Extra-care Housing: Brief development

DWELL Working Document

July 2015 DRAFT

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Purpose of this brief development document

In recent years, the development of specialised sheltered and 'extra-care housing' has attracted significant attention as a means of providing an independent and supportive environment for later life.

Although this form of accommodation offers a range of potential benefits to residents (as one of a number of housing options in later life), the complexities around housing tenure, capital and revenue funding, design quality, care provision, and building management pose a number of challenges for providers, commissioners, planners, and designers.

A wide range of agencies - from national policy-makers, local government, care providers, housing associations, private developers, architects and researchers - have examined the challenges of briefing, designing, procuring and managing a viable and sustainable specialised housing offer.

This DWELL working document draws together this existing policy and practice, with the aim of developing a set of clear briefing and design principles for new-build extra-care housing.

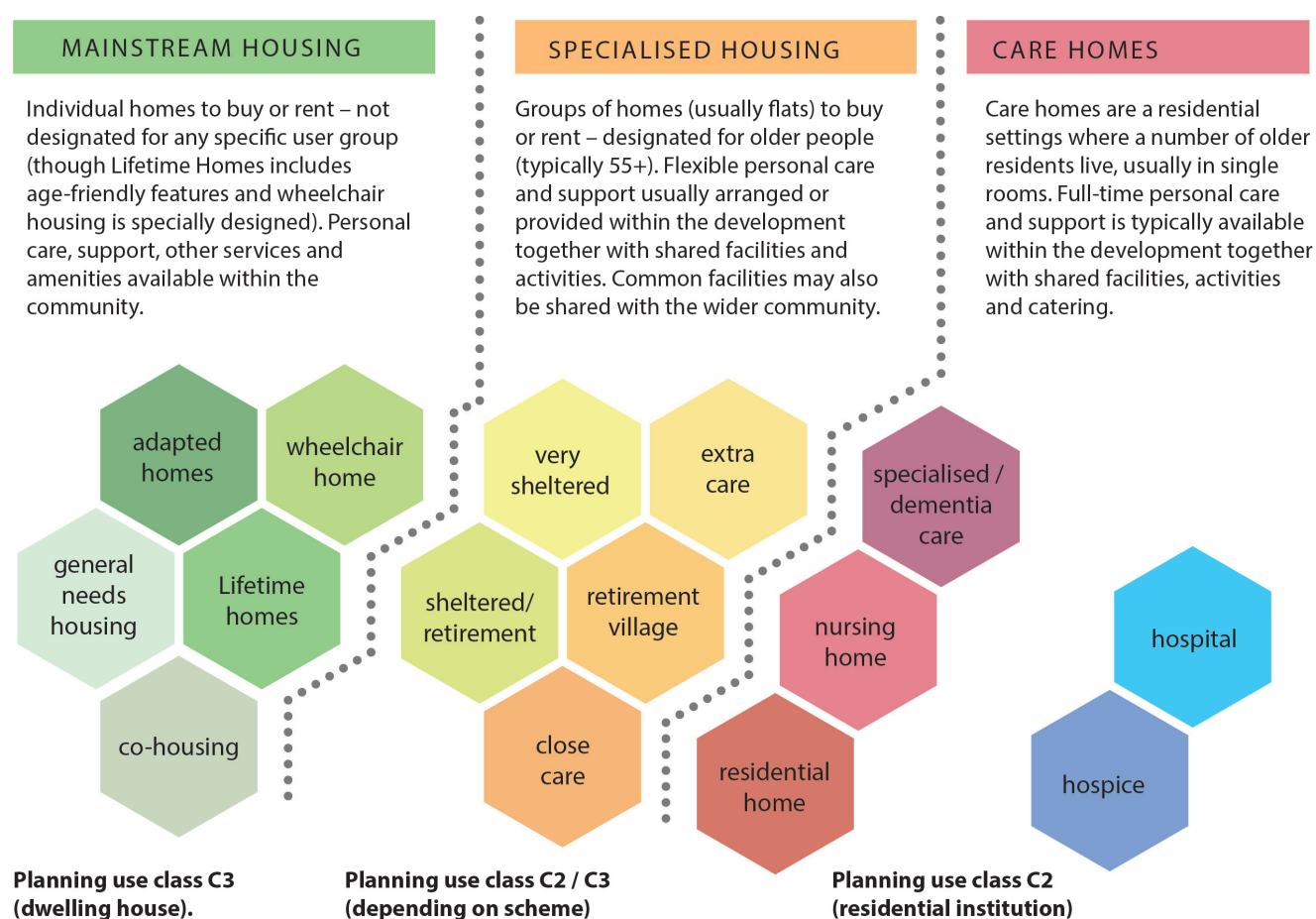# Contents

Developing a generic design brief for extra-care housing

Extra-care Housing: Definitions

Definitions

The term 'Extra-care housing' is used to describe a range of housing for older people who can no longer (or no longer want to) live in general-needs housing but do not need 24-hour or complex medical supervision. This housing model typically offers groups of independently accessed apartments (or other clusters of dwellings) with additional communal facilities and flexible on-site care/support services attached such as support from a scheme manager.[1]

MAINSTREAM HOUSING

Individual homes to buy or rent – not designated for any specific user group (though Lifetime Homes includes age-friendly features and wheelchair housing is specially designed). Personal care, support, other services and amenities available within the community.

SPECIALISED HOUSING

Groups of homes (usually flats) to buy or rent – designated for older people (typically 55+). Flexible personal care and support usually arranged or provided within the development together with shared facilities and activities. Common facilities may also be shared with the wider community.

CARE HOMES

Care homes are a residential settings where a number of older residents live, usually in single rooms. Full-time personal care and support is typically available within the development together with shared facilities, activities and catering.

adapted homes

wheelchair home

general needs housing

Lifetime homes

co-housing

very sheltered

extra care

sheltered/ retirement

retirement village

close care

specialised / dementia care

nursing home

residential home

hospital

hospice

Planning use class C3 (dwelling house).

Planning use class C2 / C3 (depending on scheme)

Planning use class C2 (residential institution)

The above diagram (adapted from the HAPPI 2 report) sets out the complex landscape of housing options in later life.[2] Sheltered and extra-care housing falls between Planning Use Class C2 and C3, which may cause a number of issues for Local Authorities and developers (eg. affordable housing provision or CIL). A number of discussion documents on the Housing LIN network have covered these issues in greater detail.[3]

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1   DCLG (2008), Lifetime Homes, Lifetime Neighbourhoods, P. 133
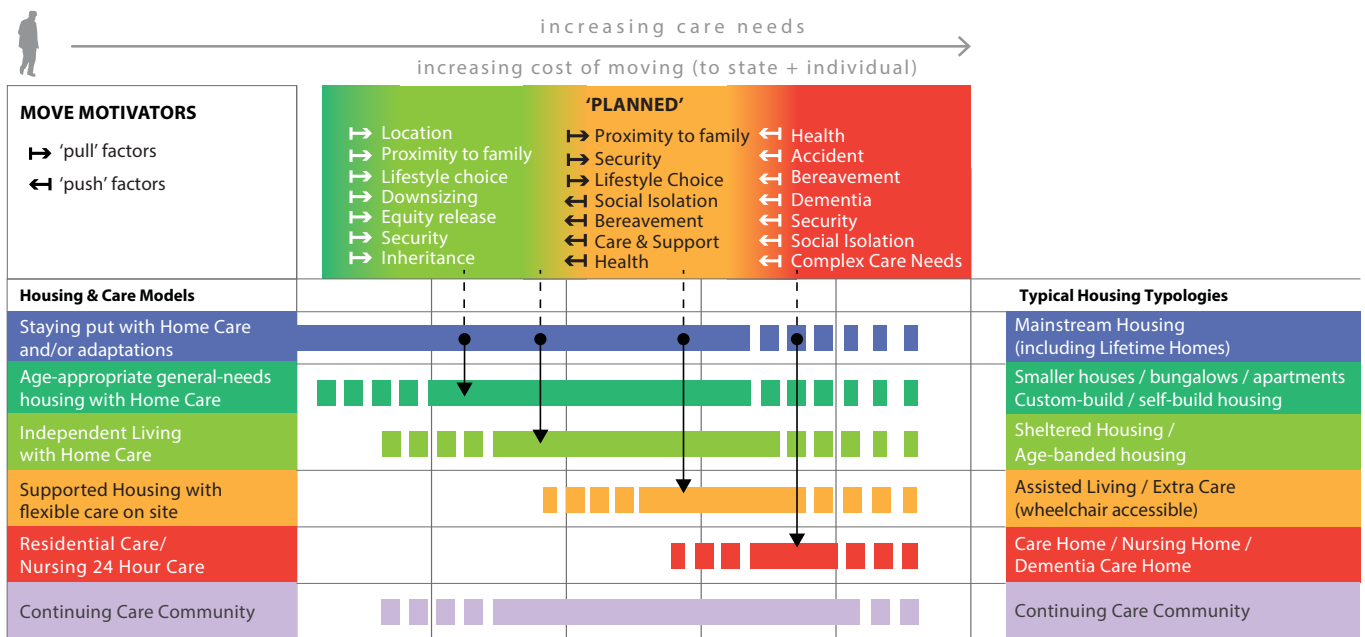2   Best and Porteus (2012), 'HAPPI 2', p.12

