

MODULAR CONSTRUCTION FOR SOCIAL HOUSING: A FEASIBILITY STUDY RESEARCH PROPOSAL.

PROPOSED RESEARCH QUESTION

How feasible is modular construction for addressing social housing shortages in Pembrokeshire, Wales?

INTRODUCTION

This study investigates the feasibility of modular construction for social housing in Pembrokeshire, Wales, focusing on cost savings, time efficiency, and challenges such as logistics and regulations. Through interviews, surveys, and data analysis, the research aims to provide insights for implementation of modular housing into their stock for policymakers, local authorities, and housing associations.

This proposal assesses modular construction's viability for social housing in Pembrokeshire, emphasizing benefits like reduced construction time and costs, and quality assurance, while identifying challenges such as logistics.

BACKGROUND OF STUDY

TYPES OF MODULAR CONSTRUCTION:

Panelised Modular Construction:

- Each panel is prefabricated and assembled on-site.
- Flat panels necessitate a greater presence of skilled hands for on-site labour.
- Provides a canvas of design flexibility for exquisite customization.
- Commonly embraced for the creation of smaller edifices.
- Demands an increased labour force on-site for seamless assembly.



(AZOBUILD, 2022)

Volumetric Modular Construction:

- Prefabricated modules come together on-site.
- Fully equipped modules, boasting plumbing and electrical systems, are ready for use.
- Crafted for stacking and a multitude of configurations.
- Frequently employed in the creation of residential abodes and hotels.
- Rapid assembly, thanks to their stackable essence.
- Transporting these marvels poses greater logistical challenges.



(VOLUMETRIC, 2023)

The growing demand for affordable housing in Pembrokeshire has highlighted the limitations of traditional construction methods, which are often slow and costly. Modular construction, involving off-site manufacturing and on-site assembly, offers a promising alternative by potentially reducing build times and expenses.

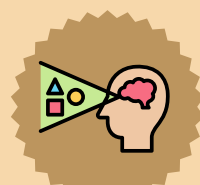
OBJECTIVES



- **Evaluate cost and time efficiency:** Analyze costs and timeframes for modular versus traditional construction in Pembrokeshire



- **Identify challenges:** Investigate logistical, regulatory, and quality control issues associated with modular construction.



- **Gather perceptions:** Assess stakeholder attitudes towards modular housing among local authorities, contractors, and potential residents.



METHODOLOGY

A mixed-methods approach will be employed, utilizing questionnaires and interviews to gather qualitative and quantitative data from stakeholders, including local authorities and potential tenants.

Qualitative:

- Semi-structured interviews with local authorities, housing associations, and residents.
- Optional focus groups to explore perceptions in depth.

Quantitative:

- Surveys/questionnaires on cost, time efficiency, and stakeholder views.
- Statistical analysis (SPSS).

Sampling:

- Purposive (for professionals) and random (for residents).

EXPECTED OUTCOMES

Modular construction could reduce costs by 15–20%, Time savings of up to 40%. Social housing waiting lists potentially reduced by 20%. Key barriers: Transport logistics, regulatory hurdles, stakeholder resistance. Final output: Policy recommendations to support modular implementation in rural areas.

CONCLUSION

This study fills a crucial research gap by focusing on modular housing in rural Wales. The findings aim to support housing authorities and construction professionals in adopting more efficient building strategies that address housing shortages sustainably and effectively.

REFERENCES

- AZoBuild (2022) Considering prefabricated construction. <https://www.azobuild.com/article.aspx?ArticleID=8475>.
- King, L., 2320088 (2025) MODULAR CONSTRUCTION FOR SOCIAL HOUSING: A FEASIBILITY STUDY RESEARCH PROPOSAL; RESEARCH PROJECT DESIGN. ACBA5024, University of Wales Trinity Saint David. research proposal.
- VOLUMETRIC (2023) About - VOLUMETRIC. <https://www.volumetric.co.uk/about-volumetric/>.

TIMELINE

Task	Duration
Literature Review	1 month
Survey/Interview Design	2 weeks
Data Collection	2 months
Data Analysis	1 month
Report Drafting	1 month
Final Revisions	2 weeks
Total	6 months

Louis King (2320088)
ACBA5024
26/03/25



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David