

Sensory-Informed Design in Practice – Learning from The Brook

1 October 2025

Agenda

10.00	<p>Welcome & introduction <i>All Crook (Regional Director of Nursing, NHS England SW) & Charlotte Burrows (Chief Executive, Design in Mental Health Network)</i></p>
10.10	<p>Design in Mental Health Network and the why <i>Charlotte Burrows & Liz Lawender (Interior Designer and Expert by Experience)</i> An introduction to the work of the Design in Mental Health Network charity and the case for good design across healthcare and wider settings.</p>
10.20	<p>Estates <i>Andrew Collier (Estates Delivery Lead - Somerset and Devon, NHS England Estates Delivery Team)</i> The session will explore the process of designing and constructing the Brook from a Trust Director of Estates viewpoint. This will include highlighting the challenges faced and solutions devised, along with associated lessons learnt through the project duration. Reflections on key areas of learning around cost, programme and risk will be shared. The importance of strategic planning of capital at Trust and system level will be explored, along with shared learning around preparation and positioning of schemes for future capital planning periods. Business case assurance and the role of NHSE in supporting Trust and providing oversight will be discussed along with governance and reporting.</p>
10.30	<p>Co-production in practice <i>Rosemary Jensen (Director, Jensen Architecture Ltd on behalf of King)</i> Rosemary will share The Brook team's practical approach to co-design, focussed on meeting the needs of the individual through listening and engaging with all building occupants. She will explain how The Brook sought to capture, communicate and respond to the evidence and experience base collaboratively, understanding and supporting the therapeutic model of care through adaptive space and a co-produced brief, design and delivery journey.</p>
10.45	<p>The Brook design brief – creating sensory-informed environments <i>Rachael Daniels (Interim Head Occupational Therapist, Devon Partnership NHS Trust), Danielle Morgan (Interim Professional Lead, Occupational Therapist, Devon Partnership NHS Trust)</i> This session shares the co-produced design brief provided to architects for The Brook, developed in partnership with service users and clinicians. It outlines how sensory-informed principles—such as zoned spaces, calming sensory features, and homelike layouts—can improve emotional safety, reduce restrictive practices, and support recovery for people with autism, learning disabilities, and mental health conditions. In addition to design principles, the session explores the multi-faceted clinical understanding of need that underpins the brief. This includes the integration of trauma-informed care, sensory processing theory, and person-centred approaches to ensure environments are not only therapeutic but also safe, inclusive, and responsive to complex clinical presentations.</p>

Agenda

11.00	<p>Designing The Brook <i>Anita White (Project Architect, Grainge Architects)</i> Anita will explain how the design of The Brook was developed to respond to the Trust's brief and create a safe, therapeutic environment for recovery. The session will explore how sensory needs informed choices around spatial zoning, massing, materials, landscaping and more, and how the design drew upon insights from Experts by Experience to deliver adaptable spaces suitable for a range of complex needs.</p>
11.15	<p>Break</p>
11.30	<p>Sensory-informed design in practice <i>Anita White & Liz Lavender, Steve Coombe (Interior Designer, Sidog Interior Design), Nicola Colborne (Senior Infection Prevention & Control Nurse, Royal Devon University Healthcare NHSFT) and Zoe Blawell (Advanced Nurse Specialist, Royal Devon University Healthcare NHSFT)</i> This session, led by Liz Lavender, Steve Coombe, and Anita White, will explore how sensory-informed design principles were considered and applied at The Brook. We will examine how colour, light, sound, and furnishings were used — why these elements matter, how their use has evolved, and the impact they have on recovery and wellbeing. The session will also reflect on the challenges faced during the design and delivery process, and how collaboration across disciplines helped overcome them to improve environments for both patients and staff, creating spaces that are safe, supportive and fit for purpose.</p>
12.30	<p>Spreading and applying the learning with an opportunity to ask questions <i>Charlotte Burrows</i> We will be inviting the audience to reflect and share on anything they have learnt from today's session and what they are looking to apply going forward.</p>
12.45	<p>Launch of the Environment Hub and close <i>Nathan Brassington (Primary & Community Development Lead, NHS England SW), Liz Lavender & Graham Carr (Interim Assistant Director of Nursing, NHS England SW)</i> Liz and Nathan will introduce the Environment Hub which is focused on a 'how to' for each design element with simple guidance to support creating therapeutic sensory informed interiors. Following this, Graham will close the webinar.</p>
13.00	<p>Close</p>



Design in
Mental Health
Network



Scan the QR to find out
more
Design In Mental Health
Network



Design In Mental Health Network

We are a UK-based charity. **Our purpose is to improve mental health outcomes through better design.**

We are a network that brings together professionals from mental healthcare, care, architecture, design, industry, academia, and lived experience working together to create safer, more therapeutic spaces for those who access and deliver mental healthcare

What We Do

Research & Learning - We commission and translate research into practical guides, tools and insights that help teams make evidence-based changes and improve outcomes in mental health

Spreading Design Innovation - We connect people, organisations, projects, and opportunities across the UK and beyond to showcase products, solutions, and system-changing approaches that; improve experiences for people, deliver value for health and care systems, and drives innovation across the mental health design landscape.

Product Testing - In partnership with the Building Research Establishment, we promote independent product testing to improve safety, reliability, and patient outcomes in mental health environments.

The impact of design in health care ?



Good design is often invisible

Poor design is impossible to ignore

The impact of poor design



Engraved memories

Professionally as an interior designer, and more importantly as a mom

‘My why’

Liz Lavender

The case for good design in Healthcare



There is strong evidence that well-designed health and care settings have measurable positive outcomes, helping people to recover sooner, improving patient and visitor experiences, and increasing staff wellbeing and effectiveness in their care.

However, in healthcare, **design decisions are not neutral** they can help or hinder recovery, safety, staff wellbeing and effectiveness.

From signage to soundscapes, from family rooms to ward layouts, **design impacts outcomes for patients, staff, and systems.**

Good design can be **quietly transformative** — from intuitive wayfinding to calming acoustics to spaces that promote dignity and connection.

Staff and patients have come to expect that NHS environments will be unpleasant



*I work in a well-resourced teaching hospital with a reputation for excellence in patient care and in research but the outpatient space **where I work could not be described as a therapeutic healing environment.** Out of the 31 rooms that make up this department, almost two-thirds have no windows and therefore no natural light, ventilation or connection with the external environment. Although the space is immaculately clean, it is inflexible; wayfinding is poor, and staff struggle to find appropriate spaces to work and to rest.*

This is not a unique experience.

Rona Inniss Clinical Nurse Specialist, Guy's and St Thomas' NHS Foundation Trust

REDUCING VIOLENCE AND AGGRESSION IN A&E

THROUGH A BETTER EXPERIENCE



The design solutions improved patients' experiences of A&E through clarification of the A&E process and improvement of the physical environment. These improvements led to reductions in frustration and reduction in potential escalation into hostility.

88%

Of patients felt the Guidance project clarified the A&E process

75%

Of patients said the improved signage reduced their frustration during waiting times.

50%

Threatening body language and aggressive behavior fell by 50% post-implementation

3:1

For every £1 spent on the design solutions, £3 was generated in benefits

Using the Process & Principles of Design

Challenges

DISCOVER

Understand problems

DEFINE

Define challenge(s)

DEVELOP

Test solutions & learn

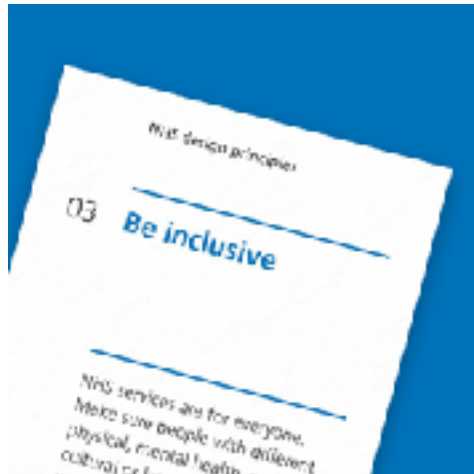
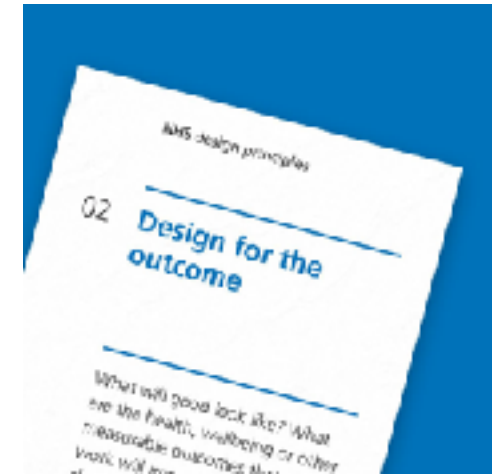
DELIVER

Adopt + Spread learning

Outcome(s)

The problem is just as important as the solution.

Are we solving the right problem?



The Brook

Mark Barriball
Deputy Director Of Estates and Facilities
October 2025



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Site Selection



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Suitable Location and Site

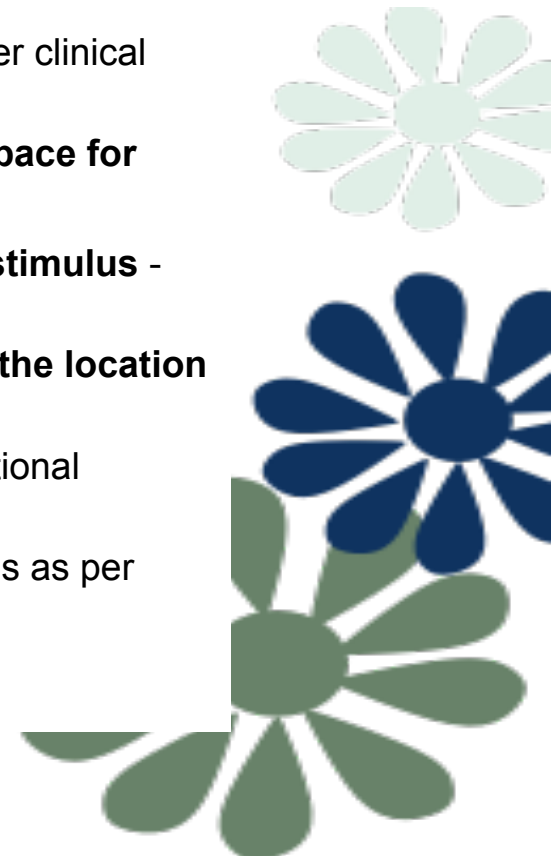
- Unique service requiring a bespoke building. New build ideal.
- Meeting the needs of the patient group.
- Ensuring lived experience support was provided from the outset.
- The use of CQC guidance to fit a best fit whilst the clinical model was still be developed.