3   King (2011) 'Planning Use Classes and Extra Care Housing'
         Retirement Housing Group (2013) 'Community Infrastructure Levy and Sheltered Housing/Extra Care Developments'

Downsizing and the preventative agenda

Extra-care housing has also been identified as offering potential cost savings to Local Authorities (compared to expensive residential care). This is in part because the 'housing' and 'care' elements are paid for separately.[4] It has been suggested that a greater supply of specialist housing might offer a 'win-win' situation for local authorities by accommodating older residents in more appropriate housing, mitigating the cost and distress of 'crisis' moves, and at the same time freeing up larger 'under-occupied' family homes by encouraging downsizing.[5]

For residents, well-designed and managed extra-care housing can offer a range of benefits. However the competing 'push' and 'pull' factors behind any decision to move are complex and different in each individual case. In mosts cases there are also a number competing motivations for 'staying put'. The diagram below, adapted from the report 'Integrated by Design' by PRP Architects, broadly outlines the common move motivators and housing options in later life.[6] Extra-care Housing is identified by category 4.

increasing care needs

increasing cost of moving (to state + individual)

MOVE MOTIVATORS
↦ 'pull' factors
↤ 'push' factors

'PLANNED'

↦ Location	↦ Proximity to family	↤ Health
↦ Proximity to family	↦ Security	↤ Accident
↦ Lifestyle choice	↦ Lifestyle Choice	↤ Bereavement
↦ Downsizing	↤ Social Isolation	↤ Dementia
↦ Equity release	↤ Bereavement	↤ Security
↦ Security	↤ Care & Support	↤ Social Isolation
↦ Inheritance	↤ Health	↤ Complex Care Needs

	Housing & Care Models	Typical Housing Typologies
1	Staying put with Home Care and/or adaptations	Mainstream Housing (including Lifetime Homes)
2	Age-appropriate general-needs housing with Home Care	Smaller houses / bungalows / apartments Custom-build / self-build housing
3	Independent Living with Home Care	Sheltered Housing / Age-banded housing
4	Supported Housing with flexible care on site	Assisted Living / Extra Care (wheelchair accessible)
5	Residential Care/ Nursing 24 Hour Care	Care Home / Nursing Home / Dementia Care Home
6	Continuing Care Community	Continuing Care Community

Some difficulties persist in the level of public awareness of new forms of extra-care housing (compared to the established residential care model). Recent research has also indicated that older people can actually be put off by specialist 'retirement' or 'sheltered' housing if it is named or marketed as specifically 'for older people'. [7]

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4   Weis and Tuck, (2013)
5   HCA (2009) HAPPI Report , Pannell et al (2012) Market Assessment of Housing Options for Older People, p.31
6   PRP Architects (2014), 'Integrated by Design', p.11
7   Bailey (2014) 'HousingLIN Case Study 78'

Extra-care Housing: Definitions

Development models

Private Sector

The largest private specilaised housing provider is McCarthy and Stone, with a reported 70% share of the private market of specialist retirement housing. They have adopted the terms *'Retirement Living'* and *'Assisted Living'*, promoting the benefits as:

> *"companionship, privacy on your terms and all the help you need to enjoy life and maintain your independence."* [8]

Private development of extra-care housing tends to be currently focussed on the higher end of the market, and therefore concentrated in areas of the country with higher housing wealth.[9]

Social housing sector

In areas outside of high housing wealth, registered providers (RPs) are the largest provider of extra-care housing. A number of other voluntary, community, and faith sector organisations are also active in developing and managing extra-care accommodation. Dwellings can be a mix of affordable rent, leasehold purchase, or shared ownership. As in all development models, care and support may be provided by the organisation owning the building or by an external agency.

Local Authority

Local authorities (LAs) have been active in developing a portfolio of extra-care housing, often to replace LA-run residential care homes.

Councils may also act as development partners alongside private or RSLs contributing capital funding, land and/or be a source of revenue funding through the Housing Revenue Account.

Cooperative models

An emerging alternative to private or RSL extra-care housing is the so-called 'Elderflowers' model. This model has similarities to co-housing, with communal facilities and care services owned and managed by residents themselves.[10]

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8   McCarthy and Stone *http://www.mccarthyandstone.co.uk/assisted-living/*
9   Hartley (2014) HousingLIN Viewpoint 61

10   Barac (2013) Elderflowers Project

Key principles of extra-care housing

- Independently accessed (and metered) apartments or other dwellings clustered together on one site.
- Developments include a range of communal facilities typically paid for by an additional service charge (see programme section).
- The housing element of the scheme is not registered by the Care Quality Commission.
- Care and support required by the residents is provided by a separately registered domiciliary care agency (often based on site) and bought in by residents on an 'as needed' basis.
- Extra-care housing caters for a range of care and support needs. A key aspect of long-term sustainability is the ongoing balance of care and support needs within each development.
- The preventative agenda often associated with extra-care housing requires a focus on 'HAPPI' design quality principles (attractive, accessible, good daylighting + thermal comfort) and links to local infrastructure (facilities, services + social opportunities)
- Extra-care housing can fall between planning use classes C2 and C3, and therefore often requires local policies / enabling to ensure viability of developments.

Research question(s):

How well do older people understand the different forms of extra-care housing?

What are older people's preconceptions around terms such as 'sheltered' or 'extra-care' housing? Is a 'rebranding' of these housing types required for the 21st century?

Does the discourse around housing 'choice' in later life reflect the experience of older people?

What are the processes that inform older people's decision-making around their future housing situation?

'Brunswick Gardens' extra-care housing in Sheffield developed in 2008 by the Extra Care Charitable Trust in partnership with Sheffield City Council.

Extra-care Housing:
Site context

Site development drivers and constraints

The following list illustrates the broad constraints and drivers that impact on site availability and selection for extra care housing. *The italicised text denotes key statutory frameworks, data or guidance related to each driver.*

- National/ local political priorities
- Land availability (current / future)
  Strategic housing land availability assessment (SHLAA)
- Land ownership (council / private) and land disposal policy
  Section 123 of Local Government Act
- Local developers - level of activity and type (private / RSL)
- Finance availability
- Planning constraints and allocations
  Local plan, green belt, planning gain (CIL) + affordable housing provision
- Land values
- Local housing market (tenure / housetype mix + house prices)
- Existing specialist / retirement housing provision in the area
  Council housing / Housing Association / Private sector
- Housing market and demand (current / predicted)
  Strategic Housing Market Analysis (SHMA), census data, HCA SIGnet tool, Housing LIN SHOPS tool
- Topography, urban form and neighbourhood characteristics
  Local planning policy, urban design appraisal
- Accessibility of local health services
  GIS mapping (GP surgery, pharmacy, optician, dentist), future healthcare planning (CCGs + health and wellbeing boards)
- Accessibility and range of local facilities
  GIS mapping (parks + green space, shops, cafes, pubs, community centres, libraries), consultation with residents, urban design appraisal
- Transport links + public transport accessibility
  GIS mapping (public transport stops + routes), future transport planning (local council + private transport operators)

The detailed analysis of many of these drivers falls outside of the scope of a design brief, and requires coordination with a range of agencies. This might include local councils (planning / development / housing / property services), the HCA, national government (Secretary of State) and developers (RSLs / private).

Research question(s):

What tools are available to aid local policy-makers and planners to appraise specific sites?

How are different (or competing) priorities weighed up against one another? (eg. land values and demand for specialist housing)

What role can participatory mapping / engagement processes feasibly play within the complex development models associated with extra-care housing?

Mapping site constraints and drivers

Selecting and acquiring a suitable site is a fundamental stage in developing and designing a successful extra-care housing scheme. As the list on the opposite page illustrates, this process is highly complex and involves coordination across a number of agencies.

Within these processes mapping can play an important role in informing the selection of site and development of a detailed brief / programme. Maps can be powerful tools to convey a range of information - from precise quantitative data to more subjective, sensitive, and propositional forms of site analysis.

