

Soundproofed: The journey through noise and frustration to a clinically compliant paediatric audiology testing facility.

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Introduction:

The recent Midlands desk top review of paediatric audiology services highlighted several issues with quality and safety of some paediatric audiology service. This included issues surrounding oversight, workforce, education, training and estates. The Midlands region have taken a collaborative proactive approach to work together towards improvement of the services provided as described by Sharma et. al 2024
The desktop review highlighted several issues regarding the estate at UHDB, and it was necessary to reconfigure the test facility for pre school children at Derby, alongside the design and installation of a totally new facility for pre school children at Burton Hospital. Funding was also secured to build a whole new facility within a local community diagnostic centre

Background:

Building a new soundproof clinical room or department is a complex undertaking that requires meticulous planning, interdisciplinary collaboration, and forward-thinking. Audiologists embarking on such projects must consider a broad range of factors to ensure the new facility is fit for purpose, compliant with regulations, and optimally designed to support patient care.

Aims and objectives:

- To:
- Share key lessons learned from the development of new soundproofed paediatric audiology rooms at UHDB.
 - Provide a practical framework for audiologists planning similar facilities.
 - Highlight clinical, operational, and regulatory considerations essential for success.
 - Promote future-proofing and patient-centred design in audiology environments.

Methods:

To produce this poster the authors reviewed internal documentation, including project board papers, meeting minutes, architectural designs, and derogation records. Reflections were drawn from the full journey, starting with business case development through to planning, siting, and resolving clinical minutiae required to open a functional, compliant paediatric audiology suite. This included the creation of rooms suitable for hearing assessment and rehabilitation of neonates, pre school, school age children.

Discussion:

1. Foundations

Establishing a robust project management structure and action plan was critical. This involved collaboration between clinical leadership, capital projects, estates, finance, equipment providers and soundproof room manufacturers, architects, electrical and water safety teams, ventilation experts, infection control, and building assurance professionals. Early engagement with all stakeholders is key to ensured timelines and budgets are meet alongside compliance with trust and national regulations.

2. Infrastructure and Equipment Planning

Close liaison with technical teams ensured optimal room layouts, including speaker positioning and jack panel configurations. Equipment procurement was tightly managed, with inventories compiled and installation coordinated across teams. Calibration and safety testing were prioritised to meet regulatory standards. Storage solutions were considered early in the design process.

3. Clinical Operations and Patient Experience

Defining the clinical purpose of each room was essential. Demand and capacity modelling helped justify the investment and informed layout decisions. Protocols were developed for new workflows, and training days were held to familiarise staff with equipment and systems. This was essential to ensure consistency in service delivery across sites.