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CQC Site Selection Guidance

1. **The site(s) are close and within walking distance of a community** – (e.g. social, leisure, educational and day to day services) This is as per national and CQC requirements, clinical input as well as service user input during engagement and coproduction
2. **The site(s) have good access to transport links including road, rail and buses** - This is as per clinical input into the clinical model and service user input during engagement and coproduction
3. **The site(s) have sufficient space to develop units as per the proposed configuration and space for sufficient parking:** This is as per the clinical model, CQC requirements and bed modelling
4. **The site(s) have sufficient outdoor and green space that is in a quiet, safe space with low stimulus** - This is as per clinical input and the clinical model
5. **There is a readily available skilled and knowledgeable workforce within close proximity to the location of the site(s)** - This is as per clinical input and in recognition of recruitment pressures
6. **The unit(s) are co-located with mental health hospital/inpatient provision** - This is as per national guidance
7. **The unit(s) have ease of access to physical health acute and primary care provision** - This is as per national guidance
8. **Access for families and other who know person well including overnight accommodation**



Options Long List - Background

Ten service options describing the potential scope for the service were measured against a list of sixteen critical success factors [CSFs].

Six location options for the unit were measured against further CSFs and then ranked.

The location options (ranked) were:

- Wonford House Hospital DPT site
- Whipton Hospital NHS PropCo site where current ASU is situated
- Exminster DPT site
- Franklyn Hospital DPT site
- Langdon Hospital DPT site
- Purchase or Rental of land elsewhere



DPT Preferred Site Options

The Long List Option Appraisal found Wonford House Hospital site (owned by DPT) was the favoured option. However, for this Programme this was discounted for the following reasons:

- Lack of space to build
- The challenges around obtaining planning approval
- The length of the timeline to complete the build

After the detailed design planning stage, the Whipton Hospital site (owned by NHS PS) in Exeter was also discounted for the following reasons:

- The higher costs of building on this complex site
- The higher costs of the building design required to obtain approval- demolition works and substation relocation
- Complexities of ownership model and multiple stakeholders

planning



Regional Offer Opportunity

The new model sets an aspiration to ultimately support reducing out of areas admissions to as close to zero as possible across the South West Region and only utilise the 20 beds available within the new units through transformation of community services and early intervention.

DPT has worked with the appointed architects (Grainge Architects) to consider the options for the construction of the facility and a favoured design which meets all the stringent therapeutic environmental requirements of experts by experience (staff and inpatients) and external experts around neurodiversity has been created.

This design was costed **and determined to be affordable on DPT's Langdon site for several reasons, eg: external building finish, levels and a 'clean' site to build on.**



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Assessment

To close the capital gap:

- **Langdon site** was explored as an alternative location (lower capital costs) and **revised the design** (with oversight of our Clinical Reference Group)

Considerations-

- Location on the site
- Electrical supply capacity
- Drainage location and suitability
- Water supply capacity (currently site supplied by an artisan bore hole)



Aerial View of part of the Langdon Site



Supportin

Location Plan



Site Location Plan (1:1250)



Site Ownership Plan (Not to scale)

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The Vision



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Proposed Site Plan



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Build Design for Langdon site

Project Name: Whipton LSW Unit
Site: Devon Partnership NHS Trust
Date: 2024

**WORK IN
PROGRESS**



Preception wing layout to be reviewed to suit CRS comments & Langdon site.



FEASIBILITY

Whipton LSW Unit
By Devon Partnership NHS Trust
Langdon Study Floor Plan

Date: 2024
Drawing No: 0024 (Rev 1)
The Building is a new building

grainge architects



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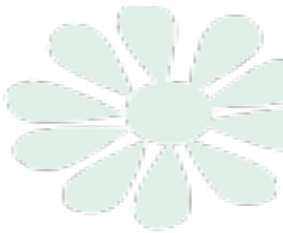
Visualisation of Site Design



Kier were the Principal
Supply Chain Partner
(P23).

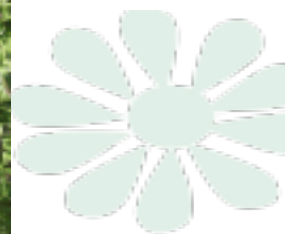
Preparatory groundworks
December 2023.

Completed June 25.



Supporting

Visualisation of Entrance and Woodland



Supporting

Visualisation of Primary Elevation



Supporting

The Challenges



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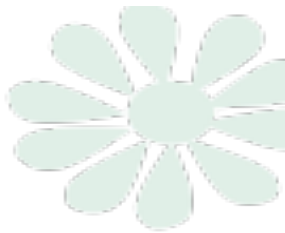
LDA Site status:



05/04/2024



12/04/2024



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Very Wet Conditions for many months



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Southern Elevation



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Solar roof panels- additional safety measures, fire risk



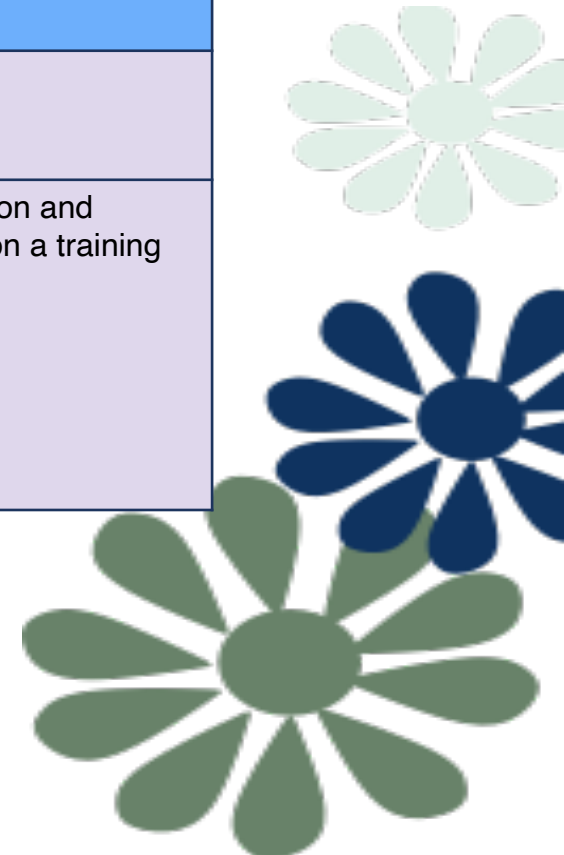
Supportin

**Patient Gardens and Staff External Corridor- reduce the risk of
absconson**

Key Risk

Description	Description
Capital Funding	Capital cost to complete the project exceeds the allocation. Delivering the project within the financial allocation
.	Recruitment to large complex MDT staff team is challenging. Comprehensive induction and training may extend beyond opening date. Additional risks as some staff will still be on a training programme

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The Outcome



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The Brook Entrance



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Actual Entrance and Ward Elevations



Supporting you to live well

Actual Ward Elevations



Supporting you to live well

Actual End Elevation



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Challenging Timeline

- P23 Framework signed with Kier Construction Ltd 14th March 2023
- Design stage started
- Shift of location from Whipton Exeter to Langdon Dawlish
- Designed reviewed and revised
- Langdon construction enabling works started date 11th Dec 2023
- Completion date 30th June 2025
- Handover 8th August 2025

Completed 3 months behind the initial submitted plan.
Weather main factor in delay.

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Limited Capital

- The scheme was delivered in line with the approved business case. Using the P23 Option C contract enabled a transparent and open approach to both developing the costs and understanding the impact of changes.
- In addition, the Trust used several standard components along with its established supply chain. This meant cost certainty around these items was secured early along with knowledge that key aspects of the brief were complied with.
- The NEC contract ensured that regular programme updates were provided and enabling detailed monitoring to be undertaken.
- Very long lead in items of high value had to be costed and purchased early on in programme.

Construction cost £14,300,000.00

Project cost £20,250,000.00



Lessons Learnt

- Don't assume practical solutions will apply when dealing with Non- departmental public bodies – selecting the football pitch as the most cost-efficient option became a challenging planning discussion.
- Challenge the programme timeline being supplied by the main contractor – this happened several times as it was too ambitious when reviewed against actual progress.
- Commissioning and key completion activities- units of this nature have complex commissioning requirements which need to be met, ensure that a clear period for Estates familiarisation and commissioning is specifically identified and protected.
- Ensure suitable Estates and Facilities resource is available for the whole duration of the project and engaged in the process from an early stage.

