BUILDINGS IN THE MAKING:

A Sociological Exploration of Architecture in the Context of Health and Social Care

Foreword: Leaving A Legacy Beyond Bricks and Mortar

It is our belief that we, as a business and an industry, have a purpose beyond profit. The energy, passion and commitment of the people that create buildings can strengthen the well-being of society beyond the structures we deliver.

Buildings that are truly fit for purpose, are designed, planned, constructed and managed with the needs, emotions and behaviours of the people who live and work within them, at their heart.

The role of our architecture and design partners, and that of every discipline, is evolving as digital, design and product innovations enable a more collaborative project process, one which care providers and developers are now coming to expect.

The findings of this report quite rightly call for greater collaboration between all construction partners and a better shared and consistent understanding of the needs of later life and people living with dementia to ensure we produce age friendly buildings.

To truly astonish our customers and positively impact the lives of those in our community, we as project teams must work and behave as One Team, recognising and respecting others.

That's why we were both thrilled and proud to welcome researchers from the Department of Sociology at the University of York to shadow our build manager on our town centre transformation project in Rochdale project, to showcase the behaviours, decision making, social interaction and emotions of our people on site.

We're proud to support the University of York Department of Sociology's research because we agree with this report's findings that a shared sense of vision and values right across the project team is critical to leaving a legacy beyond bricks and mortar in the communities in which we work.

Anthony Dillon, managing director for Willmott Dixon in the North

'A Day in the Life of a Building Site Manager' created by artist Lynne Chapman *www.lynnechapman.net* in collaboration with the Buildings in the Making project team and Willmott Dixon.

Buildings in the Making: A Sociological Exploration of Architecture in the Context of Health and Social Care

The research project examines the work of architects who design and develop buildings for health and social care, focusing on the design of buildings for dementia and later life care. Although not health nor social care professionals, architects are often employed to create settings where care takes place. A better understanding of their work therefore offers an important path for research. To this end initial scoping interviews were conducted with 26 architectural professionals. Observational research was then conducted, working with nine architectural practices, following design projects as case studies over a period of 10-18 months, exploring how designs evolve over time. This included observing design reviews, design team meetings, site meetings, and public and user consultations. Further interviews were conducted with architects, clients, developers and building contractors involved in these projects.

This report summarises the key findings of the research and is intended for those involved in the commissioning, design and construction of buildings for later life care.

york.ac.uk/sociology/research/current-research/nettleton,-daryl-martin-chrissy-buse

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Summary of Key Findings

- The **role of the architect** is changing, in relation to wider changes in the construction industry and models of procurement.

- These **changes call for collaborative ways of working, yet architectural education can encourage a separation** between architecture and building, design and construction. This has implications for the image of architects and working relationships between professions.

- Care providers, developers and contractors **still recognise the significance of architects' role**, for instance, in co-ordinating complex technical information, translating specialist knowledge, design and spatial thinking, problem solving and adding value. Good communication skills are also seen as vital to the role.

- **Creating better spaces for dementia and later life care is not just about the** *product* **but about the** *processes* **of design and construction**. Methods of commissioning, procurement and ways of working together have important implications for the finished building, and the experiences of building users.

- Models of commissioning and procurement can impact on designs, for instance, on **Design and Build** contracts, **the designing architect is not always retained**, and their expertise in design for dementia or later life may be lost. The **competitive tendering process can be a barrier** to consulting with building users early on and to collaborative ways of working.

- There is extensive **guidance available for age friendly and dementia friendly design**, but it can **conflict with financial constraints and regulatory requirements**. For instance, although gardens are recognised as important for well-being, they are affected by processes of cost cutting.

- **Principles for dementia and age friendly design need to be specified clearly in the brief and tender documentation**, to prevent key design features being lost e.g. because of cost considerations and 'value engineering' exercises.

- In guidance on age/dementia friendly design, the focus is generally on design for older residents. **Staff as building users tend to be overlooked**, and staff spaces such as staff rooms, laundries and kitchens have received less consideration in design guidance.

- There can be a **disconnect between design intentions and the operation of a building**. For instance, there is a tension in designing accessible outdoor spaces which are then kept locked due to concerns about resident safety.

- **Consultation with building users** (staff, residents, relatives) generally does not happen on projects, unless the client **allocates adequate time and resources for this**. Consultation can be left too late in the process, limiting potential for users to shape the design.

- These issues are situated within **wider constraints on funding for health and social care**, which can limit resources for consultation with building users and the take-up of principles for good design, as well as shaping the choice of particular procurement models.

- There is a need for more **guidance and training** for architects and other design and construction professionals on **why, when and how to consult with building users**. An awareness of designing for diverse building users, including people living with dementia, should be incorporated into architectural education.

- **For dementia and age friendly design to happen this requires a collaborative effort** across the different construction trades and professions, planners, regulators, commissioners and building users (including older people, people living with dementia, staff, and relatives). A **shared sense of the vision and values of a project across the design and construction team** should be embedded in the brief and developed through **ongoing working relationships and practices**.

1 The role and image of architects designing for care

1.1: How is the role of the architect perceived?

We asked architects, clients (care providers and developers) and building contractors how they saw the role of the architect, and what they thought an architect should bring to the design of later life care settings.

- **Co-ordinating design information:** Architects, clients and contractors all say that an important part of the architects' role is co-ordinating the design and technical information. One architect likened his role to a 'conductor in an orchestra', while another described it as being 'a central repository of everyone's knowledge'. Co-ordination also involves integrating the different needs and requirements of different building users and stakeholders into a building that 'works' (see section 3.3).

- **Translating knowledge:** Architects, clients and contractors see a key part of the architects' role as translating **specialist knowledge about age/dementia friendly design**, regulatory requirements and guidance. Architects in this sector sometimes try to act as **advocates for people living with dementia and improving design for later life care.**

- **Adding value:** Architects and clients say that a good architect incorporates all the necessary details to ensure a building complies with regulatory requirements, while also bringing something 'special' to the design, beyond the client specifications.

> " *Architects can design something that's attractive while keeping costs relatively low, but adding value, including features that are going to be attractive, terraces for example, garden terraces, atriums, how can they bring in more natural light. It must be a fine balancing act, all that statutory compliance side of things, it must be so difficult, and they have to have that at the back of their mind, because they could be designing a scheme and if they don't meet the criteria, it won't get signed off. When this building opens and the Care Quality Commission come in and evaluates it,*

we need to know that the design is going to get a tick. I would expect my architects to know what the guidance is, what the fire requirements are. I expect them to have all that knowledge."
Developer/project manager, case study 3

- **Spatial thinking and problem solving:** architects and clients suggest that a good architect can imagine a space in a holistic way, envisaging its different dimensions and uses, and presenting a range of 'options' to address potential challenges (e.g. fitting a building into a tight site, considering infection control issues and managing pathways of 'clean' and 'dirty' materials).

> " *I think the difference between a good architect and an engineer, is an engineer thinks a lot of the time in two dimensions. A good architect can think in three dimensions, even before he starts drawing."*
Care provider, case study 3

- **Challenging assumptions:** Some clients say that they want their architects to challenge them on the design and push the vision for the space and how it will be used. Architects also describe this as a significant part of their role.

- **Communicating with stakeholders:** contractors, clients and architects see good listening and communication skills as vital to the role of the architect – this includes communication with the project team and with wider audiences (e.g. planners, neighbouring residents, building users). As one architect put it, we are 'communicator, mind reader, arbitrator, lateral thinker'. Drawing is part of this, but verbal **presentation and telling stories and narratives** is equally significant– particularly as some stakeholders find it difficult to interpret architectural drawings and plans. Learning how to communicate the narrative of the building is part of architectural education (see example 1.3.1).

- **Designing for buildability:** contractors and clients feel that a 'good' architect needs to create designs that are buildable and cost-effective, and

that this is an area where architects can improve. This also relates to the image of the architect (see section 1.2), and architectural education (see section 1.3).

Architects describe their **work as complex and contingent, with design always involving 'compromise'**[1] – this is particularly significant in light of financial constraints in the health and social care sector (see section 2.1). During the projects we observed, designs were shaped by constraining factors including: the budget, different regulatory requirements (see section 3.2), and the competing requirements of different project team members. However, creativity is sometimes described as working within and with these constraints, while creating pleasant spaces to live and work in:

" *…thinking what an architect does, and what I do now, I think that probably the design, creative side is purely how all those intricate risk mediated measures convert into designs that are domestic and appealing and welcoming.*

Architect, Interview 15

There is some debate within the profession over whether architects designing for this sector should be a **specialist or a generalist** – clients and contractors often seek **architects who have expertise in design for later life care**, and some architects have cultivated a particular knowledge of this sector, which can provide a 'selling point' for their practice. However, others are **reluctant to define themselves as a 'health architects'**, or to be limited to particular sorts of projects.

" *…a good architect is someone who understands space, understands light, understands how to make good spaces and actually those principles are relevant to any kind of building. They're relevant to a healthcare building, they're relevant to a specialist housing, general housing, school building, and actually there are general tricks to understanding space that a good architect always knows. So there's always that deliberation between experience and knowledge, and specialist area and the idea that architecture, good architecture, is just good architecture."*

Architect, case study 2

Architects, clients and contractors describe how **the role of the architect is changing**, in relation to changes in the construction industry and procurement models (see section 2.1). Architects suggest that there is an increasing **overlap between the role of the architect, and that of other design and construction professionals** (e.g. quantity surveyors, architectural technologists, the 'principal designer'[2] role). Some feel their role is becoming increasingly marginalised, others feel they simply need to adapt.

The role of the architect is described as diverse and varies significantly depending on career stage and practice size. Senior architects in smaller practices describe themselves as 'doing a bit of everything' and having a 'hands on' involvement on projects from start to finish, while in larger practices senior architects manage specific aspects of multiple projects. As reported elsewhere[3], the positives of working in smaller practices are 'autonomy' and quality control across a project, but there are limitations in capacity to take on large projects.

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1   See also Till, J. (2009) *Architecture Depends*. Cambridge, Massachusetts: MIT Press; Yaneva, A. (2009) *The Making of a Building: A Pragmatist Approach to Architecture*. Oxford: Peter Lang.

2   A principal designer is a designer (an individual or organisation) appointed by the client to manage health and safety issues in the pre-construction phase. A 'designer' can include anyone 'whose work involves preparing or modifying designs for construction projects', for instance, an architect, engineer or quantity surveyor. **http://www.hse.gov.uk/construction/areyou/principal-designer.htm**

3   Jamieson, C. (2011). *The Future for Architects?* London: RIBA.

Architecture remains a predominately male profession[4]. Some women architects describe how **gender difference is made apparent** in building site contexts but feel that more subtle exclusions and negotiations around gender can occur in architectural offices. For instance, contacts for future work are sometimes established through networking during a game of golf or an informal get-together, from which female architects feel excluded, or unable to participate in due to childcare responsibilities. Architects in our study describe a culture of long working hours, which can be challenging for those with caring responsibilities[5].

Drawing is central to architectural identity, and to how architects see their role. Alongside the use of computer aided design (CAD) technologies to create plans and model the building, **sketching by hand and annotating plans is a way of thinking** and solving problems, as well as communicating ideas in project meetings[6].

- Drawing reflects **workplace hierarchies and divisions of labour**; often it is architectural directors who specialise in hand sketching, while architectural trainees produce CAD images. This relates to divisions between **architects who do concept drawings, and those who do 'working' drawings** for construction, which occur within and between practices (see section 2.1). Yet the ability to produce working drawings as well as concept designs is valued by clients and contractors who appoint architects.