Quantitative spatial analysis tools (GIS)
Based on the availability of up to date (and reliable) spatial data, mapping tools can be used to display and analyse a range of spatial characteristics of a site and neighbourhood. This might include:

* Local demographics (existing and projected)
* Local housing mix and tenures
* Crime + health data
* Topography
* Travel distances (and exclusion zones) for different types of facilities

Participatory mapping tools
Developing a good understanding of local constraints and drivers requires more than just desktop-based analysis. As experts of their own neighbourhood, local residents can identify issues unseen to external professionals. For example: a pub or community centre near to a development site would appear to be 'easily accessible', but may not be well-used or valued by the local community.

A participatory process involves local residents in helping to map local needs, aspirations, priorities, and future visions for a neighbourhood. It is also a way of keeping local people informed and getting 'buy-in' to any new housing development.

Hybrid mapping tools
Hybrid approaches to mapping local facilities can be used to overlay more nuanced forms of information onto spatial data. Much of this information will be collected by spending time within a neighbourhood - walking and talking to people at different times of the day and week.

* Routes + movement, including desire lines, key views, and barriers
* Local facilities - including accessibility, barriers and value
* Local history and heritage
* Usage patterns (and tensions) by different types of users
* Social spaces / meeting places (and spatial tension between groups)

GIS can be used to visualise specific data. This diagram represents a residential area not served by a shop within 500m (image: Dr Stefan White, Old Moat Project).

Hybrid map exploring the accessibility of local facilities.

A participatory mapping tool to identify local priorities (image: SOAR Neighbourhood strategy report).

Programme

A defining feature of extra-care housing is the provision of communal spaces and facilities. These facilities underpin many of the health and well-being benefits associated with this model, particularly in terms of sociability, physical and mental activity, and developing informal support networks.[1]

The table below sets out the range of options for communal spaces within an extra-care housing brief. The categories across the top (essential / desirable / premium) are illustrative only and are dependent on the local context and funding model of specific developments.

increasing costs (capital / revenue) + risk

→

increasing scale of development (to offset cost + risk)

Feature / Benefits	ESSENTIAL	DESIRABLE	PREMIUM
Social space informal interaction with residents, visitors + others	Common room / lounge Guest accomodation	External terrace(s) Separate games room (snooker, table tennis etc)	Separate function room (stage, PA system)
Eating / drinking provision of on-site meals	Tea-making facilities (in common room)	Cafe-bar + kitchenette (sandwiches, toasties etc)	Restaurant + kitchen (lunch + evening meals)
Activity space for adult learning and social interaction		Craft / hobby room Library Computer room	Workshop (woodworking etc)
Outdoor space for exercise, relaxation and social interaction	Shared private gardens (with seating / walking paths)	Balconies Growing space (greenhouse, allotments) Tool store	Range of gardens Golf course Tennis courts
Health + fitness space for exercise, relaxation and treatment	Treatment rooms (physio,)	Gym	Swimming pool Health club / spa
Other communal facilities	Laundry facilities / sluice room Scooter store / charging WCs	Visiting greengrocer Hairdresser	Convenience store
Management facilities	Staff room / changing Refuse + plant	Staffed reception desk	On-site staff accommodati

NOTE: an approximate schedule of areas for some of these facilities is provided in the extra-care design guidance published by PRP architects.[2]

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1   Weis and Tuck (2013) The Business Case for Extra Care Housing in Adult Social Care
2   PRP Architects (2008) Design Principles for Extra Care

Scale and location

Scale is a particularly important part of the briefing process, as this underpins much of the financial viability, location, and ethos of a development.

For example, a large extra-care 'village' of 100 or more dwellings may be able to provide a much greater range of communal facilities on site, but the land requirements may push it out of town and disconnect it from other residential communities.

Alternatively, a development of 30-dwellings might only be able to provide minimal communal spaces within the scheme, but if located at the centre of an existing residential neighbourhood, could be better linked in to existing community-based activities and services.

Research question(s):

What tools are available for commissioners and developers to determine which programme elements are essential / desirable for individual sites?

Viability

The range of facilities provided is highly dependent on the funding model, location, target market + tenure, and the scale of the development. In recent years, reductions in local authority budgets and central grant funding has squeezed out some of the more generous communal facilities that might have been previously provided in new extra-care housing.[3] There have also been concerns that prospective purchasers may be put off moving into extra-care housing because of the high service charges associated with more generous communal spaces.[4]

Arguably the most important is a viable funding model in terms of both capital and revenue income as well as the sustainability of future service charges. Modelling funding options for extra-care development is beyond the scope of this brief development document, however a comprehensive overview is available in a recent briefing paper published by HousingLIN.[5]

Community access to communal facilities

Models that invite the wider community (particularly older people) to share communal facilities can bring a number additional benefits, knitting a scheme into the local neighbourhood, further strengthening informal support networks, and securing the economic viability and long-term sustainability of any communal facilities.[6] This is only possible where developments are able to be sited within an established residential neighbourhood.

Experience from managers of extra-care housing suggests that this type of shared usage can also cause tensions between residents and external users. Such reports highlight issues around privacy, the nature of extra-care as a 'home', and the ownership of shared spaces. Adopting this approach therefore requires careful consideration of management policies and design - to maintain the privacy and security of residents while welcoming in visitors (progressive privacy).

Additional considerations

- careful analysis of existing local facilities (see site section) to avoid duplication of local provision
- flexible and adaptable spaces that can accommodate a range of future uses (or be expanded in future)
- alternative 'joined up' approaches to provide more generous communal facilities (see 'Hub + Spoke' in Form and massing section)
- planning to ensure facilities are available as soon as residents move in
- careful consideration of the design of thresholds between public and private spaces (see Thresholds section)
- involvement of building managers / maintenance staff within the design process

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3   Best + Porteus (2012) 'HAPPI 2' Report, p.11
4   Ferreira (2013) 'Housing for older people globally', Hartley, (2014) HousingLIN Viewpoint 61
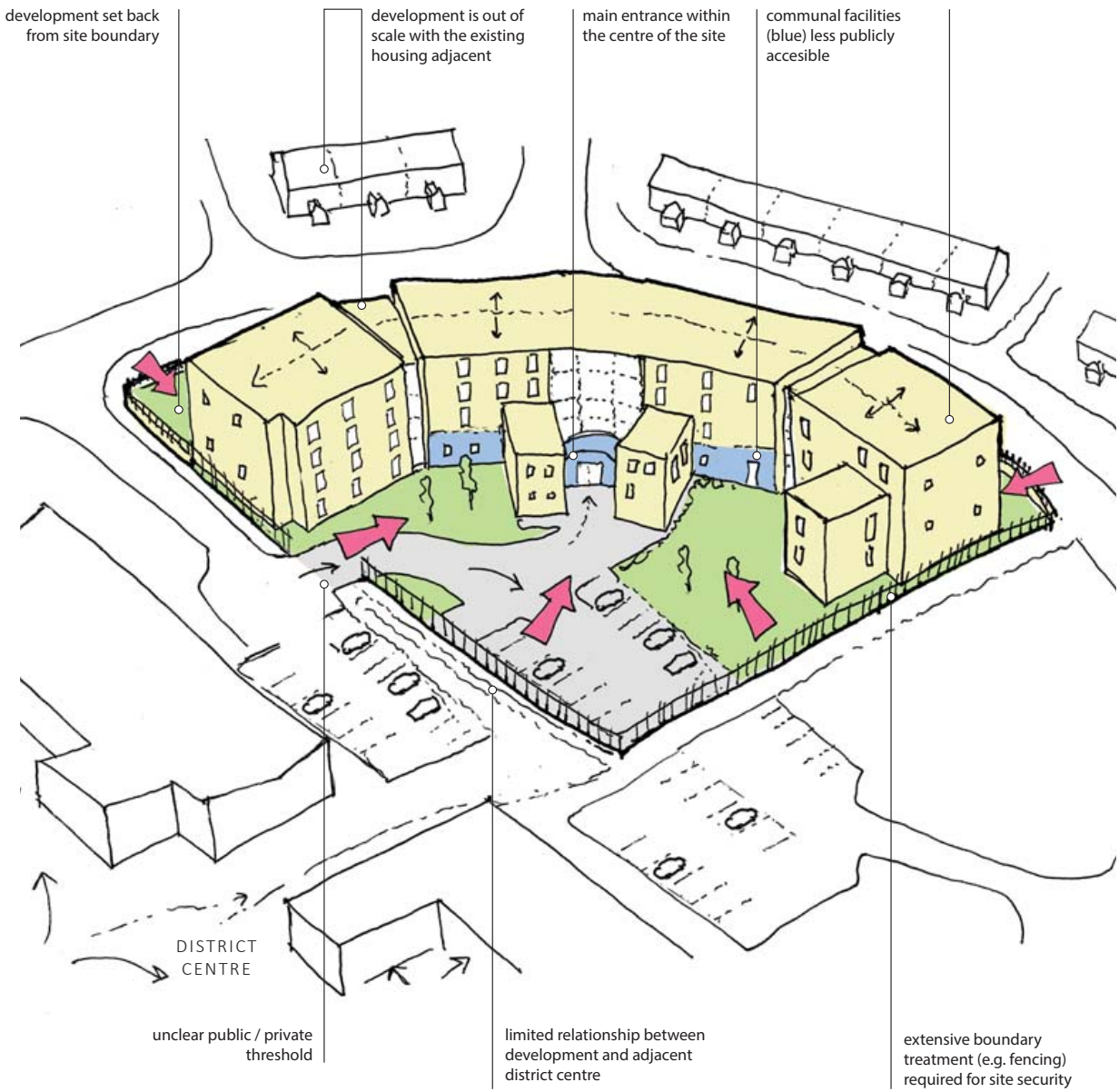5   Head et al (2013) Funding Extra Care Housing.
6   Callaghan et al (2009) Developing Social Well-being in New Extra-care Housing Schemes

