

Challenges of Communicating Specifications in the Design of Bespoke Home Environments

What do we
mean by "*Robust*"?

Karen Flatt - Arcadis



Challenging Behaviours

Building Health into Homes: Strategic Report

How occupational therapy can unlock the connection between housing and health



RCOT
Royal College of
Occupational
Therapists

In collaboration with
Foundations

Kindly sponsored by
closeMAT

‘Culturally abnormal behaviour(s) of such an intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy, or behaviour which is likely to seriously limit use of, or result in the person being denied access to, ordinary community facilities.’

Source: Emerson, E (1995), cited in Emerson, E (2001, 2nd edition): Challenging Behaviour: Analysis and intervention in people with learning disabilities. Cambridge University Press

‘Behaviour can be described as challenging when it is of such an intensity, frequency, or duration as to threaten the quality of life and/or the physical safety of the individual or others and it is likely to lead to responses that are restrictive, aversive or result in exclusion.’

Source: Royal College of Psychiatrists, British Psychological Society, Royal College of Speech and Language Therapists, (2007), Challenging behaviour – a unified approach.

[Homepage for The Challenging Behaviour Foundation - Making a difference to the lives of people with severe learning disabilities](#)

	Types of cost	Why is it needed	Examples
	Replacing furniture e.g. flooring and chairs	Damage to due heavy wear and tear, behaviour that challenges, or incontinence	Chair padding: £100 every 18 months
	Cooking equipment e.g. air fryer	To enable healthier cooking	Air fryer from £90 to £300*
	Replacing appliances e.g. microwaves and washing machines	Heavy wear and tear or damage	Microwave from £50* Washing machine from £200*

Because of his autistic sensory issues, he breaks things when he can't process the bodily reactions he's having to his environment, and that's true for rooms, clothing, bedding, anything he meets in the environment that can suffer damage because of this and therefore has to be replaced, not least for safety.

Parent

[Extra costs of learning disability Final.pdf](#)



Artwork by [Kate Bond](#)

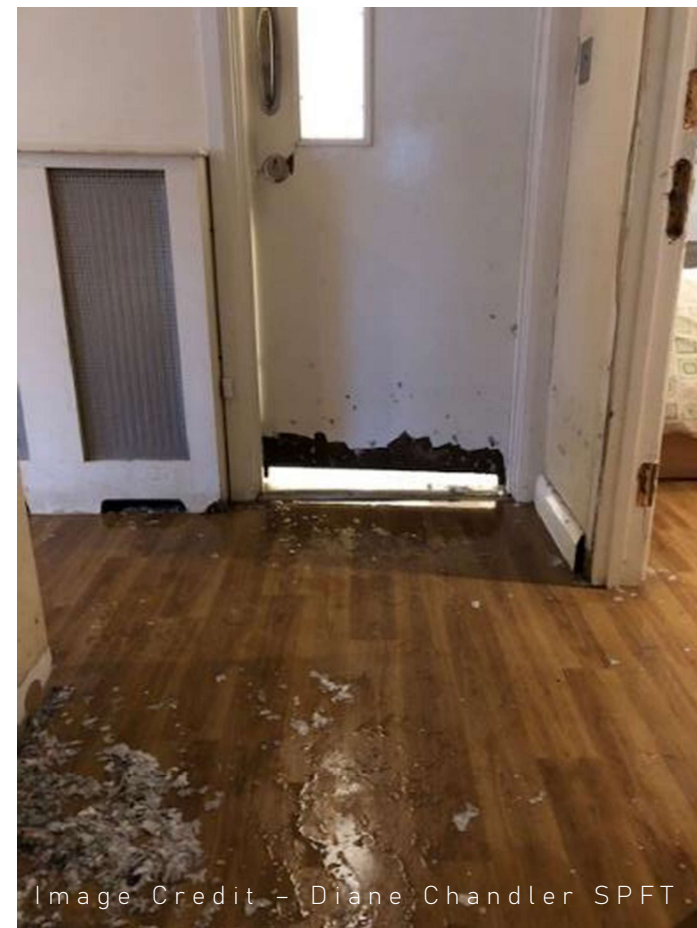


What are the current challenges?

