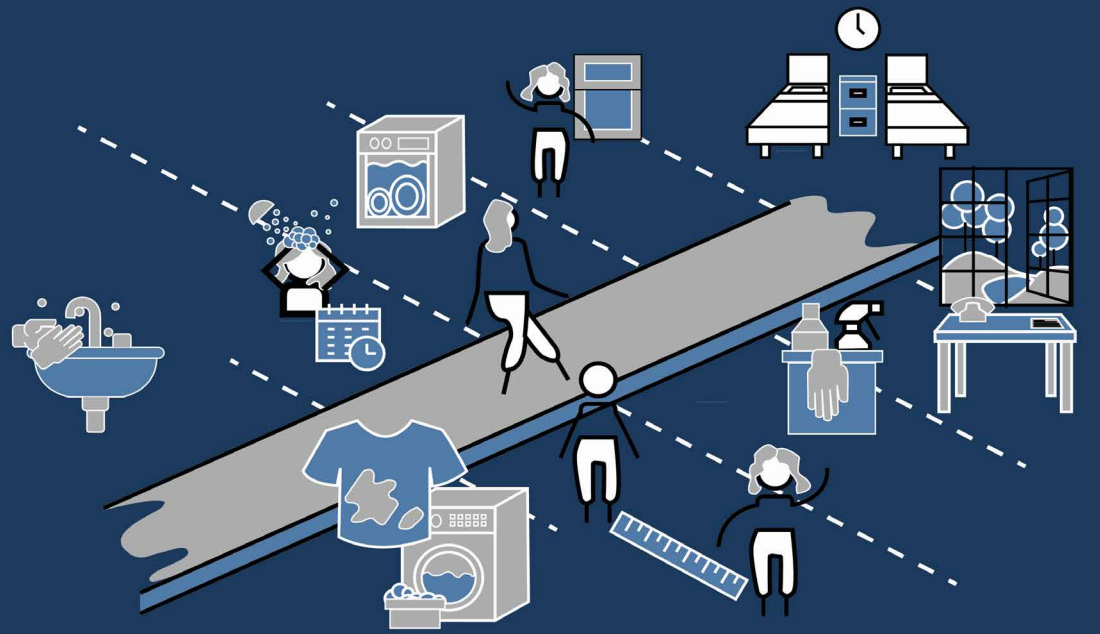
Lessons Learned from Isolation during a Pandemic

Isolation House



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HOME OF THE FUTURE

With the majority of the country living and working from home over the period of the pandemic, Archadia reviewed how you can isolate and live with vulnerable people. We asked *how does the guidance work with our homes and how will this affect the future of housing design?* This document explores what Archadia think will/ could change and how we can adapt our homes to suit this new living style.

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Established over 25 years ago, Archadia has extensive experience in housing, health and special needs, education and public buildings. Our expertise lies in supported housing for older people and people with disabilities. Many of our clients are large housing associations and several of our specialist housing projects have won awards.

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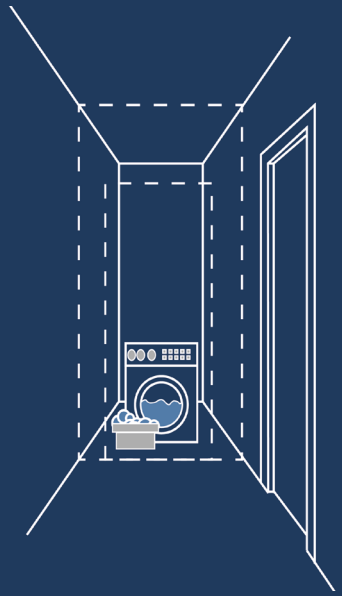

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CROSS PROGRAMMING SPACES

In the home flexibility should be built-in; a design consideration would be increasing the amount of storage and making it work in multiple scenarios. Having storage/a shower room near the front/rear door with plumbing and ventilation means this could be used for a washing machine. This would allow greater flexibility in kitchens and help with noise in open plan locations. When entering the home some people with vulnerable members of their household, or key workers, are removing clothes and showering. They could immediately go into the washing machine reducing possible spread of contaminants through the home. This would also open up space in the kitchen for a dishwasher or additional storage for shopping or bins. Part of the Government guidance says if you have a dishwasher you should use it, as well as advice being to put aside personal waste for at least 72 hours. We need to increase the flexibility of our homes.