Site layout and relationship to urban context

As indicated in both the Site and Programme sections, an important characteristics of successful extra-care housing is a positive relationship to the existing physical and social fabric of the neighbourhood.
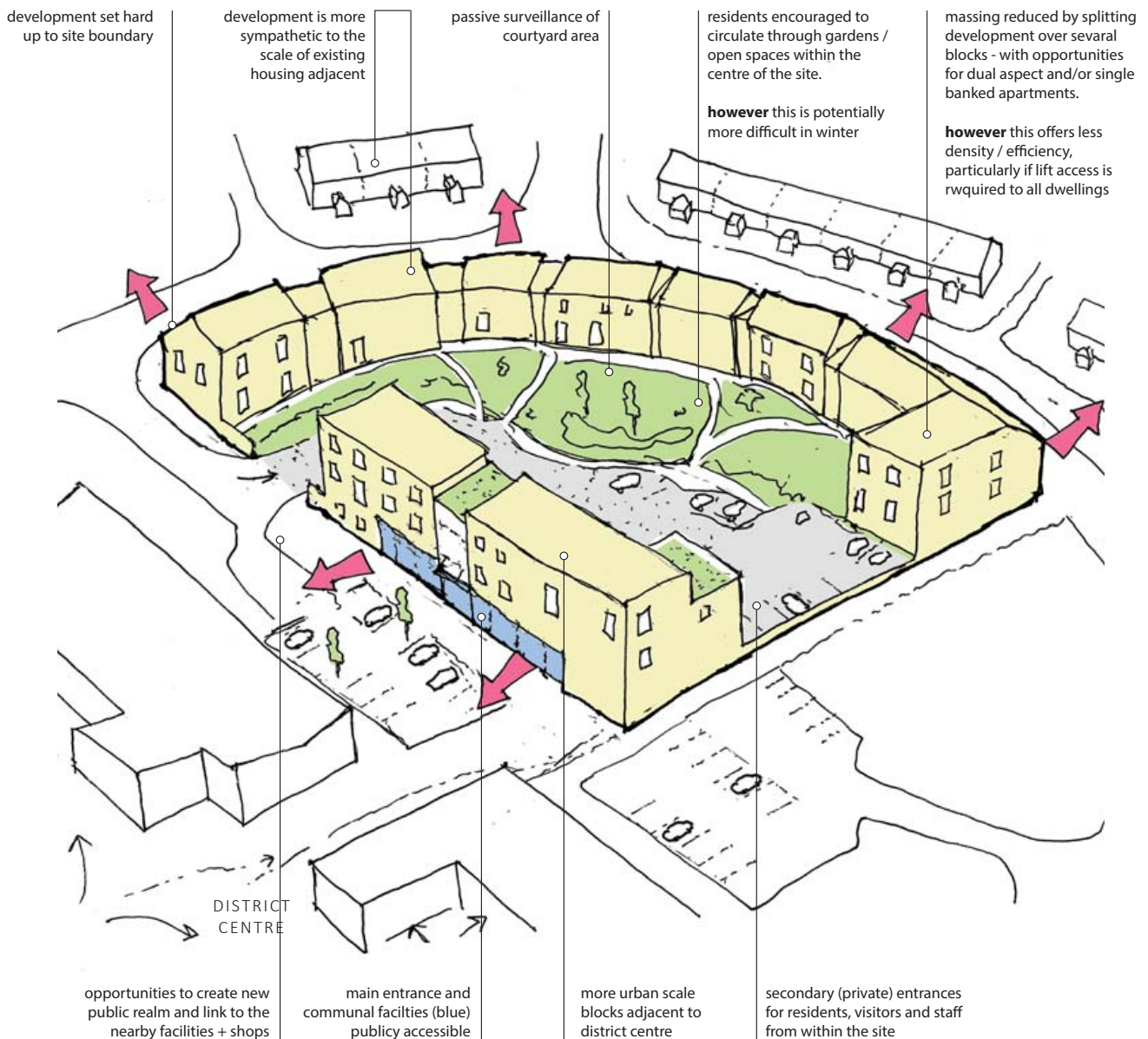
This pair of diagrams explores some of broad philosophies urban design in relation to whether a development is primarily 'inward' or 'outward' facing:

development set back from site boundary

development is out of scale with the existing housing adjacent

main entrance within the centre of the site

communal facilities (blue) less publicly accesible

DISTRICT CENTRE

unclear public / private threshold

limited relationship between development and adjacent district centre

extensive boundary treatment (e.g. fencing) required for site security

'INWARD LOOKING' SITE LAYOUT

Additional considerations that underpin the approaches to site layout / massing include:

- project budget + affordability (development costs / profit / risk)
- sustainability + ecology (BREEAM, Code for sustainable homes, planning reqs.)
- planning + conservation (development heights, massing, open space reqs.)
- car parking requirements (planning reqs., local travel plan)
- security (Secured by design)
- overall design quality + ambition (Building for Life 12, CABE, Housing Quality Indicators)
- specific guidance for older people's housing (HAPPI, EVOLVE, Lifetime Homes + Neighbourhoods)

development set hard up to site boundary

development is more sympathetic to the scale of existing housing adjacent

passive surveillance of courtyard area

residents encouraged to circulate through gardens / open spaces within the centre of the site.

however this is potentially more difficult in winter

massing reduced by splitting development over sevaral blocks - with opportunities for dual aspect and/or single banked apartments.

however this offers less density / efficiency, particularly if lift access is rwquired to all dwellings

DISTRICT CENTRE

opportunities to create new public realm and link to the nearby facilities + shops

main entrance and communal facilties (blue) publicly accessible

more urban scale blocks adjacent to district centre

secondary (private) entrances for residents, visitors and staff from within the site

'OUTWARD LOOKING' SITE LAYOUT

Extra-care Housing: Form and massing

Analysis of common typologies of extra-care housing

The following set of diagrams explores some of the common typologies of extra-care housing.

For the sake of comparison each of the typologies is shown at the comparable scale in terms of number of dwellings, storey heights, parking provision and external space. This allows certain generic characteristics of each layout (such as spatial efficiency, privacy, and daylighting) to be broadly illustrated and analysed / compared.

It should be noted that the design of all of the following typologies would be impacted on by a range of other specific programme and site conditions including:

- urban context,
- boundary conditions,
- planning policy,
- topography,
- scale (number of dwellings),
- programme (range of communal facilities).

Assumptions

- all layouts based on a 90 dwelling extra-care development
- 3 storeys maximum development height
- a mix of 1 bed and 2 bed dwellings
- a minimum of 1000 sq m . of communal space + plant
- all dwellings to be ground floor or accessible by lift
- parking ratio of approx. 1 space per dwelling
- each site has at least one side fronting onto a street (primary access) plus a potential secondary / vehicular access

NOTE:

All layouts / floor plans are indicative only and subject to all relevant statutory approvals. Development scale and mix of dwellings, required parking levels and open space requirements would be subject to local planning and housing policies.

Research question(s):

How do designers and developers of extra-care housing evaluate fiscal measures (eg. spatial efficiency) against the other advantages and disadvantages of these common typologies?