- Matching the right home specification with the right person
- Understanding what bespoke adaptations may be needed in which areas of the home
- Ensuring right people around the table at the right time with the knowledge of both the individual & the planned home.
- Having the right products in place which are fitted according to specification by people who have the right skills & are “fit for purpose”.
- Defining what we mean by “robust”

Getting this wrong can lead to:

- Risk of harm to the individual or others



- High cost of repairs or replacement of items/ call out costs



Image Credit - Diane Chandler SPFT

- Damage to key areas of the home such as kitchens can lead to loss of skills & independence & impact upon the delivery of support



Image Credit - Diane Chandler SPFT



Image Credit - Diane Chandler SPFT

- An unsightly home environment can impact upon wellbeing



Image Credit - Diane Chandler SPFT

- An unsightly home environment can impact upon wellbeing



Image Credit - Diane Chandler SPFT

- Risk of placement breakdown & possible readmission to hospital



An unclear specification can result in misinterpretation – things can easily get lost at several stages from design to the installation



Having different understandings of what we mean by robust can be one component in what can go wrong....



Image Credit - Diane Chandler SPFT

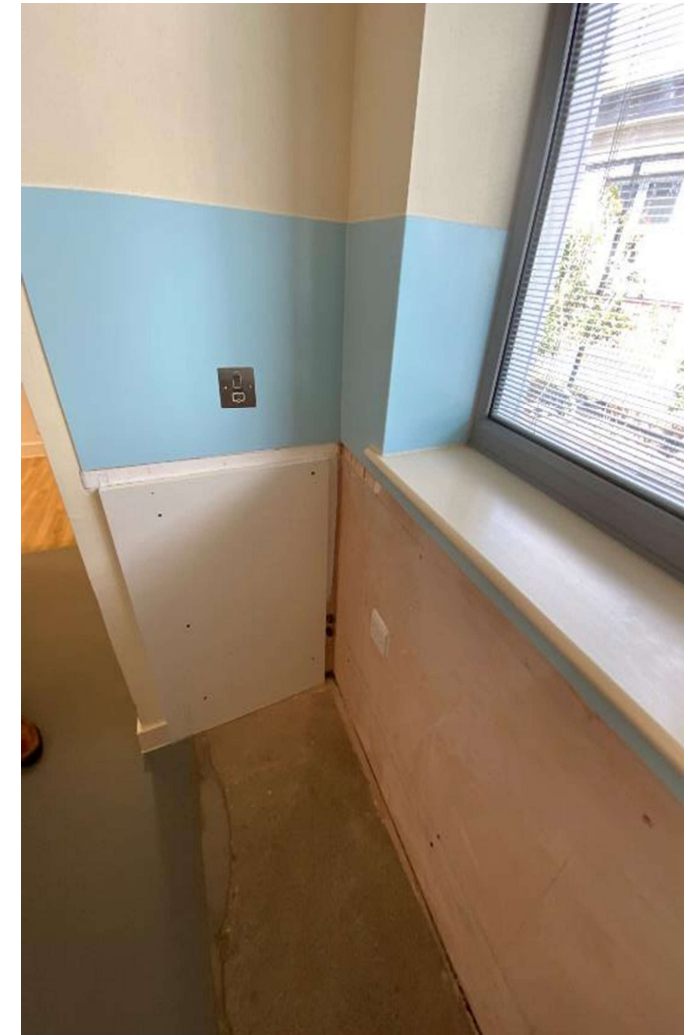
Certain areas of a home seem to be more vulnerable and likely to go wrong such as doors and kitchens



Before....



