An Ghníomhaireacht Tithíochta
The Housing Agency

Thinking Ahead:

The Financial Benefits of Investing in Supported Housing for Older People

Acknowledgements

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Acronyms/Abbreviations

AHB	Approved Housing Body
Assisted Living – Supported Housing	Assisted Living provides for increased services. There may be a healthcare manager, housing manager, or an activities co-ordinator on site. The accommodation is often located close to day care centres or primary healthcare centres.
CALF	Capital Advance Leasing Facility
CAS	Capital Assistance Scheme
CBA	Cost benefit analysis
HFA	Housing Finance Agency
HIPE	Hospital In-Patient Enquiry
HSE	Health Service Executive
Independent Living – Supported Housing	Independent Living Supported Housing represents housing constructed to reflect older persons' needs. The housing is independent and offers residents secure housing, often designed to universal design standards. There would be a low level of additional services provided.
NESC	The National Economic and Social Council
P&A	Payment and Availability Agreement
RAS	Rental Accommodation Scheme
Specialised Living – Supported Housing	Specialised Living requires the highest level of care, with care needs more closely reflecting those in a nursing home. There would be social and healthcare staff on-site, meals would be provided, and care supports would be available 24-7
Supported Housing/ Housing with Supports	Supported Housing can enable people to live independently for longer and thus avoid, or delay, moving into long term residential care. It is an alternative housing option that falls somewhere between living totally independently in the community and nursing home/residential care.
TILDA	The Irish Longitudinal Study on Ageing (TILDA) Trinity

Independent Living
Ballygall Road East / FOLD Ireland

1. Executive Summary

This paper demonstrates that investment in the development of more Supported Housing would result in considerable financial benefits to the State.

Enabling older people to remain living in their own homes with independence as long as possible, and ensuring there is greater choice of housing options for people as they age to remain living in homes suited to their needs, within their own communities and accessing appropriate care supports, is an aim of Irish Government housing policy.

Supported Housing is housing with care and support, primarily for older people. It can enable people to live independently for longer and is an alternative housing option that falls somewhere between living independently in the community and nursing home/residential care. It can enable people to live independently for longer and thus avoid, or delay, moving into long term residential care. Work from multiple sources, including The Housing Agency, has demonstrated a lack of supply in the provision of this form of housing in the State.

In this paper The Housing Agency has set out to consider what the costs or the benefits to the State would be if the supply of Supported Housing for Older People increased.

The first purpose of this paper is to provide evidence to the Interdepartmental/Agency Implementation Group tasked with ensuring the actions in the *Housing Options for Our Ageing Population Policy Statement* (Government of Ireland, 2019) are carried out.[1] The second purpose is to provide a greater understanding and clarity to a wider audience of the costs and benefits of developing this type of housing.

The paper examines the costs and the benefits to the State of an expansion in the provision of Supported Housing for older people. It explores the costs of providing a range of Supported Housing options with varying care requirements: Independent, Assisted and Specialised. It compares the costs of providing

Independent Living
Broome Lodge, Dublin / Clúid Housing

1 The Housing Agency is a member of this group.

these three Supported Housing options to a number of alternative scenarios where it is assumed that Supported Housing is not available.

Research commissioned by The Housing Agency in 2016 identified three models of Supported Housing available depending on the degree of care and the level of service required: Independent Living (low level of services), Assisted Living (medium level of services) and Specialised Living, including subacute care (high level of services) (The Housing Agency/ISAX, 2016) (Government of Ireland, 2019). This paper follows this approach and looks at the potential costs and benefits of each Supported Housing model. These costs and benefits are then compared against the costs and benefits of a counterfactual scenario, which is the assumed tenure profile of Supported Housing residents if Supported Housing is not available. Each model and associated counterfactual scenario vary by level of care required; with those in Independent Living requiring the lowest level of care and those in Specialised Living requiring nursing home care in the absence of Supported Housing. Table 1 provides a summary of what would typically be available for

Table 1: Typical features included in Supported Housing Models

Independent Living	Assisted Living	Specialised Living
1/2-bedroom apartment/ bungalow – own kitchen, living room, outdoor space	1/2-bedroom apartment/ bungalow – own kitchen, living room, outdoor space	Bed-sitting room, bathroom, kitchenette and may include own outdoor space
Own front door	Own front door	Own front door
Universal Design principles	Universal Design principles	Universal Design principles
Communal room and office space	Communal room and office space	Extra communal and office space
May have a café	May have a café or residents restaurant	Shared sitting rooms, kitchens, and dining rooms
Secure personal alarms/ emergency response	Secure personal alarms/ emergency response	Secure personal alarms/ emergency response
Caretaker/housing manager on site for some time each week	Caretaker/housing manager on site for some time each week	Social and healthcare staff on site
No home help or day care costs included in model for this paper	Co-located with an HSE day care centre	24/7 social and or/medical care costed
	Day care costed in model, but no home help costed	Day care and home help costed in model
May have a guest apartment in scheme for overnight visitors	Often a primary care centre on same site	
	May have a guest apartment in scheme for overnight visitors	

Assisted Living
Kilmaley, Clare / Kilmaley Voluntary Housing Association

each of the three levels of Supported Housing covered in this paper.

The modelling also looks at the differences in assuming different funding mechanisms for Supported Housing, broadly split into social housing and private market housing. The social model assumes that Supported Housing is largely funded through State funds and that residents would be primarily accommodated in regular social housing in the absence of Supported Housing. The private market housing model assumes Supported Housing is mainly privately funded and that residents would mostly live in their own private-market housing in the absence of Supported Housing.

The benefits described in this report are intended to be indicative only of the general financial benefits which can come from a shift in the tenure of the older population and the way in which these benefits may arise. They are based on a number of assumptions and as such should be taken as broad estimates of the potentially large benefits of Supported Housing. They are not intended to be used to the closest €1,000, as precise estimates, as there are simply too many variables. Rather, they are intended to point to the general financial benefits which can come from a shift in the tenure of the older population and the way in which these benefits may arise.

Key Findings

The results of this paper show that there is a strong positive financial benefit to the State from the provision of each of the three models of Supported Housing. It is further established that there are benefits from the provision of both social and privately-funded models of Supported Housing. The benefits primarily accrue due to Supported Housing, either by directly replacing more expensive nursing home beds or delaying the need for an older person to access nursing home care. Benefits are also generated due to reduced health and social care needs of those in Supported Housing compared to those living in standard accommodation.

In the case of public provision through social housing supply, the model in this paper calculates that there is an annual benefit of €4,700 per unit of Independent Living accommodation versus the counterfactual scenario. This annual benefit generates a Net Present Value of €106,200 over a 30-year time horizon with a 4% discount rate including the Shadow Price of Public Funds.[2]

In terms of Assisted Living the model calculated an annual net benefit to the State from the provision of one Assisted Living Supported Housing unit of €5,200 in the case of social provision and €9,200 in the case of private provision. Over a 30-year time period, investment in a unit of Assisted Living accommodation represents a net value to the State of €117,300 in the case of social provision and €207,000 in the case of a privately-funded unit of Assisted Living accommodation.

Finally, in the case of the Specialised Living, which has the highest level of care and social supports for older people and therefore is more costly, the model generated an annual benefit of €2,200 from the social provision over the alternative scenario where there is no such accommodation available. In the case of privately-provided Specialised Living accommodation there is a higher net benefit of €20,100 to the State. There is an NPV of €48,900 per unit under social provision and an NPV of €451,900 per unit under private provision. The cost of the accommodation in the counterfactual case is identical in both social and private sectors (because all are in Nursing Home care and the average cost of the Fair Deal Scheme is applied). The considerable benefits from private provision emerge due to the absence of any capital costs being met by the Exchequer, which are met up-front through the Capital Assistance Scheme funding in the case of social provision.

Table 2 summarises the benefits (savings) per Supported Housing unit to the State annually and over a 30-year time frame in the provision of each of the three models of Supported Housing, funded either by social or private funding.

This paper concludes that greater provision of Supported Living accommodation would generate large savings for the State. By making assumptions about the future investment path in Supported Housing where there is increased investment, we demonstrate that there are strong financial benefits available to the State. We estimate that direct public investment in an additional 11,400 Supported Housing homes over the next 10 years could potentially generate a total benefit of approximately €900 million for the State. Larger estimates of the required number of Supported Housing units, such as that found in the

Table 2: Benefit by funding type and accommodation

Funding mechanism	Model	Annual benefit	30-year benefit
Social	Independent Living	€4,700	€106,000
	Assisted Living	€5,200	€117,100
	Specialised Living	€2,200	€48,900
Private	Independent Living	€4,000	€89,800
	Assisted Living	€9,200	€207,000
	Specialised Living	€20,000	€451,800

2 The total net benefit is generated by calculating the total cost of Independent Living Supported Housing over 30 years, together with the associated social and health benefits, and comparing this to the cost of housing in the counterfactual case i.e. where Independent Living is not available.

policy statement, would naturally produce a higher level of estimated savings (Government of Ireland, 2019, p. 8).

A sensitivity analysis of the assumptions was also carried out. This established that even when assumptions regarding nursing home uptake rates for residents under the counterfactual model are relaxed, there is still a positive Net Present Value from the provision of Supported Housing.