KEY

- 2 bed flat (72 sq m. approx. GIFA)
- 1 bed flat (56 sq m. approx. GIFA)
- Service core (lifts + stairs)
- Service core (stairs only)
- Communal facilities / plant
- Circulation
- Parking
- Gardens
- Street frontage / access
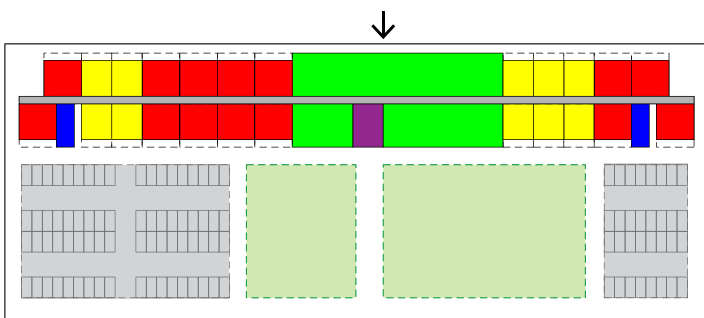- Secondary / vehicular access

LINEAR
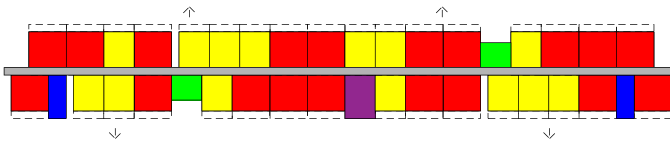
1st / 2nd floor plan

19 2 bed (38)

14 1 bed (28)

max travel distance to lift: 80m

Ground floor / site plan

14 2 bed

10 1 bed

communal space total 1150 sq m
circulation space total 1365 sq m
floor area total (gross) 10500 sq m
circulation ratio (approx.) 13%

Figure / ground plan

building footprint 3500 sq m

site 11300 sq m

31%

82 dwellings/hectare

LINEAR

Advantages

+ linear massing can be cranked
  to follow site contours / site
  boundary
+ simple form to plan /
  construct
+ most efficient option in terms
  of floor area + number of
  cores

Disadvantages

- 'institutional' / private in
  nature - may feel closed to
  external users
- long corridors with
  limited natural light / poor
  wayfinding
- single aspect apartments
  provide poor daylighting
- difficult to break up long
  'monolithic' block
- issues of differentiating 'front'
  and 'back' in relation to street
  access
- building form limits
  opportunities for semi-
  private encounters
- gardens + parking separated
  from building (boundary
  treatment required)

BRANCH

1st / 2nd floor plan

18no. 2 bed (36)
15no. 1 bed (30)

max travel distance to lift. 75m

Ground floor / site plan

15no. 2 bed
9no. 1 bed

communal total 1380 sq m
circulation total 1626 sq m
floor area total (gross) 10800 sq m
circulation ratio (approx.) 15%

Figure / ground plan

building footprint 3700 sq m

site 11100 sq m

site / footprint ratio 33%

82 dwellings/hectare

BRANCH

Advantages

+ most efficient option
  in terms of floor area +
  circulation space
+ flexible form can be adapted
  for different shaped sites
+ different 'branches' of the
  plan can have different
  identities to ease wayfinding

Disadvantages

- 'institutional' / private in
  nature - may feel closed off to
  external users
- issues of differentiating 'front'
  and 'back' in relation to street
  access
- form may cause difficulties
  with levels on sloping sites
- long corridors with limited
  natural light
- single aspect apartments
  provide poor daylighting
- building form limits
  opportunities for semi-
  private encounters
- gardens + parking separated
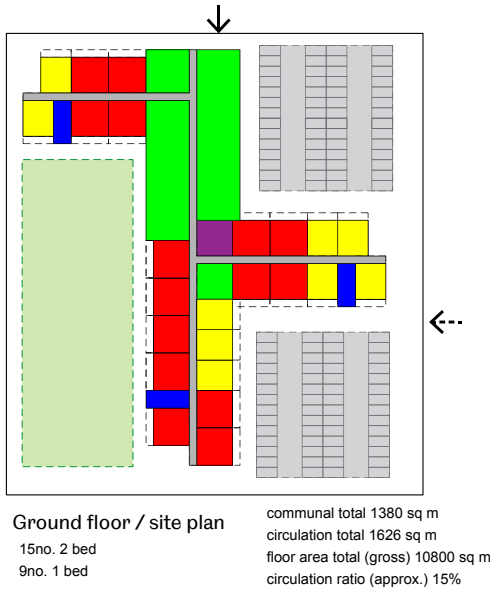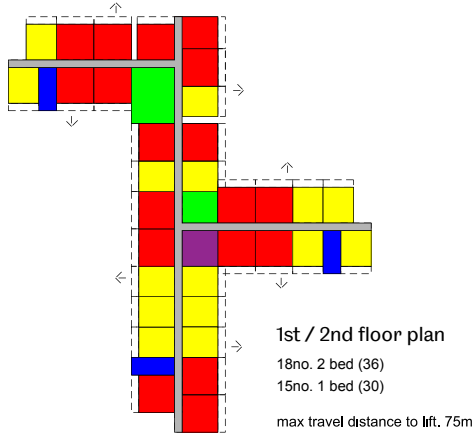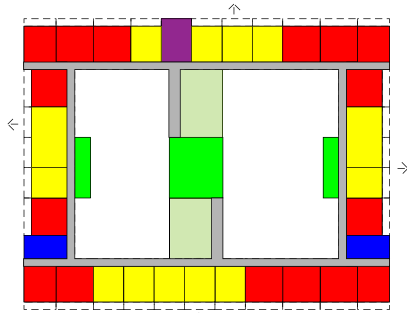 from building (boundary
  treatment required)

COURTYARD

1st / 2nd floor plan

17 2 bed (34)

15 1 bed (30)

max travel distance to lift: 100m
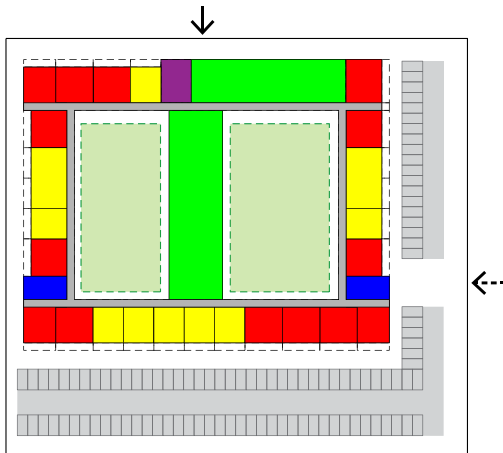
Ground floor / site plan

13 2 bed

12 1 bed

communal total 1380 sq m
circulation total 1870 sq m
floor area total (gross) 11000 sq m
circulation ratio (approx.) 17%
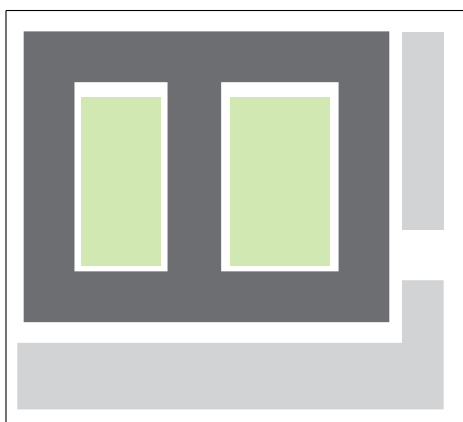
Figure / ground plan

building footprint 3850 sq m

site 11100 sq m

site / footprint ratio 35%

82 dwellings/hectare

COURTYARD

Advantages

+ potential for dual aspect apartments with better daylighting
+ views / wayfinding / daylighting within corridors
+ circulation spaces can extend into semi-private communal areas
+ private courtyard gardens integrated into building form
+ floor area efficiency comparative with single aspect options (linear / branch)
+ clear differentiation between public 'front' and private 'back'

Disadvantages

- 'institutional' / private in nature - may feel closed off to external users
- more circulation space
- form may cause difficulties with levels on sloping sites
- courtyard gardens may lack sunlight?
- difficult to break up large 'monolithic' block
- parking separated from building (boundary treatment required)

Extra-care Housing: Form and massing

FINGERS

1st / 2nd floor plan

17 2 bed (34)
13 1 bed (30)
max travel distance to lift: 100m

Ground floor / site plan

17 2 bed (34)
13 1 bed (30)

communal total 1225 sq m
circulation total 1950 sq m
floor area total (gross) 11000 sq m
circulation ratio (approx.) 18%

Figure / ground plan

building footprint 4150 sq m
site 12000 sq m
site / footprint ratio 35%
75 dwellings/hectare