....After



 Arcadis
Specialist
Mental Health Care
Architects



Co-production



Learning disabilities



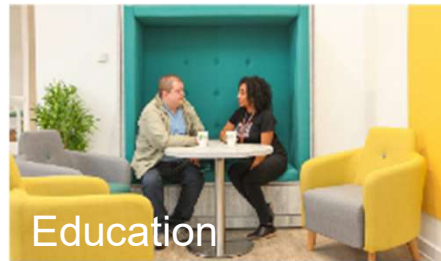
Children's homes



Acute mental Health



Community MH



Education



Secure inpatient



Neuro disability



Eating disorders



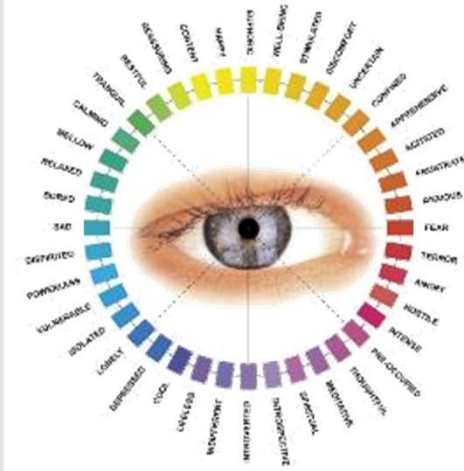
Dementia



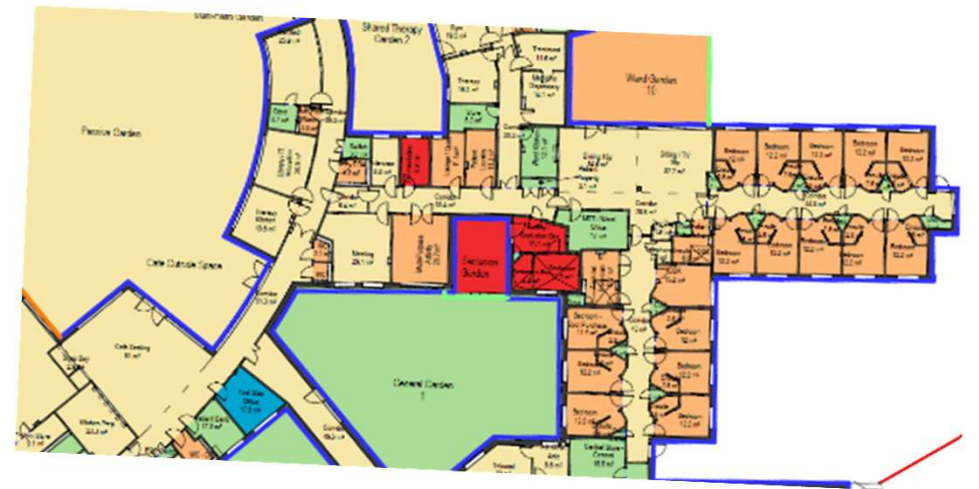
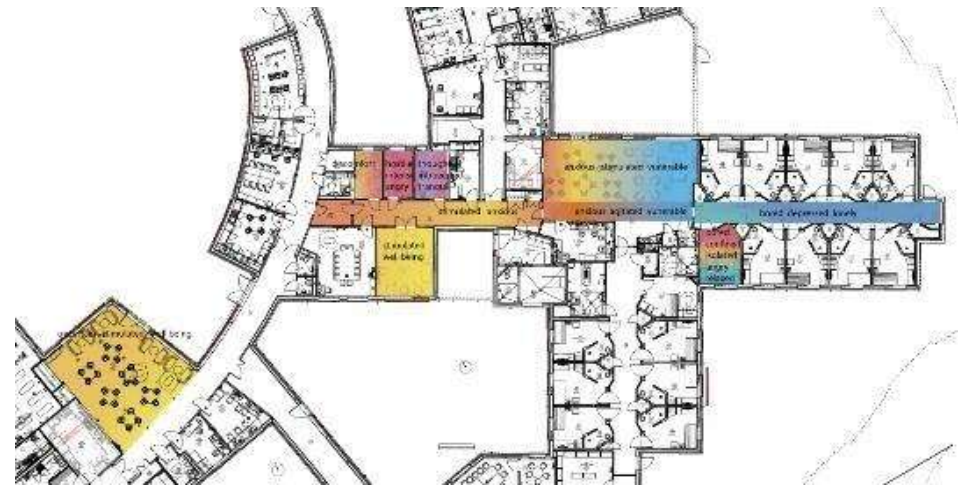
Supported living

Emotional Mapping & Risk Assessments

- Emotional mapping is a toolkit designed by Arcadis to enable the designer to look at the predominant emotions which may occur in a particular space and design the colours and the interiors to respond to those emotions.
- Trauma informed design approach to create safe, warm and welcoming spaces with choice and adaptability.