It is important to note that this paper focuses on the economic costs and benefits and that there are wider social and health benefits which are not addressed here. The social benefits include providing options to enable older people to remain living in their communities, the impact on wellbeing of the individual and their family and community, the value of freeing up housing in communities for other households and the impact on health due to the vulnerabilities of congregated settings.

This paper was conceived and mostly written, prior to the onset of the COVID-19 pandemic. Unlike a nursing home, people living in Supported Housing schemes have the security of their own front door and private indoor and outdoor space.[3] They are able to 'cocoon', if required, in their homes, able to cook and clean, while at the same time having the security of knowing they are living within a community and that there is someone close by who can help, if needed. Having said this, it does not negate the fact that nursing home care is the most appropriate form of care for many people.

The findings of this analysis make a strong case for further investment in Supported Housing, whether that is through direct public investment in social housing or supporting development within the private market sector. The savings established through investment in Supported Housing could allow for an increased level of state funding of this type of housing, while still allowing the State to make a saving compared to the current options available.

Specialised Living
Carebright Community, Limerick / Carebright

3 This may vary in some Specialised Living schemes.

Assisted Living
Great Northern Haven, Louth / Clúid

2. Introduction

In March 2019, the policy statement *Housing Options for Our Ageing Population* was launched by the Department of Housing, Planning and Local Government and the Department of Health (Government of Ireland, 2019). This policy statement contains a list of actions that, when implemented, will provide older people with a greater choice in their housing options as they age.

The first purpose of this paper is to provide evidence to the Implementation Group tasked with ensuring the actions in the *Housing Options for Our Ageing Population Policy Statement* (Government of Ireland, 2019) are carried out. The second purpose is to provide a greater understanding and clarity to a wider audience of the costs and benefits of developing this type of Housing.

Supported Housing is housing with care and support, primarily for older people. It can enable people to live independently for longer and thus avoid, or delay, moving into long term residential care, such as nursing homes (Riseborough et al., 2015; Walsh, 2018). The core ingredients of Supported Housing include some, or all, of the following:

- Purpose-built, accessible building design that promotes independent living;
- Fully self-contained properties where occupants have their own front doors;
- Communal spaces and facilities for use of the residents and sometimes the wider community;
- Access to care and support services on site with a facility for emergency services;
- Community alarms and other assistive technologies;
- Safety and security built into the design, with fob or person-controlled entry.

Work from multiple sources, including The Housing Agency, has demonstrated a lack of supply in the provision of Supported Housing for older people who

Independent Living
St. Benedict's, Malahide / St.Vincent de Paul

may have higher support or care needs but still desire to live independently, potentially with improved access to supports.

Figure 1 shows housing options for older people scaled by varying levels of care support ranging from stage 1 'living in own family home with no supports' up to stage 8, which is 'hospital care' (The Housing Agency/ISAX, 2016). Research by The Housing Agency/ISAX (2016) concluded that Ireland primarily provides housing options at the first three stages and the last two: providing standard housing and then nursing home or hospital care for those with increased care needs.

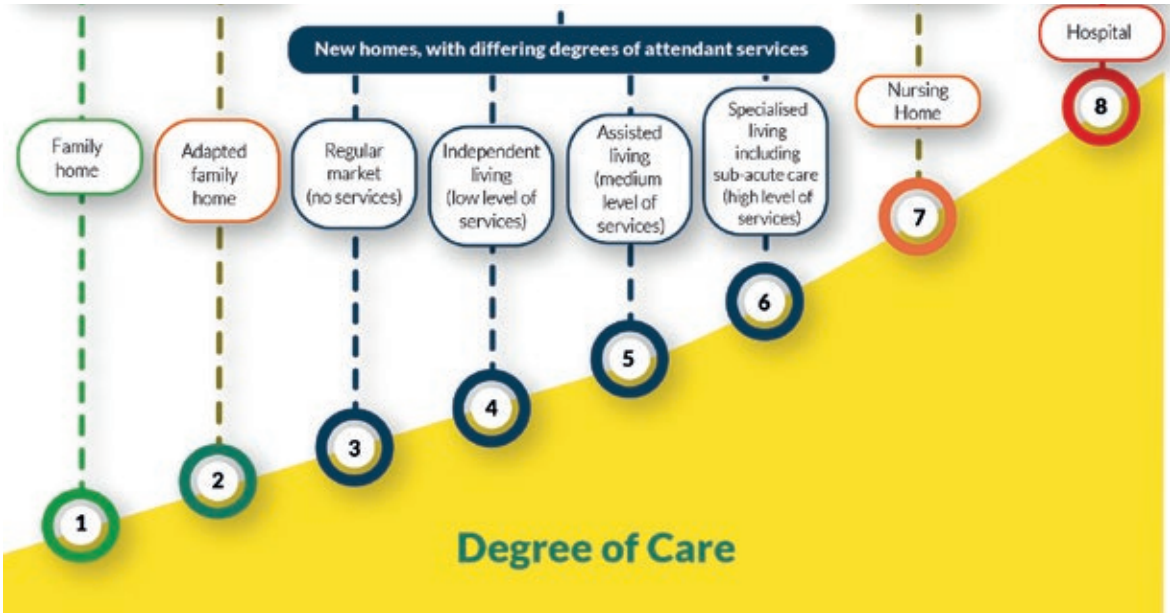
There are a number of housing options between traditional housing and nursing home care, which have been identified as being significantly undersupplied in the Irish housing sector, these are the Supported Housing options (The Housing Agency/ISAX, 2016; The Housing Agency, 2018; ALONE, 2018).

This paper will seek to establish the economic costs and benefits of providing Supported Housing options at stages four, five and six in Figure 1. These stages are Independent Living (low level of services), Assisted Living (medium level of services) and Specialised Living (high level of services). The next section of the report describes each of these stages in more detail.

Structure of the Paper

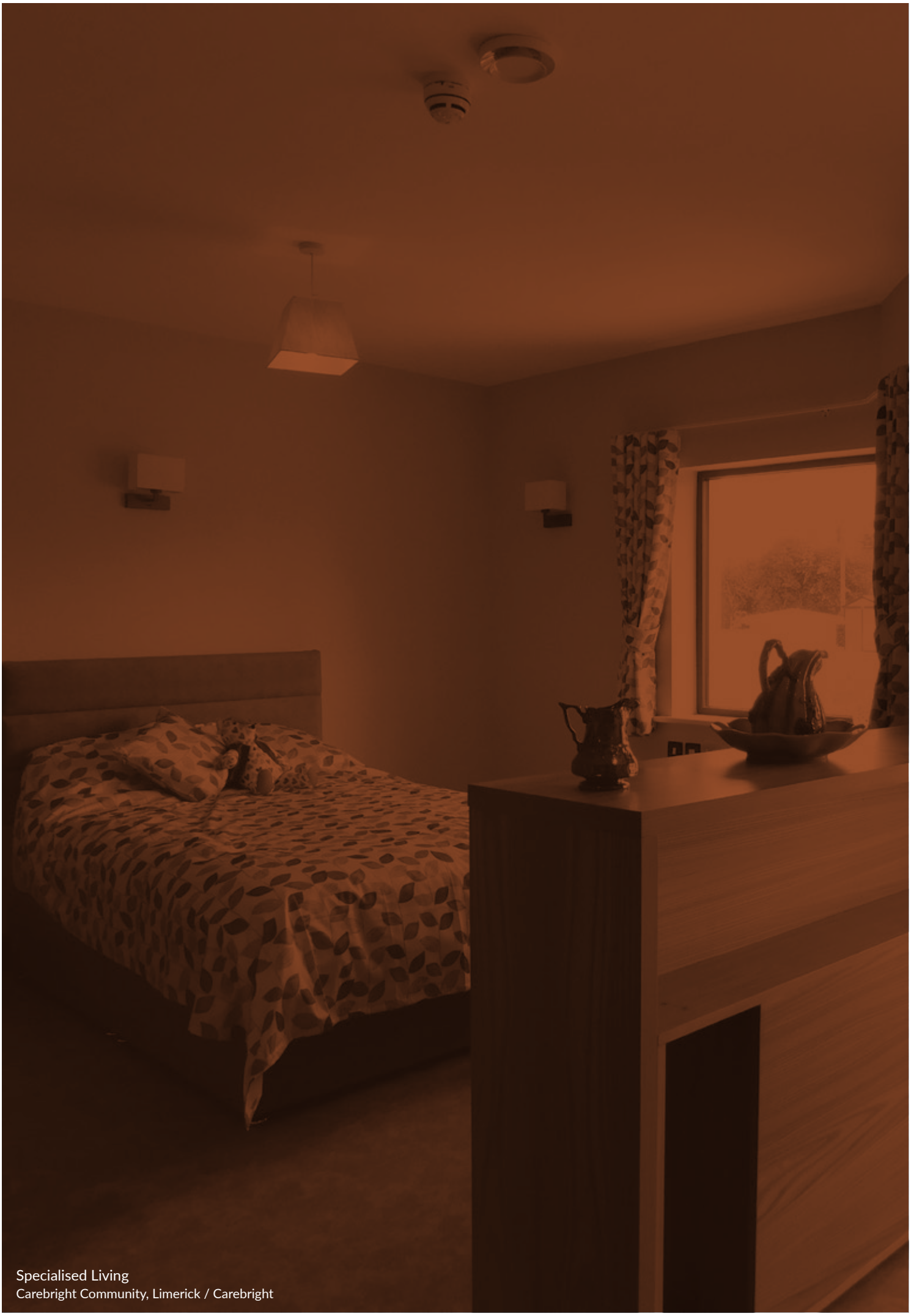
Section three outlines the methodology used, the evidence base including the costs of providing Supported Housing and the health and social care costs and benefits. It describes the tenure profile and the tenure profile in the absence of Supported Housing, and sets out the limitations in the research. Section four presents the cost and benefit models for each of the three housing models; Independent Living, Assisted Living and Specialised Living. It also contains a sensitivity analysis of the assumptions being made. Section five examines population growth using CSO population predictions for those aged over 80 to estimate how a wider adaptation of Supported Housing, by this age group, could lead to significant accumulated benefits for the State. Finally, Section six contains a discussion and conclusion.