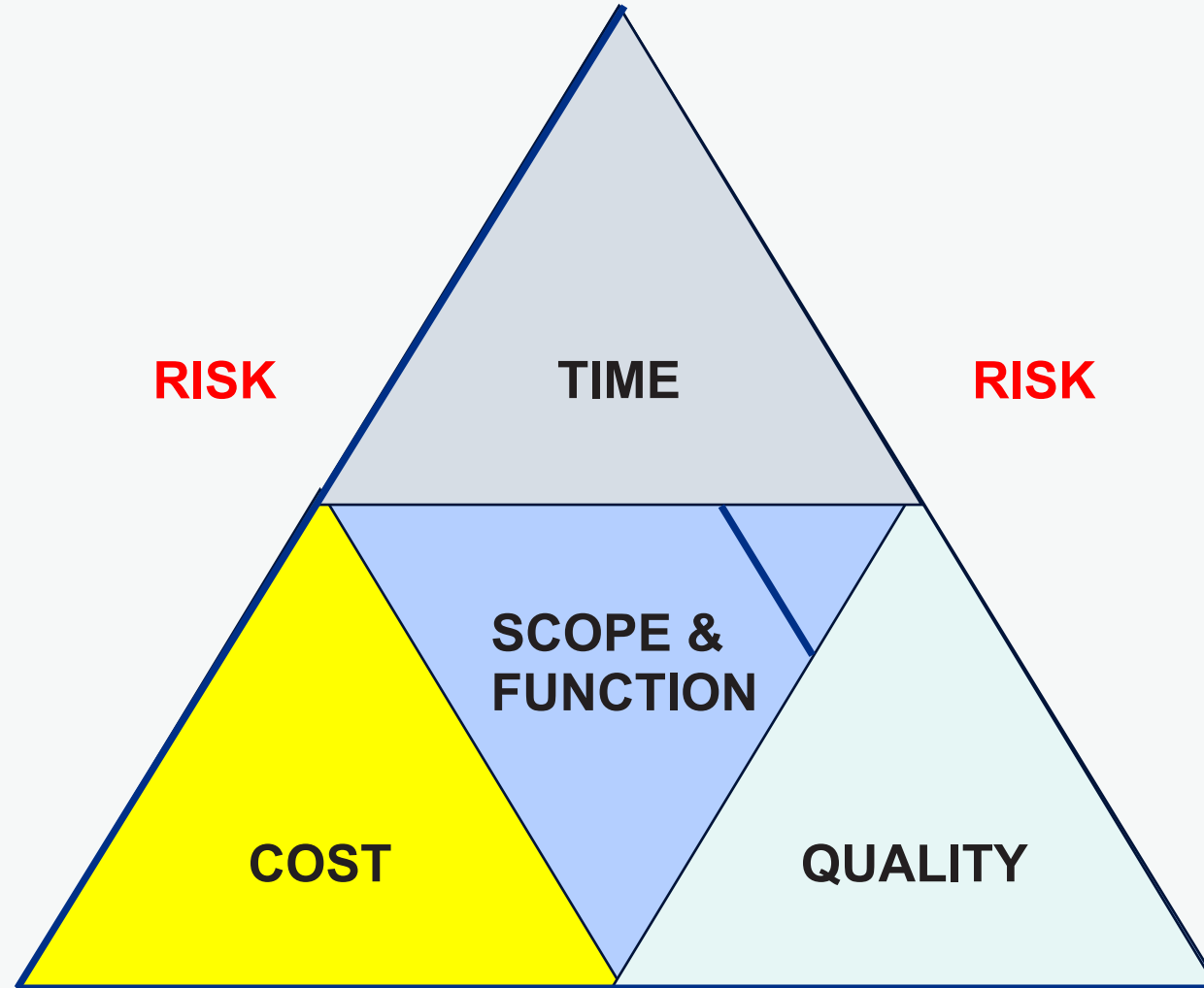


The Brook

NHSE Areas of Note

Presented by:
Andrew Collier

Key project considerations





Business case process and programme governance

- £20.25m budget, hence SFBC rather than SOC/OBC/FBC.
- Preparation and assurance of case – close NHSE-Trust-ICB working.
- NHSE (estates, regional teams and national MH team) collaboration.
- Consideration of business case structure as 2 sites in programme (The Brook and the Kingfisher in Bristol). Separate cases determined best way forwards.
- Steering group across both projects – to ensure regional approach as 2 units in different ICB areas. Critical to delivering a SW wide solution accessible to whole of region. Helped to ensure collaborative working and agreed consistent clinical and commissioning solution/ approach across 2 ICB's and 2 providers ensuring region wide solution. Consistent approach to managing quality and assurance in operation and patient outcomes. Shared learning across patch during design, construction and operation.
- Direct involvement of Assistant Director of Nursing Learning Disability & Autism Programme in developing clinical model and programme board. Clinical strategy key to understanding estates needs.



Oversight and reporting

- The Brook – programme wide steering group and programme management function provided by SW Provider Collaborative and CSU and estates / capital group project groups.
- Excel/Word project reporting and monthly meetings.
- Future reporting requirements and Bubble system.
- Oversight and support from NHSE, ensuring Estates Delivery Leads and Capital Finance Leads integrated into project and utilised effectively.
- Support, advice and guidance function of EDL role, from project inception to completion.



The people involved

- Commitment of time and energy and flexible approach around ongoing work commitments.
- Passion for delivering an outstanding project and an outstanding service.
- Patient focussed approach looking at outcomes and benefits at all stages.
- Broad range of stakeholders across many disciplines.
- Collaboration and joint working has been the key to success.
- Technical expertise and shared knowledge.



Strategic capital planning

- Constraints and challenges of short term capital planning.
- Welcome shift to multi year settlement, which enables longer term capital planning aligned to service strategies.
- Positioning of schemes for future capital planning, refresh of capital pipelines at system level and potential timescales.
- Importance of effective collaboration with NHSE colleagues and system colleagues in respect of shared learning.
- Consideration of changing landscape in NHS.

Thank You



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youtube.com/@nhssouthwest



england.nhs.uk/south



Co-production in Practice – Learning from The Brook

1 October 2025

Cultural Necessity

[Home](#) > [Health and social care](#) > [National Health Service](#) > [NHS Constitution for England](#)



[Department
of Health &
Social Care](#)

Guidance

The NHS Constitution for England

Updated 17 August 2023

Applies to England

Contents

[Introduction to the NHS
Constitution](#)

[Principles that guide the NHS](#)

[NHS values](#)

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rights and the NHS pledges to
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[Patients and the public: your
responsibilities](#)

[Staff: your rights and NHS
pledges to you](#)

[Staff: your responsibilities](#)

Introduction to the NHS Constitution

The NHS belongs to the people.

It is there to improve our health and wellbeing, supporting us to keep mentally and physically well, to get better when we are ill and, when we cannot fully recover, to stay as well as we can to the end of our lives. It works at the limits of science – bringing the highest levels of human knowledge and skill to save lives and improve health. It touches our lives at times of basic human need, when care and compassion are what matter most.

The NHS is founded on a common set of principles and values that bind together the communities and people it serves – patients and public – and the staff who work for it.

Cultural Necessity

GOV.UK

Home > Health and social care > National Health Service > NHS Constitution for England

Department of Health & Social Care

Guidance

"Your right to be involved"

The NHS Constitution for England

Updated 17 August 2023

"You're right to be involved"

Applies to England

"Nothing about me without me"

Contents

- Introduction to the NHS Constitution
- Principles that guide the NHS
- NHS values
- Patients and the public: your rights and the NHS pledges to you
- Patients and the public: your responsibilities
- Staff: your rights and NHS pledges to you
- Staff: your responsibilities

Introduction to the NHS Constitution

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The NHS is founded on a common set of principles and values that bind together the communities and people it serves – patients and public – and the staff who work for it.

Matched mindset



Hospital to Home:
Beth's story



What was it like?

unwritten rules
overwhelming
Harsh fluorescent lights
noise defenders
sharp sounds scraping chairs
Alarm triggers
loud banging and sharp textural sounds

small group
smaller rooms
Silent alarms
control
structured transition
rocking chairs
safe meltdown
Communication system
clear signage
social stories
sensory rooms

