

CIB European Affordable Housing Symposium 2026

ORGANISED BY



Nottingham Trent
University



International Council
for Research and Innovation
in Building and Construction



PROFESSIONAL EXPERIENCE

- Healthcare and complex building environments
- Major hospital projects in MENA region
- Architecture, materials and technical requirements

RESEARCH FOCUS

- Hygienic surface materials
- Healthcare design & Infection prevention
- Material performance and cleanability
- Evidence-informed decision-making



Mohanad Abo Bakr

MCIQB | FHEA | M.Eng | B.Arch.
Senior Lecturer in Built Environment | Programme Leader

Architecture, Façade Design & Healthcare Architecture
School of Computing, Engineering and the Built Environment (CEBE)



My Research: Hygienic Surface Material Selection

Focused on operating theatre design and improving how material options are evaluated and selected

The research examines hygienic surface material selection in healthcare environments, and the decision-making process

1 UNDERSTAND

- Healthcare design requirements
- Material and hygienic performance
- Stakeholder needs and practice
- Clinical risk and context

2 STRUCTURE

- Define material selection criteria
- Connect evidence with requirements
- Support comparison of alternatives
- Make priorities and trade-offs visible

3 TEST & REFINE

- Apply the framework in practice
- Gather stakeholder feedback
- Compare with testing evidence
- Refine the framework and decision process

OUTPUT

A practical design framework supporting transparent, consistent and evidence-informed selection of hygienic surface materials.



Why This Matters for Healthy Affordable Housing

Potential collaboration: translating health, material and performance knowledge into residential design

THE NEED

Housing increasingly accommodates older and more vulnerable residents, with high-contact surfaces, shared spaces and potential infection risks yet these issues are not systematically addressed through design and material selection.

WHY COLLABORATE?

- Housing has different risks and everyday behaviours than healthcare
- Healthcare knowledge should be adapted not simply transferred
- Housing needs its own evidence and practical guidance
- Health must be considered alongside affordability

AREAS FOR COLLABORATION

- Healthy affordable housing
- Materials, durability and maintenance
- Indoor environmental quality and wellbeing
- Evidence-informed design decisions

COLLABORATIVE QUESTION

How can health, material performance and long-term building quality be considered alongside affordability in housing delivery?