it.*

He also feels that local authorities need to be better at enforcing the planning requirements and policy:

*After for me for the councils is actually if they get clear planning guidance from central government which is the M4(2) standard and then their role for me is to enforce it and police it and I don't think that's consistent; they let developers away with it because developers claim that it's going to be too difficult...and they play games I think in my opinion anyway.*

## **Lindsay**

Lindsay lives alone in a property she purchased around 20 years ago. Her needs have developed and changed whilst living in the property and she has been able to make the necessary adaptations to her home, funded both by herself and her family and also with support from the Disabled Facilities Grant.

Her home has a through-floor lift which she describes as incredible, in addition to this she also has widened doorways, a wet room and hoists for the bedroom and bathroom.

She is able to access all areas of her home that she needs to and feels that she is able to be independent at home in a way that isn't possibly outside of the home:

*I'm quite independent when I'm at home, but when I'm not at home I'm almost entirely reliant on other people.*

Being independent at home and having her needs met is really important to Lindsay and has a positive impact on her wellbeing:

*Definitely. I think I find when you're having to instruct someone else all the time, it's a bit exhausting, and with being home I then have the energy to do more interesting things than just... and I think particularly during Covid, I realized I was always near a loo, I never had to think about that being home whereas when I'm out and about*

*you're always having to think where is the accessible loo? Umm, so yeah, it definitely, I love my home.*

She collaborates with her local council around accessible housing and is keen to help others understand that adaptations are often possible. She also thinks that estate agents and others can play a crucial role in valuing adapted and accessible homes and ensuring that they are advertised to those who need them:

*I think you know, partly it's to do with estate agents not listing things, so if my home was being sold because I died, at the moment someone would view it and be oh it's gonna cost loads of money to put all this right instead of someone else who was disabled come in and getting oh we wouldn't have to change this. But the estate agents have no...it is true for private renting, it is true for buying. Local authorities and housing associations probably have more awareness of what's been done to what property but outside of that, which nowadays you know, getting a property from a housing association is really difficult and I know young disabled people whose parents have been told they would have to throw their children out and you just think that's not right is it?*

## **Michael**

Michael lives in a housing association property where he has been for over 15 years. The home suits his needs reasonably well and he manages to move around independently and access everywhere he needs to.

*So, I became a wheelchair user about 35 years ago. Getting accommodation was the trickiest part because of the lack of availability and originally I had to stay in my parents' house with some adaptations done there and it took a number of years to actually find a new home more by luck than judgment that I found a flat and then again they're not ideally accessible, but they are manageable and the place I'm at the moment is a bungalow which is accessible but the same again. Really, it's not probably built to standard as it were. The new standard, certainly, but it is manageable and does give me the independence I need, although you know space as I'm sure a lot of people tell you, space is one of the key things.*

He has been able to access DFG funding and also using his own resources has been able to improve the garden and access to it, so he has usable outside space which he values. He also has an environmental control system put in by the local authority / NHS enabling him to open the front door from other parts of his home.

He believes it is important to have more accessible properties available and to ensure that any accessible or adapted homes are retained as such and not amalgamated into general housing stock, his previous home which had been adapted, has had those adaptations removed since.



*I think the main thing is to actually have the properties available in the first instance that people can just move straight into and actually have them earmarked, or ring fenced as wheelchair accessible properties really. And you know, looking at a certain percentage of housing stock to be that way, I'm not sure. I know there's a lifetime homes now, etc., but I do I think even those wouldn't necessarily have so much, you know turning space or such like I don't know the exact specs so that they come in on there but certainly having more of...it's mainly their information systems knowing which properties are all accessible and properly accessible and saving them.*

His home being accessible and suited to his needs has a positive impact on Michael's wellbeing – he reflected on this as the difference between living and existing:

*Oh, absolutely, yeah, I know it does. I mean, I. Yeah, you need something to go out to work. Even though I've got live in care I can go to and from as much as I want to, I can go outside. I don't need to ask people every time to open the door for me or to move this out the way so that is a real peace of mind. It just gives you more freedom and more ease. Yeah, to live your life. It's not a, it's not an existence. Then it becomes a bit more of a life, really.*

## *Jane*

Jane lives in a home that she rents from a housing association although she is in the process of moving to a new home that she is buying. Her current home is classed as wheelchair accessible and has wide doorways, a wet room and is all on one level but the rooms are very small. The landlord was not receptive to additional adaptations that Jane keen to make as they would be responsible for the maintenance etc. moving forward.

She has found a new home that will require some changes although it has level access and wide enough doorways so it will meet her basic needs.

Jane values using smart technology which helps with opening blinds and curtains, and notifications when the washing machine has finished for example so moving about in difficult spaces and expending energy is limited to when it is needed.

Jane feels that accessibility needs to be considered more when planning and building new homes:

*And I think there needs to be legislation that says that any new, all new buildings have to meet certain requirements, you know. Even things like, you know, when I've gone to a new build and I've gone into the bathroom in my wheelchair, I can't close the door behind me. And so just because the door is wide enough does not make your room accessible.*

## Carla

Carla lives in a privately rented bungalow with her family. They have been living there for around 6 years and whilst it isn't 100% perfect, it mostly meets her needs. They haven't felt able to make any changes to the property because it is rented, Carla also feels that there is a lack of security as the landlord could decide to sell at any point.

Carla feels they were forced into private renting because of a lack of suitable accessible family accommodation in their local area. Once she had a child, their previous housing association flat became overcrowded and despite being told they were top of the social housing waiting list, after a year the family moved into the privately rented home. It was by chance that they found this property which was in a good location for local support networks and also had most of the accessibility requirements already in place such as level access, a wet room and it being all on one floor.