Emotional Mapping



Risk Assessment

therapeutic
environment



ARCADIS

safe
environment

lovely



ugly

So, what do we mean by 'robust'?

...'not showing weakness or uncertainty.'



'homely'



'institutional'



Robust

solid

strong

firm

sturdy

tough

Concrete – a very hard building material made by mixing together cement, sand, small stones, and water:

Concrete – Adjective
– based on sure facts or existing things rather than guesses or theories

substantial

solid

material

physical

tangible



Robust
Not concrete



Product Safety Testing



Environmental Design Guide

Adult Medium Secure Services



Environmental Design Guide Adult Medium Secure Services



Annex B: Testing Levels

The testing of materials of components is a critical element of the development project. The project plan should clearly identify responsibilities for testing at an early stage and ensure that the appropriate skills, training, recording and safety measures are in place. The tests types provided below are designed to replicate a number and/or combination of actions.

Results

A component or element of construction will pass testing if:

- it exhibits no significant failure resulting in the removal of the whole or part of the component
- it does not break or fracture enabling its use as a weapon or means of self-harm
- there is no escape or exposure to live electrical wiring, high-temperature pipe work or any other vulnerable services.

If the element or component becomes deformed as a result of testing, this should not necessarily be classified as a failure provided the extent of deformation does not enable access to any recess or void within which it is fixed.

Type 1: An attack on a component or element of construction by the use of an implement or weapon

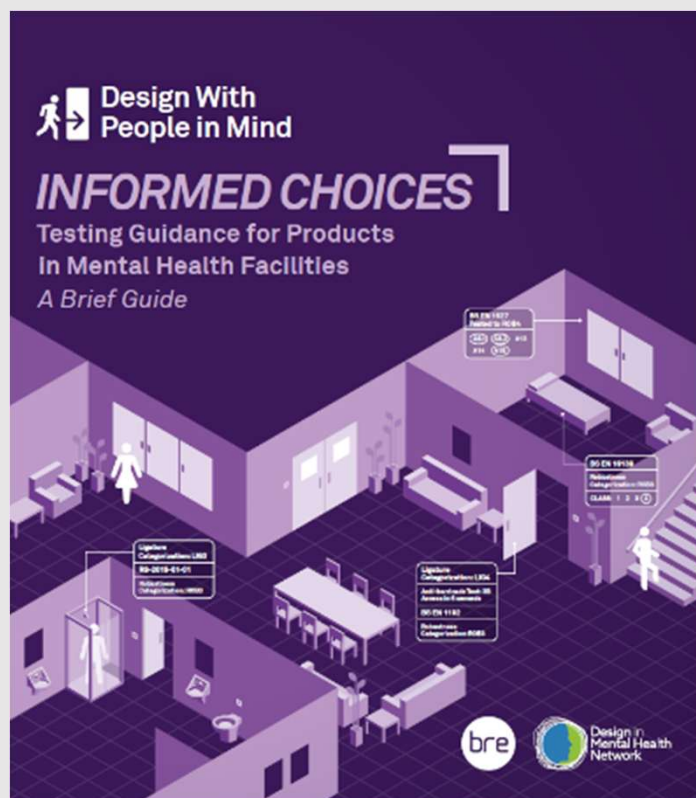
Implement:	36 x 36 x 1000 mm hardwood shaft (minimum density 650 kg /m ³), chamfered at one end to replicate the jagged edge/arises/etc. of a vandalised component, to be planed and all arises rounded
Test:	Carry out sustained attack for a period of 15 minutes (maximum potential period for a patient to work undetected on a component, notwithstanding the noise that this would create), including hitting with the flat section of the weapon a minimum of 10 consecutive blows, attacking end-on with the non-chamfered end of the weapon for a minimum of 10 consecutive blows and, where testing a component, prizing away from the structure to which it is fixed by the chamfered end of the weapon (the latter applies to the whole or any part of the component)



INFORMED CHOICES



Informed Choices



- Products independently tested by the BRE for safety and robustness
- Certification by the BRE
- Factory production control audit to ensure product is reproducible.
- Product testing performance will be shown on the BRE website
- Will inform clinical risk management practice
- New scheme will give transparency of safety and robustness performance resulting in:



Home environments – added challenges



- In home environments there is a high requirement for robustness and safety.
- Important to have choice of products which look 'normal' and don't look like a secure unit/prison – this is a challenge for manufacturers.
- Importance of therapeutic environments.