Figure 1: Taxonomy of housing and care needs



Source: (Government of Ireland, 2019, p. 23)

Specialised Living
Anam Cara, Dublin / FOLD Ireland



Specialised Living
Carebright Community, Limerick / Carebright

3. Methodology

3.1 Supported Housing Options

The approach taken to developing the cost-benefit analysis of Supported Housing Options in Ireland is similar to that taken in a report by Frontier Economics for the Homes and Communities Agency in the UK, which examines capital costs and the revenue stream costs and benefits of supported living (Frontier Economics Ltd., 2010).

The Supported Housing stages as shown in Figure 1 demonstrate a sliding range of care supports. Independent Living at stage 4 represents a home constructed to reflect older persons' needs. The housing is independent and offers residents secure housing, often designed to universal design standards. There would be a low level of additional services provided. This is referred to as **Independent Living** in this paper.

Supported Housing stage 5 accommodation provides for increased services and is referred to as **Assisted Living.** There may be a healthcare manager, housing manager, or an activities coordinator on site. The units may be located close to day care centres or primary healthcare centres.

Stage 6 requires the highest level of care, with care needs more closely reflecting those in a nursing home. This is referred to as **Specialised Living.** There would be a number of social and healthcare staff on-site, meals would be provided and care supports would be available 24-7. This may require a lower level of care staff and health staff than a traditional nursing home, which would allow for savings in this regard.

This paper groups the stages into three models for costing purposes:

1. **Independent Living** – Lowest cost, low level of support requirements
2. **Assisted Living** – Medium cost, medium level of support requirements
3. **Specialised Living** – Higher cost, high level of support requirements

These groupings are similar to the clusters identified by separate Housing Agency research (The Housing Agency, 2018) which produced case studies of housing models for older people and grouped them into four clusters based on degree of care required. This report provides further insight into the Supported Housing model.[4]

The costs of providing these three Supported Housing options are compared to the costs of providing alternative accommodation, made up of a mix of private and social general needs housing and nursing home care. This comparison case is called the counterfactual.[5]

3.2 Population and Uptake of Housing Type

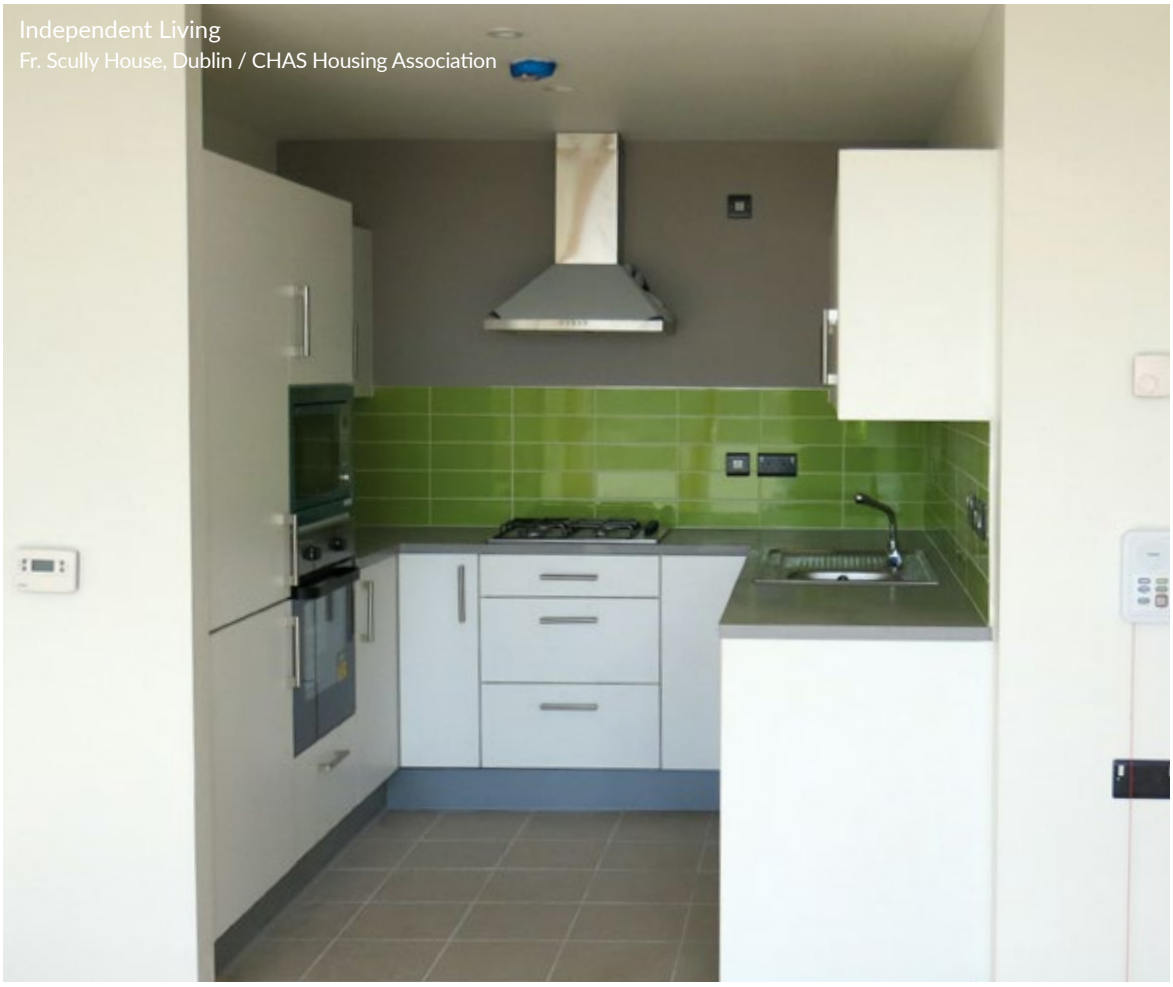
As research has pointed out (The Housing Agency/ ISAX, 2016), there is a gap in the housing stock for housing options aligned with the three models presented above. In attempting to model the net benefit or cost to the State from increased provision of this type of housing, assumptions around population growth, uptake of housing options and the split between public and private provision need to be made.
This paper estimates an average cost and benefit at an individual level for each Supported Housing option. It then applies weights to each of the model results, with the weight depending on the assumed uptake in the older population. These weighted costs and benefits are then scaled up to calculate a net benefit for the older population living in Supported Housing.

Benefits accrue through assumptions of lower need for social care and health care for those living in Supported Housing compared to a counterfactual population, which varies by model. The term counterfactual here refers to the tenure profile of Supported Housing residents if Supported Housing is not available.

Capital costs and running costs of providing Supported Housing are compared with the costs of alternative

4 Independent Living in this paper maps to the first two clusters in the 2018 Housing Agency research.

5 The Public Spending Code defines the counterfactual as "an assessment of the likely developments which would occur in the absence of a policy intervention. A well-defined and supported counterfactual is required in order to assess the additionality of a project proposal." assets.gov.ie/43560/1ac8bb5e81304861afc5a6c6c10d733a.pdf


Independent Living
Fr. Scully House, Dublin / CHAS Housing Association

accommodation, such as private housing, typical social housing, hospital care or nursing home care.

3.3 Evidence Base

The data used in calculating the cost benefit analysis is outlined in this section.

3.3.1 Capital Costs

In the *Housing Options for Our Ageing Population Policy Statement* the capital costs of twelve Supported Housing schemes were presented, averaging at €168,252 per unit (Government of Ireland, 2019). These units are typically funded through the Capital Assistance Scheme (CAS). Some of the schemes presented included the cost of communal facilities in the unit cost, while for others the cost was solely for the housing units. The range of schemes examined in the Policy Statement range from quite recent, to over 10 years in age, meaning that they may underestimate current costs. For this reason, a newer scheme, completed in 2017, which falls within the range of costs presented in the policy statement (at a unit cost of €189,000) is chosen as the representative cost of Supported Housing. This cost is used as a representative cost for the models of Independent and Assisted living.

Discussions with stakeholders pointed to greater capital costs in the provision of Specialised Living accommodation than Independent or Assisted Living. Following these discussions, we estimate that there are approximately an additional €30,000 in capital costs per unit under the provision of Specialised Living and estimate a total capital cost per Specialised Living unit of €220,000. These capital costs do not include land costs.

For privately provided Supported Housing schemes we assume that all capital costs are met privately at no cost to the State. These costs are then met through higher charges to residents. However, though costed as part of this paper, we are not aware of any Specialised Living Supported Housing schemes that are totally private currently available in Ireland.

