



Designing for Mental Health

Promote healing, prevent harm
and enhance safety with Altro

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Mental illness is the single largest cause of disability in the UK and each year about one in four people suffer from a mental health problem. These can include generalised anxiety disorders, depression, phobias and OCD. We cannot only consider adults when it comes to designing mental health environments as children make up a considerable number of mental health users.

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one in four



adults experience a mental illness or substance abuse disorder each year.

one in five



children aged 8-16 years experience a diagnosable mental health problem

six in one hundred



people have a generalised anxiety disorder

£105 billion
is the cost of mental health problems to the UK economy

This is around 4.5% of the UK GDP





Fundamentals in mental health design

Creating a secure environment for patients and staff alike remains the primary objective in designing for mental health. However, new research suggests that balancing safety with familiar aesthetics is equally important.

The environment in which a patient receives treatment should reflect a normal residential environment as closely as possible. It is important to design spaces to be warm and comfortable, while simultaneously adhering to safety guidelines.

When designing these spaces, incorporating three key fundamentals can help facilitate the rehabilitation process for everyone involved – promoting healing, preventing harm and fostering safety and security.

Promote healing

Gone are the days of sterile-looking psychiatric wards. Modern design emphasises creating a calm, normalised environment to aid patients with social reintegration post-treatment.

Brighter, more optimistic colour palettes provide a warm and therapeutic feeling compared to standard neutral options. The use of realistic artwork has proven to reduce patient anxiety and agitation as well as medication costs.

Biophilic design suggests bringing outdoor elements indoors or secure, outdoor spaces with wood and other natural finishes can serve as a positive healing distraction that benefits individuals of all ages.

- ✓ Increased light / outdoor views
- ✓ Secured outdoor spaces
- ✓ Open floor plans
- ✓ Calming colours
- ✓ Scenes and imagery from nature
- ✓ Natural finishes - wood, stone, etc.
- ✓ Inspirational design in common areas and thresholds to promote interaction outside of bedrooms



Prevent harm

Protecting the physical well-being of patients as well as visitors and staff remains the most critical design element for treatment facilities. Individual details, furnishings and finishes used throughout the facility should be carefully specified to help prevent self-harm or aggressive behaviour. The components of each room vary depending on the level of patient supervision, with specific emphasis on the reduction of ligature points and potential for self-harm. Ligature points refer to fixtures and hardware that could be used to attach a cord, rope or other material for the purpose of hanging or strangulation.

Promote safety and security

When designing psychiatric units, it is extremely important to consider the needs of those living with mental illness. The ideal environment should provide patients with the safety and security they need to complete treatment efficiently.

By avoiding distracting patterns and colour combinations you can help prevent visual misperceptions by patients, particularly those suffering from schizophrenia and dementia.

- ✓ Utilise varying light reflectance values (LRV) as a means of identifying differences in height between areas.
- ✓ Be sure your flooring has adequate slip resistance to protect patients from slip and fall accidents.
- ✓ Choose soft, forgiving surfaces to reduce potential injuries in the event of a fall.
- ✓ Ensure transitions between surfaces are seamless and colour-matched. This prevents certain patients from becoming fixated on the material and picking at it.



Duty of care and NHS Guidelines

Mental health facilities present a unique set of challenges found nowhere else in the healthcare industry. As a specifier, there is a great deal of responsibility placed on you to ensure the facilities you design are safe for patients, staff and visitors as well. Facilities should appear as comfortable, attractive and residential as possible while also preventing patients from potentially harming themselves or their caregivers.

Floors and walls used in these facilities must be the following:

Comfort underfoot

- ✓ Floors should provide support underfoot to create a comfortable standing surface for long durations.

Stain-resistant

- ✓ Floors should resist staining from common contaminants and medical-grade cleaning products.

Slip-resistant

- ✓ Floors should have adequate slip resistance to prevent slip and fall accidents among patients and staff.

Ligature-resistant

- ✓ Room fixtures and hardware should be specifically designed to prevent the attachment of ligatures in order to protect patients from inflicting self-harm.

No flooring cap

- ✓ For safety reasons, plastic or metal flooring caps should not be used, even in wet areas.

Tamper-resistant

- ✓ Patients must not be able to pick or remove transition strips between different finishes where floors and walls meet.

Impact-resistant

- ✓ Walls should be capable of enduring heavy impact without cracking or splintering to create potential health hazards.

Water-resistant / cleanable

- ✓ Flooring should be unaffected by wet cleaning, germicides and other types of cleaning solutions.

Designing based on patient level of care

The level of concern for the safety of patients and staff due to the design of the built environment is not the same in all parts of a mental health facility.

When designing a facility, best practice is to use an environmental safety risk assessment (ESRA) matrix.

This tool relates an opportunity for a patient to be alone to a level of risk of self-harm.

A combination of these factors help to determine the level of risk involved with each room in the facility.

low-risk zones



high-risk zones



Low-risk zones



Low-risk zones

When designing low-risk zones, residential looks are appropriate and encouraged in communal spaces. Areas that fall into these categories include corridors, activity rooms, counselling rooms, interview rooms and staff or service areas.