*It was just pure fluke, we were on the council list for a year. It was just a fluke that this happened to come up and I looked on the website and it had all the things that we needed. It was a bit scary because we went from a housing association flat where the rent was entirely covered to here, where we are paying like £700 ourselves so it's a lot. And it means we have to cut back on other things, it limits us a bit. It's weighing it up because we couldn't have stayed in the flat but now we have been forced into private rental we are sort of trapped here now. We were at the top of the list but there just wasn't anything.*

Carla feels that having a home that meets her needs and enables her to be as independent as possible is really important:

*Definitely, I think if I was in a house where I couldn't be as independent as I can be, even though there are a couple of things I would change, it 90% meets our needs. If it was say only 40% meeting our needs...you come home and feel safe and that's your safe place. And it would be horrible to come home and feel that you couldn't be independent even at home. Because you go out into society, and you feel that places aren't set up properly, the access isn't... it's like a constant battle and if you have to come home and continue that battle I think it would be very depressing*

She believes that it is vitally important that there is a set proportion of homes built to M4(3) standard in every new development:

*So they've brought into law something called the M4-2 standard which means you can get into the building which is great if I am visiting people's houses but it's not at all, it means I am still unable to live in any of those houses because I can't use a stairlift and because they are not built to the M4-3 standard, and there are no rules about how many need to be built to that standard, that means that most places, around here anyway they are not building any. And because they are new build they wouldn't allow you to adapt it so you couldn't put a lift in and then I think what they*

*should do is have a percentage of houses...say if they are building 100 houses say in an area, then at least 1% of those houses even should be fully wheelchair accessible, so that its fully adapted to the M4-3 standard already or they are able to put in a lift in straight away. And already have a wet room in so ready to move into.*

She also thinks that social housing allocations could be better organized to ensure that those with accessibility requirements are having their needs met, in a better way than through choice-based lettings:

*The way that the bidding system works on Home Choice, I think sometimes it might be better to have a separate list, they try and pigeonhole you, for example the house with the stairlift we were able to bid on, but it's not as simple as that, the adaptations aren't necessarily matched to the right person. If you can't use a stairlift, then living on the ground floor or having a lift are the only options available, so if a 3 bed flat came up that could be offered to someone who needs a ground level rather than letting everyone bid on it. Because there are people in band 4 like us who are adequately housed, that are getting to bid on new build 3 bed properties but we can't because they won't adapt them. Surely the system needs to change. I think they need to judge every case separately and match people a bit better with what's available, rather than just say everyone bid and we will offer it to anyone who needs an adaptation, doesn't matter if it's the right one.*

## **Tracy**

Tracy lives in a home that is rented from Habinteg and is generally very happy with her home.

*It's an accessible home, but it's more of a 90s style, early late 80s/90s style of it. As an "accessible home" there's not a huge amount of space. Storage space isn't exactly a great thing in my home, but I have enough sockets and it's all flat land I can get in and out with the doors. I can use the bathroom. I can use the bedroom fine and the hallway. So yeah, for my needs. It works. We make it work. So, for an accessible home and a wheelchair friendly home, there's a couple of things that could be different, but in the grand scheme of things, of what I moved from to here is a huge difference.*

She is able to access all parts of her home independently and has also made small changes including to the garden to improve her quality of life in the home. Tracy faced many challenges before moving into her current home and talks about her time there as existing rather than living:

*No, no, I was unable to use my wheelchair because it wasn't big enough. There wasn't enough room. So, you could barely swing a cat in the kitchen. The bathroom was large enough, but it wasn't designed to be a disabled bathroom. As I say, it was*

*big enough but that's all it was... Yeah, it wasn't a downstairs flat that I could enjoy. So it was more a case of sitting in a comfy chair and just existing as I like to call it.*

Her journey to her new home went on for over 5 years and she describes it as a fight with the local council. She was told that she wasn't entitled to a bungalow as they were only allocated to over 65s.

She is clear that her quality of life and wellbeing have improved considerably since the move to her current home.

*I didn't realize. I must admit how drastic my life would change from moving to a one bedroom flat that I was existing and having, you know, chomping down on antidepressants every day to moving into a 2 bedroom bungalow with a garden that fits my needs. How much that would change because I wasn't used to that. That was not something that I'd ever experienced.*

*But that drastic change was noticeable within me. I woke up one morning and said that's it. Don't wanna take antidepressants anymore. Don't want to do it. Can't do it and that's when I gradually started doing things for myself. I could move around in my kitchen. I could open the drawer, I could put things in the bin. You know, I could sit in my front room if I wanted to. I could sit in my front room in my chair. I could move around, I could go in the front door, out the back door.*

*I was living a life that I chose to live, not one that was chosen for me.*

Tracy believes that there needs to be systemic change throughout the whole building, planning and development process as well as an acknowledgement that the needs of wheelchair users will not all be the same.

*I think we need to start from the architects. I think the architects need to have more education. I think they need to be. It's all fair and well, saying that there's disability courses, there's regulations. The law needs to change. The building regulations need to change for sure, but it needs to change in a way that it suits everyone. And it's not just because it isn't one shoe fits all. What I need maybe doesn't fit what my next door neighbour needs. And you know, not everyone is in a wheelchair, but there are some people that are part time wheelchair users. And it's also remembering that in the fact is that space as well. I come with a lot of equipment, you know.*

Tracy also talked about retaining accessible homes and ensuring that adaptations are not undone and the homes moved into the general housing stock.

*And the problem with the Councils right now is that when a home is handed back to them. They don't automatically give it to somebody else that needs it. They are ripping everything out that they've possibly five years previous to that spent £10,000 fitting so then handed over to an abled bodied family or person. What's the point? You cannot tell*

*me there is not someone out there that needs a home that meets their needs. You've clearly not looked hard enough.*

## **Sara**

Sara lives in a wheelchair accessible flat that she rents from a housing association. The home has widened doorways throughout and also a full wet room. She is able to access all of the flat and feels that it meets her needs.

*I think more than anything, what I had when I moved in here and that basically is all the doorways wide enough to get a chair through. I currently have, because of my weight, I've got a heavy-duty chair, and I can still get through my doorways with no problem. The front door and the internal doors need to be adapted or built so that they are wide enough to get through. And I've got a wet room which has a shower in it.*

She feels very lucky to have the flat she has and is aware of long waiting lists for suitable housing for disabled people.

*I'm incredibly lucky to have the flat that I have because I know the waiting list for disabled housing is not good.*

She thinks there needs to be more accessible homes, with wider doorways and wet rooms as a minimum:

*Obviously the legalities of building and that needs to change.*

## **Maria**

Maria lives in a home that is defined as wheelchair accessible but she finds that it doesn't meet her needs as a wheelchair user. Some adaptations have been made but unfortunately these changes were not made for Maria, and therefore do not meet her specific needs.