This paper is also concerned with the cost to the State from the provision of additional housing options including private housing, social housing and nursing homes. According to a DKM Economic Consultants report (2015) for the Department of Health, private nursing homes are expected to fund capital costs themselves and are funded for running costs through the Fair Deal Scheme (which is likely to include pricing to account for this cost over time). The State, however, funds the construction of new public nursing homes. This report states there is an average cost of a new public bed of €167,589. This is used as the capital cost of a public nursing home space in this report.

Regarding the costs of social housing, it is likely that, in moving to Supported Housing, a person previously in social housing is moving to a smaller unit, so this paper assumes a larger unit size when a person is living in standard social housing. In moving to a smaller Supported Housing dwelling a unit of the social housing stock is freed up, preventing the need for an additional new housing unit to be added to the social housing stock. While this cost is 'saved' in the case where Supported Housing is available, where none is available the State will bear the cost of a new social housing unit. We take the average price paid for local authority 'turnkey' or new-build housing in 2018, which was €233,382.[6] We further assume that an Approved Housing Body (AHB) is purchasing this unit for the purposes of social housing, meaning that the capital cost to the State is 30% Capital Advance Leasing Facility (CALF) funding, which, when calculated and discounted over 30 years works out as a simple interest of 2% equal to €1,400 per annum paid over 30 years.

Provision of private housing is a low cost to the State. The costs assumed in this instance are that the State would provide grant funding through the 'Housing Aid for Older People' grant (Department of Housing, 2019). The maximum grant amount of €8,000 is assumed, as, if older people are considering moving to alternative housing, then it is likely that they would be seeking a higher grant application if they were to stay in their own home. Table 3 summarises these capital costs.

Table3: Capital costs

Tenure	Capital cost	Source
Supported Housing unit	€189,000	Unit cost of Independent/Assisted Supported Housing scheme
	€220,000	Unit cost of Specialised Living unit
Nursing home (Public Bed)	€167,589	D/Health Fair Deal CBA (DKM,2015)
Social housing	€233,382	Average Cost of New Build Social House (2018). Based on Housing Agency analysis
Private housing	€8,000	Housing Adaptation Grant – maximum grant

6 Based on Housing Agency analysis of Construction Status Report Q4 2018: rebuildingireland.ie/wp-content/uploads/2019/03/CSR-Full-Report-Q4-2018.pdf and expenditure on new build social housing detailed in the PQ12325/19: www.oireachtas.ie/en/debates/question/2019-03-12/721/?highlight%5B0%5D=12325&highlight%5B1%5D=19. Analysis shows 2,022 new units delivered at a spend of €471.9m, equal to €233,382 per unit.

Independent Living
Ballygall Road East / FOLD Ireland

3.3.2 Running Costs

Running costs are an important factor in the provision of Supported Housing. Supported Housing models may allow for a proportion of the population to remain living in the community rather than living in a nursing home, through either directly replacing or delaying the need for a move to a nursing home. Supported Housing models typically have lower running costs than nursing homes and can, therefore, achieve savings.

For social housing schemes, it is assumed that they are funded via the Capital Assistance Scheme. This means that there is no Payment and Availability Agreement set up with a Local Authority and a social rent is assumed.

In the case of socially-funded Independent Living Supported Housing we assume there is Rental Assistance of €2,000 per annum. This reflects recent RAS-CAS rental assistance of a maximum of €55 for a single person (€2,860) per annum, while acknowledging that some tenants will not require rental assistance. No subsidisation is assumed in the case of privately funded Independent Living.

For Assisted Living Supported Housing, the Supported Housing scheme of An Cluainín, Kilmaley in County Clare is used to establish a cost estimate (The Housing Agency, 2018, p. 42). The scheme has 24 housing units and a day care centre on the same site, with total running costs of €300,000 per annum. Residents pay a €400 contribution a month for rent, energy and care costs. Access to the day care centre is included. The day care centre caters for a total of 110 people in the locality, with 30 people attending four days a week. Assuming €60,000 of the day care costs are due to external day care attendees, the cost for the residential side of the facility is €240,000 per annum.[7] This is €10,000 per resident per annum. Subtracting private contributions of €400 per month, or €4,800 over the year, leaves a public subsidy of €5,200 per annum. In the case of privately provided Assisted Living we assume that there is no public subsidisation for either capital or running costs – *note that this assumption is not being based on any actual examples.*

Specialised Living is the most expensive form of the Supported Housing models for older people considered here. The higher costs reflect the higher level of care

Assisted Living
Great Northern Haven, Louth / Clúid

7 Assume €4,000 per person per year in day care costs, and that 15 of the 30 people attending each day are from outside the residential community. This gives a cost €60,000.

offered. Anam Cara, a residential home run by FOLD Ireland, was used as a basis for estimating the costs of this tenure type. This home provides a high level of care to residents. Residents pay a contribution of €180 a week, while the HSE pays €635 towards the cost of care. This works out at a cost of €33,020 per annum to the State (FOLD, n.d.). In the case of private Specialised Living, an assumption is made for this paper that private individuals pay an additional €5,000 in running costs themselves per annum on top of the €180 per week, but that the State meets the rest of their care and accommodation costs.[8]

While the cost of Specialised Living is high, it is considerably less than the cost of nursing home care. Data on the Fair Deal Scheme shows that 79% of beds are provided by private nursing homes, while 21% are provided through public nursing homes beds. Public beds generally have a higher average cost under the scheme, at €77,124 per bed per annum, while private beds cost €53,075 per annum. This produces a composite figure of €58,125 per annum as the average running cost of a bed in a nursing home in Ireland. The residents also contribute to their care costs under the Fair Deal Scheme; contributions averaged 22% of costs in 2017. This means that the average cost to the State of a nursing home bed under the Fair Deal Scheme is €45,338. Adjusting for healthcare inflation in the last two years since the estimate brings the cost to €45,883 per bed per annum (Meirmans, 2017).

Regarding the running costs of social housing, the annual Payment & Availability (P&A) payment paid to Approved Housing Bodies for making available housing units for social housing is taken as €14,220, based on Housing Agency internal calculations which assume 30% CALF funding with purchase price of €235,000 and an interest rate of 2.75% on remaining 70% capital. Private housing has no ongoing annual costs in the model.

The costs outlined are summarised in Table 4.

Table 4: Annual running costs to the State, by tenure

Tenure	Annual cost	Source
Independent Living	€2,000	Rental assistance for social
Assisted Living	€5,200	An Cluainín, Kilmaley
Specialised Living	€33,020	Anam Cara – cost of care
Nursing home	€45,883	Nursing Home Support Scheme Trends (Meirmans (IGEES) 2017)
Hospital	€365,000	D/Health Independent Review Group Private Activity in Public Hospitals (Independent Review Group, 2019)
Social home	€14,220[9]	P&A based on average new build social housing unit
Private housing	€0	N/A

8 This is an assumption – private contribution would depend potentially on any funding model established.

9 This estimated P&A payment is based on internal Housing Agency calculations. The figure is based on CALF loan of 30%, HFA 30-year loan at 2.75%, and average operational AHB operational cost. The capital cost of €233,382 was rounded up to €235,000 for this calculation.

3.3.3 Health and Social Costs and Uptake

In moving from alternative accommodation into Supported Housing, there are a number of costs which may change. While the change in these costs is reserved for the discussion of the models further on, the base costs are presented here.

In calculating General Practitioner (GP) costs, the annual capitation of €271 per person is used, while the average number of visits for over 70s is provided from data from The Irish Longitudinal Study on Ageing (TILDA, 2013, p. 5).[10] The HSE price list, which charges €737 per day case, is used as an estimate of the cost of a day case/outpatient (Healthcare Pricing Office, 2019).

The price of a private inpatient in a public hospital for one night (€1,000) is used as an estimate of the cost of inpatient care (Independent Review Group, 2019)[11]. Over 80s have an average of 0.2 inpatient episodes per annum according to TILDA data (TILDA, 2013, p. 5). Health Inpatient Enquiry data shows that once they are admitted as inpatients, 75+ year olds have a mean length of stay of 11.3 days while those 85+ have an expected stay of 13.5 days, which gives us an expected stay of 12.4 days in the case of those 80+ (Healthcare Pricing Office, 2018). Bringing the HIPE data together with the TILDA data and cost data produces an estimated cost of inpatient care of €2,480 per annum for those 80-plus years of age.

Day care costs were more difficult to estimate as costs are not routinely reported and centres tend to be funded through a mix of grants, donations and contributions. Costs were established from the Benefacts database, which provides data on State contributions to a number of charitable bodies providing day care (Benefacts, 2019). A State contribution of €5,000 per annum per day care place is used as the estimated cost of day care.

Assisted Living
Bulfin Court, Dublin / Dublin City Council

10 GP Capitation Payment for patient aged O-65: www.imo.ie/i-am-a/gp/gms-contract-agreements-a

11 assets.gov.ie/26529/aed7ee0317ff49a7a609974772cf2191.pdf

Home help costs were calculated through the Health Care Support Assistant salary scale from the HSE. The midpoint of this salary scale (€30,377) is used in combination with research from the National Economic and Social Council, which shows the average level of care as five hours per week (2012)[12]. After taking account of pension, overheads and PRSI from the salary, an annual cost of €6,517 is calculated for the average recipient of home care.