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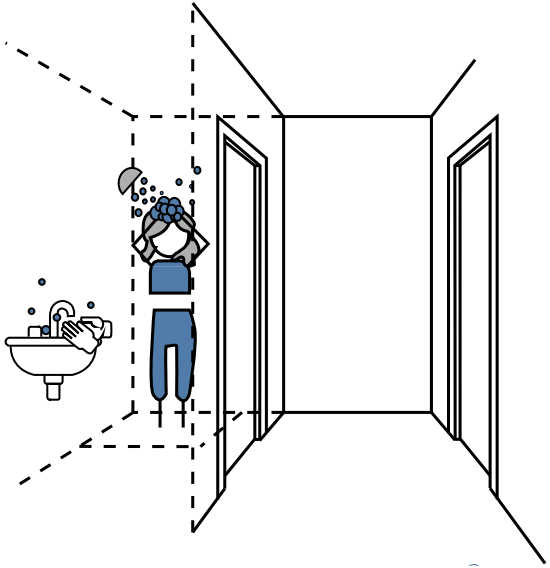

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ENTRY LEVEL FACILITIES

Housing Made for Everyone (HoME) is a coalition of ten organisations with a 7 point charter to tackle the UK's growing shortage of accessible homes. Part of HoME proposes making Building Regulations M4 Category 2 -Accessible and Adaptable dwellings- a mandatory baseline for all new houses. Archadia believe this would be good to enact for everyday life after isolation, not just accessibility. The Sanitary facilities section of the M4(2) regulation states that every dwelling has a room within the entrance storey that provides a WC and basin, where reasonable to make provision for showering. In order to allow people to safely wash when entering, without walking through the home, this provision is recommended in all housing. We extensively work with existing housing stock making sure there are accessible facilities on the ground floor, many homes have the capability to be updated to meet this recommendation.

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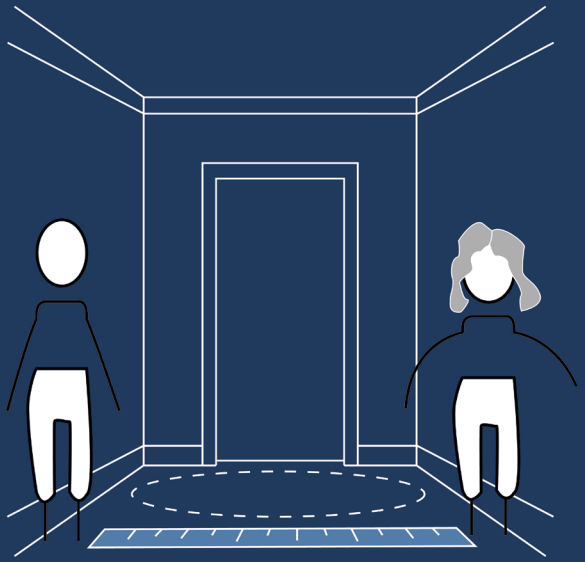
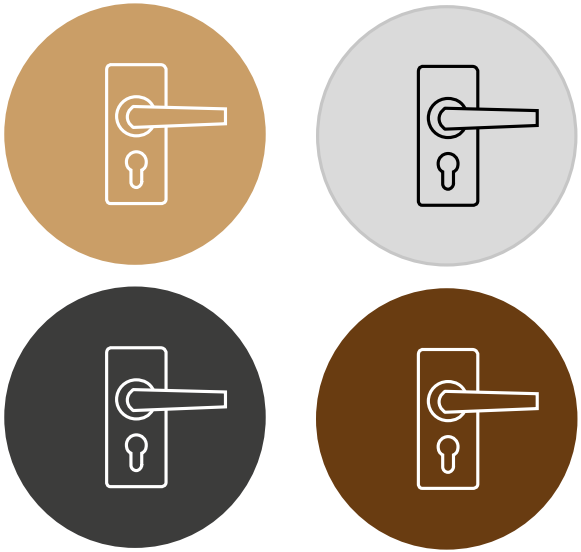


3

LOBBIES AND CORRIDORS

In certain situations a lobby is required, but if possible using an open plan layout gives you the ability to achieve the 2 m recommended separation distance inside the home. Lobbies can help with heat loss as well as increase security by providing a “public zone” within the house. Part of M4(3) for Entrances says there is a minimum 1500 mm clear turning circle inside the entrance area, in front of the door when closed. It goes on to say every hallway, approach or landing should have a minimum clear width of 1050 mm. Having wider corridors or the provision of areas for turning circles would mean people can pass each other safely within the home. Furthermore, having a wider lobby or no lobby would allow a safe distance when answering the door, as well as providing a turning circle for disabled residents and guests.