She has lived there for around a year, having been housed there as an emergency relief of homelessness duty as she was fleeing domestic violence. The house is not suitable for her in a number of ways:

*This house is yeah, it's just so unsuitable in so many ways, and it's not really a family size home and I found that with almost every accessible home I have been into that they just don't see wheelchair users as potentially having a family, which inherently is a massively ableist attitude. I'm currently a single parent. I would like my partner to move in with me but because of the size of this place I'm having to kind of scale back on possessions and I have absolute minimal furniture. It's extremely difficult to get*

*around, although I have widened doorways, and I have a wet room, that is about all and it's all on one floor.*

Because of the nature and structure of the building it is difficult to make many other changes so she isn't able to make the house work better for her. She felt obliged to take the house as was told that it was the only option available with the alternative being street homelessness.

*I said to the housing occupational therapist when we moved in, this house is not big enough and she said take it or go street homeless. Those were her actual words and the time I had a young child and we were massively traumatized and it was like, you know, we have no option. So it was, yeah, it was just. It was a really hellish situation.*

She feels there are limited opportunities for her to move now as she has to live in the new area for a few years to be entitled to be on the housing waiting list, and furthermore she would be listed as needing a 3 bed bungalow, and there are very few or none of those available in the borough currently.

Maria has also had negative experiences with OTs where she has had to be the one suggesting options and new technologies for example. She has a number of suggestions for how things could be improved including ensuring that the DFG allocation increases in line with increased costs due to inflation and the supply chain issues in the building industry. Also, a change in attitudes in local authorities where there is more emphasis on helping and not saying no to the small things.

*But I really do feel that attitudes need to change on a major scale, both at a local level and a central government level in terms of getting money. I asked my local MP to support an early day motion to allow disabled people to get additional funds for and cost of living expenses and his response was disabled people get enough money as it is.*

*There's no joined up thinking and then you have people who are living in social housing who have no equity, no capital, who have very limited savings and they are literally just left at the mercy of what somebody at the local authority says. This is kind of where I'm at.*

## **Meg**

Meg lives in a home that she purchased as a shared ownership property about 10 years ago. Her home has been adapted to meet her needs as they have changed but interestingly the property seems to have been originally planned and designed as an accessible home. The doorways are wider, the sockets are higher, and the door handles are lower, and there is level access to the outside space.

Meg became a wheelchair user in 2018 and prior to coming home was able to have occupational therapists visit her home and advise on what amendments needed to be made. Because of being in a shared ownership property, Meg had to seek permission to change the bathroom but they were eventually able to make the necessary changes and reposition furniture to make it work. Further changes were made later on, including installing a fully accessible kitchen.

Meg's property is within a communal block so there were some minor amendments necessary to ensure her access requirements were met. Initially she faced some challenges in confirming this work could happen, but it was eventually completed.

Meg is able to access the vast majority of her home independently:

*I mean, I would say there's some little bits like with furniture positioning areas I don't need to get to like. I'm just thinking like right in the corners or next to the TV that I can't, but obviously I live with my husband and say there's a lamp over there for example, and we put smart bulbs in because so that I can we can do them on phone or voice command for example. So everything it's not perfect. I know it's not 100% perfect, but it's more than good enough for the fact that I live with someone else. If I lived on my own, I think there may be a few things that I would want to tweak, and if I ever get to like build my own house one day, there's definitely the other things I didn't incorporate like maybe something with the front door cause and things like refuse disposal and things that a bit more difficult when you're a wheelchair user*

Her home has developed and evolved over time, including making additional adaptations since having a family.

She thinks that there should be lots of accessible homes built in the new developments, particularly in areas of cities that are accessible to public transport and other amenities.

*So, my hope would be that they are definitely building good amounts of accessible apartments in those new builds and pricing them sensibly and marketing them appropriately*

Meg feels that having a home that meets her needs is really valuable to ensuring wellbeing:

*Yeah, 100%, I think I definitely felt at the beginning as we were kind of going through the adaptations, I sort of describe them as like micro annoyances, whether that's like not being able to reach a coat hook or the door being heavy and difficult to open or that kind of thing. Yeah. Just kind of like micro annoyances, which just kind of get you down I think particularly while you're, you know, navigating lots of other stuff like, you know, you're on the new bladder and bowel regime and all of that stuff is just like not ideal to have these extra things that just kind of mess you up with your day.*

*So yeah, in an ideal world removing all those micro annoyances I think makes a big difference to wellbeing just because you're not kind of getting those negative nudges.*

*And I think also because you know you can't, you can't control the outside world like whether that's the lift at your local tube stations down again or you know whatever might happen and it's really nice to have an accessible haven that you know that you can kind of do everything that you need to. And I think that definitely improves wellbeing and it's it becomes a bit of a haven versus the external spaces that you don't have control over.*

## **Kara**

Kara lives with her two young adult children in their family home. Kara owns her home and it has previously worked ok for the family but in the past few years has become increasingly unsuited to their needs as the children's health conditions have progressed.

Kara would like to move within the same local area but has faced many challenges with being able to afford something suitable that meets their needs whilst maintaining social networks and support structures.

*It's like trying to find a needle in a haystack, trying to find a property that has the potential to be adaptable for the needs of 2 disabled people. It's difficult.*

Kara has tried to seek help from the local authority but feels there is limited help available for people in her position, who own a property but are unable to move into something suitable as the costs are prohibitive.

She feels that space is really important for wheelchair user accessible homes:

*It's all really about space, and having the equipment you need, and for people to come in and support. And how do you manage all of that, what does that look like? For wheelchair accessible housing, you need space for everything that comes with a person with that level of disability.*

Kara believes that there needs to be widescale changes to how we think about and how we deliver our homes and communities. For her, having homes that work for people and meet their needs are crucial to wellbeing:

*It's about attitude and removing barriers. As a society we need to think better because there are ways around it. Having a home that is suited to your needs, that is comfortable to live in, it eases many of those pressures.*





## Annex One: Overview of benefits from selected previous literature

To develop an agreed set of main benefits for application in the cost-benefit analysis model, we reviewed four key reports and documents relating to the benefits of accessible housing. We drew out the main benefits listed in each of these reports and where there were areas of agreement, we included these benefits in our model. Here we provide more detail on the four key reports.