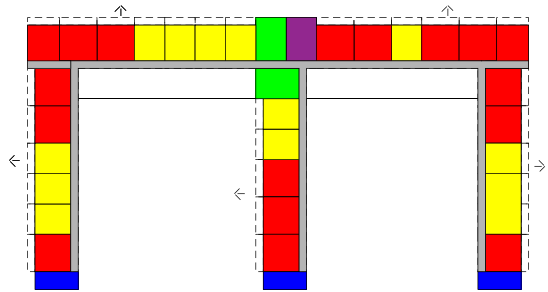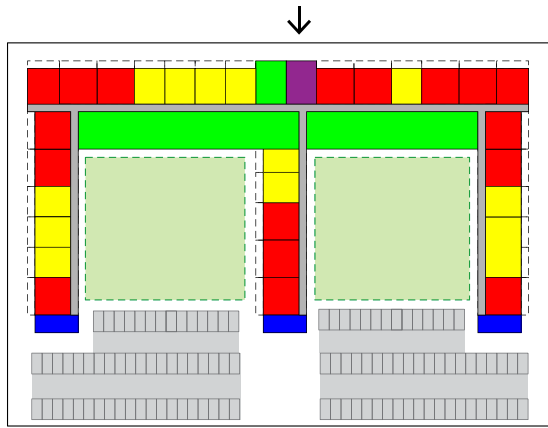### FINGERS

Advantages
+ potential for dual aspect apartments with better daylighting
+ potential for most apartments to share favourable aspect (south)
+ views / wayfinding / daylighting within corridors
+ flexible form can be adapted / cranked for different shaped sites
+ circulation spaces can extend into semi-private communal areas
+ semi private courtyard gardens + parking courts can be integrated into building form

Disadvantages
- 'institutional' / private in nature - may feel closed off to external users
- potential difficulties with levels on sloping sites (albeit less than linear / branch / courtyard)
- floor area efficiency less than single aspect options (linear / branch)
- more circulation space
- fewer dwellings / hectare than other options (linear / branch / courtyard)

VILLAGE

1st / 2nd floor plan (apartments)

13 2 bed (26)

7 1 bed (14)

max travel distance to lift: 80m
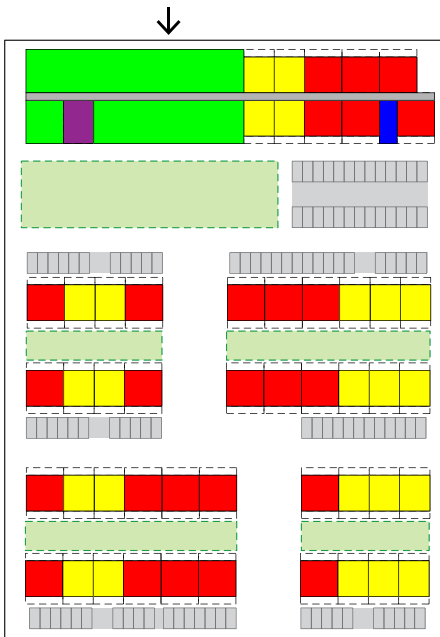
Ground floor / site plan

6 2 bed apartments

4 1 bed apartments

20 2 bed bungalows

20 1 bed bungalows

communal total 1012 sq m
circulation total 880 sq m
floor area total (gross) 10650 sq m
circulation ratio (approx.) 8%

building footprint 5000 sq m

site 16500 sq m
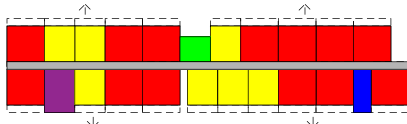
site / footprint ratio 30%

55 dwellings / hectare

Figure / ground plan

VILLAGE

Advantages
+ mix of units provides choice
  for different individuals
+ provision of popular
  bungalow typology
+ could include other
  housetypes + apartment
  blocks
+ semi-private gardens +
  parking courts integrated into
  site layout
+ dispersed layout may be
  suitable to address levels on
  sloping sites
+ dispersed layout breaks up
  massing + institutional feel
+ village layout potentially
  easier to integrate with
  surrounding context

Disadvantages
- potentially private / gated in
  nature - may feel closed off to
  external users
- fewer dwellings / hectare
  than other options (linear /
  branch / courtyard)
- less suitable for denser urban
  sites
- longer walking distances
  from bungalows to communal
  spaces
- careful planning of road ways
  + paths required to avoid car
  dominance

HUB + SPOKE

1st / 2nd floor plan (typical)
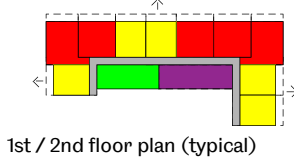
max travel distance to lift: 30m

Ground floor / site plan
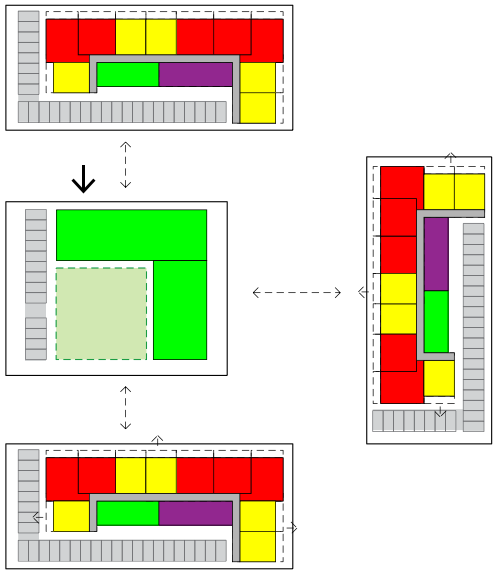
each apartment block:
30 apartments (@ 3 storeys)
28 parking (1:1 approx)

central communal facility:
750 sq m (@ 1 storey)
13 parking

communal total 1520 sq m
circulation total (3 apt blocks) 1890 sq m
floor area total (gross) 11100 sq m
circulation ratio (approx.) 17%

Figure / ground plan
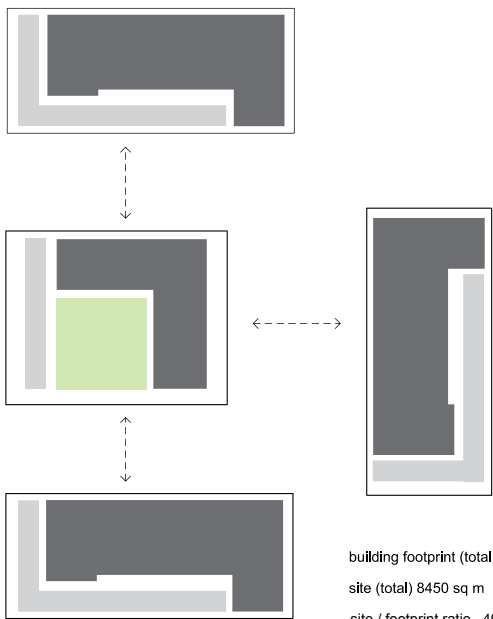
building footprint (total) 4200 sq m
site (total) 8450 sq m
site / footprint ratio 49%
106 dwellings / hectare

HUB + SPOKE

Advantages
+ most suitable for denser urban sites
+ most flexible option (suitable for expansion)
+ could include other housetypes + apartment blocks
+ most efficient in terms of site density and floor planning
+ smaller blocks offer views / wayfinding / daylighting within corridors
+ dispersed layout breaks up massing + institutional feel
+ most open in terms of external users of communal facilities

Disadvantages
- each block requires its own service core, plant and maintenance strategy
- walking distances between sites + communal facilities may be a barrier
- limited private outdoor space
- residents may not feel ownership over remote communal facilities
- careful planning of management strategy (and calculation of service charges) required

Public-private threshold

Moving to an extra-care housing scheme can have a significant impact on the way that residents interact within domestic spaces and with one another. For example, it is likely to be the first time in many years (or ever) that residents interact with others while undertaking previously private domestic chores - such as laundry or taking out the rubbish. Poorly considered spatial design or management can build stress, anxiety and discomfort into these daily activities.

Particular attention should be paid to parts of the building might be shared with private guests (including friends and family), staff members or the wider community. The quality, atmosphere, and 'progressive privacy' at the heart of the building (including the main lobby, cafe and/or the resident's lounge) are vital to the success of a well-used communal area.

The security of such spaces is often a key consideration, but where possible the need for extensive signage, locked doors or resident's key fobs should be designed out - helping to avoid the feeling of institutionalised residential care.[1]

Semi-public communal areas can suffer from poor daylighting and a lack of space to stow mobility aids (image: Brunswick Gardens retirement village, Sheffield).

Consideration of acoustic absorbtion treatment to ensure acoustic comfort

Open / double-height space

Clear signage to semi-public / shared facilities

Passive surveillance from management / caring staff

Good levels of daylighting to communal spaces

Non-institutional fittings and furnishings

Views through to external semi-private gardens and apartments

Hardwearing materials to common parts

Material change at threshold between semi-public spaces and other private / staff spaces

Informal spaces to meets other residents and guests

Comfortable seating

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1   PRP Architects (2008) Design Principles for Extra Care

Private / semi-private threshold

The social dimension of extra-care housing a key aspect of the model. Alongside events and activities in a central residents lounge or cafe, the design of circulation spaces can encourage or support interactions between residents.