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SURFACES AND MATERIALS

A lot of surfaces within the home are touched by multiple people and can be areas of infection transference. Light switches, flushes, door handles, taps, etc. are part of everyday life. Although surfaces are not considered to be the main way that COVID19 is spreading, the advice is cleaning and disinfecting frequently touched surfaces daily is key. The BBC discussed this subject and found some studies suggested that other coronaviruses “survive on metal, glass and plastic for as long as nine days, unless they are properly disinfected.” However researchers have found “that copper surfaces tended to kill the virus in about four hours.” Copper and Brass door handles could come back into fashion as they increase germ protection. Some accessible design companies have been reviewing grab rail design looking at materials which are warm to the touch, would these increase or decrease infection risk? Archadia hypothesise that material choices in buildings will not be based merely on cost or aesthetic but the hygiene qualities of the material. Technology will further help combat these concerns. This all highlights the importance of washing our hands and cleaning surfaces.

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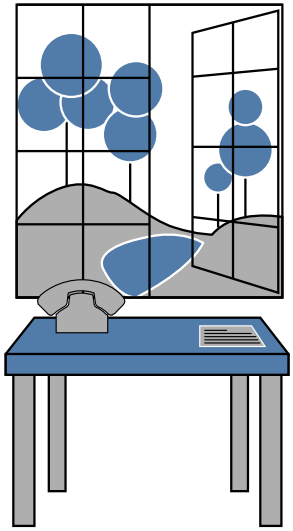
TECHNOLOGY

Many people are getting smart technology in their homes, from wireless lighting systems and smart thermostats to voice command virtual assistants. These new technologies could help reduce infection transference by stopping the need for multiple people to touch light switches, thermostats, remotes, etc. Paired with sensor taps and flushes, could this be the future of our homes? We have already seen sensors adopted across many public services. Would a ‘Smart Home’ help with health and wellbeing? Being able to call people on voice command virtual assistants could this help when people are taken ill or have fallen, if they can speak, they can call for help (unfortunately it is currently unable to call the emergency services). Electric blinds, hot water taps, smart radiator thermostats could all be part of the future home. However we need to consider the solutions as a whole. The home of the future needs to meet four themes: accessibility, hygiene, environment ,and cost. Any future housing must be smart and sustainable. If we are adding items to the energy load rather than replacing them are we worsening the problem? Are we getting enough exercise? Balance between technology and the environment could help reduce infection transference.



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WINDOWS AND VIEWS

The lockdown presents challenges on our physical, social, health and economic behaviours. A PhD student, Ayesha Batool at the University of Nottingham has launched a window view survey to study how lockdown is impacting our relationships with windows. Windows are our access to the world especially for those who are kept inside and have no private external spaces. We have acknowledged that having dual aspect living is better for light but also for capturing views. Having connections with a natural or urban environment is essential. Windows are vital, they are multi-functional they provide light, views, security (Neighbourhood watch) and ventilation. Studies have proven a link between nature and stress reduction. But in our experience, views over street scenes and car parks offer connection too. Now our houses represent a work environment as well as home our situation and outlook are more important than ever. We need to be designing homes of the future with views of nature where possible. Our layouts need to consider positions for desks and the work environment created: lighting, views, ventilation, activity, etc. We need to create dynamic environments suitable for live/work balance.