Key considerations

- Selection of more residential-looking finishes and furniture is preferred
- Use murals and printed artwork to calm and inspire; must be securely fastened to avoid tampering
- With flooring avoid patterns and colour combinations that could contribute to visual misperception



High-risk zones



High-risk zones

Strict design guidelines must be followed in these areas to prevent self-harm by eliminating any potential hazards, particularly fixtures that could serve as ligature points. High-risk areas include patient rooms (semi-private or private), seclusion rooms, patient toilets and showers.

Key considerations

- Continuous sheet vinyl with heat-welded seams
- Tamper-resistant floor to wall transitions
- Floor sloped to drains

Altro Aquarius™ / Altro Pisces™

Safety flooring for wet environments



Altro Aquarius was developed for lasting performance in shoes or barefoot, providing optimum lifetime sustained slip resistance in wet and dry environments. The range features plain and tonal chip options to help you achieve high contrast and design flexibility. This vinyl flooring has been extensively tested with a variety of shoes and contaminants to ensure top performance in high-risk environments. It's also easy to clean. With Altro Aquarius you can have it all: good looks and safety.

Altro Pisces is a domestic-look specialist flooring for a "home from home" feeling offering 17 soft-look shades with lifetime sustained slip resistance.

Key benefits

- ✓ Accommodates both shoe and barefoot pedestrian traffic
- ✓ Easily coved for showers and other wet areas
- ✓ Excellent slip resistance values whether wet or dry



Altro Suprema™

Durable, non-sparkle safety floor with superior stain resistance



Design-led Altro Suprema has been developed in consultation with colour consultants, architects and end users to reflect design requirements and interior trends. It gives a colour punch to your public spaces.

Available in a range of stylish colours reflecting contemporary trends, this award-winning, non-sparkle, low-gloss safety flooring has superior stain, abrasion and scratch resistance, making it great for busy classrooms, hospital wards, corridors and critical hygiene areas. Altro Suprema incorporates Altro Easyclean™ technology, so it is low maintenance - saving you time and cleaning costs. It is suitable for very heavy commercial use, foot and wheeled traffic.

Key benefits

- ✓ Abrasion and scratch resistance
- ✓ Stylish colour portfolio
- ✓ Non-sparkle safety floor



Altro Wood™ Comfort

Wood-look flooring with enhanced underfoot comfort



Altro Wood Comfort offers aesthetics combined with comfort and safety. It's an ideal choice for areas that need to look good while helping to give comfort underfoot. This 2.85mm thick option offers 14dB sound reduction, which is great for noisy environments such as hospitals and mental health units.

It is also suitable for wheeled traffic and low residual indentation facilitates the flexible use of equipment and furniture, including hospital beds. Altro Wood Comfort copes with medium to heavy traffic and offers sustained slip resistance for the lifetime of the floor.

With matching design and colour options across this range, Altro Wood adhesive-free and Altro Wood, you can achieve a consistent look in different areas.

Key benefits

- ✓ Wood-effect finish creates warm and inviting setting
- ✓ 14dB impact sound reduction
- ✓ Low residual indentation
- ✓ Providing in-room sound reduction and added comfort underfoot



Altro Orchestra™ / Altro Serenade™

Smooth flooring with sound reduction and high underfoot comfort



Altro Orchestra and its thicker counterpart, Altro Serenade, provide comfort underfoot in areas where patients and staff spend the majority of their time. The two products each have an impressive variety of calming, neutral tones designed to complement each other between rooms.

At 3.9mm thick with 19dB impact sound reduction, Altro Serenade reduces noise and provides a high level of comfort underfoot. This makes it especially useful for seclusion rooms.

Key benefits

- ✓ Smooth surface is easy to clean and maintain
- ✓ Provides ample comfort underfoot
- ✓ Reduces sound transmission and provides in-room sound reduction/transmission



Altro Whiterock™

High-impact, impermeable wall system



Durable, impact resistant, hygienic and easy to clean, Altro Whiterock wall sheets can overlap Altro flooring to create a fully integrated and simultaneously tamper-resistant solution.

Altro Whiterock can be thermoformed on site and bent around corners. This eliminates the need for accessories and sharp edges that could cause harm.

Altro Whiterock Satins is a colourful and tonal, satin finish wall sheet with all the hygiene and durability of Altro Whiterock.

Key benefits

- ✓ EN 13501-1, B-s3, d0 fire rating
- ✓ Impact-resistant
- ✓ Heat-formable on site
- ✓ Heat welded seams - no trims required
- ✓ Easy to care for and low maintenance costs
- ✓ Watertight

Altro Whiterock™ Whiteboard

Dry wipe wall-mounted note board



Altro Whiterock Whiteboard is ideal for brainstorming, schedule development, formulas and other non-permanent record keeping. Functioning like a dry wipe board, you can write directly on the wall with a dry wipe marker. It blends the durability of Altro Whiterock with the versatility of dry wipe usage and can be integrated with other Altro Whiterock panels for designated dry wipe areas.