Designing corridors and other circulation spaces for incidental interaction requires the creation of places that attract people out of their apartments to linger or meet. In order to provide this function, such spaces need to provide thermal comfort, provide sun/ daylight and views, as well as being comfortable, convenient and accessible.

The feeling of privacy and security is also important in semi-private circulation areas, and good practice involves separating residential corridors from public spaces and avoiding crossover of staff and resident's circulation routes.

There is also the possibility of creating residential 'clusters', where a number of apartments (5- 10) share a smaller communal lounge or terrace.
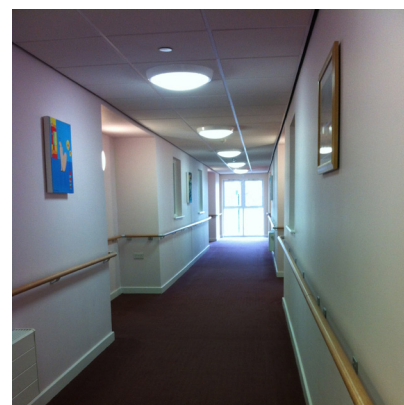
Double-loaded corridors suffer from poor daylighting, are severely limited in other uses and can become foreboding spaces to navigate through (image: White Willows extra-care, Sheffield).

1 or 2 bed apartment

"Are you going down to watch the match later?"

...this is **my** home...

Views out from the corridor side of apartments (e.g. kitchens)

Single-banked apartments allows light and airy circulation spaces with views out to central courtyard

Hardwearing materials to common parts

Widening of corridors at strategic points creates - interest and opportunities for less formal meeting places

Spaces for temporary docking of mobility aids during informal encounters

Borrowed light into corridor-side rooms (e.g bathroom)

Key threshold material change between semi-private and shared circulation space

Choice over external paint colours

Glazing around doorset to provide daylight to internal circulation

Benches outside front door for resting / personalisation

Minimum dimension for circulation spaces (1500mm?)

Indoor-outdoor threshold

The ability to easily access a good quality outdoor space is another important design consideration of extra-care housing. Outdoor spaces to undertake regular exercise (such as a daily walk) or to sit outside in privacy or semi-privacy are vital to support people's physical and mental well-being - at any stage of life.

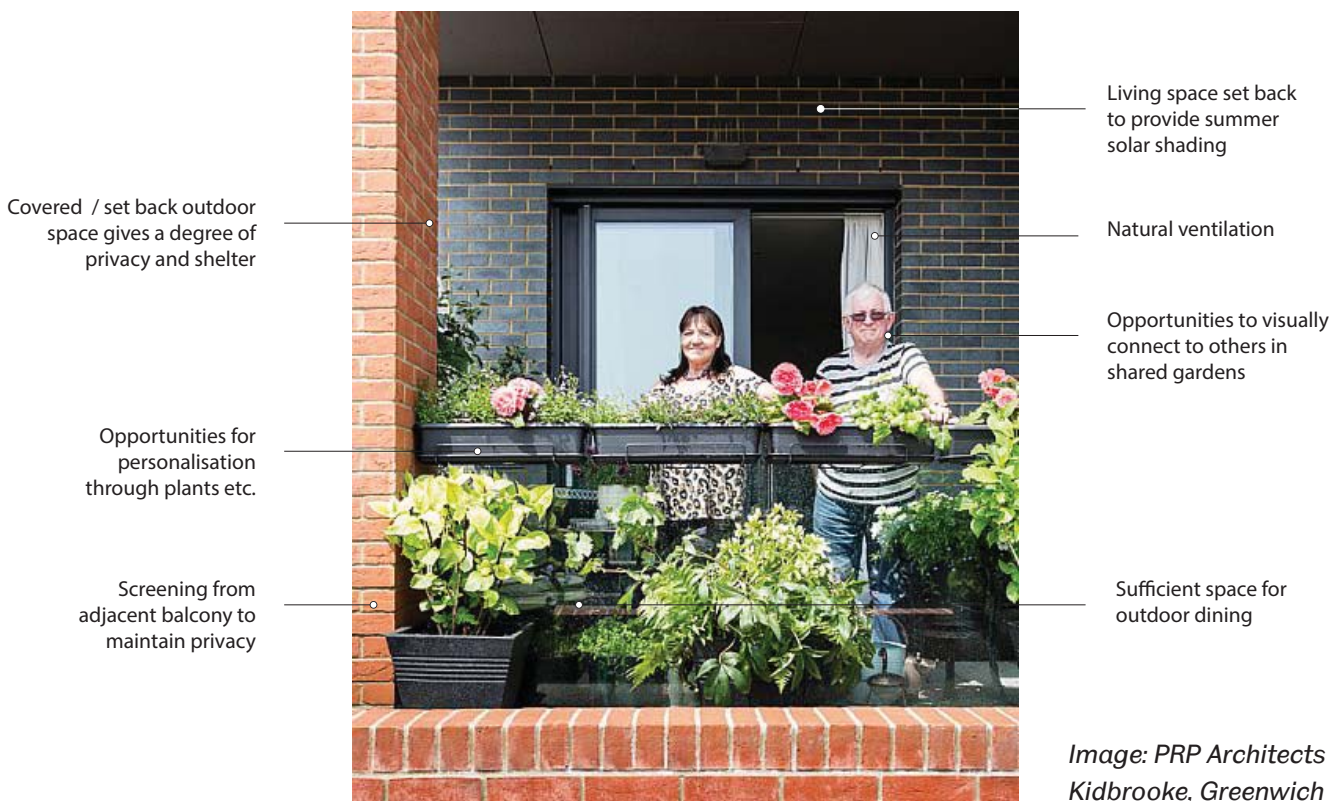Within the dwelling, increasingly limited mobility places an additional significance on views and daylighting - including being able to sit somewhere sheltered in the fresh air.

New-build specialist housing schemes for older people have been identified as being at risk of overheating in summer. Overheating has been linked to a lack of ventilation, which is particularly an issue in single-aspect apartments with restricted window opening.[2] Measures such as large openable door / windows and shaded balcony spaces might therefore play an important role in ensuring adequate flow of air and thermal comfort.

Semi-public communal areas can suffer from poor daylighting and a lack of space to stow mobility aids (image: Brunswick Gardens retirement village, Sheffield).

Living space set back to provide summer solar shading

Natural ventilation

Opportunities to visually connect to others in shared gardens

Sufficient space for outdoor dining

Covered / set back outdoor space gives a degree of privacy and shelter

Opportunities for personalisation through plants etc.

Screening from adjacent balcony to maintain privacy

Image: PRP Architects Kidbrooke, Greenwich

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2   Guy et al (2013) Building Comfort for Older Age

Dwelling types

As indicated on the typologies section, extra-care housing can consist of both communally accessed apartments and separately-accessed dwellings (bungalows or houses) near to a central hub. Dwellings are either owned or rented by residents, but individual schemes have different arrangements over the responsiblity for the furnishing and decoration of the dwelling.

The majority of extra-care housing consists of private/ self-contained apartments accessed from a shared circulation space. While shared gardens are typically provided for use by residents, some provision of private external spaces (a balcony or terrace) is also generally recommended as good practice.

Key features

Extra-care apartments share many features found in general self-contained apartments. However, apartments are often to designed to higher accessibility standards (Lifetime Homes or Wheelchair Homes) to make the apartment easier to use. Examples of these standards include wider doors, more space inside certain rooms, level-access showers, and service/ window controls that are easier to reach.

Other specific design features that are common to extra-care apartments include:

- A shelf or 'nook' outside the front door to personalise the apartment.
- Additional storage space allocated for a wheelchair or mobility aid.
- A 'Jack and Jill' arrangement with direct access to the bathroom from the hall and bedroom.
- District heating systems (although apartments may be individually metered).
- High-level ovens for ease of use.
- Optional plumbing for a washing machine (a launderette is also typically available for residents)
- Level thresholds between indoor and outdoor spaces.

Interior design and specification

While the interior design strategy will vary from scheme to scheme, new extra-care apartments tend to be finished in materials, fittings, and finishes that are modern, bright easy to use, and easy to clean. The specification of colour contrasting finishes has been highlighted as important for residents who are visually impaired are/or suffer dementia. This includes contrast between doors/ walls, walls/ floors, and sanitary facilities/ walls.

The specification of internal fittings and fixtures is important in making extra-care dwellings accessible but not institutional (image: Swallowdale Extra-care, Edlington).