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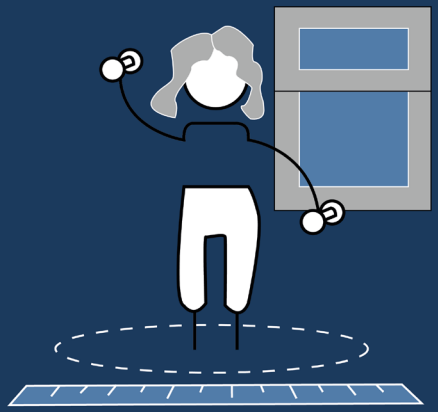

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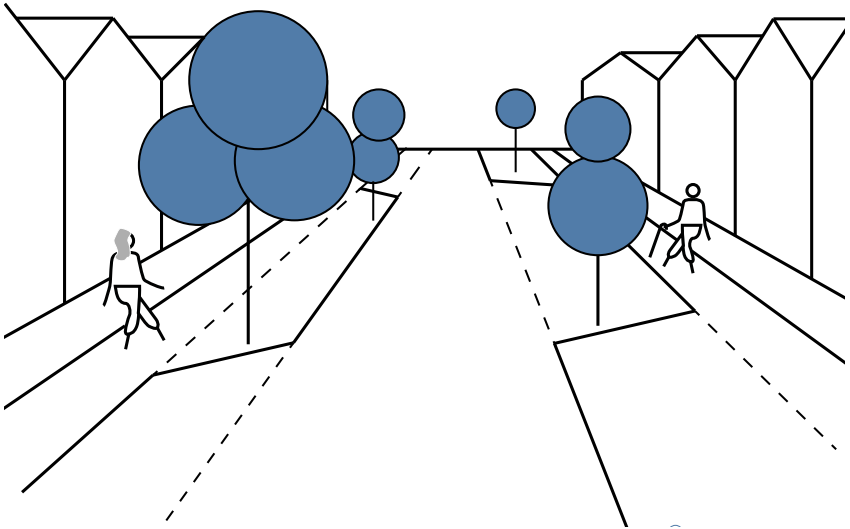
SPACE

With schools closed for the majority for many months parents were looking to keep their children occupied and educated. Joe Wick's YouTube workouts helped keep them physically fit – but one thing to note is he does them in an empty room. Many people don't have the space available to get that much empty area and the appeal of moving the furniture daily wears off. The home of the future may need additional floor area for increased storage, office desk and exercise. We need to look at the partitioning of existing space. In open plan layouts this could be dividing space with folding doors. Alternatively, this could be the creation of "the box room" somewhere between storage and a bedroom. On existing properties we could use flexible furniture (fold up beds, etc.). Many spaces in the home are empty for long periods, your bed is mainly only used when you're sleeping. We need to review our existing floor plans and look at what areas could be dual purpose?



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HEALTHIER EXTERNAL SPACE

How we design the spaces in between our buildings has long been debated, from urban designers and critics like Jane Jacobs to Jan Gehl. Our external spaces have never been more scrutinised than they are currently, from gardens, to streets, to parks. We need to consider how we design external space fit for all and safe for vulnerable people. There has been a movement towards shared surfaces, however these can be difficult to navigate and hazardous for disabled people. We propose the need to consider wider pavements to allow exercise, maintaining 2 meters separation and allowing for introduction of passing locations. In existing locations this will result in the reduction in road widths, many major cities are already trying to reduce cars: introducing one way systems, lower speed limits, etc. We need to think about our external spaces in regards to accessibility, sustainability and safety. This is not a one size fits all approach, the design for town centres won't be effective for rural areas. However most density is in our cities, which need to be considered separately. We need to furnish our streets to allow for interesting views, maintain visual security and safe areas for children to play who don't have private amenity space.

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URBAN REALM

Our residential spaces could help meet the needs of our isolation world. People will want to be able to get out and about safely. We propose that the streets will one day be more about people than cars. Our sketch to the right shows the idea that we will move towards car-pooling, requiring less parking. We believe drone deliveries will become widespread further reducing the number of vehicles on the road. This would allow for narrower roads, the space created could be used for: wider footpaths, seating areas, localised play grounds and gym equipment. Materiality of the equipment in these areas would need to be designed to reduce infection transference and maintain hygiene. Increasing the width of footpaths allows for better accessibility and safer passing distances. We could create better environments and improve the views from our homes by introducing more vegetation and trees. The street of the future will meet our social needs as well as our functional ones; we will be able to create active sustainable areas which improve wellbeing.