Key benefits

- ✓ 2.5mm thick
- ✓ Glossy, hard-coat surface
- ✓ Resists scratches, abrasion, water damage, and corrosion
- ✓ Blends the durability and hygiene of Altro Whiterock with versatility of dry-erase

Altro Whiterock™ wall designs

Biophilic designs on durable wall sheets



Altro Whiterock wall designs combine the durability, hygiene and resilience of Altro Whiterock wall sheets with patterns that simulate elements of nature indoors.

These natural wood, minerals, weaves, concretes and marble effect options can help alleviate anxiety in patients and create a calming environment for facilitating treatment.

Key benefits

- ✓ Can be hot welded
- ✓ Thermoformable on site
- ✓ Fully bonded to substrate
- ✓ Impervious to water ingress
- ✓ Impact-resistant
- ✓ Non-porous, hydrophobic



Altro Tegulis™

Hygienic tile-effect wall sheets



Altro Tegulis is an innovative wall solution available in an extensive colour and design palette. With a chic look and feel of tile, the custom-etched grout lines offer a hygienic solution eliminating scrubbing and repair issues. This easy-to-install system is available in interlocking and straight-edge formats with a variety of tile sizes capable of adapting to different designs.

Unlike traditional porous grout used in ceramic tile installations, the grout lines embedded into Altro Tegulis' surface are impervious to moisture. Using our half lap installation method combined with our sanitary sealant, Altro Tegulis prevents water and bacteria from penetrating below the surface, allowing for thorough cleaning and disinfecting. This provides an authentic tiled visual, without any of the unhygienic drawbacks.

Key benefits

- ✓ Resists bacterial growth
- ✓ Low VOCs
- ✓ Lead-free, phthalate-free
- ✓ Non-porous, hydrophobic

Altro Whiterock Digiclad™ (Custom)

Altro Whiterock Digiclad (Custom) provides an excellent canvas for artwork in mental health facilities.

Altro Whiterock Digiclad (Custom) is created by reproducing a photographic image or vector art onto Altro Whiterock wall cladding with consistent, photographic quality. Hard-coat technology provides scratch-resistant properties ideal for these areas.

Key benefits

- ✓ Reproduces high-quality artwork for endless customisation
- ✓ Prints over multiple panels
- ✓ Installs with or without joint strips
- ✓ Altro Whiterock Digiclad (Custom) liquid hard coat resists scratching and staining
- ✓ Easy-to-clean surface
- ✓ Extremely hygienic

Use of imagery

Evidence-based design studies support that the use of realistic and natural art can be beneficial in mental health facilities. Access to nature and natural images can provide a positive distraction which can have a therapeutic healing effect as well as reduce patient anxiety and agitation.

The correct and careful use of imagery cannot be understated. What may seem pleasant and peaceful to one individual could be alarming to another.

Key considerations

- Natural imagery preferred over abstract art
- Consider the effect of colour carefully when selecting imagery
- Avoid colour combinations that could contribute to visual misperception



Learn more about the completely custom Altro Whiterock Digiclad (Custom) or ask your local sales rep.



in action

With the ability to print over multiple panels with Altro Whiterock Digiclad (Custom), Springfield University Hospital was able to create a fantastic soft-focus leaf image with warm autumnal colors, helping to create a sense of calm for the residents.

Secure transition methods

Note: Altro provides a variety of floor and wall solutions, along with installation details, suitable for all levels of mental health facilities. While these products are designed to address infection control and water resistance, it is the responsibility of the architect/designer and the client to review and approve the details, ensuring they align with the patient safety risk assessment.



An extremely important part of mental health installations are the secure transitions between materials in high risk areas. The risk of weaponisation and self-harm that comes with standard transitions prevents the use of many trim pieces.

Altro has developed various joining methods between different surfaces which allow for hygienic construction without the need for potentially hazardous transition pieces.

For example, regulations forbid the use of standard flooring cap strip in mental health installations, for fear of tampering and weaponisation.

In lieu of a cap strip, Altro flooring can be finished into the Altro Whiterock wall system via a variety of methods that do not require the use of traditional flooring cap strips.