- Drawing can be a **collaborative process across different construction professions**, and we observed how engineers and building contractors contribute to designs, drawing on plans alongside architects. While the use of Building Information Modelling (BIM)[7] software is often advocated as supporting this collaborative work, **BIM was not always used or was partially used** on some projects we followed (see example 1.1.1).

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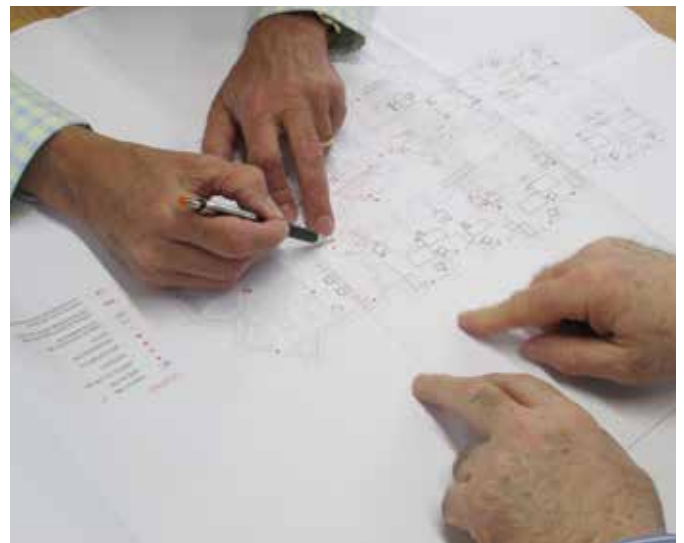
4   According to the Architects Registration Board (ARB) 2016 report, 26% of registered architects are women. **https://www.architectsjournal. co.uk/news/arb-report-for-first-time-more-than-a-quarter-of-profession-are-women/10022181.article**

5   Similar issues are reported elsewhere e.g. Sang, K. J., Dainty, A. R., & Ison, S. G. (2014). Gender in the UK architectural profession:(re) producing and challenging hegemonic masculinity, *Work, Employment and Society*, 28(2), 247-64; Tether, B. (2017) How architecture cheats women: results of the 2017 Women in Architecture survey revealed, *Architectural Review* **https://www.architectural-review.com/essays/results-of-the-2016-women-in-architecture-survey-revealed/10003314.article**

6   Groleau, C., Demers, C., Lalancette, M., & Barros, M. (2012). From hand drawings to computer visuals: confronting situated and institutionalized practices in an architecture firm, *Organization Science*, 23(3), 651-71; Mondada, L. (2012) Video analysis and the temporality of inscriptions within social interaction: the case of architects at work, *Qualitative Research*, 12(3), 304-33.

7   Building Information Modelling (BIM) is a process of digitally managing and modelling information about a building. BIM technology can facilitate the integration of design information from different disciplines into a collaborative model, helping to avoid clashes of information **https://www.designingbuildings.co.uk/wiki/Building_information_modelling_BIM**

Example 1.1.1: Drawing and co-ordinating designs across disciplines

Case study 8 is a retirement village, commissioned by a third sector provider. It is a Design and Build contract (see section 2.1), and the design has received planning approval and has now been tendered to a building contractor. In this meeting the building contractors are reviewing the original designs with the architectural technologist, mechanical and electrical engineers and structural engineer. The different sub-contractors have not had access to the latest CAD files, and during the meeting it emerges that there is a 'bit of inconsistency' between their sets of drawings. The mechanical engineer has created his own CAD drawings because he only had access to a PDF of the roof. There is a disagreement over whether an extra lift has been added since the tender drawings were submitted to the electrical engineers, as one engineer says: 'that's what we got as our tender drawings, there is no store and no lift there'. Someone points out that there are 'no windows' on their set of drawings. In the meeting, the group talk through the mechanical and electrical services (M&E) and the structural

elements, which require adjustments to the building design – different people annotate the plans as they try to work out solutions together. The plans include the position of 'fixed' seating in the atrium and communal areas, added by the interior designer at the request of the client. However, the position of the furniture no longer works following these adjustments for M&E services and structural elements. This illustrates why a co-ordinated approach to drawing and sharing designs is important – this can be supported by BIM software, but also needs to be embedded within collaborative working practices and involving the right people at the right time (see section 2.2).

- **Technologies like BIM and contractual models such as Design and Build** (see section 2.1) where there can be multiple architecture practices working on one project, can raise questions regarding the **ownership of design images**.

- Being able to **interpret drawings and plans** is regarded as an architectural skill. **Different types of visual representation are needed to help clients and building users to imagine a future building**. Hand drawings and watercolours are sometimes used on design boards for public consultations and are described as more engaging than computer images. Other architects use virtual 3-D models or cardboard models (see example 3.3.1) to help building users and clients to envisage a space.

1.2 The image of architects

- Some architects feel there is **an image problem or lack of understanding of their role** among the public and in the construction industry.[8] Negative images of architects include: being overly focused on **'artistry' or 'creativity'**; having a big 'ego'; and the myth of the 'lone genius', creating autonomously. Care providers, developers and contractors sometimes describe experiences of working with architects who are **overly 'precious' about the aesthetic aspects of the design, which can cause practical problems for the wider team.**

> *…nowadays architecture is more artistry than logic and buildability, and you find that what's designed doesn't take into consideration the budget and programme, and quite often what is actually buildable. So you have to build upon what the architect has sold to the client as the vision, but at the same time bring it back to reality."*

Building contractor, case study 3

> *The contractor had put down all the tiles, he'd been told to put these tiles in a random fashion, down a hallway which was about a hundred metres long. An architect came in and he didn't like the pattern, and he insisted that they all came up, in which case half of them broke so the contractor had to buy a load more. And that's what I call a precious architect."*

Care provider, group discussion

- Stereotypical images of architects are **perpetuated by media portrayals focusing on** 'starchitects' who create iconic buildings, reducing architectural design to single acts of artistic creativity, and neglecting the complexity of the process.

> *…there was this BBC programme about that hotel in Singapore, and they interviewed the architect to explain how the concept came up, and the guy went 'yeah, and then I was thinking about the swimming pool, and I just cut a piece of cardboard and put it on the three towers, and it was perfect.' And my wife, who is also an architect, just turned around; 'that's why people think that's*

what we do, we just cut cardboard and throw crazy ideas into the wind'. We're not artists…we employ a kind of high level of creativity, but our design decisions are based on facts, and these off the cuff comments that some architects do to show themselves as being very spontaneous, or more intelligent or more creative, they only hurt the profession in the external perception of what we do."

Project architect, case study 3

- Dichotomies between logic/artistry, creativity/ practicality, design/construction were sometimes drawn on by both building contractors and architects, constructing their professional identities and roles in opposition to one another. Just as some contractors, developers and clients hold negative images of architects, **architects sometimes hold stereotypical images of builders** as overly focused on cost cutting at the expense of the design, lacking in creativity, and lacking in consideration of building users.

> *…because a contractor after all, he's only there to make money, that's his whole raison d'être, more than the architect. We're there: a) because we love design b) because we want to create something that other people like, and c) because we want remunerated for it. The contractor is usually a lot more focused on the fact he needs to get the money, do the project, pay his men and go on to the next one, and make savings, particularly if he's responsible for a fixed cost, and he thinks maybe I didn't price that one too right, oops, I think I need to persuade them to get rid of the very nice roof lights and put something in cheaper…"*

Architect, interview 5

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8   See also Samuel, F. (2018). *Why Architects Matter: Evidencing and Communicating the Value of Architects.* London: Routledge.

Example 1.2.1: Rethinking images of construction

Among some architects there is a perception that contractors do not care about building users. However, on building projects it is often the site manager and builders who work most directly with neighbours and – in refurbishment projects – older people and staff who use the building. We observed many examples of contractors working positively with building users and the wider community: keeping building residents and/or neighbours regularly informed about the build; assisting an older resident when they had a fall; helping an older resident to fix their wheelchair; doing small 'jobs' for neighbours; buying chocolates and flowers for neighbouring residents at the end of a project. On refurbishment projects some older residents enjoyed watching the build and chatting to the builders. On new builds, site managers are often still present when residents start moving into a building, and one site manager describes how through his ongoing relationships with care providers and architects, and talking to staff and residents, his awareness of dementia has increased:

Interviewer: *As a contractor, is the end user of the building something that you think about as part of your role?*

Site manager: *The answer's yes, but if you asked me the same question 10 years ago I'd have said no. I've built enough care homes now to know what the end user requires, and then a bit more knowledge on dementia levels. From building them and from the client, and being*

involved with the client's staff, you get to know a lot more. Because once we hand it over next Monday, this building will be theirs, I will be still here involved with their staff, and you pick up on what they're saying. I think I have a different view altogether on dementia now than what I did have. But I think that's a general thing throughout the world; I think people have a different view on it. Out of the last two care homes I've built, they've actually had residents in before we've left, so we have a bit of chat with them...

Can this sensitivity to building users (including people living with dementia) become more widespread throughout construction? Some building contractors and project management companies are already developing strategies for this.[9]

9   For example: Fletcher, I (2018) How high-quality design development and buildability achieves community integration [Wilmott Dixon]. *The Great Debate – Linking Housing, Health and Adult Social Care*, Manchester Central Convention Complex, 26 June 2018; Owen, L. (2016) Championing Dementia-Friendly Design throughout the Construction Industry, Faithful and Gould **https://www.fgould.com/uk-europe/articles/ championing-dementia-friendly-design/**

■ These images of architects and building contractors have **real implications for working relationships on projects** and can underpin tensions between different disciplines. On the other hand, **positive long-term working relationships can help overcome** negative stereotypes (see example 2.2.1).

Recommendations

1. Development of **activities and resources to support a better public understanding of the role of architects**, and the complex, contingent and collaborative nature of their day-to-day work.

2. More **spaces for multidisciplinary dialogue**, encouraging a better understanding of different professional knowledges and roles, sharing ideas about design and construction for later life care across the construction professions.

Figure 1: Spaces for multi-disciplinary discussion[10]

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10 Image by Lynne Chapman **www.lynnechapman.net**, produced as part of the roundtable event 'Architectural design and construction for later life care', June 28th 2018, organised and hosted by the Buildings in the Making project team in York. The event brought together participants from architecture, construction and social care sectors.

1.3 Architectural education

- Participants describe **divisions and stereotypical assumptions about different construction professions** and trades as rooted in the 'siloed' nature of education[11]. Some architects feel their education encouraged **the idea of architecture as autonomous creation, rather than a collaborative and contingent process.**

> *In architectural education you work on your own a lot of the time, you do group projects now and again. But as soon as you enter the profession everything you do is collaborative. Even if you're a single architect working on your own, you've still got to collaborate with engineers and planners and clients. The whole process is one of collaboration…but there is that myth of that kind of genius architect who scribbles, hands out the sketches, "make this happen". I have a great hope that the generation of architects coming up will bring an openness and collaborative spirit and try to squash down that myth of the sole genius."*

Architect, Interview 12

- Some architects say their education was overly focused on concept design, with **less attention to technical design issues, financial considerations or regulations**[12]. This varies between architectural schools – some were described as more 'practically focused', with opportunities to work on 'live projects', and involvement of clients, quantity surveyors and structural engineers in design reviews. However, other architects reflect that they were **not 'practice ready'** after completing their qualification, and some practice directors describe **new graduates as needing significant upskilling**[13].