Shadow Day

May 2023



Joint visits

June 2023



Image courtesy of Medical Architecture

Joint visits

June 2023

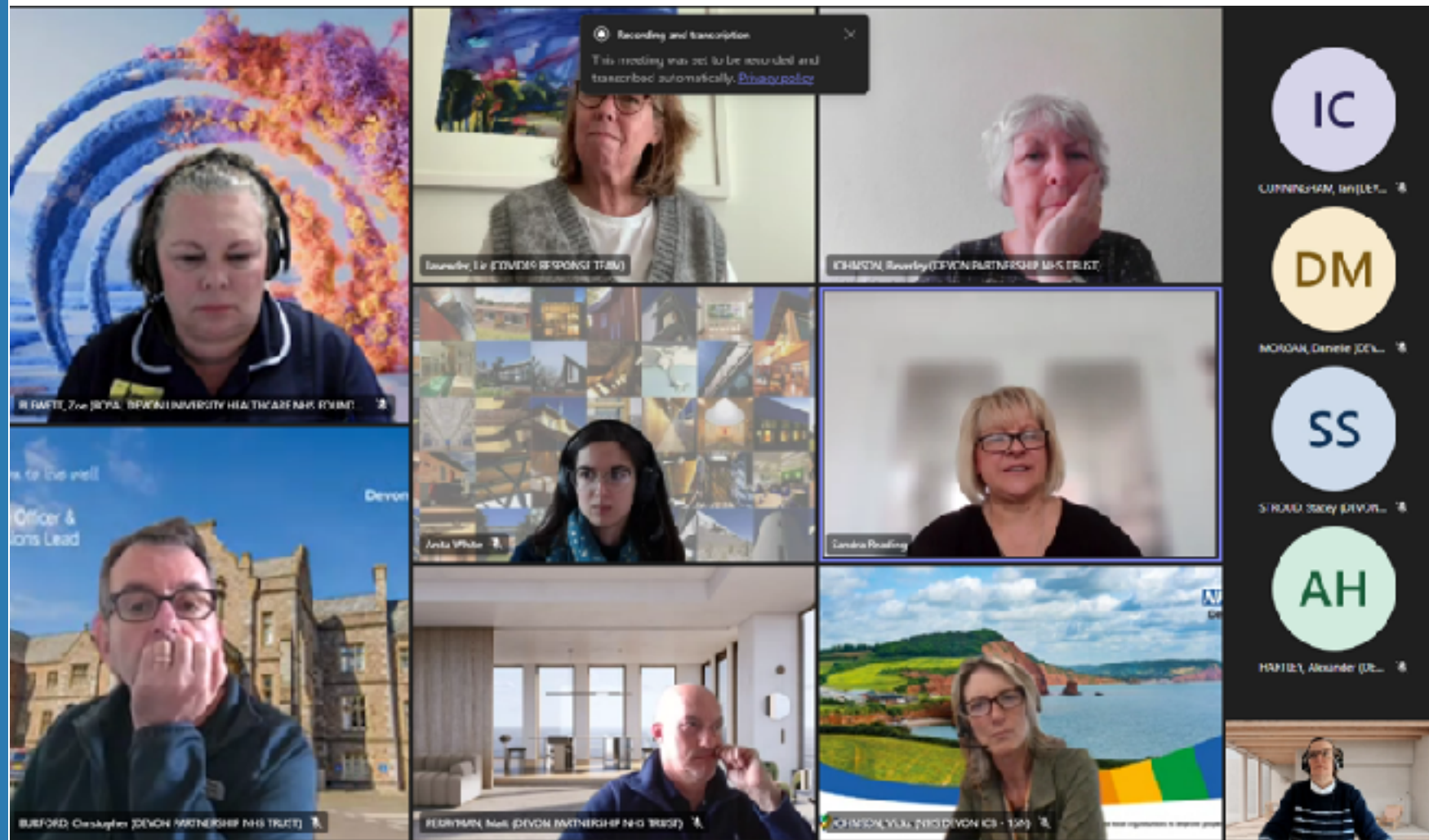


Day in Life of....

April 2023



Clinical Review Groups throughout



Internal Design agreements



Devon Partnership
NHS Trust

Kitchenettes

Design review has been completed and will now include bespoke in-built units with lock-back doors; and include worktop, inset sink with Hydrotap, mini fridge and microwave. Previously considered items to be included were a kettle and a toaster. These will no longer be supplied within the patient rooms. All patients will have ongoing risk assessments before, and during, having access to their kitchenette, including risk assessments for individual items in their kitchenette.

Window Mesh

Following detailed clinical assessment and discussion an agreement has been reached to include mesh on externally-facing windows only. The internal windows will not have mesh in order to improve ventilation and light, and support patient comfort.

The LDA unit will have both externally facing windows and internally facing small windows (for ventilation purposes) between the patient's room and their individual private garden. By placing mesh on these windows, which already have reduced light, will significantly limit the amount of light and air entering the room.

Further assessment of cleaning requirements for mesh-covered windows has also been completed with the new unit having removeable mesh for window cleaning and windows which can be easily fitted with mesh at a later date if any reassessment was required.

Clinical Review Groups
throughout

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Design / Impact – Operational process

De-escalation

New guidance being prepared by NHSE will require de-escalation spaces to not be locked
Changes have been made to the door specification whilst maintaining the robustness of the environment.
Clinical teams actively engaged in NHSE CRG discussions and a specialist review, sharing best practice and visits to alternative sites.
Whilst attention has been given to the robustness of the design, additional consideration has been given to the social autonomy of the patient, with access to fenced seclusion garden space, a lounge area, bedroom and a choice of activities.

Whilst design continues in line with requirements, further and ongoing discussions are taking place to inform the operational practice/policies for the new LDA Unit

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Naming Process/Engagement



Devon Partnership
NHS Trust

- DPT, led by Comms Team, intends to carry out the naming process for the LDA Unit over the next few weeks. We will update on this as and when....
- Engagement with Devon Partnership Boards takes place regularly and Experts by Experience are engaged through a third party, Living Options Devon, to provide support and gain feedback from patients, carers and staff.



We empower disabled and Deaf people
to live the life they choose



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Design Reviews

Learning Disability and/or Autism Mental Health Inpatient Facilities

Positive Feedback from the Design Appraisal Toolkit (DAT) Workshops

As users of regional mental health services improve the quality of care and the experience could be with a learning disability and/or autism, two LDA projects will make much needed care closer to home by increasing the number of inpatient beds available across the South West. One project is at the Blackberry Hill Hospital site, Striscourt by Avon and Wiltshire Mental Health Partnership NHS Trust (AWP) and the other at Langdon Hospital site in Dorset, run by Devon Partnership Trust (DPT). A joint board formed to work on the shared programme approach has ensured the specialist and co-creates centres of excellence with designs that incorporate current best practice and the latest research.



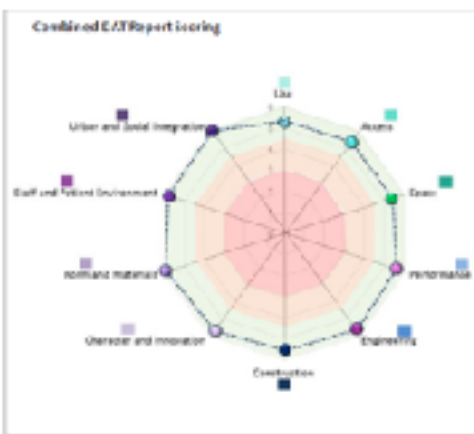
The Design Appraisal Toolkit (DAT) workshops for each of the projects was an invaluable opportunity for the Trust teams to discuss and assess the scheme designs to ensure the objectives were being achieved. The positive scoring reflected the design quality and high level of collaboration within each of the project teams.

Both projects have been designed with input from those with lived experience.

Ben Stunell, peer mentor on the AWP LDA scheme said: "It has been very rewarding and confidence building to have our thoughts and ideas listened to and it will be very exciting to see the building going up and taking shape. Knowing that we've contributed so much, alongside other support groups and people with lived experience. We are committed to keeping the autistic voice at the forefront of any ward/district designs so that the environment is adapted to our needs".



Architectural Visuals: Langdon Hospital site, Dorset



Stakeholder comments from the DAT workshops:

Stakeholders were particularly pleased with the following key design aspects:

- Good visual connection to high quality external green spaces from the interior spaces.
- Good provision for user and staff outdoor areas, even on a restricted site.
- Optimisation of the bedroom design to create areas and provide an inspiring space for service users.
- The overall plan layout accommodates efficient staff flows while also providing carefully designed circulation areas suited to a range of user needs.
- Flexibility and provision for both accessible and basic care bedrooms noted as particularly positive and an excellent benchmark.



Architectural Visuals: Blackberry Hill Hospital site, Bristol

DPT LDA Project PSP: Kier / Architects: George Architects Ltd / M&E Engineers: Eir / Landscapes Architect: Roffey Design Ltd / Structural Engineer: Arup and Coles Consulting Engineers
AWP LDA Project PSP: M&E Architects / Architects: Roffey Design Ltd / M&E Engineers: H&P Ltd / Landscapes Architect: Roffey Design Ltd / Structural Engineer: H&P Ltd

The Brook Design Brief

The physical and social environment directly influences emotional safety, occupational engagement, and recovery outcomes.

Rachael Daniels – Professional Lead for Occupational Therapy

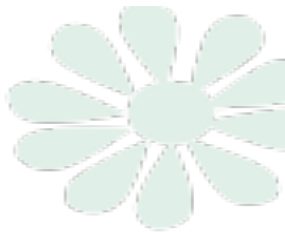
Danielle Morgan Advanced Specialist Occupational Therapist



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Why Sensory-Informed Environments Matter

- Reduce anxiety and distress.
- Support self-regulation and calm.
- Prevent sensory overload and escalation.
- Make care more accessible and inclusive.
- Affirm neurodiversity and individual strengths.
- Foster autonomy, engagement, and recovery.



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These principles are grounded in the Model of Human Occupation (MOHO) and supported by tools like the Residential Environment Impact Scale (REIS)

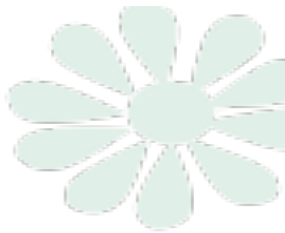
Learning Together

- Zones of Regulation Quality Improvement Project at the Additional Support Unit
- Residential Environmental Impact Scale
- Capable Environments
- Previous experience sensory Integration clinic space



Learning Together

- Learning from the environment from the Additional Support Unit
- Trust experience of designing and using new inpatient units
- Scoping other specialist units



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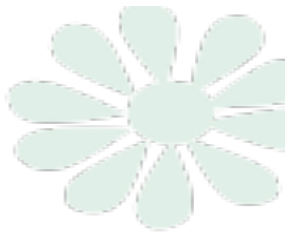
Physical Space

Why:

- Reduces sensory overload and distress.
- Promotes autonomy, dignity, and safety.
- Supports trauma-informed care.

Summary:

- Sensory-friendly design (lighting, sound, textures).
- Zoned areas for activity and quiet.
- Private bedrooms, en-suites, and kitchenettes.
- Clear signage and accessible layouts.
- Natural environment



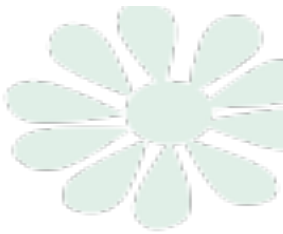
Resources

Why:

- Enables self-regulation and reduces restrictive interventions.
- Builds daily living skills and engagement.

Summary:

- Sensory rooms, quiet pods, movement spaces.
- Visual supports and personal belongings.
- Private kitchens and laundry areas.



Social Support

Why:

- Fosters trust and engagement.
- Reduces anxiety and isolation.
- Supports recovery through meaningful relationships.

Summary:

- Staff trained in trauma/sensory-informed care.
- Co-production with service users.
- Predictable routines and choice.



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Opportunities

Why:

- Promotes recovery and independence.
- Reduces restrictive practices.
- Supports person-centred care.