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Car pooling
Localised playground
Seating areas
Wider footpaths
Drone deliveries
Increased vegetation and trees
Localised gym equipment

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FLAT DIAGRAMATIC LAYOUT

This document sets up some parameters we believe could be included in future housing. We have discussed cross-programming, facilities to wash your hands and shower near entrances, proportions of lobbies and corridors, surfaces and materials, technology, windows and views and indoor exercise space. Our understanding of the home has changed and evolved into a hybrid work environment. We expect our homes to allow us to safely isolate when needed and be able to keep vulnerable people protected. We have asked how does the guidance work with our homes and how will this affect the future of housing design. The diagrammatic image to the right summarises the learning from this series. These are a starting point for the housing profession to take on board and review whether we are meeting our sustainable, accessible, financial and isolation requirements.

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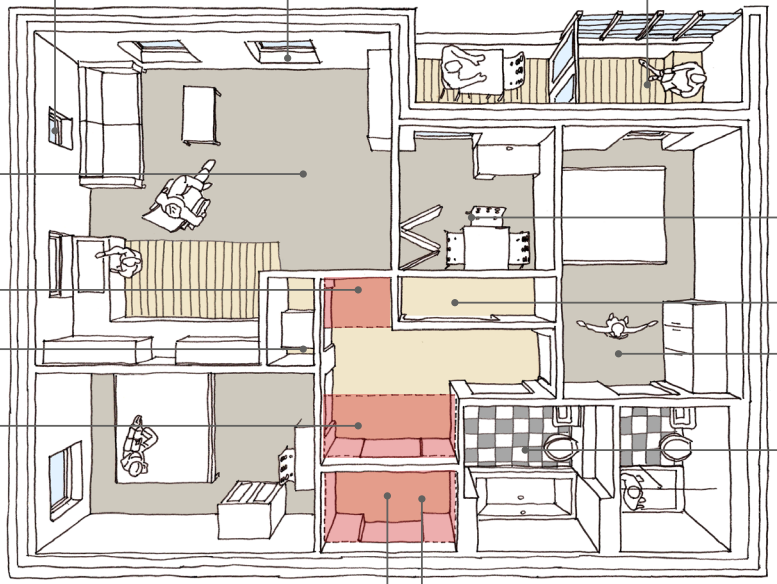
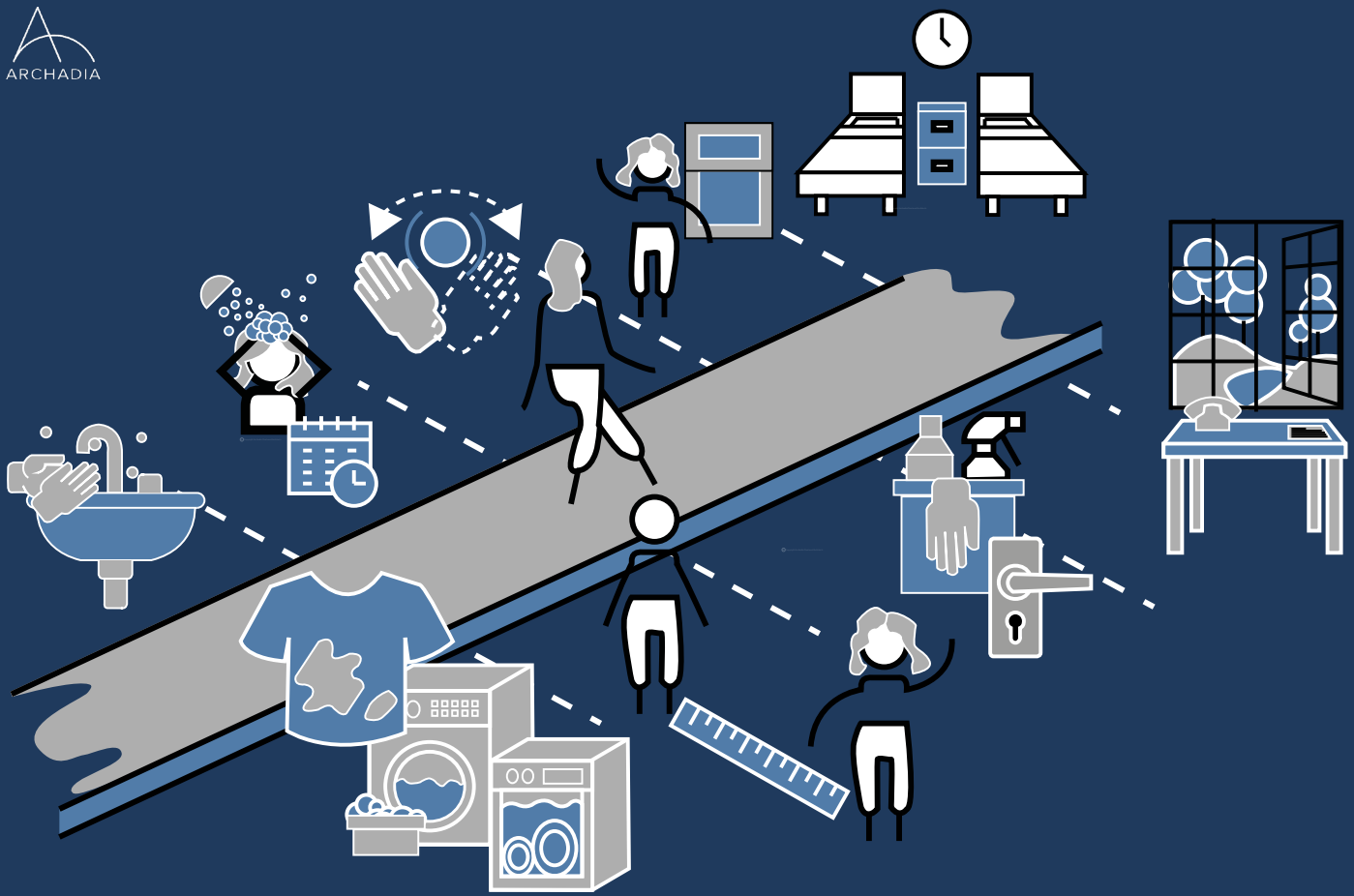