### **Research on Part M: Access to and Use of Buildings, by PRP Innovate Ltd, for Ministry of Housing, Communities and Local Government (2021)**

The most recent report which includes details of costs and benefits of accessible housing, including wheelchair user housing, is [Research on Part M: access to and use of buildings<sup>38</sup>](#), prepared for the Ministry of Housing, Communities and Local Government in 2021. Part One of this document includes details of the outcome of an investigation with the research questions:

- *Needs: What evidence exists to characterise the nature of the benefits provided by accessible housing?*
- *Benefits: What evidence exists to characterise and quantify the benefits provided by the provision of accessible housing and accessible housing standards?*
- *Benefits: Are there potential savings/costs to public and private sectors that can be achieved by changes to Part M? Do the existing measures already result in potential savings/costs to the public and private sectors?*

The report provides details of the investigation and sources used, which are cited at appropriate points throughout the report:

- *Evidence for the two key research questions identified above are collected from a variety of sources, including government, disability groups, access consultants, housing providers, building owners (including Facilities Management teams), local authorities, designers and other stakeholders from across the industry. The references and data sources we have looked at include the following:*
  - *as a starting point, a comparison of the current Part M and Approved Document M with the draft Part M and draft Approved Document M to give an indication of what evidence is required based on the proposed changes*
  - *documentation from the Housing Standards Review of 2013*
  - *papers and reports produced by UK-based disability groups and charities such as MENCAP, Guide Dogs, RNIB, British Deaf Association, Muscular Dystrophy UK, MS Trust, Restricted Growth Association and others*
  - *articles, papers, reports and publications that provide measurable and quantifiable evidence on the benefits of accessible housing*

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<sup>38</sup> <https://www.gov.uk/government/publications/research-on-part-m-access-to-and-use-of-buildings>

- *London Accessible Housing Register and other similar databases*
- *reports and papers from the access sector, including work by access consultants and occupational therapists, human resources, National Register of Access Consultants (NRAC), The Access Association; Housing Adaptations Advisory Service (HAAS).*

It further sets out, at page 13:

*We have focused our research on data which is readily available, and which can give an indication of the value of savings that are possible and the frequency they are likely to occur. It is in establishing the frequency of benefits using statistically reliable data that the most significant gaps in evidence occur.*

The report has extensive discussion of the main benefits of accessible housing, from page 13 onwards, and which are summarised as:

*A summary of the quantitative evidence found during the course of this research is as follows:*

- ***Delayed hospital discharges** cost the NHS about £285m per year, and the evidence suggests that up to 14% of these delayed discharges can be reduced by accessible housing through the reduction of the need to adapt homes (3%) and the need to supply assistive equipment (11%). However, the evidence also indicates that 24% of delayed discharges result from lack of assessment or consultant services, which suggests that procedural changes would be more effective in reducing these costs.*
- ***Trips and falls in the home** on stairs and between levels create significant costs for the NHS of more than £291m per year. Evidence suggests that low cost home modifications lead to positive results in terms of a reduction in injuries attributable to trips and falls at home, and that visual impairment leading to falls at home cost the NHS £130m per year. However, because the research does not specifically look at accessible housing but rather, the incidence of trips and falls in general, it is unclear what proportion of these costs are due to the nature of the housing in terms of accessibility versus other causes. [Note that in the report this reduction in trips and falls also applies to caregivers]*
- *There is also evidence of significant savings (in the region of £25,480 - £80,000 per patient per year) arising from **adaptations packages enabling – in particular – permanently disabled people to live at home, thereby avoiding the need for residential care**. A study by the Papworth Trust found that home adaptations can help prevent or defer entry into residential care, with just one year's delay saving up to £26,000 per person, less the cost of the adaptation. There is less evidence as to the frequency or extent that accessible housing reduces the need for residential care for the wider population, or people with a temporary disability or condition, although the evidence for the benefits of adaptations packages indicate that the potential for benefit exists*
- *Adaptations that **remove or reduce the cost of care assistance at home** pay for themselves in a time-span ranging from a few months to three years and then produce annual savings varying from £1,200 to £29,000 a year. This evidence of benefits is derived from adaptations, not the inherent features of the property itself, and it is also unclear from the data whether the homes were already accessible and needed only small adaptations (such as the installation of grab rails) or required more major adaptations. In*

*terms of the reduced cost of home adaptation, a recent study by the Northern Ireland Housing Executive of 70 adaptations showed that the savings of adaptations would have been £275,000 if 69 residents had been able to move directly into appropriate accommodation instead of having their homes adapted.*

- *In a more generalised study by the PSSRU/LSE it was found that a client base of 45,000 individuals receiving interventions (at a total cost of approximately £270 million, broadly equivalent to the total annual expenditure on Disabled Facilities Grants used to fund major adaptations), is likely to generate a **reduced demand for health and social care services** worth £156 million over the estimated lifetime of the equipment, and to achieve quality of life gains of £411 million over the same period.*
- *There is very little quantitative data available to characterize the nature and frequency of the benefits related to the **avoidance of temporary residential costs** and the reduced cost of rehousing although it would be logical to assume that accessible housing leads to benefits in these areas. Harrow Council estimates that the cost of rehousing can be up to £30,000 per home, but there is no available data on the quantity or frequency of this occurrence. Finally, while there is anecdotal evidence of the desire for the removal of adaptations from a newly-occupied home, there is no available data on the cost and frequency of this occurrence nor how these would be affected by the provision of accessible housing.*

Page 49 of the report also sets out what the authors think would be needed by way of additional investigation and evidence to better understand the nature of the benefits of accessible housing.