Summary:

- Meaningful activities and skill-building.
- Regulation zones for participation.
- Tools for discharge and community integration.



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Advancing Our Learning

REIS Audits Collaboration

- Experts by Experience and Occupational Therapists collaboratively assess all DPT ward environments to develop tailored action plans with annual reviews.

Sensory Champions Training

- The 'Train the Trainer' model and peer support build a sustainable network of trained Sensory Champions across wards.

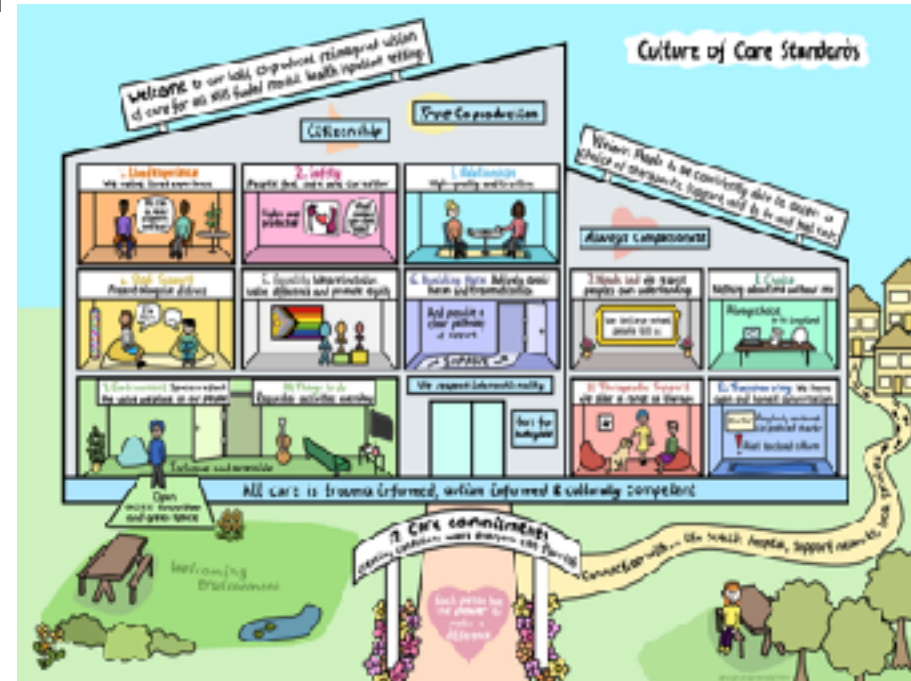
Sensory Attachment Awareness

- Training helps managers and staff understand their sensory profiles and stress patterns to promote trauma-informed care.

Next step.....

Quality Improvement Project - 'Beyond a Sensory Box'

- Co-production of welcoming waiting room designs integrates physical, sensory, and social factors to enhance patient experience.



Supporting you to live well

Key Message



"Creating sensory-informed environments is essential for reducing distress, promoting recovery, and fostering well-being through collaboration and inclusive care."

Supporting you to live well



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Designing The Brook

Anita White – Associate Architect

grainge architects

Location

Layout

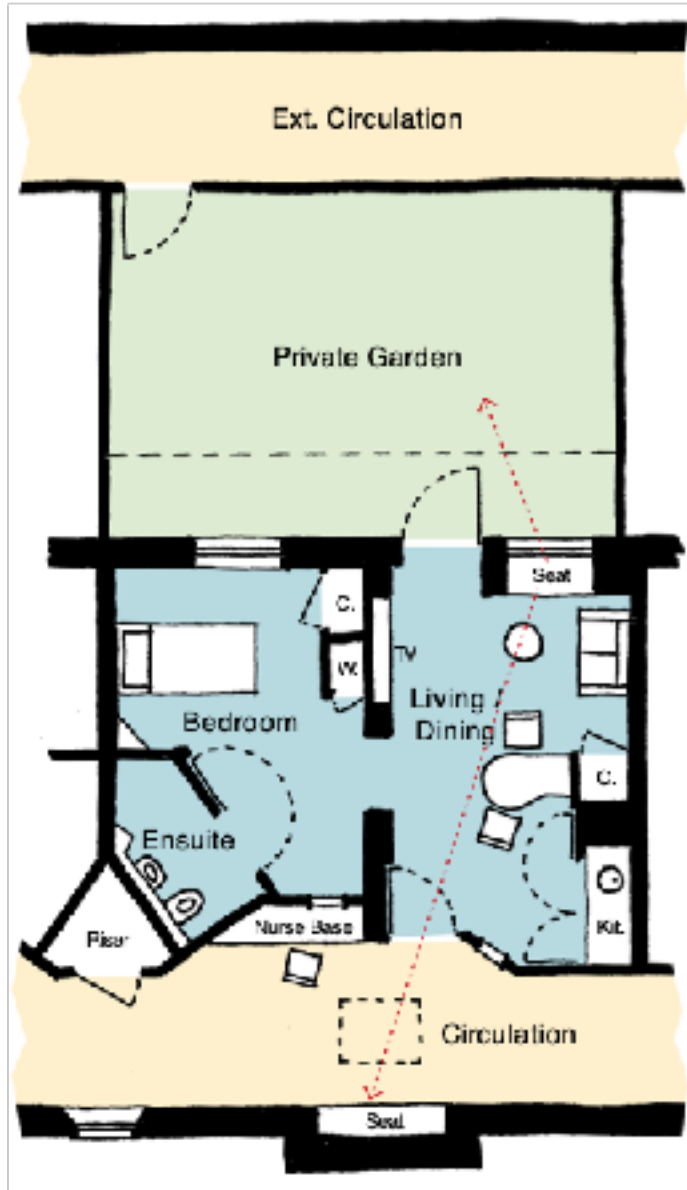


First Floor

Flatlets, spatial transitions & flow



Flatlets, spatial transitions & flow



Flatlets, spatial transitions & flow



Courtyards

Sensory Integration Garden

De-escalation Garden

10x Private Gardens

Breakout Garden

Visitor Garden

Activity Garden

Quiet/Sensory Garden



Courtyards



Landscaping



Form, scale & materials





Final thoughts

- Good sensory-informed design benefits everyone
- Holistic design is key; all elements need to work together to create a successful whole





Any questions?

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grainge architects

Break





The Brook

Sensory-informed design

Liz Lavender

Steve Coombe - 3idog

Anita White – Grainge Architecture

**Light
Colour
Sound
Furnishings**

Sensory-informed design

Exploring why and how these elements were considered, we show how the design evolved into an environment that supports both patient recovery and staff wellbeing.

'Nature is not a luxury: it is a vital part of human health'

Roger Ulrich, Environmental Psychologist



Light

The Research

Chellappa et al. (2013)

Blue evening light delayed melatonin; warm light reduced disruption.

Münch et al. (2017)

Warm dim evening light improved sleep and circadian rhythm.

Vetter et al. (2022)

Circadian lighting in psychiatry improved sleep and mood.

Taniguchi et al. (2022)

Daylight + green space reduced depression, anxiety, stress.

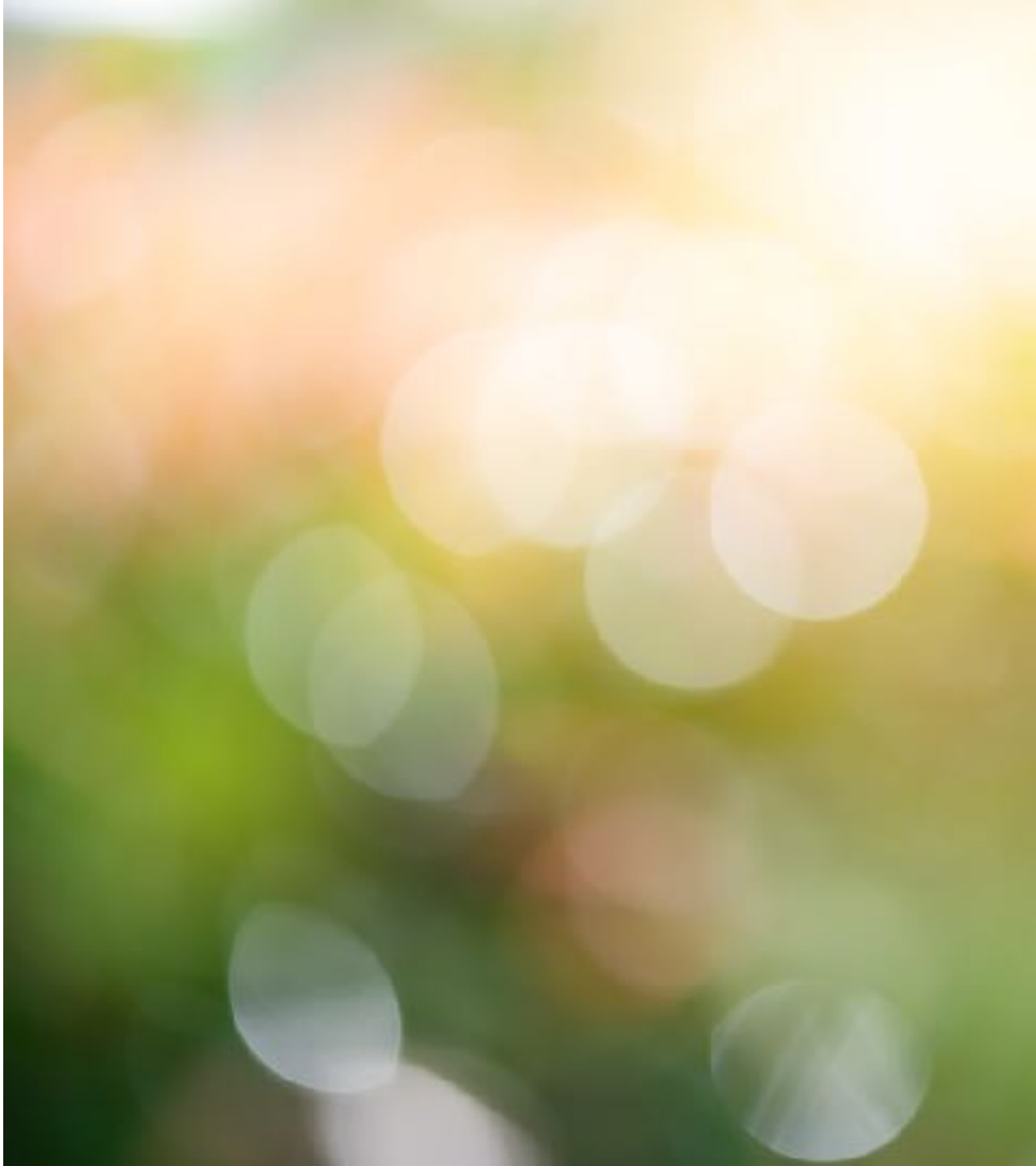
Norman Biobank (2023)

Daytime light lowered risk of psychiatric disorders; night light raised it.