> *…with architects there's things they have to know, but they're also expected to be incredibly creative individuals as well. I'm not sure they learn very much about how to plan a building. I find it very, very abstract. In fifth year, they'll end up doing a project…they'll get to a point where they've started the design of the building, I find it incredibly frustrating actually, because I think that's when it gets interesting, that's when they stop. And we take on students from time to time and you definitely sense that, first of all, they have no clue at all about the technical issues of the job, so we have to teach them from day one. Universities have become little closed worlds, so that you'll find people who teach in the university who have never built a building, wouldn't dirty their hands…"*

Architect, Interview 10

- Architectural students are trained to **communicate the 'narrative' of a building** during design reviews (sometimes referred to as 'crits') – this skill is vital for practising architects, however, the questions and issues addressed in the reviews can be very different to those asked in real-life contexts (see example 1.3.1).

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11 Morrell, P. (2015) *Collaboration for Change: The Edge Commission Report on the Future of Professionalism*. The Edge.

12 See also Imrie, R. and Street, E. (2011) *Architectural Design and Regulation*. Chichester: Wiley-Blackwell; Till, J. (2009) *Architecture Depends*. Cambridge, Massachusetts: MIT Press.

13 This also reflects the findings of the RIBA Appointments Skills Survey report 2014 **https://www.riba.com/intelligence/riba-appointments-skills-survey-report**

Example 1.3.1: Presenting designs in architectural education and practice

In our research we observed architects presenting designs in a range of settings.

Architectural student reviews

At a third-year student review, architectural students pin up their plans and drawings, and set out wooden or cardboard models on the studio floor. Designs are presented to an audience of students, tutors, and external examiners – generally practicing architects. The students present their concept for the building and describe the context of the site and surrounding area. Questions are asked about the **'process', 'ideas history', 'narrative', 'connection with the landscape', 'rhythm' and 'materiality'** of the build, and the **precedents**. Comments also focus on the quality of the drawings and models. However, there is **little discussion of technical issues, buildability, costs, or regulatory** issues. **Discussion of the 'building user' is also limited**, although some external examiners and tutors push for more consideration of 'activities' and use of the building, this tends to be done in a generic way. One external examiner describes the process as similar to the design reviews he does for planning applications but says that here it is **more 'creative' and the focus is on 'ideas' rather than 'making the building buildable'**.

Public consultation

In contrast to some student reviews, when presenting designs at public consultations, architects must deal with complex questions concerning the impact of the construction process and finished building on neighbours, the experiences of building users, and regulatory requirements. One public consultation is held at a sheltered housing development owned by the care provider (who is the client). The consultation is **informal and open, the architects walk with people along a series of design boards** (see photos), using these to explain the project. The room is full and there is a 'buzz' of different conversations. **Some questions focus on care provision**, which is yet to be fully defined – a woman remarks 'I actually worked in care' and 'no way you'd get a hoist in there'. Other questions focus on trees – will existing **trees** be kept, will they be better maintained? There are **concerns about privacy; 'we've lived here for 30 years and have never been overlooked'**. Questions also focus on parking, there is concern about a lack of parking spaces 'there is only 22 parking spaces for a 69 bed care home'. There are also questions about the **construction period – the noise and traffic** from lorries and vehicles on site.

Internal design reviews

Design reviews in architectural offices are performed in similar way to student reviews – the project architect and architectural assistant **pin up their drawings on the wall of a meeting room, and designs are reviewed by senior practice members**. There is a similar use of architectural language to explain the building 'narrative', but here the architect must also discuss how the design meets the requirements of the client, planners, regulators and building contractors. In this example, the project architect explains how he has **adjusted the designs following a project meeting** – for instance, moving the bin store out of the building at the **request of the care provider (client)**, adding **additional storage** space, and **moving an open staircase**, which the care provider perceived to be a risk. He has also adjusted the thickness of the walls, in response to **BREEAM**[14] **acoustic requirements.**

In order to break up the façade of the building and create a **'terraced feel'**, the project architect has stepped the walls in and out. However, the practice director suggests he has **'over-complicated' the design.** Using a piece of tracing paper, **the director draws over the plans, straightening the walls**. He concludes that the adjusted design is **'constructionally more comfortable'** – walls that step in and out have cost implications for the contractor, the revised design has a more **'simple geometry' and 'calm rhythm.'**

Project meetings

In project meetings with clients, developers and contractors, architects are often questioned about costs and buildability – issues that may be less prominent in student reviews. At one project team meeting, the project architect stands and holds up the plans and elevations for the building design. He talks through the idea of a **curved feature wall, and having a pattern of white brick, red brick**. He says to the contractor that to **pull a brick in/out 25 ml** may not incur any extra cost. A representative from the building contractors says 'who did you talk to? It will.' The developer says 'it adds extra complexity'. **Another building contractor representative says that 'anything that steps away from the ordinary will add cost.'** The building contractor later explains to the researcher that this is about **buildability and the cost of labour**, having this pattern means you will need a more experienced bricklayer, they will have to go back and forth to get different coloured bricks, and there is a 'risk' that mistakes will be made.

- **Architects describe the practical experience/ year out components of their qualification as vital** to understanding practical and technical issues. However, they also report that the **usefulness of practice-based placements is variable**, and the ability to secure a good placement depends on your social networks[15]. The length of time required to become a fully qualified architect (including time for practical experience), along with rising tuition fees, is challenging for those with limited financial resources. This has implications for inclusion and diversity within the profession[16].

> **Architect:** *It's so hard to find someone to take you on for that practice-based experience, because I had to do 24 months of professional experience signed off by a qualified architect. Well for some people it's very hard to find that. So the industry itself I think needs to help out...*
>
> **Project manager:** *It's affordability, isn't it? You don't get paid an awful lot, if anything at all. If you've not got the family support and money behind you, you're not going to be able to do two years signed off. So it becomes an exclusive club.*
>
> **Interview 15 (joint interview with architect and project manager)**

- **Education needs to encourage multi-disciplinary collaboration, and respect for the knowledge of different construction professions and trades.**[17] Suggestions from participants in our study include:

  - Providing more practical experience for architecture students on building sites, as well as in architectural practices.

  - Greater consideration of construction processes and technical design.

  - Training in cost considerations and business skills.

  - Opportunities for exploring cross-disciplinary working during education, and peer education which brings together students from the different construction professions.

  - Involvement of building contractors, engineers and clients in student reviews.

> " *The other thing is to encourage students to actually do some element of work on a building site. We as architects need to know how to assemble things, but the way we would conceive it being built may be different to the people who build it, who have different tools, different knowledge and just understanding what happens on a building site. So that's vital."*
>
> **Architect, group discussion**

15 Allen, K., Quinn, J. Hollingworth, S. and Rose, A. (2013) Becoming employable students and 'ideal' creative workers: exclusion and inequality in higher education work placements, *British Journal of Sociology of Education*, 34(3), 431-52.

16 Jessel, E. (2018) Student survey: Only the rich need apply to study architecture, *Architects' Journal*, **https://www.architectsjournal.co.uk/news/ student-survey-only-the-rich-need-apply-to-study-architecture/10033472.article**

17 See Morrell, P. (2015) *Collaboration for Change: The Edge Commission Report on the Future of Professionalism*. The Edge.

- Learning to design in a collaborative way is also about consideration of different building users (see section 3). Some architects and design professionals suggest that **more training in user consultation, and age friendly and inclusive design**, should be embedded into **architectural education**.

"   *...when architects are trained, traditionally trained, it's more about the design and less about the client, and I think there's a huge body of work to be done to retrain architects to understand that the client isn't just the commissioning person, it's the end user, and I just don't believe that there is sufficient understanding within the current formal training of architects. It's far more about the purity of the design and the logic that's forming the basis of the design, and less about the functionality and understanding that if you've got two electric scooters whizzing around a corridor, you need the corridor to have bypassed places or chicanes or parking places. So I think there's a huge amount of work to be done in training architects and design professionals to understand how they should engage more hands on and empathise..."*

Director of architectural practice, interview 3

Recommendations

3. More **training within architectural education and Continuing Professional Development (CPD)** focused on understanding the needs of diverse building users, user consultation, dementia and age friendly design. This could be extended to other construction professions.

4. **Embedding opportunities for multidisciplinary collaboration and learning** within architectural education. For instance, this could include spending time on building sites, involvement of different disciplines in student reviews, more training in construction processes and buildability issues.

2 Working relationships on design and construction projects for care

2.1: Procurement models

Different procurement models have implications for the role of the architect and relationships between different stakeholders. The three main procurement models found on our case study projects are: 1) Traditional contract 2) Design and Build 3) Design-Build-Finance-Operate.

Figure 2: Procurement models found in our case studies and implications for architects' role

Traditional contract

The architect is employed to design the building to a high level of detail and produce tender documentation. The architect is retained during the construction phase to manage the design and in some cases oversee contract administration.

Implications for architects

- Responsibility (and financial risk) lies with the architect and the client.
- Architect has greater autonomy to make decisions, and maintains greater control over the design than in other procurement models in the study.
- Clear division of roles and responsibilities.
- Consistency of architectural practice and role throughout the project.
- Lines of communication are visible and relatively clear.
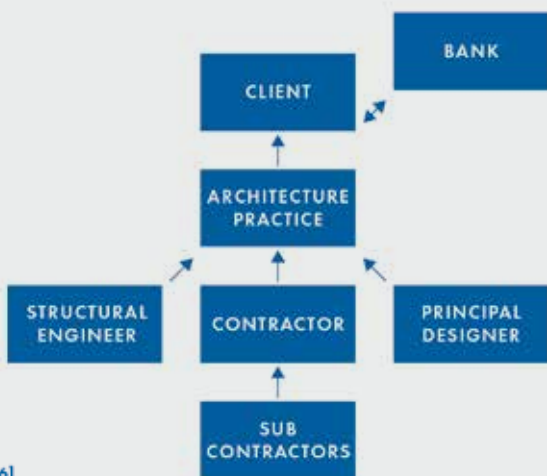
[CS6]
TRADITIONAL CONTRACT

Design and Build

The building contractor is appointed by the client to carry out the design and construction of the building. Architects may be initially employed by the client to create the concept design and planning drawings, before tendering to a contractor. At this point the architect may be novated[18] to work for the contractor

Implications for architects

- Responsibility (and financial risk) for design and build lies with the building contractor.
- If the original architect is novated they may have a dual responsibility to the client and the building contractor.
- Potential for involvement of more than one architectural practice if contractors appoint their own architect.
- Less control over the design, finishes and materials, potential implications for quality.

[CS2]
DESIGN + BUILD

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18 Novation means a substitution of an existing contract for a new one, and the transfer of contractual rights and obligations from one party to another – in the context of Design and Build, it means that the original designing architect who was employed by the client, becomes appointed to work for the building contractor: **https://www.designingbuildings.co.uk/wiki/Novation**

Design-Build-Finance-Operate

A form of private finance initiative (PFI). In the example we observed, a developer was appointed to finance the building project, project manage the design and construction process, and ensure that it is operational within a particular period of time.

Implications for architects (in addition to those associated with Design and Build)

- Developer finances the project and makes final decisions.

- Communication with the client is mediated through the developer.

- The architect, building contractors, engineers and other members of the design team are accountable to the developer, rather than the 'ultimate client'.

- Greater number of stakeholders involved. Potential for greater complexity of roles, responsibilities, and lines of communication.