The uptake of social care is also important in the context of cost estimates. These are presented in Table 6.

Table 5: Health and social care costs

Health & social care	Cost per visit	No. of days per annum	Annual cost	Source
GP visit	€59	4.6	€271	Medical Card capitation, TILDA 2013 uptake data
Outpatient/day case	€737	1.7	€1,253	HSE price list, TILDA 2013 data
Inpatient cost	€12,400	(12.4X0.2) =2.5	€2,480	HSE price list, TILDA 2013 data
A&E	€100	0.2	€20	HSE charge
Day care	€19.23	260	€5,000	Analysis of day care accounts
Home help	€41	3 visits a week	€6,517	HSE payscales, NESC research

Table 6: Uptake of care services by over 80s

Care services	Share of over 80s population	Source
Day care	6.80%	(TILDA, 2013, p. 8)
Home help	8.20%	(TILDA, 2013, p. 8)
Nursing home	11.50%	Census 2016

12 HSE Payscale (September 2019): www.hse.ie/eng/staff/resources/hr-circulars/hr-circular-025-2019-appendix-2-amended-1-september-2019-consolidated-pay-scales-final-pdf.pdf

3.4 Cost Models

3.4.1 Tenure Assumptions

This section will provide an overview of the cost models.

- Social
  - Independent Living
  - Assisted Living
  - Specialised Living
- Private
  - Independent Living
  - Assisted Living
  - Specialised Living

This paper compares the costs of Supported Housing, against the situation where Supported Housing is not available (and so the State would fund alternative accommodation options). This alternative is also called the counterfactual scenario. The 'counterfactual', or alternative housing options, are different under private and social scenarios. The private and social models are dealt with separately due to the differing costs of provision, as well as the different size of the private contribution which is required. The social model is funded through the Capital Assistance Scheme (CAS); this reflects the large proportion of the Supported Housing schemes in the country currently operating in which residents are primarily allocated from the local authority social housing waiting lists. The private model reflects schemes which are primarily funded through private contributions and without significant State intervention. These models assume that a higher percentage of the older population would secure accommodation in the private market or would continue to live in their own private accommodation. In the social model, it is assumed a higher proportion would be in alternative social housing.

The inclusion of both social funding models as well as private market provision is in line with policy suggestions from Housing Agency research, outlining two broad groups which would benefit from an increased provision of older persons housing:

- Older persons whose incomes are sufficiently low that they meet the threshold for State support in addressing their housing and care needs
- Older persons whose incomes are sufficiently low that they require state support to meet their housing and care needs but whose incomes are too high to qualify for state support.

In the recommendations for future policy in the 2016 Housing Agency report (The Housing Agency/ISAX, 2016, pp. 15-16), it was proposed that future policy might lower the threshold at which older people qualify for State support or introduce a 'Fair Deal' type of scheme to subsidise the provision of Supported Housing.

The models in this paper estimate the cost of each type of Supported Housing. The cost of Supported Housing is then compared with the costs of alternative provision where Supported Housing is **not available.** This is done in order to estimate the net benefit of the provision of Supported Housing in place of other tenures. For example, in the case of Specialised Living, it is assumed that all those who are in Specialised Living would be living in a nursing home without it being due to their higher care needs. In the case of Independent Living, the requirement for a nursing home would be lower in its counterfactual case than that of Assisted or Specialised Living, in this case the rate of older people in a nursing home is closer to that seen in the general population. The tenure profile of alternative housing options (in the absence of Supported Housing) are presented in Table 7.

Each tenure type has a different capital cost and a different running cost – which will have a bearing on net benefits and costs.

Specialised Living
Carebright Community, Limerick / Carebright

Table 7: Counterfactual accommodation – (tenure profile in the absence of Supported Housing)

Funding model	Tenure	Independent Living	Assisted Living	Specialised Living
Social housing	Private housing	5%	5%	0%
	Social housing	90%	80%	0%
	Nursing home	5%	15%	100%
Private market	Private housing	95%	85%	0%
	Social housing	0%	0%	0%
	Nursing home	5%	15%	100%

Independent Living Model – in this model there is minimal support provided. Home help and day care costs are not covered by accommodation costs.

The alternative housing option, if Independent Living was not available, is mainly social housing in the case of the social model, and private housing in the case of the private market model. It is assumed that in the absence of Independent Living accommodation, 5% of the those who would be housed in Independent Living accommodation would instead be resident in nursing homes. This can be rationalised by viewing the provision of Independent Living accommodation as enabling one in 20 residents to reside in independent living accommodation for one year longer than they would have in the absence of Independent Living.

In a scheme of residents in Independent Living accommodation, there will be a variety of ages and care needs. It is not an unreasonable assumption that 5% of the population who may have been in this accommodation longer and may have increasing care needs would benefit from Independent Living to the extent that it enables them to stay an additional year in their own home. Requirements for home help and day care are in line with the general Over 80s population.

Assisted Living Model – In this model, day care is included in the cost of the accommodation while home help is not covered. The alternative housing option under this model assumes a higher need for nursing home care (15% of residents) in the absence of Assisted Living. This reflects the higher care needs of those living in this accommodation. Similar to the above assumption, this can be viewed as Assisted Living enabling 15% of residents to stay in their own homes in place of going to a nursing home for one year longer than would be the case without that accommodation being available. It is assumed that approximately 85% of residents would be in their own general (social or private) accommodation in the alternative. It is assumed that 20% of residents require home help two days of the week and that 50% of residents use day care facilities, also twice a week.

Specialised Living Model – This is viewed as a close replacement for nursing home care, and both home help and day care are covered in the cost of care. In comparison to nursing home care, there would be a lower ratio of staff to residents as well as lower health care requirements. It is assumed that the care needs of those in Specialised Living are high enough that they would be living in nursing home care in the absence of this model.

3.4.2 Social and Health Benefits of Supported Housing

There is a range of research (Frontier Economics Ltd., 2010; Aston University, 2015; Wood, 2017) on the effects of Supported Housing and 'ExtraCare' housing (similar to specialised housing in our model) in the UK. Generally, studies demonstrate that Supported Housing reduces requirements for health care and social care.

Benefits are generated through reduced requirement of GP visits, reduced hospital visits, as well as a reduced requirement for day care and home help. These benefits emerge due to a significantly reduced number of falls in the older person population in Supported Housing, better monitoring of health and a better housing environment.

Assumptions on the health benefits of residing in Supported Housing are taken from Frontier Economics' work in the UK (Frontier Economics Ltd., 2010). The assumption is based on the reduced uptake of health service centres, emerging from Supported Housing constructed with an older person's needs in mind, together with an increased level of community support and better monitoring of health by site staff. The reduction is outlined in Table 8.

The size of these benefits will vary by model and the associated assumptions around alternative housing options and will depend on the actual cost of each service, which was discussed above.

For example, the 46% reduction in GP visits applies to Specialised Housing only, we assume that Assisted Living and Independent Living receive 75% and 50% of this reduction respectively, as they are less intensive forms of Supported Housing.

In the case of reduced length of stay in hospital, Woods (2017) found a 56% reduction in the length of hospital stay when examining the impacts of sheltered housing which more closely equates with Independent/Assisted Living housing. This study found a reduction in the average length of stay from 17 nights to 7.4 nights (Wood, 2017). In the case of inpatients (within this model), it is estimated that an over 80-year-old will have a length of stay of 12.4 nights based on data used. A 56% reduction would give a figure of 5.5 nights length of stay on average. In order to be conservative, we use the higher figure of 7.4 nights directly from the Woods study as the assumed length of stay for an inpatient from Supported Housing. This figure is in turn combined with the reduction in inpatient attendance established by Frontier economics (a 20% reduction). This provides a total expected reduction in cost of inpatient care per annum of €1,296 per person in Supported Housing, a 52% reduction in the expected cost of inpatient care per annum.

The reduction in outpatient and day case attendances is based on the estimate used in Frontier Economics' work, however we view this as a conservative estimate of the benefit as research evidence from Aston Research Centre for Healthy Ageing and the ExtraCare

Table 8: Reduction in care support through provision of Supported Housing

Services	Estimated reduction	Evidence source
Number of GP visits	46%	Aston University
Number of A&E visits	22%	Frontier Economics
Number of hospital admissions (inpatient)	20%	Frontier Economics
Reduction in length of stay (inpatient)	56%	Wood
Number of Outpatient Attendances	20%	Frontier Economics

Charitable Trust shows a 35% reduction in the incidence of falls in the ExtraCare population (from 49% to 31%), while the same study found a decrease of 38% in the cost to the health system from ExtraCare (Aston University , 2015).

It is assumed that there is no additional cost saving in medical services or social services arising from Supported Housing if a person is residing in a nursing home compared to a hospital in the counterfactual.

The reduced need for health care for those living in Supported Housing generates an average saving of €1,675 per person in Supported Housing per year. Another aspect to consider is that savings will vary depending on the uptake of nursing home care. In the Independent Living model, where 5% of those in Independent Living would be in a nursing home alternatively, benefits are 5% lower. Similarly, in the Assisted Living model, they are 15% lower. There are no additional health costs or benefits in the Specialised Living model as it is assumed that health benefits are equal across Specialised Living and nursing homes.