The report also sets out a table linking identified primary benefits to a range of 21 “secondary benefits”. This chart is copied in the next three pages. Note that for the purposes of our report, we have focussed on benefits 1 through 6, as benefits 7 and 8 were not relevant to the scope of research:

- 1 Avoid temporary residential costs (rehabilitation or re-ablement care)
- 2 Reduced bed-blocking
- 3 Reduced residential care costs
- 4 Reduced cost of care assistance at home
- 5 Reduced cost to NHS (trips/falls/injury to carer)
- 6 Reduced cost /need for aids and adaptations
- 7 Reduced cost of removing adaptations
- 8 Reduced admin costs of rehousing

	1	2	3	4	5	6	7	8
<b>A</b>	Improved/maintained quality of life	✓	✓	✓	✓	✓	✓	✓
<b>B</b>	Improved mental health/independence/ well-being of the individual	✓	✓	✓	✓	✓		
<b>C</b>	Maintenance of original levels of dignity, pride and self-esteem	✓	✓	✓	✓	✓	✓	
<b>D</b>	Reduced fear of falling (with mental health impacts of reduced anxiety, depression, stress, etc)				✓	✓	✓	
<b>E</b>	Maintained /increased empowerment, autonomy, independent decision-making, improved self-esteem and self-confidence. <sup>73</sup>		✓	✓	✓	✓	✓	
<b>F</b>	Improved/maintained social inclusion	✓	✓	✓	✓	✓	✓	✓
<b>G</b>	Lower levels of anxiety and depression <sup>74</sup>	✓	✓	✓	✓	✓		✓
<b>H</b>	Reduced social isolation due to visitability of own home and those of others.	✓	✓		✓	✓	✓	
<b>I</b>	Reduced levels of mortality from cardiovascular disease, accidents and suicide due to social isolation.	✓	✓		✓	✓	✓	

<sup>73</sup> Wheelchair Accessible Housing: waiting for appropriate housing in England – Aspire 2014

<sup>74</sup> Public Health England – Written Evidence (BEN0186)

	1	2	3	4	5	6	7	8
J	Reduced fear of crime, as the home is not visibly different from others in the street (external ramps and handrails are unwelcome indicators of a home with a vulnerability or disability.) <sup>75</sup>							
K	Positive effect on health and peace of mind. <sup>76</sup>							
L	Reduction in risk of further illness picked up in hospital, particularly pneumonia in vulnerable people such as the immuno-suppressed and older people, further delaying the release of a bed.							
M	Reduction in potential for spread of infection, such as MRSA, <i>C difficile</i> , <i>E coli</i> , etc.							
N	Reduction in the institutionalisation of the individual and therefore sustained independence and social inclusion.							
O	Earlier return to work, activities, community.							
P	Maintenance of employment/studies/day-to-day activities.							
Q	Improved quality of life of carers.							
R	Reduced mental strain on family.							
S	Reduced travel by family and friends to a different location							
T	Less damage/repair required to the home							

<sup>5</sup> Incorporating Lifetime Homes standards into modernisation programmes. Joseph Rowntree Foundation, Housing Research 174 (April 1996)

<sup>6</sup> Money Well Spent - the effectiveness and value of housing adaptations - JRF 2001 page 13.

	1	2	3	4	5	6	7	8
U		✓			✓			✓
V	✓	✓			✓			

## Living with Disability in Inaccessible Housing: Social, health and economic impacts, by Dr Ilan Weisel (2020)

A further recent and well evidenced report, which includes an extensive bibliography of a wide international range of sources for the benefits of accessible housing set out in the report [Living with disability in inaccessible housing: social, health and economic impacts<sup>39</sup>](#).

A summary of the main area of benefits identified is set out below. Details of the references cited in the text can be found in report itself. Note that this report is based on adaptations (as mentioned at the end of the section quoted below) and that benefits are consequently tailored to individual needs. In fact, this would be relevant to the cost benefits of new homes provided under category 3b (where they are fully compliant on completion of building and let as such by a local authority), but not an issue in relation to 3a (where the specific modifications for wheelchair use by a purchaser would be specified by that person).

The overview is:

*Much of the research on the effects of housing accessibility and inaccessibility derives from data on people's experiences before and after home modifications. Positive effects of home modifications have been documented across a range of interconnected life domains:*

**Improved function, independence and freedom:** *Home modifications improve people's ability to conduct everyday activities at home – from moving around, through to self-care and caregiving for others, and care of the home itself – with reduced difficulty, stress and fatigue (Alpin et al., 2015, p. 127; Lau et al., 2018, p. 240; Petersson, 2008, p. 256). Reduced effort on such everyday tasks frees up energy and time for other activities that are more meaningful to people (Norin et al., 2017, p. 233). Lau et al. (2018, p. 240) identified six activities most significantly affected by home modifications: getting in and out of home; bathing and showering; grooming; transferring to toilet; walking a block; and moving in and out of bed. Accessible housing is associated with a sense of independence and freedom, as described by Alpin et al. (2015, p. 126): "To be able to do things for one self, to choose activities freely, to move from room to room and to come and go as one pleases was extremely important to participants." (Alpin et al., 2015, p. 126)*

**Support needs:** *Improved accessibility at home is also associated with reduced need for paid and unpaid support. Carnemolla and Bridge (2019, p. 7) found that home modifications reduced informal care hours by an average of approximately 6 hours per week, and formal care by approximately 0.36 hours per week, for participants in their sample. Sinclair et al.'s (2020, p. 5) survey of informal carers found the vast majority (97%) agreed that the home*

<sup>39</sup> [https://disability.unimelb.edu.au/data/assets/pdf\\_file/0010/3969109/Accessible-Housing-Research-Report-22-October-2020.pdf](https://disability.unimelb.edu.au/data/assets/pdf_file/0010/3969109/Accessible-Housing-Research-Report-22-October-2020.pdf)

design had a significant influence on the level of support required. Reduced reliance on formal or informal support increases the sense of independence, and privacy when performing personal self-care activities (Lau et al., 2018, p. 240), and more freedom in choosing when and how people do things such as taking a shower or toileting, without having to ensure a spouse or a family member is present (Alpin et al., 2015, p. 126).