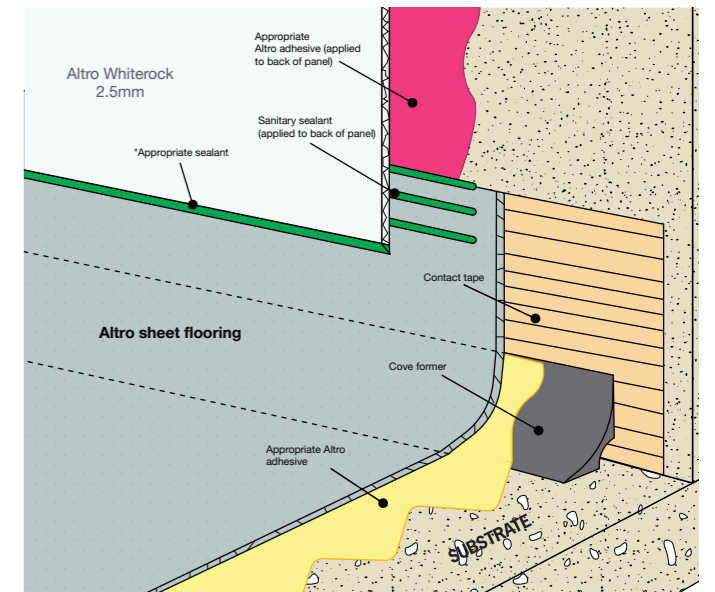
Secure floor to wall transitions

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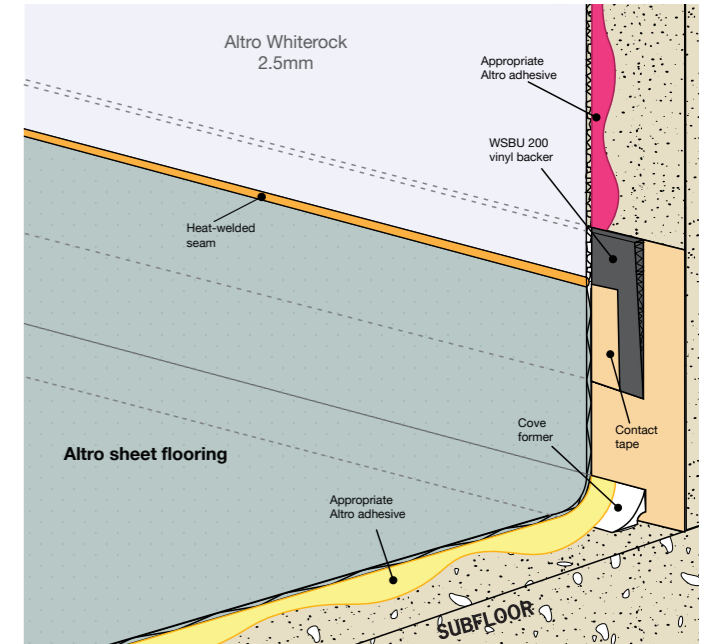
Overlap floor to wall transition

In this process, the coved sheet flooring tucks beneath corresponding wall panels. The edges of the panel are chamfered and a layer of tamper-resistant security sealant is applied to ensure that patients cannot access the excess flooring or remove pieces of the wall.



Floor to wall heat weld transition

Altro Whiterock can be heat welded directly to Altro sheet flooring. This advanced installation technique creates a virtually seamless transition that is ideal for extremely hygienic environments.



Note: Altro W39 adhesive is the recommended choice for all Altro Whiterock installations across all mental health units.

Secure floor to wall transitions continued



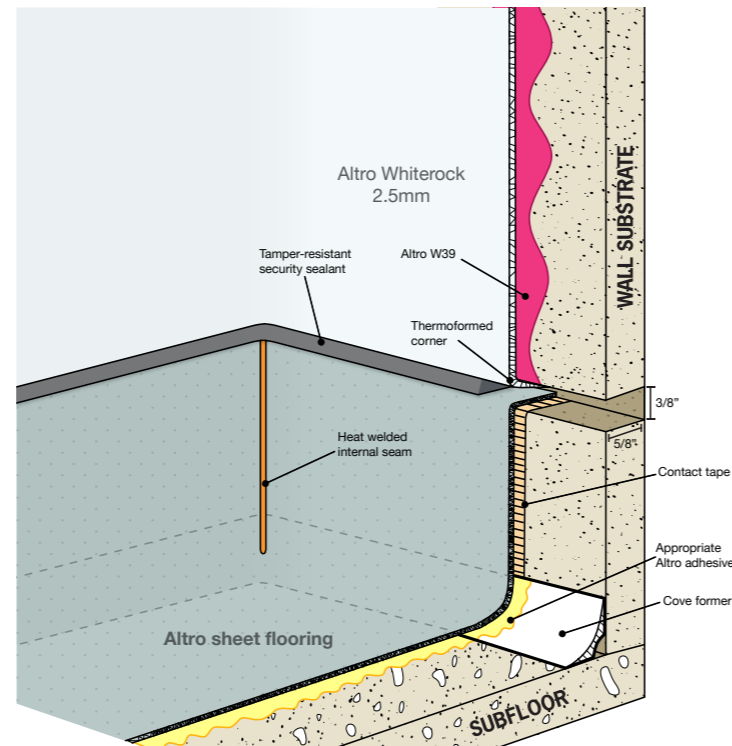
Floor to wall rebate transition

The rebate method is an extremely secure way to transition the floors and walls in high risk areas. It is ideal for use in seclusion rooms.

In this transition a rebate is saw cut into the wall. The flooring and Altro Whiterock are then tucked into it and glued in place. The void between the two products is filled with a tamper-resistant security sealant to prevent tampering.