Daylight

Gives us a sense of time, natural daylight changes anchor us in the day/night cycle.

Exposure to daylight is linked to faster recovery and reduced medication.

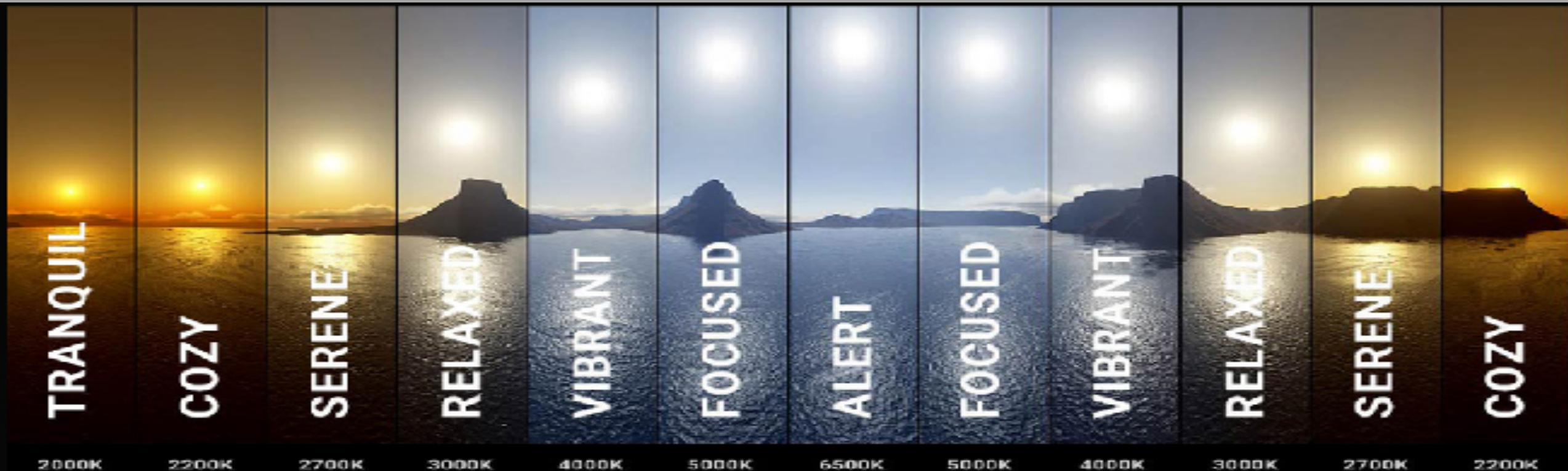


Morning, Noon & Night

Warm light gently wakes the body

Bright daylight boosts alertness

Warm light prepares us for sleep





Light Colour

Warm White (2500–3000K)

calming, like sunrise or sunset; supports relaxation and winding down.

Cool White (3500–5000K)

balanced light for daytime activity and focus.

Daylight (5500–6500K)

bright, alerting, like midday sun; boosts concentration.

Warm Light

Sunrise/Sunset

Calm & Restful

Supports Melatonin Release

Ideal for recovery spaces

Cool Light

Mid day

Stimulating & Alerting

Boosts Concentration

Idea for active/work areas



Flexible diffused light

Colour **temperature** reflects use

Daylight

Neutral integrated blinds



Lighting shapes how we feel, think, and recover.

Warm colour light

Reflect sunrise/sunset tones which are calming, restful and linked to melatonin release.

Cool light colour

Reflect midday tones which are linked to alertness and focus, good for function activities

Dimmable

Flexible light levels support comfort, choice and control

Impact on Health

Lighting design influences mood, stress and healing outcomes.

Colour & Finish

The Research

Ulrich (1984)

Natural views sped recovery & reduced pain medication.

Dijkstra et al. (2008)

Nature-inspired wall colours lowered pain & stress.

Andrade et al. (2013)

Warm muted palettes reduced pre-procedure anxiety.

Jiang et al. (2014)

Green colour schemes linked to less analgesic use.

Bower et al. (2020)

Soft nature colours reduced anxiety in paediatrics.

Bluyssen et al. (2022)

Harmonious palettes improved wellbeing & comfort.

Colour

A universal language

It communicates emotion and has instant meaning without words.



Cool Tones

Linked to mid day sun

Promote alertness, focus and concentration

Useful in active or task orientated spaces





Warm Tones

Linked to sunrise and sunset
Times of the day when the body winds down
or gently wakes up



Not all Whites are equal

A Cold White can feel harsh and clinical, while a Warm White feels softer and calm.

Not all neutrals are the same

The shade and tone choice is important: it has a big impact on how a space looks, feels and is experienced



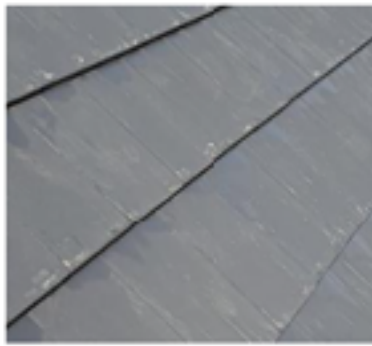
The Brook Colour Palette

Low stimulation, non-clinical to support a sense of safety.

Inspired by natural materials and subtle shifts in daylight these colours are designed to promote comfort, wellbeing, and visual quiet in every space.

Interior & Exterior

Work together to support transition

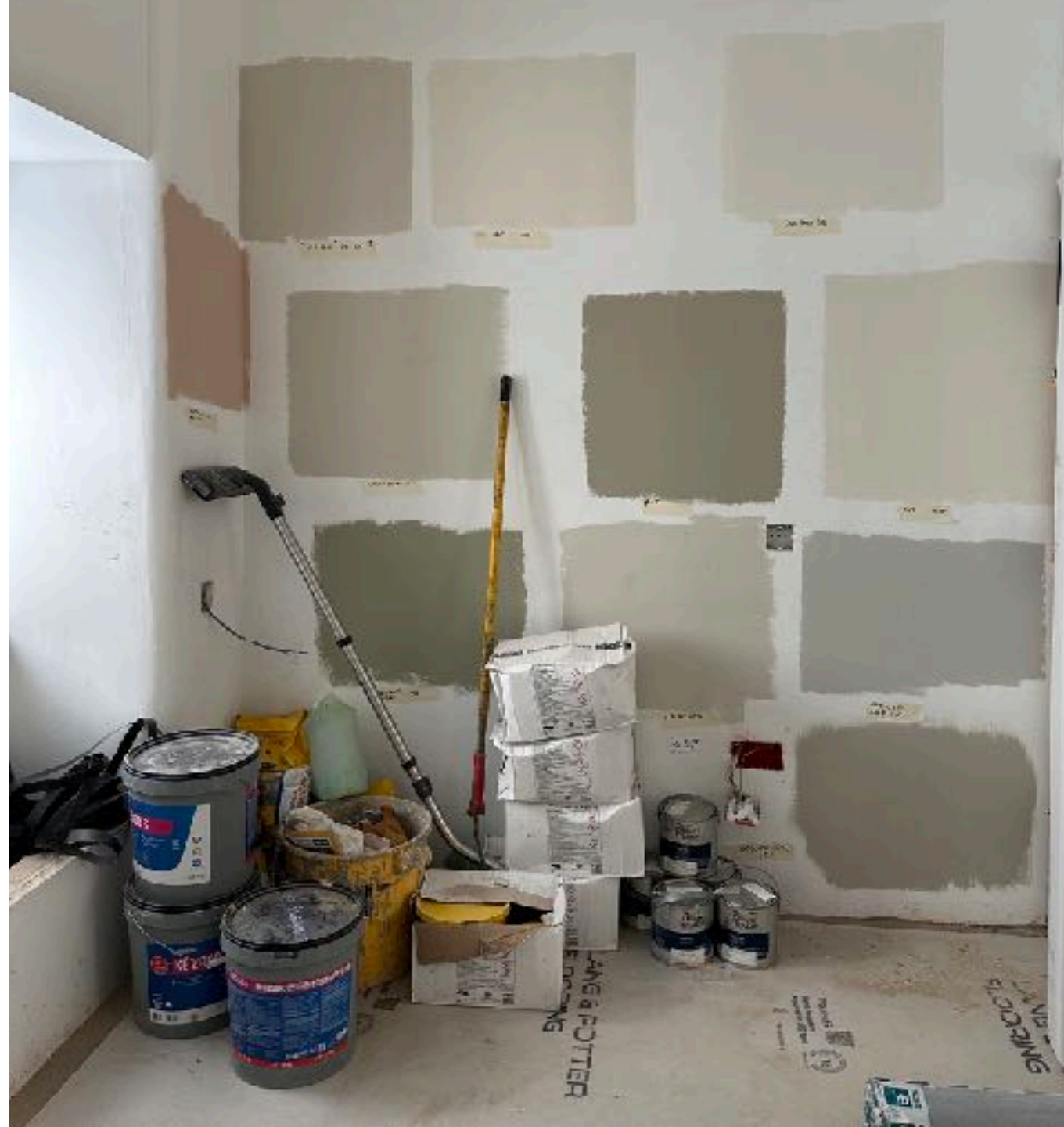


Test in Real Light

Warm neutrals can shift dramatically with light.