The diagram below attempts to visualise a range of the recent design guidelines and research into purpose-built housing for later life (including extra-care housing):

Adjacent /accessible car parking (if required)

Efficient to heat

Sufficient storage

Walk-in /accessible shower

Clothes drying area

Guest room / hobby room/ 2nd bedroom (if affordable)

Good levels of daylighting

'Telecare ready'

WIFI

Double aspect (cross ventilation)

Views / greenery

Accessible kitchen storage

Potential space for pets

Open plan / flexible living

Manageable outdoor space (terrace / balcony courtyard)

Personalisable / defensible space

Own front door / covered entry

Level access thresholds

Wheelchair turning zones

High standards of thermal / noise insulation

Openable windows / fresh air

Sufficient space (to maintain an active / social lifestyle)

Access to a range of communal / community facilities (eg. cafe, shop, library, etc.)

Research question(s):
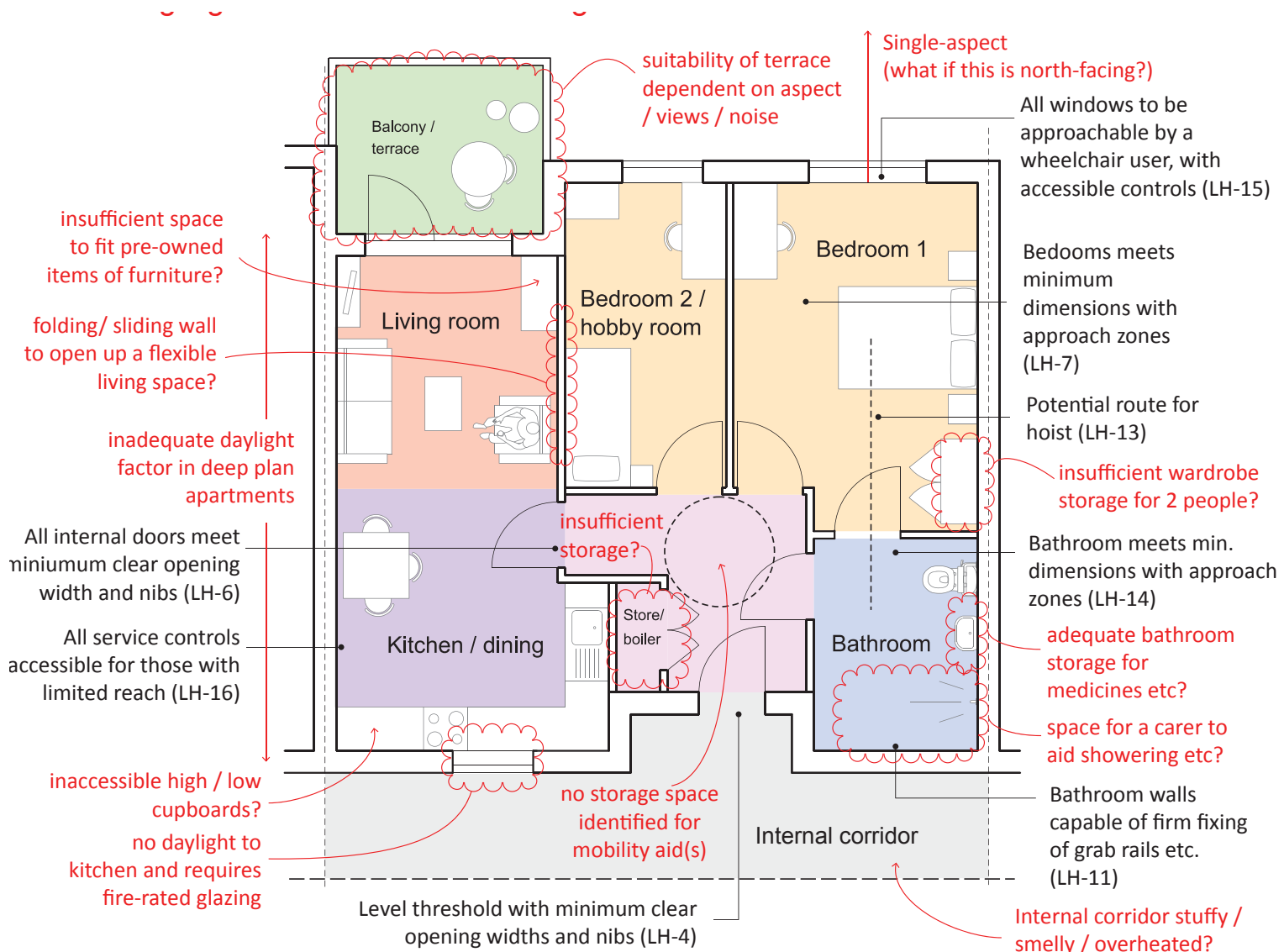
How is the amount of private space provided in individual dwellings balanced against the provision of shared/ communal spaces?

Apartment layouts

The majority of extra-care schemes comprise of a mix of 1-bedroom and 2-bedroom apartments. Some schemes also offer '1 bedroom plus' layouts (a double bedroom with a small second room intended for hobbies or storage).

2 bedroom apartment layout (62 m sq.)

The apartment plan below is common to many recently-constructed extra-care schemes in the UK. Notes in black highlight Lifetime Homes design guidelines. Additional notes (in red) draw attention to a range of further design considerations that have either been highlighted in recent best practice guidance and/or site visits to existing extra-care schemes.

suitability of terrace dependent on aspect / views / noise

Single-aspect (what if this is north-facing?)

All windows to be approachable by a wheelchair user, with accessible controls (LH-15)

Balcony / terrace

insufficient space to fit pre-owned items of furniture?

folding/ sliding wall to open up a flexible living space?

Living room

Bedroom 2 / hobby room

Bedroom 1

Bedooms meets minimum dimensions with approach zones (LH-7)

Potential route for hoist (LH-13)

insufficient wardrobe storage for 2 people?

inadequate daylight factor in deep plan apartments

insufficient storage?

Bathroom meets min. dimensions with approach zones (LH-14)

All internal doors meet minimium clear opening width and nibs (LH-6)

All service controls accessible for those with limited reach (LH-16)

Kitchen / dining

Store/ boiler

Bathroom

adequate bathroom storage for medicines etc?

space for a carer to aid showering etc?

inaccessible high / low cupboards?

no daylight to kitchen and requires fire-rated glazing

no storage space identified for mobility aid(s)

Internal corridor

Bathroom walls capable of firm fixing of grab rails etc. (LH-11)

Level threshold with minimum clear opening widths and nibs (LH-4)

Internal corridor stuffy / smelly / overheated?

Existing design guidance, codes, and regulations

A wealth of best practice design guidance, research and regulation exists for the sizing and detailed design of individual extra-care dwellings. It is important to note that many of the HAPPI recommendations for older people's dwellings (such as good daylighting, thermal comfort, higher space standards etc.) reflect universal good practice for housing design but are often not provided by general-needs market housing.

Specific guidance for housing for older people
*   HAPPI report
*   Lifetime Homes standard
*   'Building Comfort for Older Age' (Guy et al, 2014)

Specific guidance for the design of accessible housing
*   Wheelchair housing standard (London Housing Design Guide)
*   BS 9266:2013 (Design of accessible + adaptable general needs housing)
*   Building regulations Part M

Extra-care specific design guidance
*   EVOLVE toolkit
*   PRP Architects - Design Principles for Extra Care

General housing design guidance
*   Design Council / CABE (2010 review of housing design standards)
*   London Housing Design Guide
*   Building for Life 12
*   HCA - 'Design and Quality Standards' (2007)
*   HCA - 'Quality Counts' reports (National Affordable Housing Programme)
*   Levitt Bernstein - The Housing Design Handbook
*   Secured by Design
*   Code for Sustainable Homes

Single-aspect apartments are prone to poor daylighting, even where large areas of glazing are provided (image: Swallowdale Extra-care, Edlington).

Research question(s):

Is the 'typical' extra-care apartment layout adequate in terms of utility, storage, daylighting, ventilation, and thermal comfort?

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Nicholson, Anne-Marie, Clare Cameron, and Nicola Mountford, Design Principles for Extra Care (Care Services Improvement Partnership, 2008) <http://www.housinglin.org.uk/_library/Resources/Housing/Housing_advice/Design_Principles_for_Extra_Care_July_2004.pdf>

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Weis, Wolfgang, and Jenny Tuck, The Business Case for Extra Care Housing in Adult Social Care: An Evaluation of Extra Care Housing Schemes in East Sussex (London: Housing LIN, 2013) <http://www.housinglin.org.uk/_library/Resources/Housing/Practice_examples/Housing_LIN_case_studies/HLIN_CaseStudy78_EastSussex.pdf>