ULTIMATE CLIENT

DEVELOPER/ CLIENT REPRESENTATIVE

ARCHITECTURE PRACTICE   **CARE PROVIDER**   **BUILDING CONTRACTOR**

[CS3]
DESIGN + BUILD FINANCE OPERATE CONTRACT

- **Design and Build, and private finance initiatives (PFI) such as 'Design-Build-Finance-Operate', are common in the design of buildings for social care,** particularly within the public sector. This reflects restrictions on government funding for social care[19], and the view among clients and commissioners that Design and Build and PFI contracts provide **greater cost certainty,** and the 'transfer of risk' to the building contractor or developer. There is also a **perception among clients that a project will 'get on site' quicker,** because the design develops 'as you build'. Clients sometimes feel restricted to particular procurement models, because of funder requirements:

> *...I think it's impossible to get Traditional contract now for somebody that needs the grant funding, because you just don't have the time availability. So, for instance I've got one grant going through now, we've got to be starting on site by the 22nd June, otherwise we lose two and a half million pounds worth of funding. So there's a lot of risk involved. We've got a new finance director who insists on competitive tendering and all the rest of it. Because the other aspect is if you've got a good contractor who you trust, you just stick with them."*

Development director, third sector care provider

> *...banks prefer Design and Build because of that cost certainty, so care providers, they've got to borrow money to build these and the banks say one of the conditions is a Design and Build contract, fixed price, so we're going to lend you five million pounds. If it was detailed traditional construction it might cost 4.8 million pounds, but we're prepared to pay that extra to have that cost certainty, because then we know where we are."*

Architect, interview 8

19 Wenzel, L., Bennett, L. Bottery, S., Murray, R., Sahib, B. (2018) *Approaches to social care funding: social care funding options*. Health Foundation Working Paper 2. London: The Kings Fund.

The use of Design and Build contracts has implications for architects' role, as once the project is tendered to a building contractor, they may bring their own architect, rather than novating the original designing architect. This contributes to a division **between 'design' or 'concept architects' (often high-profile practices) who do the design work up to gaining planning approval, and 'delivery' or 'contractors architects',** who do technical design work for a building contractor (often smaller, 'cheaper' local firms).

> *…we mainly do design, but we do have a team who do working drawings, from design to completion, and they now only take projects that we've designed in-house, so they won't take another architect's design and work for the contractor. We want to keep design at the heart of what we do. And I don't think we would get much out of delivering someone else's scheme, because you don't really get much thanks for it, and in some ways you don't learn that much from it either."*

'Design architect', case study 2

The use of Design and Build and PFI models of procurement can **create a distance between the architect (and design team more generally) and the commissioning client**. In some projects we followed, communication is directed through a developer, and the design team cannot contact the client directly. This can create issues for quality control, as reported in coverage of high profile cases of construction failures[20].

Competitive tendering is a common procurement method in the social care sector and is a concern for some architects, contractors and clients, yet some organisations (e.g. local authorities) feel compelled to procure services this way. In PFI funding models the bidding process can be particularly drawn out with multiple stages; for example, in one case study it lasted over two years.

- The lengthy time-scales of some competitive tender processes and uncertainty of funding means that design **decisions have to be made before relevant parties can be consulted** (see example 3.1.3).

- This method of procurement can **limit opportunities** to build on successful **long term working relationships** (see below).

- There can be an **overemphasis on cost**, sometimes leading to proposals that are unrealistically ambitious given the projected costs.

- **The competitive tender process** can create a barrier between the architect and the commissioning client, as well building users, limiting opportunities for user consultation in the early stages of a project (see section 3.3).

- **Small practices are less able to go through lengthy competitive tender processes**, because it involves considerable unpaid work, and uncertainty of funding.

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20 For example Marrs, C. (2018) Design and build damned by Dumfries leisure centre probe, *The Architects' Journal,* **https://www.architectsjournal. co.uk/news/design-and-build-damned-by-dumfries-leisure-centre-probe/10030644.article**

Architects suggest that **Design and Build involves a trade-off between cost and quality, risk and control**, and generally prefer Traditional contracts as they retain greater control over the design. This can be particularly significant in designing for later life care, where changes to design features, materials and fittings have **implications for the experiences of those living and working in these buildings** (see section 3.2).

Other clients, architects, and contractors feel it is about the way you set up the contract, and how you establish working relationships[21], and that Design and Build can work effectively if certain conditions are met:

- **Novation** of the original architect is generally perceived to be beneficial for maintaining **consistency in the design process**. Clients sometimes specify novation in their contractual arrangements with building contractors.

- **Retaining independent architectural advice** – sometimes when the original designing architect is not novated, they are kept on by a client as a 'design guardian' or 'advisor'. Local Authorities that have their own architects sometimes do this 'in house'.

- **Clear tender documents** are regarded as 'critical' to a successful Design and Build contract. Detailed specifications and drawings facilitate a more realistic costing from the contractor and can help prevent design features being value engineered (see section 3.2). Some architects do an additional 'D+' stage of design after planning[22] to provide further detailing. There is a tension between preserving key design features and giving the contractor scope to competitively price materials. Some clients left the contractor with more scope for selecting external building materials, while specifying internal fixtures and finishes that directly shape experiences of building users.

> " *...what we tend to do now is, particularly for these care home projects, is anything that the residents will see, use or touch, we specify a design one way or the other. So we will specify the taps, and the sanitary ware, and the size of radiators, and leave the contractors to choose the roof trusses and the wall insulation and the foundations, the unseen parts. Because we've found that the design quality can suffer with Design and Build...*"

Architect, interview 8

- **Developing relationships** – participants said that Design and Build can work if time is taken to build a collaborative approach and create a shared 'vision' for the project (see example 2.1.1). Building on successful working relationships with trusted contractors (where possible) can also support positive experiences of Design and Build.

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21 See also Wigglesworth¬, S. (2012). 'WLTM caring contractor': the dating game of Design and Build contracts, *Architectural Research Quarterly*, 16(3), 210-16.

22 Reference to the old RIBA plan of work, stage D is 'design development' (equivalent to the current 'developed design' stage 3)

Example 2.1.1: Establishing positive working relationships – Design and Build

Case study 7 is a new build extra care housing scheme, providing affordable housing to older people, commissioned by a local authority. It is a Design and Build contract where the original architect is not novated but remains involved in the project as a design 'advisor'. Most people had not worked together before, but the client and wider team established a number of steps to build positive working relationships:

1. The tender documents emphasise quality, which is reflected in the choice of building contractor – the site manager is described as 'meticulous' about the quality of the build.

2. Straight away when the project was awarded, the client organised a 'vision and values' meeting to establish a shared sense of the project aims and 'ethos', as well as team building exercises and socialising.

3. The team have social events together (e.g. Christmas meal), and the contractor sometimes takes the team out for a meal at site meetings.

4. There are regular communications between site meetings, both face-to-face and over the phone. This includes weekly team meetings among the client team with the 'design architect', and regular reviews and workshops addressing any design issues and decisions. When the contractors' architect initially made changes to the design and finishes, they presented these to the client and design architect for their feedback, before finalising decisions.

5. The team established a collaborative approach, working through any issues together and looking for solutions, rather than assigning blame.

6. The publication of designs and publicity from the build are presented in a shared way, that acknowledges the different architecture practices involved, and the building contractor.

> *…it's a nice scheme that's been delivered well. You always see a lot of negative things about construction and it's nice to just see that there's been a successful partnership between everyone. There's been some really good individuals. I think, although [name] have been a good contractor, I think it is down to the team as well. I think a lot of people, they've enjoyed working on it and coming to work."*

Design architect, case study 7

Recommendations

5. Consideration is given to the potential implications of different **procurement models** for working relationships, and designing for building users in later life care (while recognising financial constraints).

6. Consideration is given to the implications of the **competitive tendering process for opportunities to consult with building users and for collaborative working,** particularly the more drawn out tendering process used in PFI models.

7. **Clear specifications** for good practice in designing for building users (older residents, relatives, staff) are incorporated into the **brief and tender specifications for contractors.**

2.2: Factors affecting working relationships in design and construction

Factors contributing to positive working relationships	Factors contributing to negative working relationships
✓ Clear brief and tender documents	✗ Lack of clarity about roles and responsibilities
✓ Involving the right people early on	✗ Too many representatives at meetings
✓ Trust	✗ Blame culture, liability
✓ Regular and open communication	✗ Communication routes unclear or limited
✓ Efficient communication of information	✗ Lack of continuity in personnel
✓ Respect for different professional knowledges	✗ Physical distance between the office base of different stakeholders
✓ Shared sense of vision and values	✗ Tensions over cost, quality and time
✓ Collaborative working	✗ Focus on individual agendas rather than a 'team' approach
✓ Clear decision-making processes	
✓ Long-term working relationships	

Brief and tender documents – having a clear brief and tender documents is important to working relationships.

- The **weighting given to cost, quality or time in the writing and assessment of bids** has implications for ongoing relationships. **Tensions around timescales, and the cost/quality/time triangle** frequently emerge during the design and construction process. Embedding an emphasis on quality in the initial brief and tender documents can help support quality throughout a project.

- The **'vision and values'** of the project can be shared through the brief, as well as being embedded in ongoing relationships (see example 2.1.1), for instance, an emphasis on a 'homely' non-institutional setting, supporting autonomy and independence.

Involving the right people at the right time – is described by architects, clients and contractors as key to a successful project and avoiding unnecessary design changes. In addition to the client and designing architect, this includes:

- **Mechanical and Electrical engineers (M&E)** – Without input from M&E engineers early on, this can result in alterations to the building, and additional costs. Ventilation has implications for the sensory experience of a care home – heat, noise and smell – but requires the involvement of M&E engineers at an early stage to make sure it is properly designed in and costed for.

> *...the M&E consultant is very much, in my view, an undervalued part of the team. As far as the end client is concerned – and end client being the resident or member of staff who works in it 24 hours a day. It's whether the heating is good, whether the lighting is good, whether it's controllable, the day-to-day living in a building is so important. In one care home there were a number of internal rooms, so we needed to have mechanical ventilation heat recovery systems, and the architect just hadn't thought about it at an early enough stage. And so halfway through the design we suddenly realised we were going to have to drop ceilings by about three, four hundred millimetres, to get some of this trunking through. That was because the M&E guy hadn't had enough input early on."*

Care provider, case study 3

- **Interiors and landscaping** – often interior designers and landscape architects join a project in the later stages, and communication between architecture, interior design and landscaping can be disjointed. Addressing these aspects of the design earlier can facilitate user involvement (see section 3.3) and prevent later value-engineering (see section 3.2).

- **Construction** – building contractors often come into a project after planning permission has been obtained, when most design decisions have been made. However, early input from a contractor can support cost certainty, and prevent later changes to the design for buildability.