Views: Dual aspect where possible
Winter garden: expands living space usable all year
Space to exercise
Flexible separation of space to create temporary home office
High Level Localised storage
Storage
Washing Machine in entrance
Space to exercise
High Level Localised storage
Bathroom adjacent to entrance : hand washing and showering
High Level Localised storage
Lobby for parcels and waste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CONCLUSION

A question all housing professionals have been wondering is what will change after lockdown? Whatever your job or circumstances since the lockdown people are spending prolonged amounts of time inside their own home. This gives us the unique chance to review our housing, realise the successes and failures in their design. From acoustics to layout we are seeing opportunities to improve. Post COVID19 will people be looking to move, to find the property without the flaws they have experienced? If so, is there anywhere to move to which meets the post COVID19 world's requirements.

In early April, the Housing LIN's Jeremy Porteus published an interesting blog "HAPPI Working from Home? Designing 'work ready' housing". He recalibrated HAPPI to incorporate 'work ready' principles. It mentioned the need to adapt and adjust HAPPI to meet a growth in home working for all ages. Archadia are interested in looking at the future of housing and how these principles can be effectively adopted. We support the work ready design features which are similar to what we have been advocating on our social media.

As a specialist in older and disabled people design, Archadia have been reviewing how you can isolate and live with vulnerable people. This design series was inspired from employees' experiences. Many have family members who are key workers or are living with vulnerable people; this is a summation of their shared learning. Over the last couple of weeks, we have explored what should and could change to form a person-centred wellbeing approach. The suggestions we have made look at new build as well as how we can adapt our homes to suit the COVID19 living style.

Firstly, we saw there is a difference in the recommendations for houses compared to flats and new build compared to adaptation. We have proposed general principles that can be applied to all types of housing. However, it is also important to highlight that every person will have different physical and mental requirements which will lead to the general principles being personalised.

We need to consider all solutions as a whole. And with the government's Home of 2030 in mind, the home of the future needs to meet four themes: accessibility, hygiene, environment and cost. Any future housing must be smart and sustainable. If we are adding items to the energy load rather than replacing them are, we worsening the problem? We should be retrofitting to improve energy performance – many household bills will increase during isolation and with many being placed on furlough is it affordable to live in uninsulated properties? A balance between these themes could help reduce infection transference and increase wellbeing and help prepare for a new post-pandemic world.

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