4. Health, Safety, and Regulatory Compliance

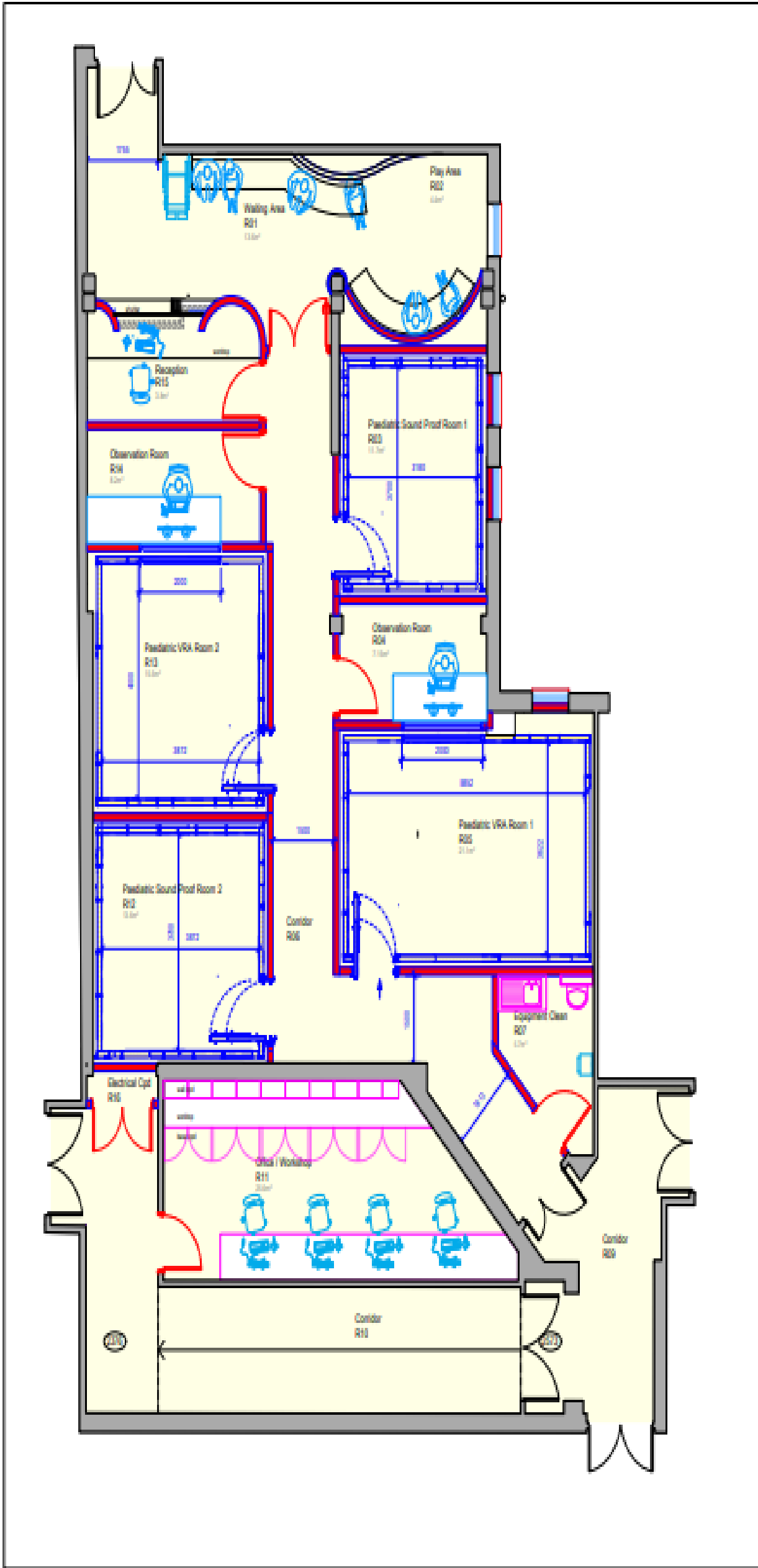
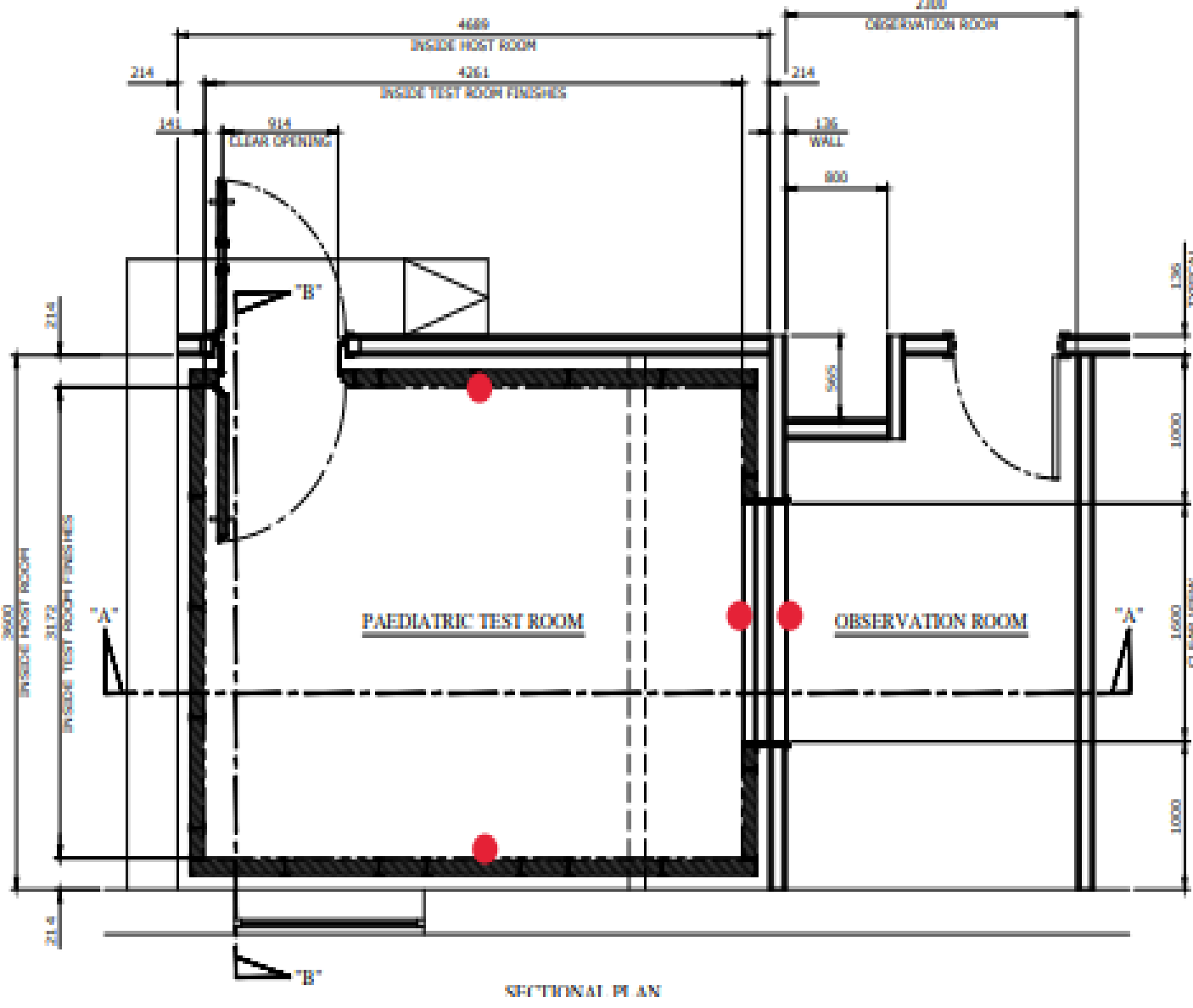
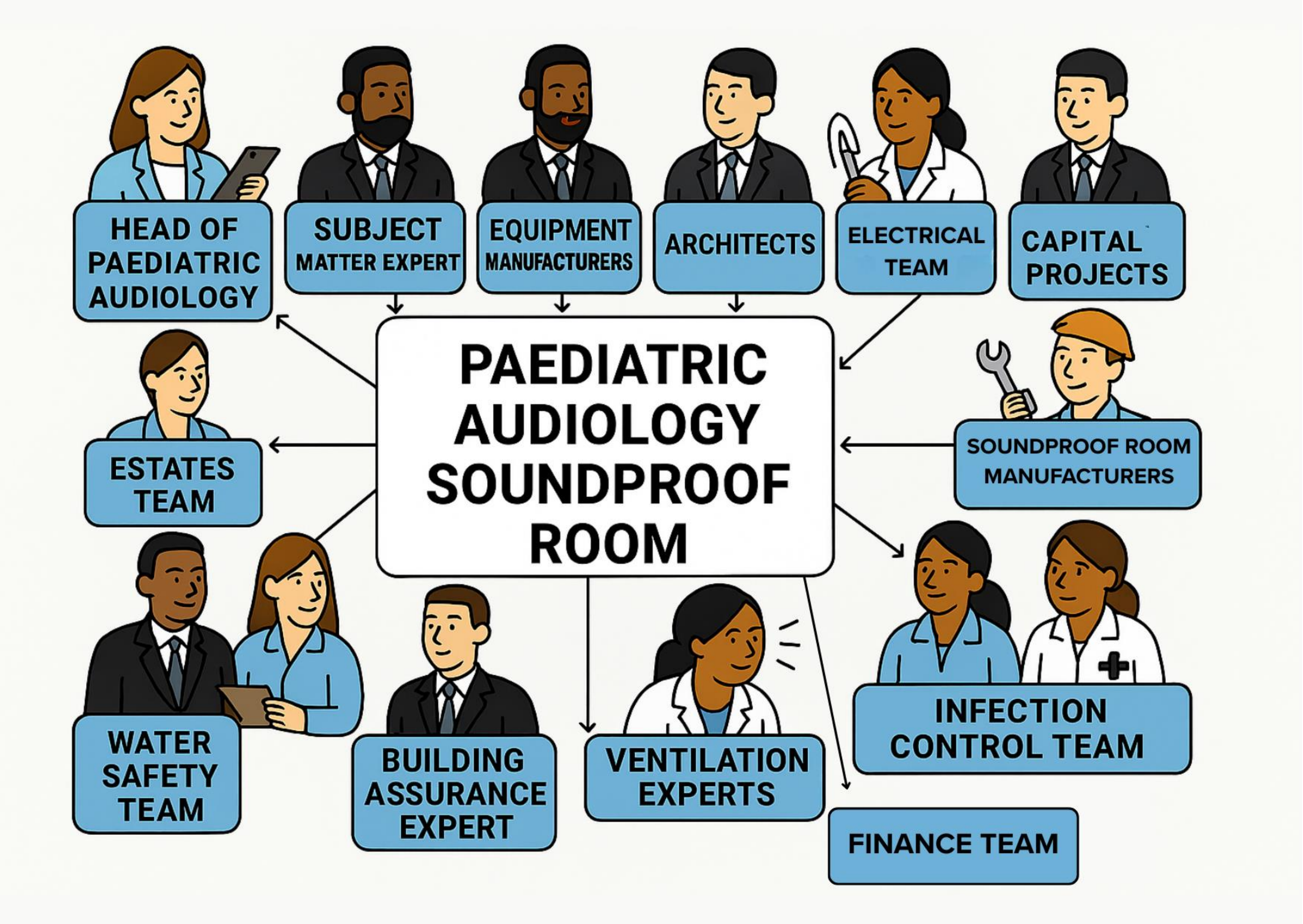
Designs were benchmarked against British Society of Audiology guidelines and NHS England health building notes were taken into consideration. These informed decisions on room size, noise floors, ventilation, and emergency systems. Awareness of potential compromises—such as considerations around air conditioning in clinical rooms, helped mitigate delays in installation. Early planning of socket placement, emergency call systems, and infection control measures was vital.

5. Enhancing Patient and Staff Experience

Resources such as walk-through videos and QR codes were proposed to help children and families navigate new sites. Rooms were stocked with appropriate consumables and toys to support paediatric testing. Consideration was given to accessibility, comfort, and inclusivity, including wheelchair access and bariatric seating.

6. Interdepartmental Collaboration and Future-Proofing

Engagement with external suppliers and internal departments ensured technical and space needs were met. Scalability was built into the design to accommodate future growth.



Conclusion:

The development of soundproofed paediatric audiology rooms at UHDB has demonstrated that success lies in detailed planning, collaborative working, and clinical foresight. Audiologists must advocate for environments that are not only compliant but also adaptable, inclusive, and conducive to high-quality care. This journey offers a blueprint for others embarking on similar projects, reinforcing the importance of strategic design in shaping the future of paediatric audiology services.

References.

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