- **Involving the right number of people** – involving too many people can mean that meetings are large and unwieldly (see fig. 3), and making decisions becomes difficult. Instead we suggest that a representative from these different professions should be included.
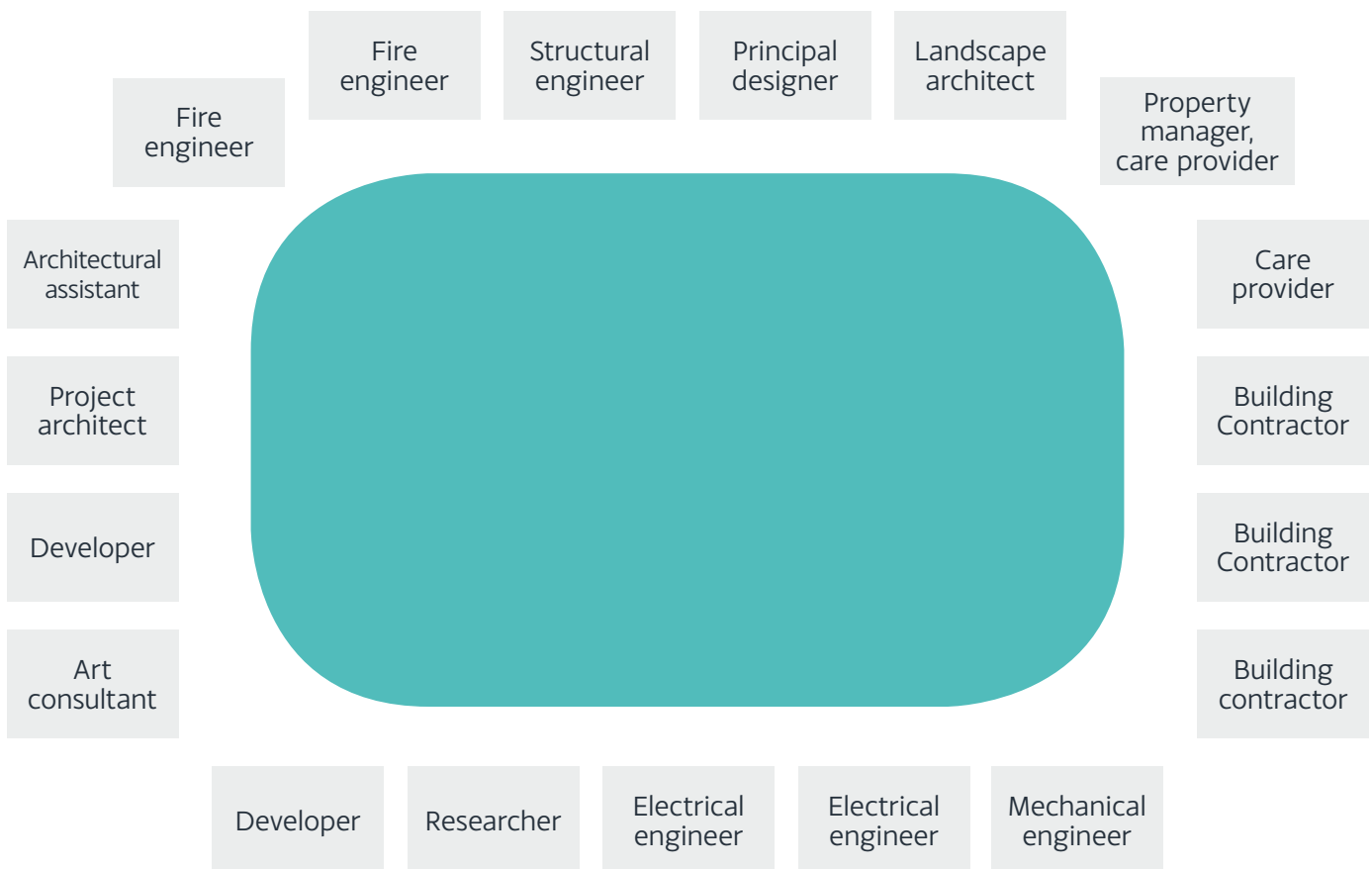
Figure 3: Seating plan from project meeting spring 2016, case study 3 (Design-Build-Finance-Operate)

Trust – architects, clients and contractors describe 'trust' as vital to good working relationships, and as something that must be actively 'worked on'.

- Design projects building on **established relationships can facilitate trust, efficient ways of working** and speed of decision making (see example 2.2.1). However, this can have implications for innovation.

- Opportunity to build on successful **long-term relationships can be supported by partnering contracts** (e.g. PCC 2000[23]) rather than a reliance on competitive tendering, as argued in the Egan report[24]. Architects, clients and contractors report positive experiences of partnering contracts, but say that they are rarely used in this sector, despite the earlier recommendations.

> *...it's about being open and getting that really good team together from the beginning, and I think the way that you procure projects is ultimately what gets that really good team together, choosing and selecting people. Maybe competitive tender is not the best way to go..."*
>
> **Architect, group discussion**

- Ongoing relationships with **subcontractors** are also important. However, these are happening less in the industry, due to an emphasis on competitive tendering and costs.

> *...I think 20 odd years ago you'd probably have the same subtrades you work with on a regular basis, possibly the designer and architect would be more repeat work, whereas its less and less like that, each job's a new team, and people do move around. It's a luxury we're not afforded anymore. People have no loyalty, no company has, they're guided by the cost. If somebody's a more attractive proposition you give them a go. Whereas in the past you might have said no, we'll stick with who we know."*
>
> **Design co-ordinator, contractors, case study 9**

- Trust can also be **developed in newer working relationships** through taking time to establish positive ways of working together (see example 2.1.1)

> *You've got to trust each other. Trust is a big, big word. And you've got to build that trust up. That doesn't come easily, you work with certain people over a length of time. If I went to a new practice, if I was building a care home for somebody else, it was a different architect, I don't know how he works. You build this trust up. I trust him, and I trust the architect to trust me to do the job."*
>
> **Senior site manager, case study 6**

In contrast, concerns about **liability and accountability** can create tensions in relationships and hesitancy in decision making, and architects talk about a 'legislative culture' where people on project teams are 'scared to make a decision' in case it 'comes back to them'. Careful record keeping and 'decision trackers' can be used as a way of mitigating for these concerns.

Regular and open communication – architects, clients and contractors describe 'clear lines of communication' as vital to good relationships.

- **Clear and efficient communication of information** and instructions is critical to avoiding delays in decision making, particularly once a project is on site.

- Regular monthly 'on site' meetings are not enough, **regular communication and updates between these meetings** is needed (see examples 2.1.1 and 2.2.1).

- **Physical distance can be a barrier** to communication, and with increasingly dispersed project teams, communication is often virtual (e.g. email and conferencing calling) rather than 'on site', which is not always an effective substitute.

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23 The PPC 2000 is the first standard for of partnering contract, established as direct response to the recommendations of Egan report *Rethinking Construction.* **http://ppc2000.co.uk/**

24 Egan, J. (1998). *Rethinking Construction: Report of the Construction Task Force on the Scope for Improving the Quality and Efficiency of UK Construction.* London: Department of the Environment, Transport and the Regions.

> *And communication is the key to it all. These days you just get that many emails, you don't tend to get the hands-on meetings on site and sorting particular things out, because people haven't got the time to allocate to travelling to the site as frequently as maybe they could. So, you'll have a monthly meeting, which is great, but very little time on the ground looking at what's going on."*

Design co-ordinator, contractors, case study 9

Respect for different professional knowledges is described as vital to good working relationships (see example 2.2.1).

> *...you may have some expertise or good knowledge of a sector but you don't know everything, so you need to work as a team to deliver. So as architects we can draw things and we can specify things, but contractors know how quick they can get walls up. And if you change specification slightly, we can save weeks of money or vice versa."*

Architect, case study 7

Example 2.2.1: Establishing positive working relationships – Traditional contract

Case study 6 is a Traditional contract, and the architect, contractor and client have worked together for approximately ten years on different care home projects. The contractor also has ongoing working relationships with subcontractors. There is trust and mutual respect between the different parties; the architect describes the contractors as 'the best' with an emphasis on 'quality', while the contractors describe the architect as 'old school', 'practical' and 'experienced' in designing for the care sector. The architect and site manager deliberately aim to make site meetings amicable and 'fun'; each meeting begins with informal discussion and sharing coffee/tea, sandwiches, cakes and biscuits. The same key people are involved throughout the project (architect, client representatives, site manager, quantity surveyor and contracts manager), and attend each site meeting. There is regular communication by

phone or in person between site meetings, which means that the client and architect are regularly updated, and decisions can be made quickly, avoiding delays.

> *If I come across a problem, or as a company, if we come across a problem, it can usually be sorted out over the phone. We don't seem to have any down time waiting for answers. The secret is to keep the job moving, and the client, or the architect, is very accommodating. And I think that comes from, again, the trust, and regular contact with the architect, client, to keep them updated. We don't leave it till every month before we speak to each other, because if everything had to be thrashed out on a monthly basis you could just get bogged down with stuff. I think our monthly site meetings are more of a get together and an update for those that aren't involved in the day-to-day, week-to-week running of the job."*

Senior site manager, case study 6

Recommendation

8. Creating a **shared vision and values across the design and construction** team – this is supported by long term working relationships, but where this is not possible, it can be set out in the brief, and developed through meetings which focus on sharing this vision and values across the project team.

3 Design and construction with and for building users

3.1: Who are building users and how are they imagined in the design process?

Architects draw on a **range of strategies to imagine the anticipated residents (in terms of the older person) when designing for care**, including: sourcing published research and guidance; visiting other care homes and extra care housing; engaging in **empathic work** to 'put themselves in the person's shoes'; and drawing on the experiences of their own relatives[25].

However, **anticipating who building-occupants are can be uncertain at the initial design stage** (e.g. whether a care home/extra care development will include provision for residents living with dementia and other complex needs). When designing for **extra care housing, the levels of need and care provision are variable**, which can create challenges in refining the design. Who building users are also shifts over time in relation to changing levels of care need, and generational change as new residents move into a building. **Architects try to anticipate these changing needs when seeking to future-proof designs**.

Architects and other members of the design team sometimes draw on and can **reproduce dominant cultural images** of older people, and stereotypical assumptions about the aesthetic tastes and preferences of particular generations. Specific **types of buildings are more associated with certain representations of ageing**, so while extra care housing and retirement villages are associated with more positive images of 'active ageing', care homes tend to be embedded with negative images of ageing as a period of decline and dependence. These representations of later life were also expressed by the public during planning consultations. However, some architects and care providers sought to challenge these assumptions and create homely,

non-institutional environments, as well as creating community engagement through open days, cafes, and volunteering initiatives.

In design guidance and in design practice, the **focus is generally on improving design for older residents/people living with dementia**. There is a **comparative lack of design guidance for staff**. The needs of staff and residents are interconnected – maintaining good working conditions for staff can help promote staff satisfaction and retention, which has implications for care quality[26].

Care homes often have **small staff rooms. This is sometimes deliberate, to encourage care staff to interact with residents and to be 'on the floor'** as much as possible. However, research studies have illustrated how care work is an emotionally and physically demanding job[27], **so the need for a separate space to recuperate is important.**

> *It comes down to staff, staff, staff, staff. So it's very important that you provide a care home that looks good to the person who's in it, the person who's paying for it, and the resident's children or carer. But also it's got to be good for the staff to work in because then you attract good staff and you keep good staff. I don't know how you support the resident if you're not supporting the [paid] carer. Because it's the carer that looks after the resident. What makes good architecture is having a carer that's coming in at seven o'clock in the morning for her eight hour shift, and it normally is a her, happy to get to work, being comfortable. What makes good architecture is somebody being able to say it to a neighbour, 'I work at [name of care home], it's lovely place you know...'*

Development Director, third sector care provider

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25 Buse, C., Nettleton, S., Martin, D., and Twigg, J. (2017) Imagined bodies: Architects and their constructions of later life, *Ageing & Society*, 37(7), 1435-57; Lewis, A. (2015). Designing for an imagined user: Provision for thermal comfort in energy-efficient extra-care housing, *Energy Policy*, 84, 204-12.