North-facing rooms tend to cool colours down- so pick a slightly warmer shade to avoid looking grey.

South-facing rooms enhance warm tones, a softer, lighter neutral may be best to prevent overheating visually.



Keep Finish & Texture in Mind



V



Matt finish

Scrubbable
reduces glare

Sheen finish

Wipeable
reflects light

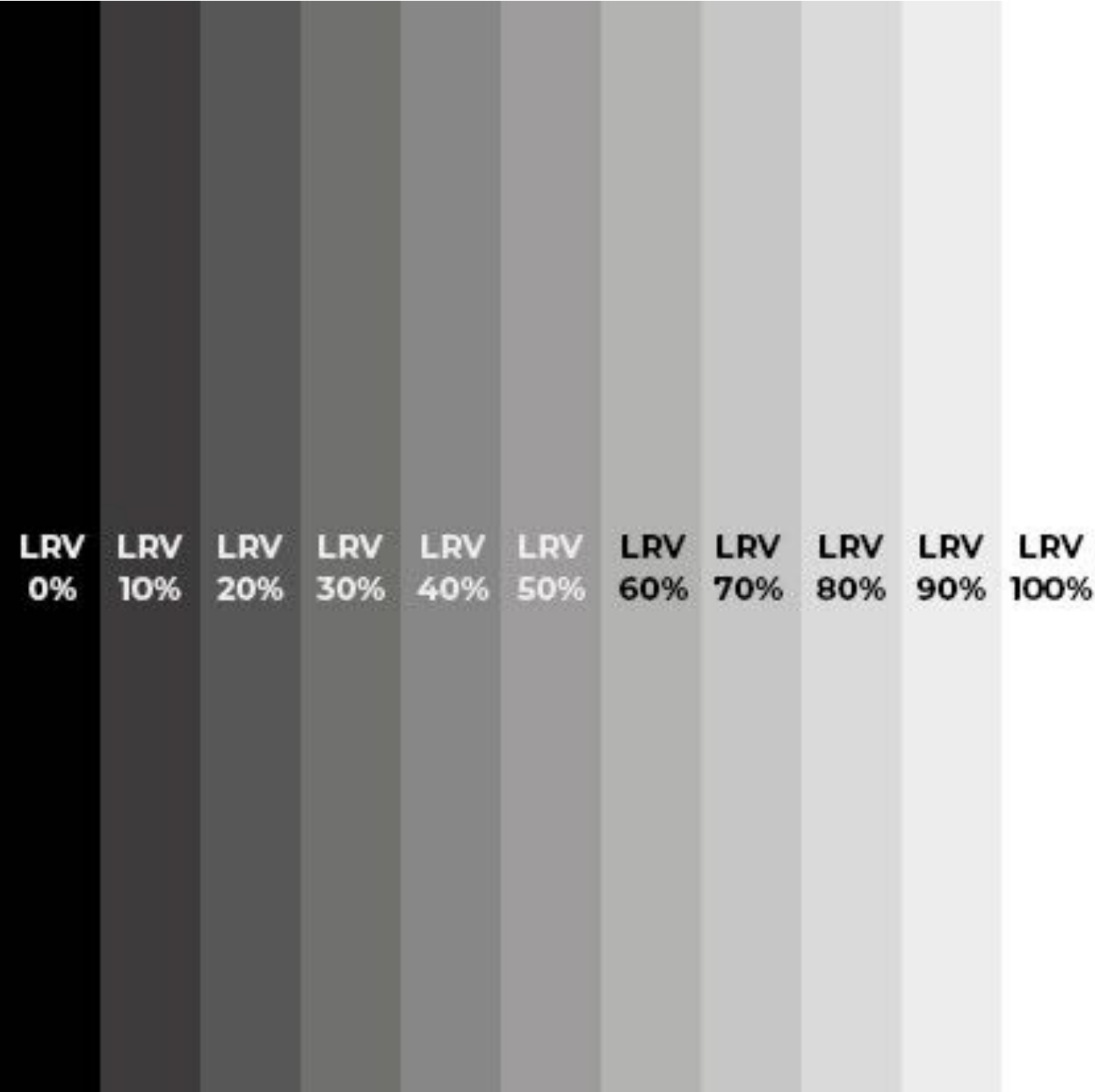


Calming effect of natures patters

Fractal patterns found in nature -
proven in research to reduce stress
and promote relaxation.



People add Colour



Light Reflectance Value

A measurement of how much visible light a colour reflects when light hits it.



Accessibility & Contrast

Contrasting LRV helps people with visual impairments navigate an interior environment safely. For example, a door frame should contrast clearly with the wall so it can be identified easily. The most common rule of thumb is a minimum 30-point LRV contrast.



It's not Blue





Avoid visual clutter

Busy patterns demand attention,
which can keep the brain alert

Limited colour & pattern feels more relaxing

Reduces visual “work”

The brain processes fewer visual “decisions” when colour and pattern is limited

Supports a sense of stability

Continuous colours and gentle transitions help spaces feel predictable and safe.

Minimises stimulation

High-contrast shifts in colour or busy patterns demand attention, which can keep the brain alert.

Aids recovery

Calmer visual fields lower cognitive load, giving the nervous system more space to relax.

Fabric & Furniture

The Research

Felsten (2009)

Nature-inspired shapes & textures support stress recovery.

Kellert & Calabrese (2015)

Organic-shaped furniture & natural materials increase calm and cognitive restoration.

Ulrich et al. (2008)

Comfortable seating & homelike furnishings improve patient and visitor satisfaction in hospitals.

Shepley & Pasha (2017)

Well-designed, comfortable furniture layouts reduce agitation in behavioural health units.

Wunsch et al. (2022)

Wood and natural textures reduce stress and benefit mental health.

Hua et al. (2025)

Local natural materials improved mood, agency, and emotional connection for young adults with depression.



Zones

Identified and reviewed risk level of each area in collaboration with the infection control team.

Working together with the Infection Control team to develop The Brook

A conversation with

Steve Coombe - 3idog Interior Design

Nicola Colbourne & Zoe Blewett - Infection Prevention and Control

Royal Devon University Healthcare and Devon Partnership Trust

Liz Lavender – Expert by Experience & Interior Designer

Hosted by **Charlotte Burrows**

CEO of Design in Mental Health Network





Tips for working with Infection Prevention Control

Talk to each other: build an
understanding together.

Matt v Gloss

Why finish matters



Gloss finish

Reflects light and sound
causes glare
Feels hard and clinical



Matt finish

Diffuses light – reduces glare
Creates softer calming surface
Supports comfort, absorbs sound

Fabrics

Feel natural whilst being robust

Matt finish & touch were important in selection

Integrated new technology -
antibacterial, hygienic protection,
easy clean

Comfortable fabrics can help reduce
anxiety, support focus, and make
daily activities more manageable.





Furniture

Invoke a sense of the familiar

Comfortable, more domestic in look and feel whilst being robust.

Tonal darker in tone to be both practical and grounding

Organic shapes which reference nature.

It's a sofa not a chair

Designed to support a feeling of safety

Evolves to reflect need & recovery

Kitchenettes

A place like home





TV Unit

Height, Distance & Size reflect home.

Cables in place to connect to gaming set up or charging your phone.

Integrated speaker

Individual lighting control

Every choice matters

Touch matters

Fabrics and finishes directly influence comfort and emotional wellbeing.

Absorption

The right fabrics help absorb sound and light, reducing overstimulation.

Natural materials

Wood, wool, linen, and other textures create warmth and calm.

Organic shapes

Curved furniture and biophilic forms reflect nature and reduce stress.

Comfort & home like cues

Soft seating and thoughtful layouts support relaxation and recovery.

.

Sound

The Research

Middelboe et al. (2001)

Higher ward noise linked to more agitation and disruptive behaviour.

Topf & Dillon (2002)

Noise strongly associated with sleep disturbance and reduced coping in mental health patients.

Ulrich et al. (2008)

Reducing noise improved stress recovery, safety, and staff effectiveness in psychiatric hospitals.

Shepley & Pasha (2017)

Quieter behavioural health units supported calmness and reduced aggression.

Bluyssen et al. (2020)

Staff in noisy healthcare settings reported more fatigue, stress, and lower care quality.

Kim et al. (2024):

Noise reduction strategies linked to lower staff burnout and better patient–staff interactions in psychiatric hospitals



**Designed
so that you don't want to stay**

Fast Food

Bright harsh lighting

Bold high contrast colours

Reflective hard surfaces

Rigid uncomfortable seating

High background noise

All elements deliberately chosen



**Designed
so that you want to stay**

Relaxed dining

Soft warm lighting

Muted harmonious Colours

Natural textured surfaces

Comfortable seating

Calmer quieter area

All elements deliberately chosen

**Sound is like a ping pong
ball**

What absorbs sound
at home





Sound at The Brook



Reducing noise reduces stress

Noise increases stress

High, unpredictable sounds are linked to agitation, anxiety, and aggression

Sound affects sleep

Night-time noise delays recovery by disrupting natural rest cycles.

Staff wellbeing

Constant noise raises fatigue, stress, and burnout risk.

Acoustic design helps

Sound-absorbing materials and panels calm the environment within health care

Quieter spaces improve outcomes

Linked to better mood, reduced medication, and safer ward environments.

‘Less is More’
Miles Van de Rohe

Good design supports recovery

Choose Differently

Good design isn't always about spending more.

Design for Wellbeing for everyone

Reduces stress • Aids recovery • Creates calm.

Key Elements

Light • Colour • Sound • Furnishings.