Benefits

- Completely sealed system
- Tamper-resistant
- Two-part polyurethane adhesive securely bonds floors and walls to the substrate
- Flooring can be replaced without affecting the wall cladding

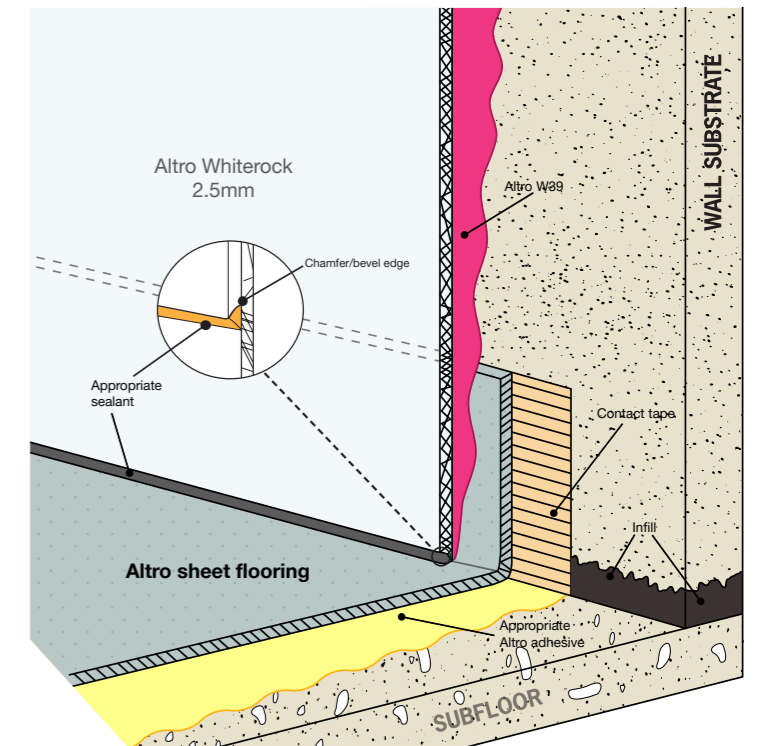


Altro Whiterock run flush to floor with pencil cove installation

The pencil cove installation method is an extremely secure way of detailing showers and wet areas. In this installation depicted above, the flooring has been self-coved without using a cove former/covestick and is protected by the overlapping wall cladding. The wall is flush against the flooring to ensure there is no opportunity to pick at the finishes. The bottom edge of the wall panel is chamfered and caulked with tamper-resistant security sealant. This installation method ensures the room is both watertight and tamper-resistant.