26 For discussion of the importance of buildings that also 'care for staff', see also Marshall, M. (1998) How it helps to see dementia as a disability, *Journal of Dementia Care*, 6, 15-17.

27 Twigg, J., Wolkowitz, C., Cohen, R. L. And Nettleton, S. (2011) Conceptualising body work in health and social care, *Sociology of Health and Illness*, 33(2), 171-88.

Example 3.1.1: Staff experiences – care home laundries

Spaces such as care home laundries have received little attention in design guidance, but previous research illustrates how laundry workers play a significant role in the care team[28]. Clothes can be crucial to our identity and presentation of self, but they can easily become lost, damaged or mixed up in care home settings. Retaining good laundry workers who take a pride in what they do, and have built long term relationships with residents, is important.

Yet laundries can be environments that are difficult to work in, and involve dealing with noise, heat and smell. While a lot of consideration is given to windows in the living spaces of residents, there is no regulatory requirement for laundries to have windows or even air conditioning (nor is there a requirement for kitchens to have windows). In two case studies the need for a window or air conditioning was brought to the attention of architects by a care home manager who was involved in project meetings. There is also a lack of guidance on how to make these more pleasant spaces to work in.

28 Buse, C., Twigg, J., Nettleton, S. and Martin, D. (2018) Dirty linen, liminal spaces and later life: Meanings of laundry in care home design and practice, *Sociological Research Online*, **http://journals.sagepub.com/doi/full/10.1177/1360780418780037**
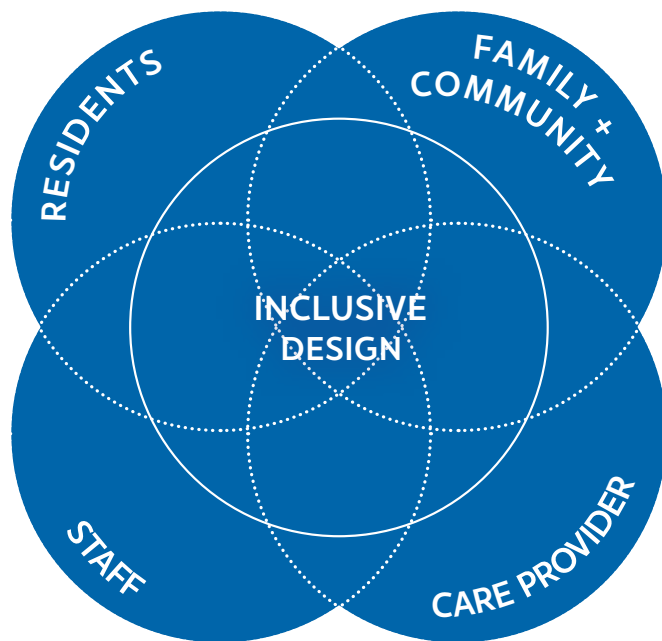
Figure 4: Designing for multiple building users

There can be **competing needs between providers, staff, relatives and residents.**

- **Among some care providers the focus is on designing for relatives**, because that is who they are 'selling' to. This can result in hotel like finishes and interiors, which look attractive, but may be less 'homely' and user-friendly.

- There can also be clashes between **making the care home a homely environment for residents, and making it conducive to the working conditions of staff.** For instance, care homes are often kept warm due to the perceived needs of residents[29], but this can be challenging for staff who are engaged in physical work.

- There is a **tension between a desire to facilitate the independence and autonomy** of residents, particularly those living with dementia, and **concerns about risk** among care providers and

staff[30]. In extra care settings with variable levels of need the assessment of safety versus autonomy can be particularly complex. In one case study, an extra care housing facility had been designed with an open reception area, to draw the community in. However, staff members were concerned about security and did not want this area to be openly accessible to the public, so it is now locked, and can only be accessed using an intercom.

> *…getting the whole team to embrace the vision of independent, empowering living. I still feel we have a bit of a difficulty here [at the new extra care housing development] because I think some of the team, particularly the operational team on the housing side, still have a more paternalistic attitude towards that role. "We're the landlord, we're there to keep things safe, we lock…The door's locked so people can't get in." And I think that's all wrong. That's not the vision we set out to achieve, and that's not the building we designed."*
>
> Client, case study 9

This raises the issue of a **disconnect between the design intent and operation of the building**. As recommended in previous research there is need for greater connection between staff working practices and the design process[31]. This could take place by having greater involvement of staff during the design stages of a project where possible, and having staff training and awareness raising during the handover phase and over the longer term. There is also a need to reconsider the weighting of 'risk' monitoring versus quality of life, and how this is regulated by bodies such as the Care Quality Commission (CQC).

29   Gupta, R., Walker, J., Lewis, A., Barnfield, L., Gregg, M., and Neven, L. (2016) *Care Provision Fit for a Future Climate*. York: Joseph Rowntree Foundation.

30   See also Chalfont, G.E (2013) Beyond risk: the rewards of nature, *Journal of Dementia Care*, 21(6), 32-34; Van Steenwinkel, I., de Casterlé, B. D., & Heylighen, A. (2017). How architectural design affords experiences of freedom in residential care for older people, *Journal of Aging Studies*, 41, 84-92.

31   Chalfont, G.E. and Rodiek, S. (2005) Building edge: an ecological approach to research and design of environments for people with dementia, *Alzheimer's Care Quarterly*, 6(4), 341-48; Gupta, R., Walker, J., Lewis, A., Barnfield, L., Gregg, M., and Neven, L. (2016) *Care Provision Fit for a Future Climate. York*: Joseph Rowntree Foundation; Waller, S., Masterton, A. and Finn, H. (2013) *Developing supportive design for people with dementia*: The King's Fund's Enhancing the Healing Environment Programme 2009-12. London: The Kings Fund.

Example 3.1.2: Gardens and access to the outdoors

Architects describe examples of where they had designed gardens to facilitate access to the outdoors for people living with dementia, but this was undermined by staff locking doors due to concerns about risk. In contrast, one care provider had an 'open door policy' so residents can go freely into their secure gardens. However, in one of their care homes, staff put net curtains across the door to the garden which meant that residents could not see the door handle. Furthermore, as research has shown[32], staff time for interaction with residents and supporting access to outdoor spaces is often limited.

In designing the garden for their new care home, one care provider suggested that the solution is about changing culture, and that when recruiting new staff they will try to incorporate use of the garden into staff specifications and roles, rather than it being viewed as an extra duty. Care home managers can play a significant role in changing work cultures[33], and encouraging staff to help

residents get outdoors; as one manager said, 'it's about positive risk taking, we are so used to keeping people safe'. This care provider also suggested it was important to have 'things to do' outside, to encourage residents and staff to use the gardens, and their more successful gardens had features such as raised beds, a 'beach' area, tables and chairs, and areas for physical activity.

The **attentiveness to user experiences** in guidance for dementia or age friendly design is inclined towards the design of bedrooms and communal spaces. However, **laundries, kitchens and hairdressers are sites for further consideration,** as work spaces for staff, and potential spaces of sociability and activity for residents.

Although there is increasing consideration of interior décor, colours and furnishings as part of design guidance for dementia and later life care, **decisions about more mundane aspects of building design and materials** (e.g. sprinklers, air conditioning, ventilation, wood, bricks) also have significant implications for how staff and residents experience the building, which warrant further exploration. This supports the need for a shared vision, and early involvement of mechanical and electrical engineers (see above).

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32 Timlin, G. and Rysenbry, N. (2010) *Design for Dementia: Improving Dining and Bedroom Environments In Care Homes*. London: Helen Hamlyn Centre for Design, Royal College of Art; Wigg, J. M. (2010). Liberating the wanderers: using technology to unlock doors for those living with dementia, *Sociology of Health & Illness*, 32(2), 288–303.

33 Chalfont, G., & Hafford-Letchfield, T. (2010). Leadership from the bottom up: Reinventing dementia care in residential and nursing home settings, *Social Work and Social Sciences Review*, 14(2), 37-54.

Example 3.1.3: Sprinklers and personalisation of interiors

Sprinklers are not only important to fire safety but are described as important for residents and staff having the freedom to personalise and decorate interiors. In one care home for people living with dementia owned by a third sector care provider, staff mount photographs and objects linked to residents' histories on the walls outside their bedrooms – this photograph shows where staff pinned up football shirts and photographs next to the bedroom door of a resident who was a keen footballer. In communal areas, staff place images and decorations on the walls of corridors to mark seasonal events, and brighten up these spaces, as well as including sensory, tactile items in shared spaces. This creates a sense of ownership of the space for both staff and residents, and can provide a 'talking point', as well as stimulating memories.

This care provider describes how fire officers sometimes discourage pictures and decorations on the walls due to fire safety concerns, but if sprinklers are in place this can help reassure them. However, on their new build care home project, we observed how sprinklers were left out because they were not included in the initial design, and so had not been costed for. This relates to the procurement model (Design-Build-Finance-Operate) and competitive tendering process, which limits opportunity to fully consult with care provider representatives early on (see section 2.1). It also reflects an emphasis on short term costs within this procurement model.

In new build care homes/extra care housing, **a focus on building users** is often more prominent in the concept design stage, when the experience of the building and potential building users is imagined, but **may disappear in the technical design/construction phase**, where the emphasis is on the practical details of the build.

Changes in personnel related to Design and Build contracts (see section 2.1), can mean that the original architect is not retained, and their knowledge of dementia/age friendly design is lost. It is important to have a person(s) on the project team who **continues to advocate for the perspective of building user groups** (e.g. residents, staff and relatives) **throughout the design and construction stages. Creating a shared sense of the vision and values of the project** can additionally mean that good design principles and a sensitivity to building users are dispersed throughout the team (see section 2.2).

Recommendations

9. Having a **'champion' or 'advocate' for different building user groups** (including residents, relatives and informal carers, and staff) involved with the project throughout the various stages. This may be developed in partnership with relevant organisations representing these groups (e.g. Dementia Engagement and Empowerment Project (DEEP), Alzheimer's Society, National Association of Care and Support Workers). Additionally, representatives in the construction industry can be trained to act as a 'champions' for particular building users.

10. **More guidance on best practice in designing for staff needs**, alongside guidance for age/dementia friendly design. This includes recognising the importance of having a window (or at least air conditioning) in staff spaces such as kitchens and laundries, and having generous staff rooms.

11. Creating **more dialogue between the design and operation of buildings**. This could take place by including staff in the design process, during handover, or training sessions following the completion of building projects. Supporting residents with accessing outdoor spaces could also be included in job specifications and training for new staff. However, in light of the constraints on staff time, this needs to be recognised and rewarded as part of staff roles, or have dedicated staff to assist with this (e.g. activities workers, volunteers).

12. Rethinking the **weighting of 'risk' versus quality of life in care home policy and practice**. A risk averse culture can undermine opportunities for residents to enjoy outdoor spaces or carry on everyday activities. This can be addressed by care home managers and operators in everyday practice but needs to also be supported by regulators like the Care Quality Commission.

3.2: Translation of best practice guidance

Architects and clients **work with a range of published guidance for dementia and age friendly design**[34]. However, various factors constrain the extent to which this can be implemented.[35]

Architectural design is shaped and constrained by client requirements and specifications, and some clients (especially larger care providers) have a particular 'ethos' or 'blueprint' for their buildings. For instance, architects report that some clients like a 'hotel-like' aesthetic while others prefer a 'homely' aesthetic, and that different clients have different specifications for the size of 'household' clusters and staffing ratios. This may or may not align with architects' knowledge of dementia/age friendly design. The tendency to repeat existing models can limit potential for innovation in rethinking what spaces for later life care might look like.