**Health & safety:** Home modifications are associated with improved physical and mental health. Mitoku and Shimanouchi (2014) found that modifications slow the progression of frailty. Heywood (2004) identified mental health effects of home modifications, associated for example with reduced fear of falling, and reduced depression. Many studies identified an enhanced sense of safety and a decrease in injuries and falls following home modifications (Chang et al., 2004; Clemson et al., 2008; Tse, 2005; Turner et al., 2011; Powell et al., 2017; Lau et al., 2018, p. 240; Petersson, 2008, p. 256). However, in some documented cases, poorly designed or executed modifications, such as installation of slippery ramps, have sometimes increased risk of injury (Alpin et al., 2015, p. 126)

**Social participation:** Home modifications have been found to serve as a catalyst for improved social and family relations, due to improved ability to leave the home to engage in social activities, and improved ability to have friends and family members with a disability visit one's own modified home (Alpin et al., 2015, p. 127). White et al. (1995) found a 60% mean increase in reported trips out of the house following ramp installation. Home modifications contributed to family relations by enabling people to take on caregiving roles – such as a parent being able to cook for his children – and being less reliant on other family members' help in everyday activities (Alpin, 2015).

**Employment:** Bishop et al. (2013), in a US survey of over 4200 adults with Multiple Sclerosis, compared employment outcomes for those living in accessible and inaccessible homes. Among those with accessible homes 43.3% were employed, while among those living in homes that do not meet their accessibility needs, only 23.0% were employed. The study found a significant difference in the mean number of accessibility features that participants needed but did not have between employed and unemployed survey respondents.

**Housing security and choice:** Home modifications are associated with improved housing security and choice: ability to move home, or to stay put, at will rather than necessity. Alpin et al. (2015, p. 127) report that people who modified their homes experienced an enhanced sense of permanency and a feeling that their home was now a "home for life... where ageing, deteriorating or improving health or the growth of children was accommodated for." Conversely, Kim (2020, p.20) found elderly people with unmet accessibility needs in their home were more likely to move home.

A longitudinal study by Petersson et al., (2009) found that **the positive effects of home modifications, as elaborated above, are sustained over time**. In contrast, those waiting for home-modification with unmet need experience increased difficulty over time: "For each month's wait for a home modification, the person's difficulty in performing everyday life tasks increased".

While evidence is accumulating on the various themes noted above, the current study address three significant gaps in existing literature. Firstly, most existing literature on the impact of accessibility is focused on home **modifications** rather than **new homes built to accessible standards**. This is not surprising considering the very limited supply of new accessible housing stock in many countries. However, concerns have been raised (CIE,



2020, p. 140) that the effects identified for modified homes – **which were modified to address specific individual needs** – may not necessarily be applicable to houses built to a more general accessibility standard. The current study compares homes that are modified (partly or fully addressing residents' personal needs) with those that were built accessible, or were neither built accessible nor modified. Secondly, except for Bishop et al. (2013) we have not found other studies addressing the relationship between housing accessibility and employment outcomes. The current study provides important new qualitative and quantitative data on employment effects of accessible and inaccessible homes. Thirdly, our *Living with disability in inaccessible housing: social, health and economic impacts study* presents new important **qualitative data** that deepens the understanding of the relationship between housing accessibility and mental health.

## **Housing Standards Review: Final implementation Impact Assessment, from the Ministry of Housing, Communities and Local Government (2015)**

The 2015 [Housing Standards Review: Final Implementation Impact Assessment](#) which was part of the review leading to the introduction of national standard definitions for accessible housing also sets out the costs and benefits of that change. Although older and hence with less usefulness in terms of monetisation and links to current health and social care practice, it is nevertheless a comprehensive review of likely areas where social benefits would accrue.

A summary of these benefits is provided at page 49, followed by more details on each. *There are a range of social benefits which can arise from building more accessible housing. Typically, these are greater where a household includes an older, disabled or vulnerable person. The most common savings include but are not limited to:*

- *avoiding temporary residential costs by enabling early return from hospital*
- *reduced bed blocking in primary health care due to inappropriate housing preventing return home*
- *reduced residential care costs by delaying long term need to move in to residential accommodation*
- *reduced cost of and need for care assistance in the home*
- *reduced costs to the health service arising from unsuitable housing and including trips, falls and injury to carers*
- *reduced cost or need for adaptations*
- *reduced cost of removing adaptations*
- *reduced administration costs in re-housing older or disabled people.....*

*In particular, the availability of fully wheelchair accessible or adaptable housing can provide an alternative to residential care, and enable families to continue to live together and support each other, as well as delivering considerable savings to health and social welfare services.*

More specific detail is provided in subsequent sections:

### ***Avoiding temporary residential costs by enabling early return from hospital***

*Prior to discharge it is a typical practice for occupational therapists to assess conditions in the home to establish if older, disabled or temporarily injured people will be able to cope; to arrange for care and support where this will be necessary or recommend delayed return (until suitable adaptations can be made) or arrange*

*a temporary move in to residential care. Accessible housing improves speed of adaptation and makes it easier to avoid the need for temporary re-housing in residential accommodation.*

*The critical activities that in particular older or disabled people need to be able to undertake are to move safely around the property (including up and down stairs); to wash and access a toilet; and to prepare food. Typically this means having eating, sleeping and washing accommodation at ground level, and the capacity to speedily fit critical adaptations such as grab rails in bathrooms. The cost of a ten day stay in residential accommodation is £767.*

### ***Reduced bed blocking due to inappropriate housing***

*In addition to the costs of residential care arising from homes being unsuitable for patients to return to are the costs to the NHS where bed blocking occurs (as an alternative to residential care). This is a separate and more common cost. On any given day, 65% of hospital beds are occupied by the over 65's (Department for Health). The cost of an NHS bed is around £260 per day or £94,900 per year.*

*A significant number of bed days are lost each year as a result of bed blocking by older people unable to return home. Whilst it is likely that housing which is more accessible or adaptable will reduce the frequency of bed blocking, improved evidence of the frequency with which this happens is needed to monetise this benefit.*

### ***Reduced residential care costs by delaying long term need to move in to residential accommodation***

*Aside from specific incidents, injuries and ill health, the accessibility and adaptability of housing also affects the 'tipping' point at which individuals are moved into full time residential care – this has a typical cost per year of £28,800. Often, a move into care is precipitated because of the unsuitability of an existing home and the difficulty of adapting the property or lack of funds to adapt the property in a timely manner. This will particularly be the case where people have severely impaired mobility.*