The reduced need for social care is also a factor. There are two effects which must be accounted for here:

(i) In moving to Supported Housing, we assume a 20% reduction in the requirement for day care and home help compared with general accommodation. This cost saving on social care is evidenced from a UK based study which found savings on social care costs of between 16% and 18% (HousingLin, 2016).
(ii) In moving to a nursing home, day care and home help (which were publicly provided while in Supported Housing) are no longer required. While these costs are implicit in higher nursing home costs, in the 'Health and Social Benefits' element of the model this reduces the benefit of Supported Housing when compared to the counterfactual case. This varies between models. Where day care and home help are covered in the running cost of Supported Housing, we assume no additional cost savings from this care being taken into a nursing home. Where home help or day care are not included in fees, there is a specific cost saving within the model in moving from Supported Housing to nursing home care. These are entered as a negative in this model. In the specific case of Assisted Living, where day care is provided for within the fees, there remains a benefit due to 35% of residents who received day care as part of their Assisted Living accommodation who now must receive care in the community (In Assisted Living we assume 50% of residents utilise

Table 9: Reduced cost of health services for those living in Supported Housing

Health services	Annual avg. cost per older person in general housing (estimate) (€)	Reduction	Annual avg. saving per older person in Supported Housing (estimate) (€)
GP visits	€272	46%	€124
A&E visits	€20	22%	€4
Hospital admissions and reduced length of stay (inpatient)	€2,480	52%	€1,296
Outpatient attendances	€1,253	20%	€251
Total saving per older person in Supported Housing			**€1,675**

Independent Living
Colivet Court, Limerick / Clúid Housing

day care, in the counterfactual case, 35% of these must be catered for in the wider community, while 15% receive this care in a nursing home).

Both the reduction in the requirement of social care with Supported Housing and the provision of these services in nursing homes in the counterfactual case are summed and outlined in Table 10. The reduced requirement for social care in the Independent Living model does not outweigh the increased costs for those who would receive day care and home help included in their nursing home fees in the counterfactual case and so we see a negative value of €372 entered for this model in Table 10.

These benefits and costs do not vary depending on private or public provision of Supported Housing. The social care and health benefits (Tables 9 & 10) sum up to the total health and social benefit from Supported Housing in Table 11.

The interaction of the above health and social care benefits, together with the capital and running costs of each accommodation type generate the results in the model. The assumptions made around tenure are a significant determinant of whether the model generates a net benefit or cost. Generally, if Supported Housing is replacing nursing home accommodation, it will generate a significant net benefit in favour of Supported Housing due to the high cost of nursing homes. However, the scale of financial benefits to the State will depend on the level of subsidisation of private activity (with limited assumptions made in this regard in this paper).

3.5 Limitations

This paper sets out to provide an indication of the benefits which might accrue to the State from greater investment in Supported Housing models over other forms of housing, which have been set out as the 'counterfactual case' throughout the paper. The counterfactual cases are built on a number of assumptions which are set out below.

- We assume that the tenure of those who might live in Supported Housing would match with the tenure put forward in the counterfactual scenarios. While discussions with stakeholders suggest the large majority of those in Specialised housing would be in nursing home care without its provision, there is a larger assumption made around the tenure of those in Independent Living and Assisted Living.
  - There is an assumption that living in Independent and Assisted Living will delay the need for nursing home care for between 5% and 15% of the population in those tenures for an additional year than would have been the case in non-supported accommodation. This occurs through the health and social benefits from Supported Housing, as well as the greater support offered in Assisted Living in particular. While we believe this to be a reasonable assumption, it is an assumption which drives a large part of the results for those tenures.
- There was a lack of clarity on the land-cost element of Supported Housing. This is addressed later in this paper through a sensitivity check but that is a gap in the analysis.

Table 10: Change in social care benefits for those in Supported Housing

Independent Living	Assisted Living	Specialised Living
€(372)	€229	€0

Table 11: Total health and social benefits from Supported Housing

Independent Living	Assisted Living	Specialised Living
€1,160	€1,628	€0

- We assume that the health and social care benefits witnessed in UK studies will carry over to the Irish case. While we believe the health and social care benefits proposed in the models are conservative estimates, they are based on a reduced need identified from those studies.
  - There was difficulty estimating the number of 'day cases' (not admitted as an inpatient) in the older population. If this was included in the analysis it would likely lead to larger benefits associated with Supported Housing.
- It is difficult to model the effects of Supported Housing on reduced need for home help and day care as there are benefits accruing from Supported Housing which don't apply if a person is in nursing home care in the counterfactual.
  - We believe the level of benefit in reduced need for day care and home help in those in general and social housing in the counterfactual may be underestimated in this model.
  - This is further compounded by a lack of clarity on day care costs which were drawn from available sources on the Benefacts database.
  - The actual financial benefit in this area will vary according to what is and isn't provided within each Supported Housing scheme.
- Running costs are drawn from a small number of specific examples of Supported Housing in the social sector.
- We did not use any actual examples of privately provided Supported Housing schemes in this paper. We assumed for these that all capital costs are met privately at no cost to the State. These costs are then met through higher charges to residents. Though costed as part of this paper, we are not aware of any Specialised Living Supported Housing schemes that are totally private currently operating in Ireland.
- The estimates in this paper are costed based on one person per unit. In reality there could be two persons living in some of the units, and therefore there could potentially be even more savings.

The limitations above mean that the outputs and benefits from this paper are only intended as broad estimates of the (potentially large) benefits of Supported Housing. They are not intended to be used to the closest €1,000 as precise estimates, as there are simply too many dependencies. They are intended to point to the general financial benefits which can come from a shift in the tenure of the older population and the way in which these benefits may arise.

Independent Living
Sue Ryder House, Dalkey / Sue Ryder Foundation

4. Cost-Benefit Models

Each model presented in this section takes the total economic costs of providing Supported Housing and compares these costs to the cost of providing alternative accommodation in the absence of Supported Housing.

This generates an annual benefit or cost associated with each of the three models of Supported Housing. This annual benefit, or cost figure, is then summed over a 30-year time horizon and discounted back at a 4% interest rate to calculate the Net Present Value (NPV) of providing this type of housing.

The Shadow Price of Public Funds is also accounted for, which looks at the effect that distortion tax (required to fund expenditure) can have on the economy and applies a premium to the cost of public investment of 30%. All costs and benefits which require public expenditure are increased by a factor of 1.3 as a result. It is appropriate to use the Shadow Price of Public Funds in the model, as it is comparing the cost to the State of two alternatives. This is in line with Department of Public Expenditure evaluation guidelines (O'Callaghan & Prior, 2018). In the case where the costs of Supported Housing provision are lower than the counterfactual, applying the Shadow Price of Public Funds can cause the benefit to be 1.3 times what it otherwise would be. Both the NPV with and without the Shadow Price are presented for clarity.

The models assume that each unit of Supported Housing is occupied by one person so that the health and care benefits of Supported Housing on a per person basis can be more clearly brought together with the per unit capital cost and running cost.[13] Costs are rounded to the nearest €100.

Assisted Living
Kilmaley, Clare / Kilmaley Voluntary Housing Association

13 This is an assumption made for modelling purposes, some Supported Housing units are occupied by more than one person.

4.1 Independent Living Model

In the case of public provision through social housing provision, the model calculates that there is an annual benefit of €4,700 per unit of Independent Living accommodation versus the counterfactual scenario. This annual benefit generates a Net Present Value of €106,200 over a 30-year time horizon with a 4% discount rate including the Shadow Price of Public Funds.[14] The model generates a net benefit in the social case due to:

(i) Lower unit cost of Supported Housing unit (1 or 2 bed) compared to larger social housing unit
(ii) Health and social care benefits
(iii) 5% of residents don't require costly subsidisation for nursing home care

In the case of private market provision, the model calculates an annual benefit of €4,000 and an NPV of €90,000 per unit:

(i) The costs of Supported Housing are met privately and so represent no additional cost to the Exchequer compared to private housing
(ii) Still generates a strong benefit to Exchequer from replacing costly nursing home care and hospital care
(iii) Health and social care benefits

Table 12 summarises the costs and benefits of providing one Supported Housing Unit of Independent Living, costed for one person per unit. Costs are rounded to nearest €100, which may affect totals.

Independent Living
St. John's College, Waterford / Respond

14 The total net benefit is generated by calculating the total cost of Independent Living Supported Housing over 30 years, together with the associated social and health benefits, and comparing this to the cost of housing in the counterfactual (i.e. where Independent Living is not available).

Table 12: Independent Living model costs and benefits

Description		Social	Private	Comment
Alternative housing options	Private housing	5%	95%	Tenure of residents if Independent Living accommodation was not available
	Social housing	90%	0%	
	Nursing home	5%	5%	
Independent Living cost	Annuitised capital cost	€10,900	€0	Calculating the annual net cost of Supported Housing Net cost = Costs less benefits
	Running cost	€2,000	€0	
	Annual social and health benefit	€1,200	€1,200	
	Annual net cost of Independent Living (A)	€11,800	-€1,200	
Counterfactual cost	Annual cost of counterfactual (B)	€16,500	€2,800	Annual composite cost of alternative housing options
Total	**Annual Net Benefit/ (Cost) of Supported Housing** **(C) = B-A**	**€4,700**	**€4,000**	**Cost of alternative housing options less net cost of Supported Housing**
	Total NPV	**€81,700**	**€69,100**	**Annual net cost or benefit summed over 30 years and discounted back at 4%**
	Total NPV + shadow price	**€106,200**	**€89,800**	**Includes cost of shadow price of public funds at 30%**

4.2 Assisted Living Model

The model calculated an annual net benefit to the Exchequer from Assisted Living Supported Housing of €5,200 in the case of social provision and an annual benefit of €9,200 in the case of private provision. Over a 30-year time period, investment in a unit of Assisted Living accommodation represents a net value to the State of €117,300 in the case of social provision and €207,000 in the case of a privately funded unit of Assisted Living accommodation.