As discussed above, government funding for health and social care is invariably limited and **commercial issues can constrain** the implementation of principles for best practice in design for later life/dementia:

- Participants in our research report **how recommendations for generous space standards** or a spare bedroom for relatives in extra care flats can be **undermined by wider financial constraints**[36]. Government policies such as the 'bedroom tax'[37] can mean that older residents are less likely to opt for apartments with two bedrooms.

- Architects and other participants describe examples of design features being cut or modified because of **budgetary constraints and value engineering processes**[38]. Gardens and interior design are particularly vulnerable because they happen towards the end of a project.

- In order to make care homes **financially sustainable** providers need to have a **certain number of beds**, which can mean compromises on space for communal areas for residents, outdoor space, or staff areas. Although design guidance recommends smaller 'households' for people living with dementia[39], architects describe how providers often prefer larger groupings to make **staffing ratios** financially viable.

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34 For example: Dementia Services Development Centre. (2011) *Dementia Design Audit Tool 2011*. Stirling: Dementia Services Development Centre, University of Stirling; Homes and Communities Agency. (2009) *HAPPI Housing our Ageing Population: Panel for Innovation*. London: Homes and Communities Agency; The Kings Fund (2014) *Is Your Care Home Dementia Friendly? EHE Environmental Assessment Tool*. London: The Kings Fund.

35 See also Davis, S., Fleming, R., & Marshall, M. (2009b). Environments that enhance dementia care: issues and challenges, In Nay, R., Garratt, S. (Eds) *Older People: Issues and Innovations in Care*. Chatswood: Elsevier; Lewis, A. (2015). Daylighting in older people's housing: Barriers to compliance with current UK guidance, *Lighting Research & Technology*, 47(8), 976-992.

36 Homes and Communities Agency. (2009) *HAPPI Housing our Ageing Population: Panel for Innovation*. London: Homes and Communities Agency; Levitt Bernstein. (2011) *Learning from the HAPPI report*. London: Levitt Bernstein.

37 This was a benefit change introduced on 1st April 2013 under the Welfare Reform Act 2012 where tenants in social housing could have their benefits reduced if they had a spare bedroom.

38 In construction value-engineering is an exercise that involves assessing the selection of materials, equipment and processes, and looking for more cost effective solutions: **https://www.designingbuildings.co.uk/wiki/Value_engineering_in_building_design_and_construction** However, participants often described value engineering as simply a cost-cutting exercise, that does not attend enough to value in terms of the social or long-term value for building users (see also Samuel, F. (2018). *Why Architects Matter: Evidencing and Communicating the Value of Architects*. London: Routledge).

39 Alzheimer's Australia (2004) Dementia Care and the Built Environment. Position Paper 3, June. Available at: **https://www.dementia.org.au/ files/20040600_Nat_NP_3DemCareBuiltEnv.pdf**; Dementia Services Development Centre. (2011) Dementia Design Audit Tool 2011. Stirling: Dementia Services Development Centre.

There can be **clashes between guidance for best practice in design for dementia and later life and other regulations and standards** such as building regulations, fire safety legislation and BREEAM. For instance, as noted in earlier reports[40], the **use of open plan design** to improve visibility and way-finding for people living with dementia can conflict with aspects of fire regulations, and make it more difficult to gain approval from regulators.

Example 3.2.1: Bringing light in versus building regulations

Guidance on best practice in designing care homes and extra care housing recommends plenty of windows in communal areas to maximise natural light, and the importance of avoiding artificially lit, institutional corridors.

In one extra care housing project, the design incorporated full-length end of corridor windows next to seating areas to 'let as much light in as possible'. However, following a building control inspection, the contractors were required to put hand rails and safety mesh on some of the end of corridor windows, due to concerns about the safety of residents. Such regulatory requirements undermine aims to bring natural light into the building, and the safety mesh and handrails create a more institutional appearance.

The **requirements of planning departments can also conflict with aims for age and dementia friendly design**, for instance, requirements for a greater number of car parking spaces can impinge on garden space. Planners sometimes request particular materials to fit in with local buildings (e.g. a specific type of slate) – this can have positive implications for the appearance the building, but can have financial implications, and mean that other aspects of the design (e.g. gardens, interior design) are compromised. Architects suggest that establishing working relationships and trust with planners through ongoing engagement is important.

> *...the planner wanted particular slates on the roof of the building, we had to have expensive roof slates, we weren't allowed to use artificial ones. This ate into the client's budget, so at the end where there's the staircase with two roof lights above it, that was going to be a proper window coming through the roof, but the budget just wouldn't allow for it. There were a lot of compromises because of the planning restrictions and in the end the landscaping wasn't done at all, it was cut out because they couldn't afford it. And that is, for us, that is a key issue, because if the landscaping is done correctly it will draw people out of the building, and it's so important that people get outside..."*

Architect, interview 4

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40 Smith, A. S. (2013) *Design for People with Dementia: An Overview of Building Design Regulators*. Stirling: Dementia Services Development Centre, University of Stirling.

Example 3.2.2: Design compromises – bay window

In case study 3, a new build care home for people living with dementia, the architects initially designed the bedroom windows as bay windows with a deep sill, to give residents more space 'where they can have their own stuff... bits and pieces that connect you to your previous life, to your family.' However, this bay window was subject to a series of compromises and negotiations:

1. BREEAM – the bay window was originally designed in timber, to make it 'warm' and 'domestic', but in order to reach a high standard on the BREEAM assessment, it had to be changed to a UPVC composite.

2. Planning – due to neighbours' concerns about privacy, the sides of the bay window had to be changed to translucent rather than transparent glass.

3. Value engineering – the contractors tried to value engineer the window design, to have a window with a single pane of glass rather than a bay window. However, this attempt at cost cutting was overruled by the developer financing the project.

Translucent glass pane to side of bay window

Illustration showing the translucent glazing side to the bay window at the end of the wing

Recommendations from guidance for age/dementia friendly design can **become lost if they are not included in the brief and tender documents in a clear way, particularly in Design and Build contracts** (see above). These principles should also be embedded in working practices throughout a project.

> Interviewer: *Finally, what do you think makes for good architectural design in the care sector?*
>
> Project co-ordinator (building contractor): *Understanding the end user requirements. That more than anything else really. And incorporating that into design, the whole way through the process. That includes budget, that includes programme.*

The **Stirling Dementia Services Development Centre (DSDC) standards and audit tool are generally regarded by architects and clients as the key guidance for dementia friendly design**,

and the achievement of Stirling 'gold standard' may be required by clients in their brief. However, on building projects this guidance can become reduced to ticking off essential requirements on the checklist, without addressing the underlying principles, and the more detailed accompanying guidance and literature. When **design guidance is taken up only in a 'tick box' way** to achieve a particular standard, the original intentions behind recommendations can be lost (see example 3.2.3).

There can be **tensions between the recommendations of standards and guidance, and the experiential knowledge** of care home staff. For instance, on one case study, care home staff requested plastic grass in the garden, as it is easier in terms of maintenance, and also facilitates the use of the garden all year round for activities. However, this goes against guidance regarding the importance

of real planting and grass at a sensory level[41]. The landscape architect compromised by providing small areas of plastic grass for physiotherapy and activities, with real grass and planting in the rest of the garden.

Example 3.2.3: Windows into corridors

Following the HAPPI report recommendations regarding light and windows, it has been suggested that having dual aspect apartments in extra care housing is desirable[42]. On one case study project, we found that this recommendation was interpreted in the client brief as an additional window from the kitchen into the corridor[43]. The architect suggests this can create opportunities for engagement with other passing residents and help reduce isolation and loneliness, but on the other hand it can compromise privacy, and she reports examples from other developments of residents covering up these windows with newspaper to prevent people seeing in.

Recommendations

13. More **dialogue between regulators and those working on building projects for later life care, about how regulatory requirements can clash with or support aims for age/dementia friendly design**. While recognising the need for rigorous processes of assessment, there may be potential for consideration of **flexibility in how regulations or standards are applied on a case specific basis**, particularly in complex environments like care homes and extra care housing, which sit outside conventional categories of domestic dwellings and healthcare spaces.

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41 Chalfont, G.E. and Rodiek, S. (2005) Building edge: an ecological approach to research and design of environments for people with dementia, *Alzheimer's Care Quarterly*, 6(4), 341-348; Delhanty, T. (2013). *Housing LIN Factsheet 35: Landscape Design for Dementia Care.* London: Housing Learning & Improvement Network.

42 Levitt Bernstein. (2011) *Learning from the HAPPI report.* London: Levitt Berstein.

43 There is also a recommendation to have windows into corridors in Nicholson, A., Cameron, C. and Mountford, N. (2008) *Housing LIN Factsheet 6: Design Principles for Extra Care.* London: Housing Learning and Improvement Network

3.3: Consulting building users

Many architects report that they would like to engage with the current or future occupants of a building and embed their feedback into the design process. However, this generally **does not take place because time and resources for consultation are not included in the project brief and programme of work**. For user participation to happen, 'buy in' from the client to resource it is needed.

> *...you're kind of relying on the client to facilitate that, so in effect, on those two projects we didn't have really any contact with the end users. And in the case of [named client/ development], they don't know who the end users are going to be, because it's a brand new building and they've yet to move in...I think it's a shame, we don't have much contact with people with dementia or older people in care generally actually, so from a professional point of view I've tried to make an effort to get to know people with dementia..."*
>
> **Architect, interview 11**

In new build care homes/extra care housing, **consultation with building residents and staff is difficult because they are not in place,** and care providers often act as a proxy for talking to building users. However, spending time **with residents and staff in other homes by the same provider or post-occupancy evaluation** can be used to help understand the experiences of building users, and embed learning from other projects. Direct consultation happens more in refurbishment projects, which require an ongoing working relationship with existing building users across the design and construction team (see example 1.2.1)

Positive examples of user engagement were observed on **local authority and third sector funded projects,** where engagement was built in as part of the brief and programme of work. We observed some examples of good practice, and **creative techniques for user participation** (see example 3.3.1).

Example 3.3.1: User consultation in garden design – embedding creative approaches

On one specialist dementia care home project, we observed how an artist and landscape architect used creative methods to embed user consultation into the garden design[44]. Although it was a new build, they engaged with existing staff and residents in other care facilities owned by the care provider and, in particular, the residents in a sheltered housing development that adjoined the site of the new build care home. We observed a series of consultation sessions with staff and sheltered housing residents, including a 'walk around' of the site and the neighbourhood while talking with sheltered housing residents, followed by tea, cake and further discussion. Care home staff were also invited to input their ideas for the garden design onto a cardboard model of the building – this was an iterative process and later versions of the model incorporating their ideas were then presented back to staff. The process also brought together care home residents, staff and members of the design and construction team, creating dialogue between these groups. The consultation was able to take place because a budget was ring-fenced for public art as part of the original brief. The landscape architect felt it was unusual to be able to embed this level of user participation into the design process, and would like to see this happen more often.

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44 Bergendal, K. and Frazer S. (2018) A NOW TIME ZONE. Paper presented at workshop *Architectural design and construction for later life care: challenges and opportunities for designing with and for building users*, University of York, 28th June 2018.

Consultation with care staff is often limited, and where this takes place it tends to focus on operational issues of functionality and efficiency. Discussions with staff tend to be limited to those at a managerial level – managers often act as advocates for staff needs, for instance, the importance of a window in the laundry (see above), or the need for additional storage. However, **consultation could be widened to include care-workers, laundry workers, kitchen staff, cleaners and maintenance staff**.