What products would need to be covered for a home environment?



■ Building Envelope

- Wall build ups
- Ceiling build ups
- Floors & Finishes

■ Permanent Fixtures

- External doors
- Windows
- Internal doors
- Sanitaryware

■ Bespoke Components

- Kitchen
cupboards/worktops/ sinks/
hobs/ovens
- Bathroom fittings
- Bedroom furniture
- Dining and living furniture –
loose furniture/TV cabinets
- Radiator covers
- Lighting
- Smoke detectors

Wrong specification
but right installation

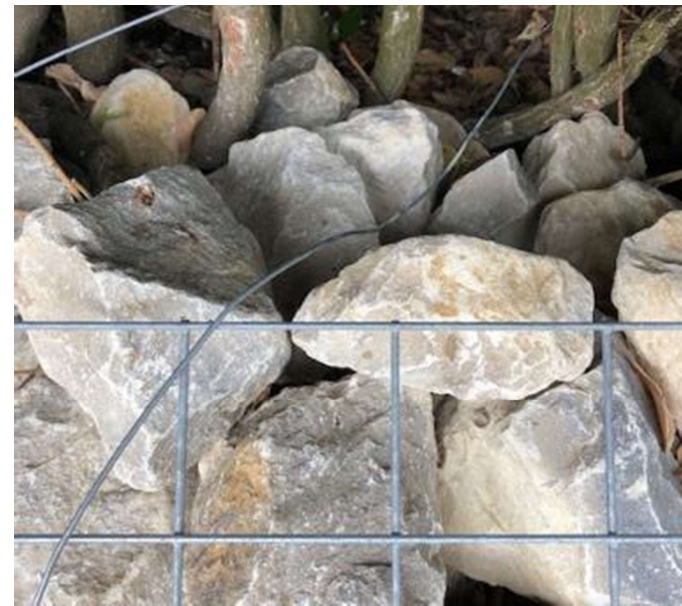
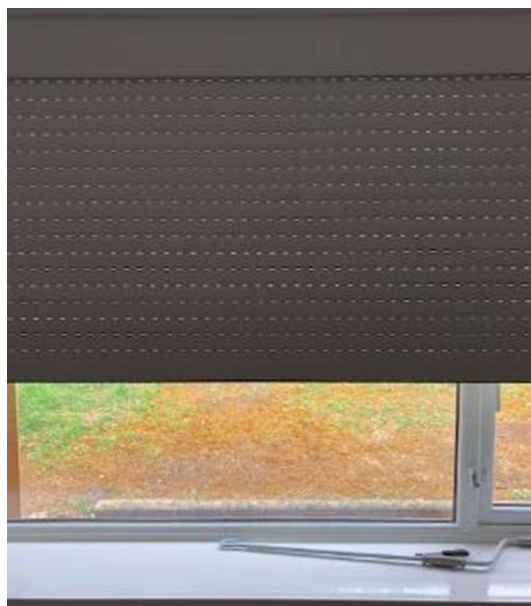
...or...

Right specification but
wrong installation

Can both lead to:

- Costs
- Disruption
- Safety concerns

- Get the right team on board
- With the specialist knowledge
- Get to know the person and their individual needs
- Know how to translate the needs into the right specification and build.





Explore DiMHN's
work and resources



Karen Flatt
Associate

Design in Mental Health Network

Improving mental health outcomes through better design.