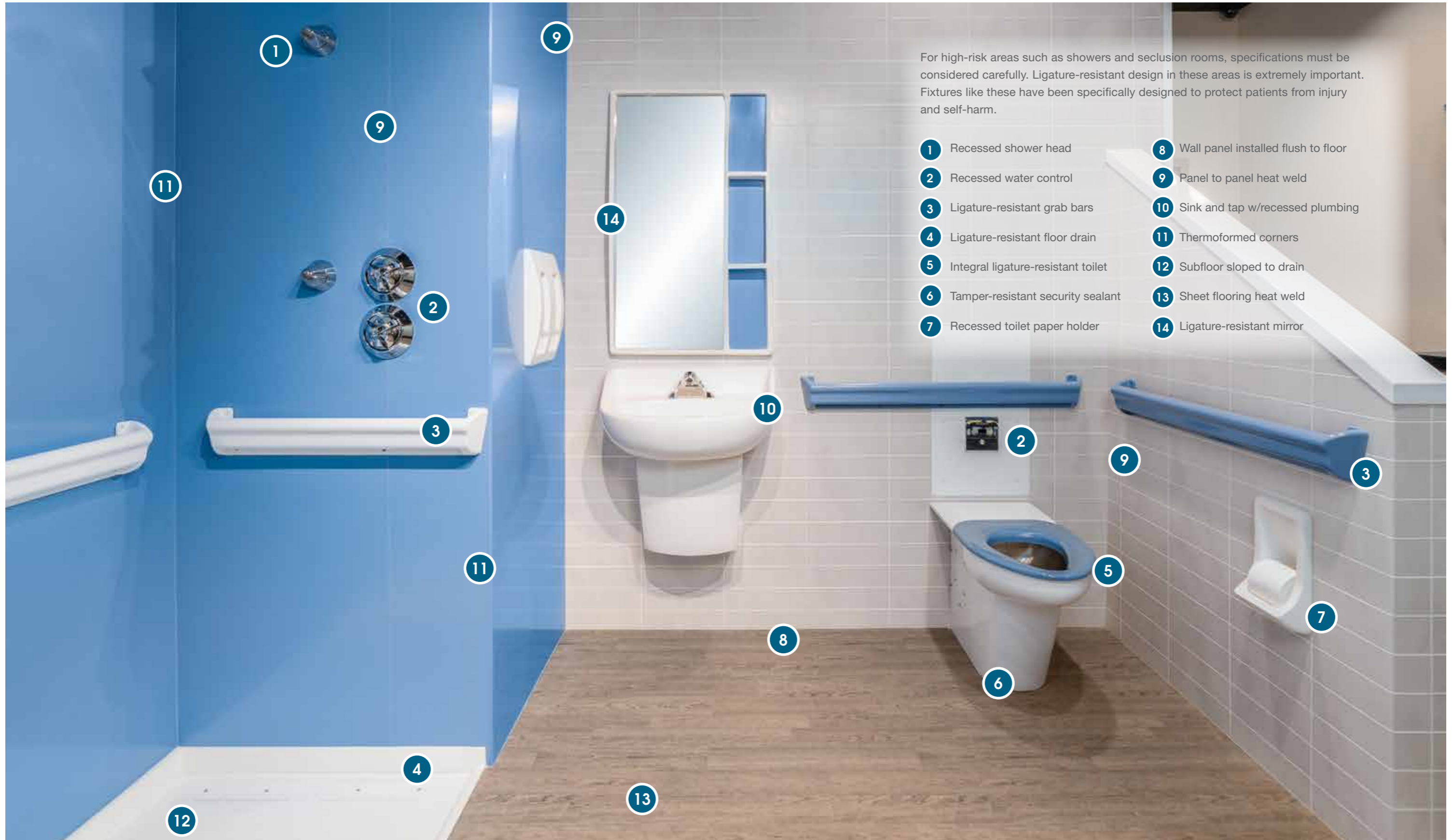
Benefits

- Completely sealed system
- Tamper-resistant
- Watertight



Note: Altro W39 adhesive is the recommended choice for all Altro Whiterock installations across all mental health units.

Ligature-resistant detailing



For high-risk areas such as showers and seclusion rooms, specifications must be considered carefully. Ligature-resistant design in these areas is extremely important. Fixtures like these have been specifically designed to protect patients from injury and self-harm.

- 1 Recessed shower head
- 2 Recessed water control
- 3 Ligature-resistant grab bars
- 4 Ligature-resistant floor drain
- 5 Integral ligature-resistant toilet
- 6 Tamper-resistant security sealant
- 7 Recessed toilet paper holder
- 8 Wall panel installed flush to floor
- 9 Panel to panel heat weld
- 10 Sink and tap w/recessed plumbing
- 11 Thermoformed corners
- 12 Subfloor sloped to drain
- 13 Sheet flooring heat weld
- 14 Ligature-resistant mirror

Flooring considerations



Sheet flooring

Altro sheet vinyl flooring is heat-welded together to create a virtually seamless, water-tight, system. This allows for the entire bathroom to be one floor and eliminates potential ligature points.



Integral flash cove

Guidelines prohibit the use of conventional vinyl and rubber wall base as these can be removed and weaponised. Altro flooring utilises an integral cove base behind the flooring so it cannot be accessed or tampered with.

Above shows a cutaway image of a cove stick reducing and terminating at a door architrave to create a seamless, unobtrusive finish.



Flooring heat welds

A heat weld is the required method of seaming sheets together to create a hygienic, impermeable seal in mental health facilities. This bond is extremely difficult to remove via gradual picking and is incapable of repurposing for acts of aggression or self-harm once damaged.



Two-part polyurethane adhesive

Altro flooring and wall cladding can be installed with two-part polyurethane adhesive. When cured, these hard set adhesives are water-resistant and rock solid, making removal of the floor or wall panel nearly impossible.

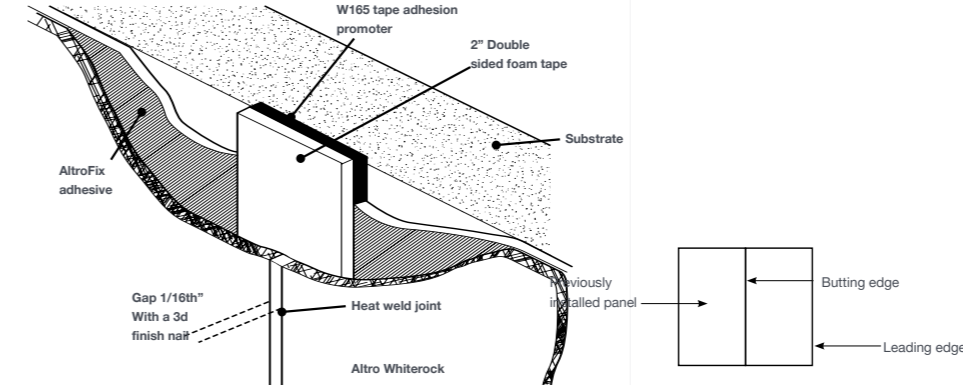


Ligature-resistant clamping drains

Ligature-resistant clamping drains for bathrooms and showers are secured with tamper-proof screws that can only be loosened via the corresponding specialty tool or removing the screw heads completely, these drains prevent misuse in low-supervision environments. The drain cover is designed with an internal gusset system to prevent ligature points.



Wall cladding considerations



Panel to panel heat-weld

Altro Whiterock wall panels can be heat-welded together. This bond is extremely difficult to remove via gradual picking and is incapable of repurposing for acts of aggression or self-harm once damaged.