Consulting staff should go beyond operational issues and examine their lived experience of the building, well-being and quality of life through asking questions such as: 'What does it feel like to work here?' 'What would make your job easier?' 'What makes your role more challenging?' 'What makes your work rewarding?' Spending time in care settings, observing staff working practices and routines at different times of day can also help create a fuller understanding of the work of care home staff (as well as the experiences of residents).

People living with dementia are less likely to be included in consultation – often architects are unsure of how to engage with them, and some architects say that 'you can't consult with people with dementia'. This mirrors the earlier marginalisation of people living with dementia in care policy and research, that has now been challenged by researchers in the social sciences, as well as by activists[45]. There is a **need for further guidance for architects on how to consult with users**, particularly how to engage with people living with dementia. This could be embedded in mainstream architectural education and continued professional development (see section 1.3). There is opportunity for **further dialogue between architectural practice**, and the creative methods which have been used to engage with people living with dementia in **dementia studies, sociology and design research**.

The timing of consultation can be challenging:

- There is a tension between the need to 'fix' aspects of the design to enable building projects to move forward, and aspirations to enable user involvement (e.g. care staff, residents) at various stages throughout the process.

- Deciding when to involve users can be difficult, as designs continue to evolve throughout a project. Those involved in construction and project management generally felt that user consultation should take place as early as possible, and ideally before the end of the technical design stage, to ensure that key design principles are specified, and prevent delays during construction. However, consulting with building users before it is certain a building project is going ahead can be sensitive, in light of the long time-scales of the competitive tender process (see above), the uncertainty of funding and raising expectations.

- User consultation is time-consuming, so for this to take place it needs to be incorporated into the programme of work and budget for a project.

> *Generally as an architectural practice, we try and maximize consultation. In recent years that time-frame is getting really compressed, we're often getting projects that are much tighter, the fees are tighter, we are asked to restrict our fees. That means we've got to try and streamline things. About six years ago, when we were doing other projects, we had a lot of time to consult with end users effectively, like staff, residents. And that was great, but we kind of have less time for that these days."*

Architect working for contractor, case study 2

Integrating conflicting views, requirements and 'tastes' of different building users into a coherent design can be difficult, particularly when designing communal areas.

> *My task was design coordination, because it was a Design and Build contract. And we looked to the stakeholder meetings to establish final bits of details on what eventually turned out to be things like the kitchens, doors, internal fittings. And then the different user groups having their own interests in what the final usage were,*

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45 For example: Hubbard, G., Downs, M. G., & Tester, S. (2003). Including older people with dementia in research: challenges and strategies. *Aging & Mental Health*, 7(5), 351-362; Wilkinson, H. (2002) *The Perspectives of People with Dementia: Research Methods and Motivations*. London: Jessica Kingsley.

which got slightly confusing, there was more people wanting to pull it in different directions. Yes, it was difficult to know, you know, we were trying to give the best service as the builder but trying to find out what we were trying to build was the difficult bit."

Building Contractor, case study 9

User consultation taking place is not in itself enough, unless this feedback is taken on board by the architect, client, design and construction team. Some architects and other design team members report that user consultation takes place, but that user recommendations and designs can be compromised, overruled or not put into practice.

There can be a **tension between different forms of expertise – user views may not be in keeping with guidance for best practice or 'expert' knowledge** (see section 3.2).

Recommendations

14. **More guidance on why, when and how to consult** with building users, and on engaging with people living with dementia.

15. **Ring-fenced costs for user consultation and time for this built into** the programme of work on care homes/extra care housing projects.

Example 3.3.2: People-Centred Design and Inclusive Design Methodologies

Design research undertaken at the Helen Hamlyn Centre for Design (HHCD), adopts people-centred approaches to engage directly and creatively with those being designed for in order to generate insights and design inclusively. Typically employing qualitative methods and techniques such as design ethnography[46] and co-creation allow for more empathic research to be undertaken[47], gaining insight into the real needs and lives of people. It is the view at the HHCD that deeper research with smaller sample groups can generate more insight and impact than broader, or purely statistically-driven research. Taking the time to have meaningful conversations with lead users (i.e. those with greatest needs) and involving them not only from the start but throughout the project, allows research and design that is more useful to more people. These lead users may not be the end-user of the product or building but as they have heightened experiences and insights

The Helen Hamlyn Centre for Design, ICU Journey, 2016

around the topic at hand, they can provide deeper understanding of the physical and social context within which we are designing. In the context of designing buildings for later life, the ideas of developing a resource of lead users is particularly useful, as the eventual building users (both staff and residents) are often not known when a project is first being commissioned and then designed.

Example written by Mikaela Patrick and Chris McGinley, Helen Hamlyn Centre for Design

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46 Ethnography is a method used in anthropology and the social sciences that involves spending time with a social group in order to understand their experiences. Methods include observations, informal conversations and interviews. Design ethnography uses similar processes of interaction and conversation to inform designs in a collaborative way. Van Dijk, G. (2010). Design ethnography: Taking inspiration from everyday life. In M. Stickdorn and J. Schneider (Eds) *This is Service Design Thinking: Basics, Tools, Cases*. Amsterdam: BIS publishers.

47 Bichard, J. and Gheerawo, R. (2010) 'The Designer as Ethnographer: Practical Projects from Industry' in A. Clarke and K. Dankl (eds.) *Design Anthropology*. New York: Springer

Recommendations

Recommendation	Key audiences
1 Development of **activities and resources to support a better public understanding of the role of architects**, and the complex, contingent and collaborative nature of their day-to-day work.	Royal Institute of British Architects (RIBA), Design Council, Chartered Institute of Architectural Technologists (CIAT), Construction Industry Council (CIC)
2 More **spaces for multidisciplinary dialogue**, encouraging a better understanding of different professional knowledges and roles, sharing ideas about design and construction for later life care across the construction professions.	Housing LIN, RIBA, CIC, Chartered Institute of Building (CIOB), CIAT, Royal Institution of Charted Surveyors (RICS)
3 More **training within architectural education and Continuing Professional Development (CPD)** focused on understanding the needs of diverse building users, user consultation, dementia and age friendly design. This could be extended to other construction professions.	Architecture schools, RIBA, CIC, CIOB, CIAT, RICS, Construction Industry Training Board (CITB)
4 **Embedding opportunities for multidisciplinary collaboration and learning** within architectural education. For instance, this could include spending time on building sites, involvement of different disciplines in student reviews, more training in construction processes and buildability issues.	Architecture schools, RIBA, CIC, CIOB, CIAT, RICS, CITB
5 Consideration is given to the potential implications of different **procurement models** for the design, and for building users in the longer term (while recognising financial constraints).	Department of Health and Social Care (DHSC), Homes England, Ministry of Housing, Communities and Local Government (MHCLG), Commissioners and clients (e.g. care providers).
6 Consideration is given to the implications of the **competitive tendering process for opportunities to consult with building users and for collaborative working**, particularly the more drawn out tendering process used in PFI models.	DHSC, Homes England, MHCLG, commissioners, clients
7 **Clear specifications** for good practice in designing for building users (older residents, relatives, staff) are incorporated into the **brief and tender specifications for contractors.**	Clients, commissioners, architects, developers, project managers
8 Creating a **shared vision and values across the design and construction** team – this is supported by long term working relationships, but where this is not possible, it can be set out in the brief, and developed through meetings which focus on sharing this vision and values across the project team.	Clients, commissioners, design and construction team

9	Having a **'champion' or 'advocate' for different building user groups** (including residents, relatives and informal carers, and staff) involved with the project throughout the various stages. This may be developed in partnership with relevant organisations representing these groups (e.g. Dementia Engagement and Empowerment Project (DEEP), Alzheimer's Society, National Association of Care and Support Workers). Additionally representatives in the construction industry can be trained to act as a 'champions' for particular building users.	Clients, commissioners, design and construction team, Dementia Engagement and Empowerment Project (DEEP), Alzheimer's Society, Age UK, National Association of Care and Support Workers, National Care Forum, RIBA, CIC, CIOB, CIAT, CITB
10	**More guidance on best practice in designing for staff needs**, alongside guidance for age/dementia friendly design. This includes recognising the importance of having a window (or at least air conditioning) in staff spaces such as kitchens and laundries, and having generous staff rooms.	DHSC, Care Inspectorate, universities, research groups and other organisations providing design guidance (e.g. Kings Fund, Housing LIN, University of Stirling)
11	Creating **more dialogue between the design and operation of buildings**. This could take place by including staff in the design process, during handover, or training sessions following the completion of building projects. Supporting residents with accessing outdoor spaces could also be included in job specifications and training for new staff. However, in light of the constraints on staff time, this needs to be recognised and rewarded as part of staff roles, or have dedicated staff to assist with this (e.g. activities workers, volunteers).	Clients (care providers), care home managers, Skills for Care, National Care Forum, Care England
12	Rethinking the **weighting of 'risk' versus quality of life in care home policy and practice**. A risk averse culture can undermine opportunities for residents to enjoy outdoor spaces or carry on everyday activities. This can be addressed by care home managers and operators in everyday practice but needs to also be supported by regulators like the Care Quality Commission.	Clients (care providers), care home managers, Care Quality Commission (CQC)
13	More **dialogue between regulators and those working on building projects for later life care, about how regulatory requirements can clash with or support aims for age/dementia friendly design**. While recognising the need for rigorous processes of assessment, there may be potential for consideration of **flexibility in how regulations or standards are applied on a case specific basis**, particularly in complex environments like care homes and extra care housing, which sit outside conventional categories of domestic dwellings and healthcare spaces.	MHCLG, Department for Communities and Local Government (CLG), Building Control Bodies (BCB), Building Research Establishment (BRE) Trust, Health and Safety Executive (HSE), Fire and Rescue Service, local authority planning departments
14	**More guidance on why, when and how to consult** with building users, and on engaging with people living with dementia.	DHSC, Care Inspectorate, universities, research groups and other organisations providing design guidance (e.g. Kings Fund, Housing LIN, University of Stirling, RIBA)
15	**Ring-fenced costs for user consultation and time for this built into** the programme of work on care homes/extra care housing projects.	DHSC, Homes England, MHCLG, commissioners, clients

Publications from the project to date

Buse, C., Nettleton, S., Martin, D., and Twigg, J. (2017) Imagined bodies: Architects and their constructions of later life, *Ageing & Society,* 37(7), 1435-57. **https://www.cambridge.org/core/journals/ageing-and-society/article/imagined-bodies-architects-and-their-constructions-of-later-life/659A30B0F8C07577F02B29DBC659FCA5**

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Martin, D., Nettleton, S., Buse, C., Prior, L. and Twigg, J. (2015) Architecture and health care: a place for sociology, *Sociology of Health & Illness*, 37(7), 1007-22. **https://doi.org/10.1111/1467-9566.12284**

Nettleton, S., Buse, C., & Martin, D. (2018). 'Essentially it's just a lot of bedrooms': architectural design, prescribed personalisation and the construction of care homes for later life, *Sociology of Health & Illness* **https://onlinelibrary.wiley.com/doi/abs/10.1111/1467-9566.12747**

Nettleton, S., Buse, C., & Martin, D. (2018). Envisioning bodies and architectures of care: Reflections on competition designs for older people, *Journal of Aging Studies*, 45, 54-62. **https://doi.org/10.1016/j.jaging.2018.01.008**

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