*In particular, the availability of fully wheelchair accessible or adaptable housing can provide an alternative to residential care, and enable families to continue to live together and support each other, as well as delivering considerable savings to health and social welfare services. Further evidence is required to fully monetise these savings.*

### ***Reduced cost of and need for care assistance in the home***

*Approximately 1.5 million households involve one person or more being cared for, typically by family members or friends or funded through some form of private care. Of these, 400,000 households are receiving state assistance, which averages 10 hours or £100 per week, or £5,200 per year. The majority of these households will include a reference person over 75 or a disabled people.*

*Where such a household occupies a Category 2 home, they are less likely to need assistance to overcome the design of the home (e.g. to be assisted in bathing or toileting); are likely to be able to be more independent in moving in and out of the home and will find it much cheaper (and will therefore be more likely) to put in place suitable adaptations. All of this will reduce the likelihood or extent of care required. Further research is needed to fully establish the value of these benefits.*

### **Reduced costs to the health service arising from unsuitable housing and including trips, falls and injury to carers**

*Independent research by the Building Research Establishment into the likely savings to health services found that:*

*“Homes built to current building regulations offer significant health advantages over the average stock, and may provide direct NHS health cost savings per dwelling in excess of £4,000 during a 60-year expected lifespan. Building to the Lifetime Homes Standard could provide an extra £194 of savings over 60 years, or £700 if the potential adaptations to bathrooms and access to a bedroom/bathroom were made.”*

*“When considering the potential cost to society, the savings are likely to be much higher. Using the model, it is suggested that a home built to current building regulations could save £83,000 during a 60-year lifespan, compared to the average for the current stock. Building to the Lifetime Homes Standard could provide a further £1,600 in savings, or £8,600 if the potential adaptations were made.”*

### **Reduced cost or need for adaptations including the need for extensions**

*Category 2 (accessible and adaptable) and Category 3 (wheelchair user) housing are designed in such a way as to significantly reduce the need for or extent of adaptations required to meet peoples changing needs over time. This saves money by avoiding the cost of adaptations, or makes adaptation cheaper, but further evidence of these benefits in practice is needed to in order to establish their value.*

### **Improved cohesion within family units**

*Evidence gathered in support of the London Plan requirement for space standards identifies a range of benefits that families derive from good standards of space in the home<sup>14</sup>. These include better ability to socialise with family members and guests; improved storage; improved space for solitary activities (studies or pastimes); greater flexibility in arranging rooms to meet different preferences; the ability to work from home; more space for managing waste and recycling and improved day light and ventilation.<sup>15</sup>*

### **General Health and Wellbeing**

*Research into the health and wellbeing benefits of space standards is on-going<sup>16</sup>, but social benefits are proposed to be derived in two particular respects; firstly, there are reductions in family stress and improvements in in familial relationships, often arising from improved opportunities for privacy and isolation within the dwelling. Secondly, space standards help to mitigate impacts from overcrowding, particularly relating to mental health (reducing depression) giving children room to play within the home and helping to ensure a good night's sleep<sup>17</sup>.*

*There is also some research into the benefit of higher ceiling heights in improving indoor air quality and dealing with risks from over-heating. Given that predictions of climate change suggest a long term trend towards longer periods of higher temperature, this may becoming an increasingly important design tool in offsetting the discomfort and health risks (including increased mortality) from*

*periods of overheating.*

### **Reducing Anti-Social Behaviour**

*Research is on-going into the links between poor quality housing (of which limited internal space is one contributory criterion) and evidence of the link between anti-social behaviour and smaller homes is primarily empirical<sup>40</sup>. However, poor internal space is linked to poorer health and lower educational attainment. It is also suggested that where there is insufficient space for adults and younger family members to inhabit a property comfortably, there are increased risks of children and young adults being displaced into the external environment where they are more vulnerable to falling into patterns of anti-social behaviour.*

## **The Fiscal Impact of the Lack of Accessible Housing in the UK, and the Returns on Investment in Accessible Newbuild Social Housing, by Howard Reed (2015)<sup>40</sup>**

A final report to which we refer is *The Fiscal Impact of the Lack of Accessible Housing in the UK and the Returns to Investment in Accessible Newbuild Social Housing*, an unpublished 2015 report written by Howard Reed of Landman Economics for Leonard Cheshire Disability. Although unpublished, this presents a further set of overlapping potential areas of benefit and additional references to background literature. It is also more specifically addressing investment in newbuild accessible housing – although similarly to most of the other reports, does not specifically refer to Category 3 housing. **NOTE** that the information below relates to how the cost benefit analysis in this report by Landman Economics has been undertaken, but that in the main approach above we have taken some different approaches as we are dealing with specifically wheelchair user housing. The Landman Economics report identifies the costs that come from not building newbuild accessible housing in general, which include:

- 1. NHS costs for people suffering injuries or depression-related conditions** as a result of living in inaccessible housing (including hip fractures and other injuries resulting from falls, ambulance call-outs, treatment for depression, bed blocking and GP appointments);
- 2. Additional local authority expenditure on residential social care systems**, resulting from individuals with care needs having to move into residential social care because their own home is not sufficiently accessible for them to receive domiciliary care;
- 3. Reduced receipts of taxes and National Insurance Contributions** for people forced out of work due to health problems arising as a result of inaccessible housing;
- 4. Increased expenditure on disability and unemployment-related benefits** for people forced out of work due to health problems sustained due to inaccessible housing.

### **Costs to the health and social care system**

There are seven main categories of cost arising to the health and social care system as a result of inaccessible accommodation. In detail, these are as follows:

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<sup>40</sup> Reed, H., (2015) *The Fiscal Impact of the Lack of Accessible Housing in the UK, and the Returns on Investment in Accessible Newbuild Social Housing*. Landman Economics. Available direct from Landman Economics at [howard@landman-economics.co.uk](mailto:howard@landman-economics.co.uk)

**i) Costs arising from hip fractures**

Around 65,000 cases of hip fracture resulting from falls are treated by the NHS in England each year, with around three quarters of these falls occurring in the home (Royal College of Physicians, 2013). This research report assumes that 50 percent of hip fractures result from falls arise due to unsuitable accommodation (based on NICE, 2013). The average cost to the NHS and social care services of treatment of a hospital admission for hip fracture is around £14,500 (Cabinet Office/New Economy Manchester, 2015). Note that a large proportion of wheelchair users, particularly in the later years group, primarily use wheelchairs outside the home and so are still at risk of falls inside the home where the property is not fully accessible to meet their needs.