Assisted Living is more costly in terms of provision than Independent Living. However, due to the assumption that a higher proportion of residents would be in nursing home care without this housing option being available, the cost of the counterfactual is also higher.

Under social provision the capital costs are paid for by the State. There is also a contribution made to running costs of €5,200 per resident, with the rest of the costs covered through State contribution. Under private provision, all costs are met privately.

As stated above, there is an assumption that the availability of Assisted Living accommodation prevents (or delays) the need for 15% of residents entering nursing home care. In the case of the Assisted Living model, accommodation costs in the counterfactual would reach €19,700 per annum in the case of social and €7,600 in the case of the private model. The delay in the requirement for nursing home care drives large savings in this model and is the main reason for the large benefits from Assisted Living under both social and private provision.

Table 13 summarises the costs and benefits of providing one Supported Housing Unit of Assisted Living.

Assisted Living
Tobar Naofa, Kerry / Tralee Town Council / Kerry County Council

Table 13: Assisted Living model costs and benefits

Description		Social	Private	Comment
Alternative housing options	Private housing	5%	85%	Tenure of residents if Assisted Living accommodation was not available
	Social housing	80%	0%	
	Nursing home	15%	15%	
Supported Housing cost	Annuitised capital cost	€10,900	€0	Calculating the annual net cost of Supported Housing Net cost = Costs less benefits
	Running cost	€5,200	€0	
	Annual social and health benefit	€1,600	€1,600	
	Annual net cost of Supported Housing (A)	€14,500	€(1,600)	
Counterfactual cost	Annual cost of counterfactual (B)	€19,700	€7,600	Annual composite cost of alternative housing options
Total	**Annual Net Benefit/ (Cost) of Supported Housing** **(C) = B-A**	**€5,200**	**€9,200**	**Cost of alternative housing options less net cost of Supported Housing**
	Total NPV	**€90,300**	**€159,200**	**Annual net cost or benefit summed over 30 years and discounted back at 4%**
	Total NPV + shadow price	**€117,300**	**€207,000**	**Includes cost of shadow price of public funds at 30%**

4.3 Specialised Living Model

Specialised Living is the most expensive form of Supported Housing. Residents have higher care needs and, in the absence of Specialised Living accommodation, it is assumed that they would be cared for in long-term residential care, such as a nursing home.

There is an annual benefit of €2,200 from the social provision of Specialised Living accommodation over the alternative scenario where there is no such accommodation available. In the case of privately provided Specialised Living accommodation, there is a higher net benefit of €20,100 to the State. There is an NPV of €48,900 per unit under social provision, and an NPV of €451,900 per unit under private provision. The cost of the accommodation in the counterfactual scenario is identical in both social and private (as the assumption is that all are in Nursing Home care and the average cost of the Fair Deal Scheme is applied). The considerable benefits from private provision emerge due to the absence of any capital costs being met by the Exchequer, which are met upfront through CAS funding in the case of social provision.

Costs are based on a housing scheme run by FOLD Ireland, which has an annual State contribution of €33,020 per unit. In modelling the private market, we assume an additional private contribution of €100 per week compared to the social model, which implies a reduced State contribution of €27,820 per annum. There are no capital costs in the case of private market provision, while we assume a capital cost of €220,000 for a publicly funded Specialised Living unit.

In the counterfactual scenario it is assumed that 100% of residents would require a nursing home place and costs are assumed to be identical in both social and private models, at €47,918 per annum. The difference between nursing home care and Specialised Living drive the cost savings under this model.

The Specialised Living model highlights the potential savings available to the State from appropriate alternative accommodation being provided for those who might otherwise be in nursing home care. By delaying the requirement for costly nursing home care there are considerable financial benefits which could be realised by the State.

Table 14 summarises the costs and benefits arising on a per unit basis of Specialised Living.

Specialised Living
Carebright Community, Limerick / Carebright

Table 14: Specialised Living model costs and benefits

Description		Social	Private	Comment
Alternative housing options	Private housing	0%	0%	Tenure of residents if Specialised Living accommodation was not available
	Social housing	0%	0%	
	Nursing home	100%	100%	
Specialised Living cost	Annuitised capital cost	€12,700	€0	Calculating the annual net cost of Specialised Housing Net cost = Costs less benefits
	Running cost	€33,000	€27,800	
	Annual social and health benefit	€0	€0	
	Annual net cost of Supported Housing (A)	€45,700	€27,800	
Counterfactual cost	Annual cost of counterfactual (B)	€47,900	€48,000	Annual composite cost of alternative housing options
Total	**Annual Net Benefit/ (Cost) of Supported Housing** **(C) = B-A**	**€2,200**	**€20,100**	**Cost of alternative housing options less net cost of Supported Housing**
	Total NPV	**€37,600**	**€347,500**	**Annual net cost or benefit summed over 30 years and discounted back at 4%**
	Total NPV + shadow price	**€48,900**	**€451,800**	**Includes cost of shadow price of public funds at 30%**

4.4 Sensitivity Analysis

The results of the models are sensitive to the assumptions made. The assumptions around tenure profile in the case where Supported Housing is not available is particularly sensitive to the assumptions made.

It is difficult to estimate the exact share of the population in Independent or Assisted Living models which would be in a nursing home without Supported Housing available, or would at least move to nursing home care a year earlier than in the case that Supported Housing was available. To test this assumption, we drop the assumed share from 5% to 2% in the Independent Living model and from 15% to 5% in the Assisted Living model.

4.4.1 Change In Nursing Home Need

Changing the assumed number of people going into nursing home care has an effect on each model, particularly the Assisted Living model where we assume a greater level of change. By reducing the need for nursing home care from 5% to 2% the annual benefit of the Independent Living model drops by approximately €927 in the case of socially provided Independent Living accommodation, and an average of €1,400 under private provision. Under the Assisted Living model, where a larger drop in the assumed rate is made (15% to 5%), there is a larger drop in the NPV of approximately €3,100 in the case of social provision and €4,800 in the case of private provision.

These changes are presented below in Table 15.

Both the Independent and Assisted Living models still generate a net positive benefit even when the assumptions on nursing homes are relaxed. However, it is also the case that the assumptions made in the modelling have been quite conservative, particularly with regard to nursing home care needs. Assuming that one in twenty people will be able to delay their move to nursing home care by one year due to the support provided through Independent Living is not an excessive assumption to make. Similarly, in the case of Assisted Living where residents have greater care needs, assuming that one in eight people would require nursing home care in the absence of Assisted Living appears to be a conservative assumption. It could indeed be the case that there is a greater need for nursing home care in the counterfactual scenario. A 5% increase in this figure would add to the benefit estimated in the model by a similar factor to that outlined in Table 15 below.

4.4.2 Land Costs

This paper initially looked at a sample of Supported Housing models in order to gain an estimate of the capital costs of providing Supported Housing units. It can be difficult to get an accurate estimate of the capital costs of this type of housing due to its scarcity and the way in which costs develop over time. Indeed, our sample included a number of units which had been developed over 10 years previously. For this reason, a more recent Supported Housing development was used as the basis for our estimate of the capital cost of Supported Housing.

One issue with using this development as a basis for costs was that it (like many other Supported Housing developments in the social sector) received subsidised land to construct on. This creates issues when trying to estimate the cost of further provision, as an assumption that all models will receive public land is a significant one, as well as there being an opportunity cost to public land being provided for that purpose. It is not clear either to what degree land costs are reflected in the average cost of new social housing

Table 15: Sensitivity to assumptions made – change in annual benefit

Type	Independent Living (social/private)	Assisted Living (social/private)
Nursing home (change in uptake rates)	€927/€1,400	€3,100/€4,800
Total annual benefit remaining	€3,800/€2,596	€2,100/€4,400

Independent Living
McAuley Place / Nás Na Ríogh

delivery used in this paper. If land costs are not fully reflected in the delivery cost of social housing stock (or it is being delivered on legacy land with low costs) then it may underestimate the cost of delivering additional social hosing.

Another issue here is one of comparison, with Supported Housing units typically smaller than general housing units and therefore taking up a smaller parcel of land than a typical housing unit. There is also the matter of how the purchase of land is approached. Costs can also vary depending on whether the land purchased is zoned as agricultural land or zoned as residential, with the later typically demanding a higher price. A pro-active approach in this regard could reduce potential land costs for Supported Housing.

These issues, a lack of data on the land cost of Supported Housing (and social housing), land costs being dependent on the approach to purchasing, as well as the smaller portion of land used, create difficulties in assuming a single average cost of land for each Supported Housing unit. This is also an area of costs which could develop differently in future, depending on the policy approach.