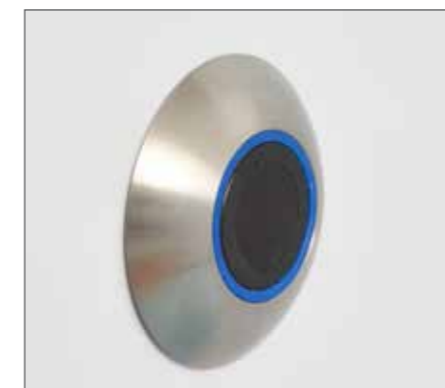
No pick, one-part connectors

An alternative to heat welding, one-part joint strips securely bond Altro wall panels together. Installed beneath the panels, this accessory cannot be forcibly removed.



Recessed shower fixtures

To reduce potential ligature points it is vital that shower fixtures such as shower heads and valves are properly recessed into the wall to prevent tampering or risk of self-harm. Great care must be taken when selecting appropriate fixtures for this environment as conventional options are not suitable.



Hellesdon Hospital - Norwich

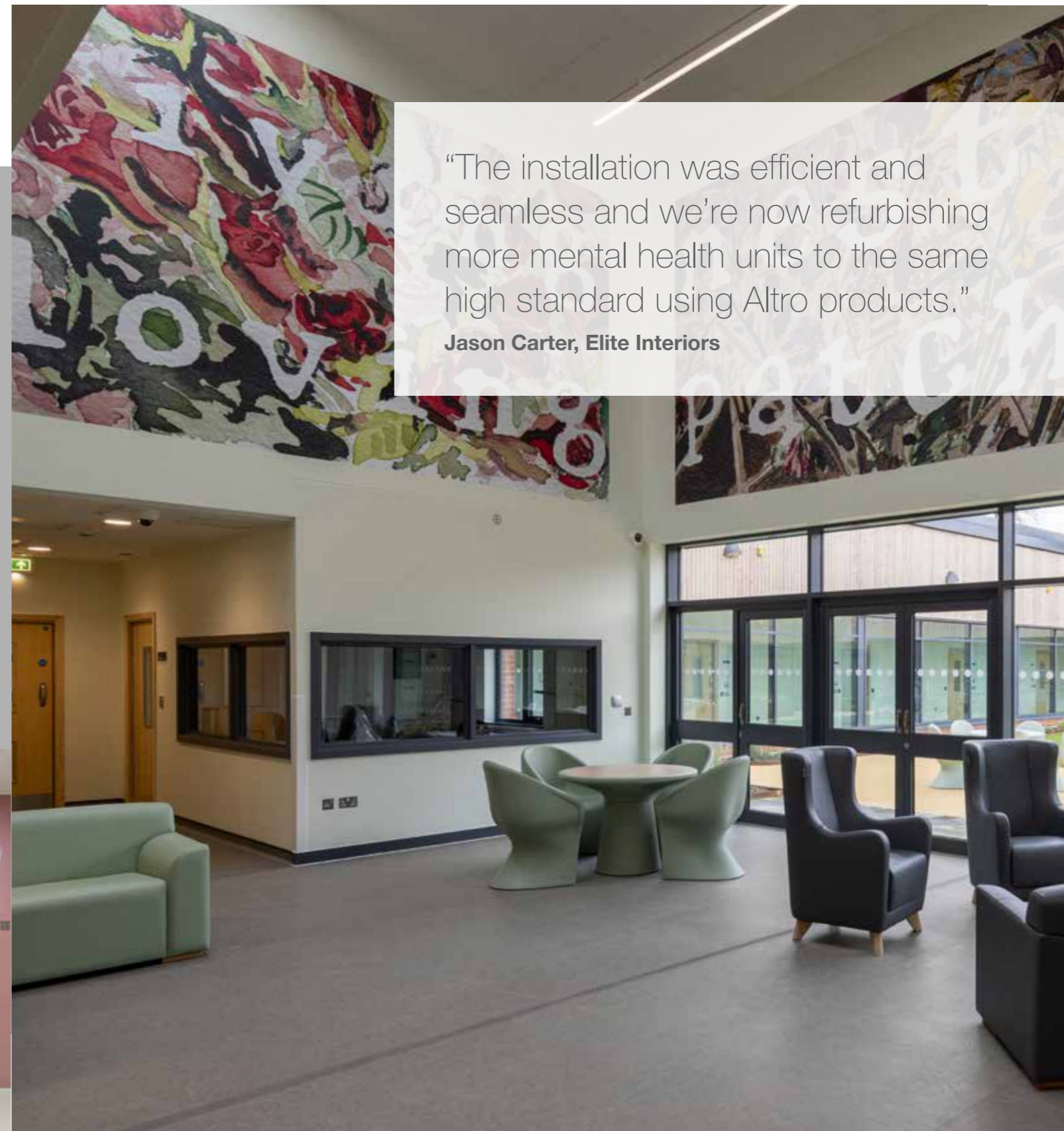
Award-winning, state-of-the-art Rivers Centre at Hellesdon Hospital specifies Altro floors to provide specialist, safe, and person-centered care for service users.