Sensory-Informed Design

Creating spaces together that feel safe, calm and support recovery

Environment Hub Update: Where are we now?



Learning Disabilities & Autism – South West

Mission

**How we'll
do it**

Our Vision

To have safe spaces for treatment & recovery from mental illness for autistic people & people with a learning disability within the South West providing centres of holistic care and treatment where everyone is treated with kindness and value.
To eliminate out-of-area admissions whereby people will maintain their connections with family, loved ones and their existing circle of support

Our Mission

To always provide the right care at the right place, at the right time.

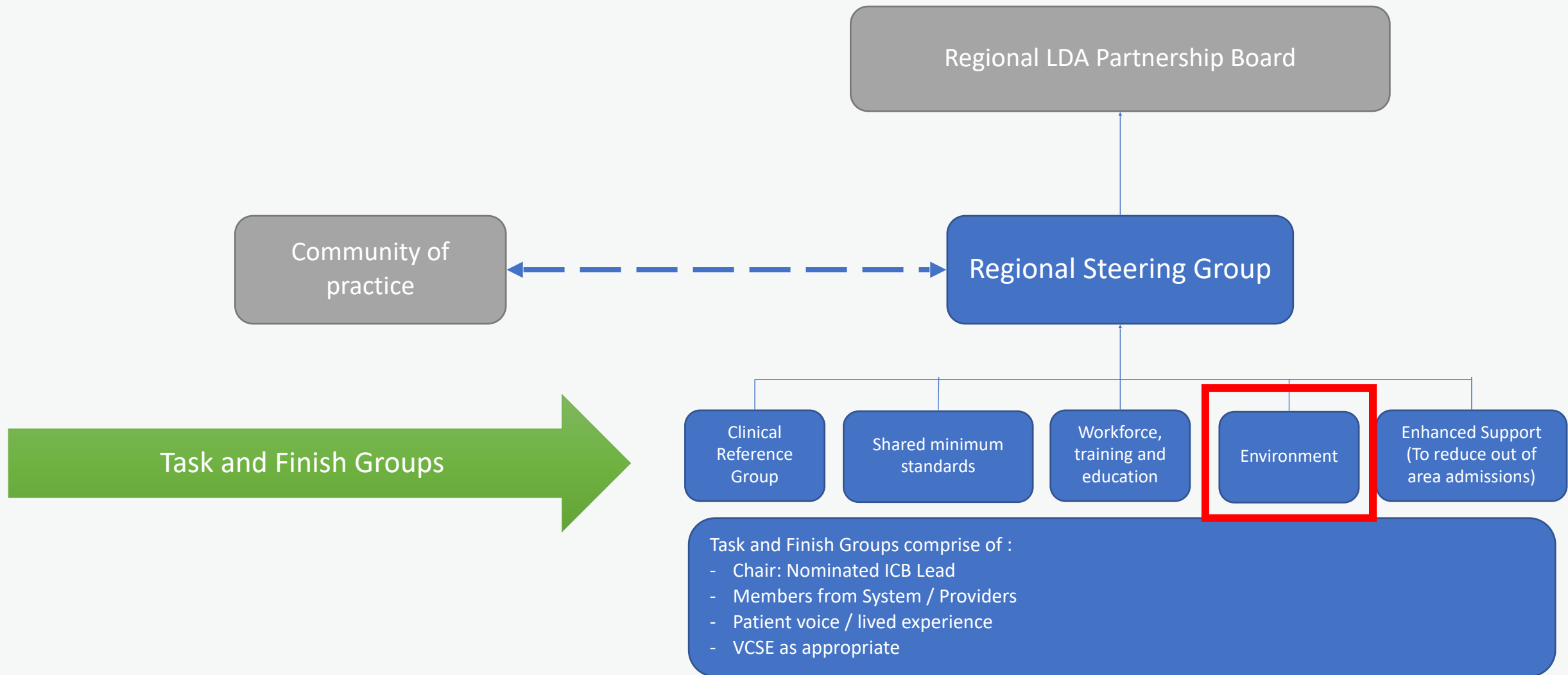
Our Behaviours and Principles

 Dignified	 Involved	 Friendly	 Open Minded	 Safe	 Adaptable
 Kind	 Compassionate & Respectful	 Diverse & Inclusive	 Willing to experiment and learn	 Grounded & Optimistic	 Trusting & Reliable

What underpins this all...

Co-production – Integrated Care – Up-to-Date Knowledge - Enviro-Ethical

Programme Overview



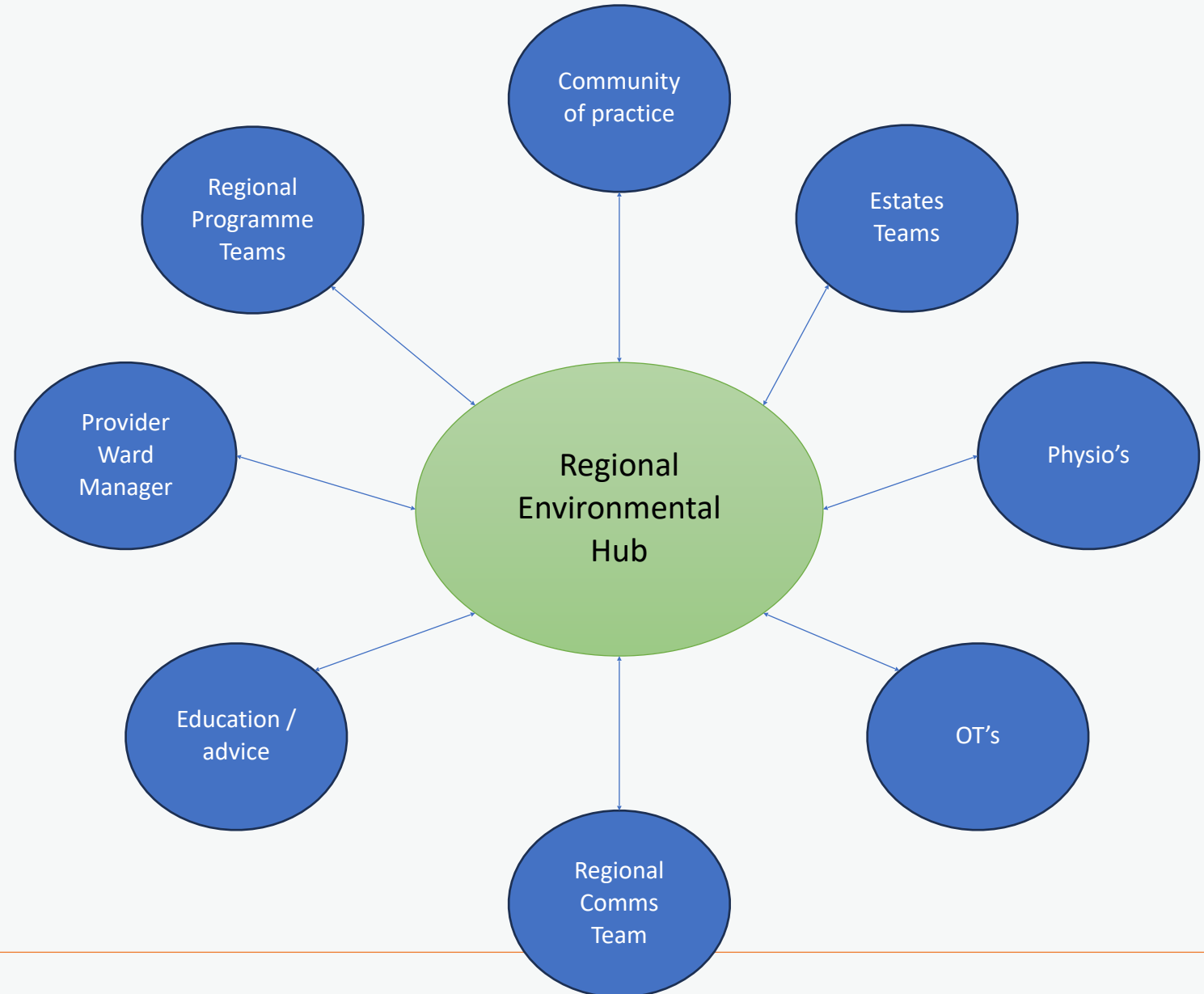
Development of Regional Environmental Hub: Aim and Deliverables

Aim:

To ensure a consistent approach and one stop shop to access informed information on improving environments for people with Learning Disabilities and Autism

Key Deliverables:

- Provide access to a range of media (written, video's etc) on creating the right environment
- Develop list of core partners that can support organisations, individuals (families / carers) in creating the required environment
- Central resource for health workers, social care, parents / family / carers to access a breadth of resources including directory of key contacts
- Monthly Virtual Forum to share best practice, areas of concern or challenge
- The Hub would share the learning of the design/environmental knowledge within the new hospital projects teams to the improve environments across the region





The **Environmental** Hub

Creating Calming Spaces Through Peaceful Design.

The Environmental Hub is a space to share knowledge and learning on how to create sensory informed environments.

For those with heightened sensory awareness, interior design is especially important, poor interior choices can be extremely stressful.

Whether it's in a hospital, GP surgery, school, office or home, simple considerations can have a huge impact on how we feel and support access.

The **Environmental** Hub
Creating Calming Spaces Through Peaceful Design.



Following extensive engagement with a wide breadth of stakeholders, both internal and external to the NHS the Environment Hub website is ready for formal launch.

We have chosen to partner with Design in Mental Health Network, to host the hub and support future development.

On-behalf of all colleagues who have input their time and expertise into the design and development of the site, thank you

Environment Hub Link: <https://www.theenvironmentalhub.uk/>

Working together to improve environments.

We have call action to share your top tips for improving environments to include on the hub.



We cannot afford not to invest in good design.

Good design is not just about the aesthetic improvement of our environment, it is as much about improved quality of life, equality of opportunity and economic growth.

Sir Stuart Lipton