The current discounted benefit from each model show that there is considerable value accruing over a 30-year period from the provision of Supported Housing units when compared to alternative accommodation, with benefits ranging from €38,000 to €81,000 per unit in the case of social provision.

This provides a significant buffer to factor in a range of land costs for Supported Housing. Units constructed in more urbanised areas will naturally dictate a higher land price, while units in rural areas will have a lower site cost. On a national basis these cost differences can cancel each other out (it will cost more to construct a social home in Dublin, similarly it will cost more to construct a Supported Housing unit).

To deal with the uncertainty arising with the land cost element of Supported Housing, a number of recent large housing transactions were examined.

- A NAMA site sold in Cork for €15 million in late 2018. Developers have sought planning for 1,100 apartments on this site. This works out at an average land cost of €13,600 per unit.
  - This is a similar price per unit to a site in Cork docklands site purchased in 2018 which has the potential to deliver 1,000 units which was priced at over €15 million. This is approx. €15,000 per unit in site costs.
- A look at transactions of some large Irish developers active in the Irish land market provides some evidence on the range of costs
  - A €60 million transaction for development land

in Dublin City Centre in 2018, with potential for over 650 units, translated to a rough land cost of €90,000 per unit
  - Land purchased with planning approval for 700 homes going for €9 million – that is approximately €13,000 per unit
- One Irish developer has delivered 12,000 units with a per unit land cost of €32,000, masking a large range in cost between Dublin based sites and rural/ commuter town sites.

There are a number of lessons which can be drawn from the above to feed into the analysis in this paper.

- Land costs in urban areas are typically higher. If we are looking at the cost of Supported Housing in a high-density city centre location then the appropriate comparison is for other accommodation in the city centre, particularly as it relates to the land cost element.
- There are examples of high-density urban units with a land cost per unit in excess of €60,000. There are also examples of units in urban areas outside of Dublin, as well as in suburban Dublin with land costs of less than €15,000 per unit.
- The land costs above are typically for 3-4 bed homes or 2-3 bed apartments. Assuming that Supported Housing units are typically intended for single occupancy, they would take up less land and therefore have a lower land price per unit.
- Data on the land cost element of social housing, or that of Supported Housing is not available on a national basis. Based on some of the transaction values above, we can arrive at a very rough estimate of what land costs for Supported Housing might look like.
- We use a figure of €30,000 per Supported Housing unit to examine the impact of paying for land on the relative value of Supported Housing compared to alternative accommodation. This is intended to reflect potentially higher land costs in some areas, as well as lower land costs in other areas.

Table 16 below sets out the 30-year benefit from social housing as well as the annual benefit after taking €30,000 additional land costs for the Supported Housing unit into account.

From Table 16 we see that there is still a positive value associated with all forms of Supported Housing after accounting for €30,000 in land costs per unit.

It is emphasised that the figure of €30,000 land costs per unit is an estimate and is not intended as an exact representation of the costs which Supported Housing units may face in reality. It serves the purpose here of demonstrating that the Supported Housing model can also incorporate assumptions around higher land costs.

It is also important to note that, similar to the case of Supported Housing, land costs may not be fully reflected in our counterfactual accommodation. It is unknown what proportion of the social housing stock built in 2018 may have been constructed on reduced price land, similarly nursing homes may have also benefited from lower priced land which has not been incorporated into prices. If land costs are not fully reflected in the counterfactual costs used in this paper, then the benefits arising from Supported Housing will be higher than is reported here.

Table 16: Annual benefit and 30-year benefit, assuming €30,000 in land costs per unit

Funding mechanism	Model	Annual benefit	30-year benefit
Social	Independent Living	€3,900	€67,000
	Assisted Living	€4,500	€78,000
	Specialised Living	€600	€9,900

Independent Living
Broome Lodge, Dublin / Clúid Housing

Assisted Living
Tobar Naofa, Kerry / Tralee Town Council / Kerry County Council

5. Estimating the Wider Benefits of Investment in Supported Housing

There are costs to the State which arise from the housing tenure choices of the older population. Changes in those housing choices, or options, can impact on the level of State expenditure on housing for older people.

In this section we examine the current cost of those housing options and the potential benefits from a change in the tenure profile towards increased supply of Supported Housing.

This section seeks to demonstrate how a wider supply of Supported Housing for the over-80's population could lead to significant accumulated benefits for the State. The calculations are meant to serve as indicative figures and are heavily based on assumptions around population growth and changes in accommodation profile.

According to CSO population estimates, the population of those over 80 years of age is expected to grow to 272,099 people by the year 2030. This is an increase of 114,000 from the 2018 estimate (CSO, 2019).

In Census 2016, 16,360 people over the age of 80 were recorded as being in nursing home care, representing 11.6% of that age group. One key aspect of an increase in the provision in Supported Housing, would be a reduced requirement for additional nursing home beds. For this analysis we assume that 5% of the additional 114,000 projected by 2030 can be accommodated in Specialised Supported Housing instead of a nursing home specifically. We further assume a general increase in the provision of Independent and Assisted living such that 2.5% of the additional 114,000 could be accommodated in each accommodation type, respectively.

This gives us a reasonable increase in the provision of Supported Housing by 2030, of 11,400 units assuming an occupancy of 1 person per unit. We make a further simplifying assumption and assume that all these units are publicly provided, meaning that we base costs and benefits on the results from the social side of each model. This is done in reflection of the current lack of provision of private Specialised Living in Ireland as well as for simplicity.

An accommodation mix of 50% Specialised, 25% Assisted and 25% Independent would produce an annual average benefit of €4,650 per unit, when compared to a situation of that accommodation not being provided. Bringing that to a population of 11,400 produces a significant saving of €900 million to the State over a 30-year period. This is outlined in Table 17.

Table 17: Wider benefits of Supported Housing supply

Annual average benefit (per unit)	€4,650
Additional units	11,400
Total annual benefit	€53,010,000

The above analysis focuses only on additional units for the rising over 80s population. It takes no account of the current provision of accommodation, or the current tenure of the over 80s population. If there was further provision of Supported Housing accommodation beyond that which is assumed above, then further benefits would also rise. We also assume that this accommodation is entirely publicly funded. As demonstrated earlier in the paper, there are considerable potential benefits arising from an increase in private Specialised Living (depending on the degree of State subsidisation). The average saving outlined above would also rise if it was assumed that a part of the provision was being made privately, as stated earlier depending on the level of subsidisation by the State.

The above analysis is simply an extrapolation of the average benefit for a projected rise in the over 80s population. It is done in place of more in-depth analysis which can rely on too many specific assumptions being made regarding the future breakdown of Supported Housing, the current provision of each type of accommodation (data for which is not comprehensive), the actual take up of this accommodation. The above analysis is done to highlight the scale of the savings which could potentially be achieved by the State in a single year through an increase in the provision of Supported Housing.

Independent Living
Broome Lodge, Dublin / Clúid Housing

6. Conclusion

This paper has explored the costs of providing a range of Supported Housing options. It has compared these costs to a number of alternative scenarios where it is assumed that Supported Housing is not available.

The modelling found that there was a strong positive financial benefit to the Exchequer from the provision of each type of Supported Housing with varying care requirements; Independent, Assisted and Specialised. It was further established that there are benefits from both a social model of Supported Housing as well as a privately funded model.

The benefits primarily accrue due to Supported Housing either directly replacing more expensive nursing home beds or delaying the need for an older person to access nursing home care. Benefits are also generated due to reduced health and social care needs of those in Supported Housing compared to general accommodation.

In the case of the Independent and Assisted Living models, the level of public subsidisation (of private accommodation) has been kept low; this demonstrates the potential for government subvention while still retaining a net benefit to the Exchequer, particularly if such a subsidy was required to incentivise development of Supported Housing.

In the Specialised Living model, due to the higher cost, the model assumed a higher level of public subvention. Even with this subvention, this model accrues the most significant benefits of any model as it is viewed as a direct replacement for more expensive nursing home care. The level of public funding if such a model of care was introduced at a wider level could be varied; however, the analysis shows that even at a high level of subvention there remain strong benefits to the State due to the reduced need for nursing home care.

Indeed, the benefits of Supported Housing derive mainly from the State being able to replace more costly nursing home care with lower cost Supported Housing units, either directly or through a delayed need for nursing home care, as seen in the Independent Living or Assisted Living models. The provision of a wider range of Supported Housing options which better reflect the range of care needs in the older community can delay, or even replace, the need for nursing home care, allowing older persons to continue living in their own community, and can also accrue significant financial benefits for the Exchequer compared to the current provision of accommodation where a gap exists in the market.

This work has not considered the wider benefits of Supported Housing. Such benefits can include:

- Being in 'own home' and community
- Living near services
- Increased social interaction and reduced loneliness
- Better health and wellbeing
- Better utilisation of the wider housing stock
- Environmental benefits from living in well-designed, energy efficient homes in compact settings
- Health benefits of living in non-congregated settings

While the above benefits may be considerable, they are difficult to accurately quantify in terms of cost and benefits, and this analysis has primarily been concerned with costs to the State. However, the fact that the benefits above have not been explored fully, only serves to underline the potentially significant value that Supported Housing can provide to its residents, the HSE and the State.

This paper demonstrates the considerable potential benefits that an increase in the supply of Supported Housing could bring to the older person population, and the State.

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