Explore our work



[Design with people in
mind evidence series](#) >



[Find A Specialist –
Design In Mental Health](#) >



[Webinars:
Shared Learning on
healthcare design](#) >



[Members resources](#) >

www.arcadis.com
karen.flatt@arcadis.com

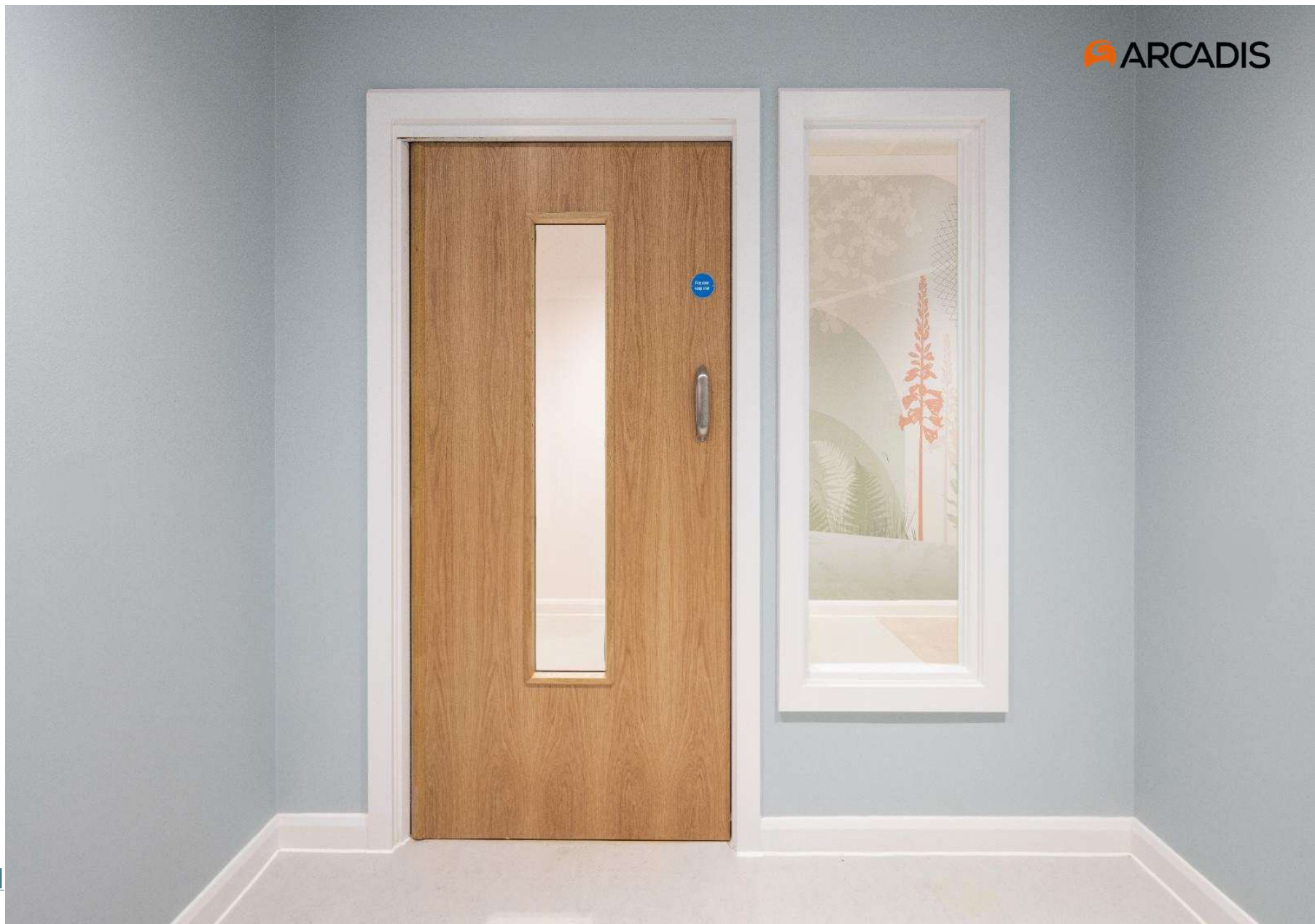






Artwork by [Kate Bond](#)





www.arcadis.com
karen.flatt@arcadis.com

Thank you.



Artwork by [Kate Bond](#)