Consisting of three new ward buildings that were co-designed with patients, the £55m Rivers Centre at Hellesdon Hospital, run by Norfolk and Suffolk NHS Foundation Trust (NSFT), was built to provide a bespoke and therapeutic setting for mental health patients. The wards were designed to enhance the safety, dignity, and privacy of those receiving care, in accordance with government guidelines.

Products used needed to meet the Procure23 framework and BREEAM standards with consideration to reduced ligature throughout. Integrated Health Projects (IHP), the joint venture between VINCI Building and Sir Robert McAlpine, working with architects Murphy Philipps, Elite Interiors and Blade Flooring consulted with NSFT, who wanted to invest in products they knew would deliver the technical specification and meet their expectations.

A range of Altro products were specified throughout the Rivers Centre. Altro Illustra in colour Skyfall provides circulation areas, bedrooms, and communal spaces with safety under foot. Altro Illustra in colour Soft Blush, and Altro Whiterock Satins in colour- Blush were used to provide reduced ligature and a hygienic solution in seclusion rooms. Altro Pisces in colour Lighthouse, and Altro Whiterock Satins in colour Promenade were installed in bathroom ensuites.

Throughout the rest of the Rivers Centre Altro Whiterock Satins in colours Blush, Fawn, Cesco, Flint, Clarity, Mint, White and Promenade were used in ensuites, seclusion suite, kitchenettes, and laundry with Altro Walkway in colour Blizzard installed in the kitchen.



“The installation was efficient and seamless and we’re now refurbishing more mental health units to the same high standard using Altro products.”

Jason Carter, Elite Interiors



1. Altro Illustra™ | Skyfall | LU2415 | LRV 20
2. Altro Pisces™ | Lighthouse | SB2001 | LRV 70
3. Altro Whiterock Satins™ | Promenade | 212 | LRV 32
4. Altro Whiterock Satins™ | Blush | 231 | LRV 29
5. Altro Illustra™ adhesive-free | Soft Blush | LUAF2408 | LRV 57

“The floor is the thing that most people comment on as it’s so vastly different from the usual NHS style of flooring – even though it is to the same specification and standard.”

Chris McElroy, Altro specification consultant



CAMHS Udston Hospital, Hamilton

Altro help transform spaces for mental wellbeing, South Lanarkshire

At CAMHS Udston Hospital the old unit was originally a hospital ward which had been de-canted and empty since the COVID-19 pandemic. This included bedrooms, shower rooms, and kitchens in an old-fashioned community hospital building.

The building was stripped out and architects Hypostyle were enlisted to re-design all spaces as part of the major refurbishment programme. These spaces included a reception and waiting area, treatment office, corridors, and therapeutic rooms. The local Altro specification consultant provided guidance on suitable products when considering infection control, hygiene requirements, and NHS standards, and local children and young people were consulted on the colour scheme. A natural, calming atmosphere was required, one that reflected the hospital gardens and nearby woods, and Hypostyle provided the internal design specification.

To create a welcoming, biophilic theme, Altro Suprema in a natural tone and Altro Wood adhesive-free were specified for the reception, corridors, waiting area and treatment rooms.

Helping to reduce noise transference, Altro Orchestra with 15dB impact sound reduction, was specified for the offices. For hygiene and safety, Altro Whiterock White and Altro Suprema were specified for the bathrooms.

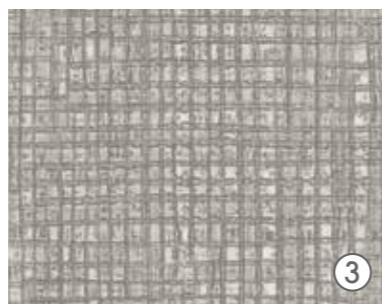
“It takes a lot of courage for young people to attend CAMHs – it can be an anxious time for them and for one of them to say ‘This place is wonderful, it has made me feel better already’ has confirmed that we have achieved our overall goal to create a welcoming, calm and comfortable environment. This is now the standard we will be aiming for in all future projects.”



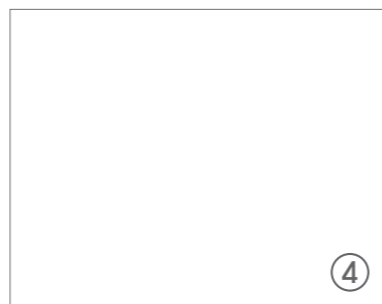
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②



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1. Altro Suprema™ | Pampas | SY20009 | LRV 62 2. Altro Wood™ adhesive-free | Shaded Cherry | AFW280004 | LRV 17
 3. Altro Orchestra™ | Trumpet | CH2825U | LRV 37 4. Altro Whiterock White™ | White | W103-W104 | LRV 89

Samples

If colour choice is critical, please request a sample of the material


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 Altro Suprema, Altro Whiterock wall designs, Altro Whiterock Digiclad (Custom), Altro Wood Comfort, Altro Serenade, Altro Aquarius, Altro Pisces, Altro Whiterock, Altro Tegulis, Altro Fortis Titanium, Altro Orchestra, Altro Operetta, Altro Walkway 20 and Altro Whiterock Whiteboard are trademarks of Altro Limited.

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