**ii) Costs arising from other injuries resulting from falls**

Statistics from the Health and Social Care Information Centre (HSCIC, 2013) suggest that in addition to hip fractures, there are approximately 350,000 other treatable incidents a year arising as a result of falls. These include:

- fractures to arms, legs, hands and feet;
- fractures of lumbar, spine and pelvis;
- intracranial injury;
- open head wounds.

The average cost to the NHS of treatment for a hospital admission for these other injuries is around £2,800 (Cabinet Office, 2015). As with hip fractures, this report assumes that 50 percent of these falls arise due to unsuitable accommodation.

**iii) Costs arising from ambulance call-outs**

Ambulance call-outs cost the NHS an average of £223 per incident (Cabinet Office/ New Economy Manchester, 2015). Based on research by Age UK (2012) on the number of ambulance call-outs for falls among older people in the UK population, this report assumes that just over 200,000 ambulance call-outs per year could be avoided if the whole of the English housing stock were upgraded to Lifetime Homes Standards.

**iv) Costs of treatment for depression**

Previous research has shown that there is a clear relationship between being in unsuitable accommodation and suffering from depression (NHS Confederation, 2011). Analysis of recent data from the Labour Force Survey suggests that adults who suffer from mobility problems are over four times as likely to suffer from depression as the wider population. Based on the relatively high occurrence of depression among disabled people with mobility problems, this report assumes that up to 200,000 instances of depression could be avoided if the whole of the English housing stock were upgraded to lifetime home standards. Research by the Cabinet Office (2015) suggests that the average cost of NHS and local authority service provision for adults suffering from depression and/or anxiety disorders, per person per year, is just under £1,000.

**v) Bed-blocking**

In many cases, NHS hospital patients are delayed in returning home after treatment for a health problem arising as a result of inaccessible accommodation, resulting in additional

costs in the NHS as they continue to occupy hospital beds ("bed- blocking"). Recent NHS statistics suggest that these delays in leaving hospital due to needing to wait for accommodation to be accessible resulted in over 40,000 extra bed- days in hospital in the year to August 2014 (NHS England, 2015). The average cost to the NHS of bed-blocking is £275 per bed per day, resulting in total costs of over £11 million per year (Cabinet Office/ New Economy Manchester, 2015)

vi) **GP costs**

Survey research by Leonard Cheshire Disability suggests that NHS General Practitioners (GPs) in England have just under 3 per cent of their total workload taken up by appointments which arise because of inaccessible housing. Based on a total GP budget for England of £9.6bn in 20145, this means that inaccessible housing accounts for around £275 million of costs to the GP service.

vii) **Residential social care costs**

In many cases, individuals with care needs are forced into residential social care rather than being able to receive care services in their own home (domiciliary care) because their own home is not suitably accessible for their disability. Analysis by Leonard Cheshire Disability (2014) of its own residential care clients suggests that just under 2 per cent of people in residential care would have been able to remain in their own homes if their property had been suitably accessible. This creates an additional cost to local authorities because the average cost of residential care is much higher than the average cost of domiciliary care (figures from HSCIC, 2015, show that residential care is around £380 per week more expensive than domiciliary care).

viii) **Other potential costs not considered**

There are a number of other health and social care costs which arise as a result of inaccessible accommodation which are not included in the calculations in this report. These include:

- additional domiciliary care costs for conditions other than hip fractures arising from falls and treatment of depression;
- NHS costs for minor injuries resulting in outpatient admission (e.g. sprains).

In each of these cases, there was a lack of necessary data on the number of people who might require treatments for these conditions as a result of inaccessible accommodation, which made it impossible to include them in the analysis. This implies that the results presented here are a conservative estimate of the fiscal costs of inaccessible housing (because these additional costs will certainly be greater than zero).

**Costs to the tax and benefit system**

Living in inaccessible housing increases the risk of worklessness due to injuries and other health conditions sustained as a result of housing which is poorly adapted to disabled people's needs.

Because statistics from the Government's Health and Social Care Information Centre indicate that the majority of serious health conditions arising from inaccessible housing

occur for adults aged over 60, the calculations of costs to the tax and benefit system in this report focus on the over-60 age group.

The estimates in this report assume that the employment rate of people whose health is affected by inaccessible housing is equal to the overall employment rate in the UK labour force for disabled people aged over 60 (around 23 per cent). Using realistic assumptions for the proportion of health conditions which give rise to incapacity for work, the analysis assumes that employment for the affected group will reduce by approximately 20,000 people per year.

### **Reduced tax and NICs receipts**

The average annual wage for disabled people in work aged over 60 (just under £19,000 per year, as measured by the UK Labour Force Survey) is used to calculate the reduction in income tax and National Insurance Contributions (NICs) receipts as a result of each person who moves out of work. The reduced tax take per person breaks down as follows:

- reduced income tax: £1,613
- reduced employee NICs: £1,273
- reduced employer NICs: £1,457

In addition to this, the reduction in net incomes for people forced out of work due to health conditions sustained as a result of inaccessible housing leads to lower expenditure on goods and services, which leads to reduced receipts from VAT and other expenditure taxes (such as excise duties). Using reasonable assumptions on the amount of earned income which is spent rather than saved, and the mix of goods and services bought by typical consumers, we calculate that each person moving out of work results in reduced expenditure tax receipts of £1,428. Thus, total tax receipts are around £5,800 lower per year for each person forced to move out of work as a result of deteriorating health due to inaccessible housing.

### **Increased benefit payments**

As well as reduced tax receipts, the Exchequer is likely to face additional costs due to higher benefit and tax credit payments – including disability related benefits such as Employment and Support Allowance and Personal Independence Payment as well as Housing Benefit and Council Tax Support. Using the UK Family Resources Survey and comparing the average amounts of benefit and tax credit payments made to disabled people in the over-60s age group who are in work with the amounts paid to non-working disabled people, non-workers, the latter group receive just over £7,000 per year more than the former on average. This difference in payments is also factored into the overall analysis.