

Top tips when developing on a brownfield site

A brownfield site typically includes any site in an existing urban environment that has previously been developed for residential or other urban purposes. For community housing providers these sites are often existing residential sites containing older homes that need to be demolished to make way for the development of new social housing. Balancing cost, safety, and efficiency is crucial to transforming a brownfield site into a viable residential development.

In part two of our series on developing community housing, Harrison Grierson, -part of the LEAD Alliance - New Zealand's biggest social housing project with Kāinga Ora, explains how effective risk management and stakeholder collaboration are key to navigating complexities when developing on a brownfield site.

1. Due diligence and feasibility analysis

The best place to start is by looking at the site's history to uncover any potential issues that may affect your redevelopment plans. Familiarise yourself with local zoning rules, environmental regulations and heritage considerations to ensure the site is compliant. Council property files are often a good source of historical data.

Assess the condition and capacity of existing utilities and engage with the relevant asset owners to discuss your proposed redevelopment plans and understand any upgrades which may be required.

The site's potential vulnerability to flooding is a key factor to consider, as the local council may require significant assessments, extending well beyond the site boundaries.

Assess transportation links, in particular public transport options, walking and cycling networks and conduct topographical, geotechnical and contamination surveys to understand site conditions. You'll need to engage a quantity surveyor to create a comprehensive cost estimate, including potential contingencies.

By engaging with an environmental consultant early in the process, they can help uncover any issues with your proposed site and the likely costs associated to develop.

2. Navigating resource consent applications and detailed design

We recommend scheduling pre-application meetings with the local council to get feedback on your development plans. Council can help to identify potential issues early, streamline the approval process, and ensure your application is comprehensive and aligned with local regulations.

Ensure the meeting is well documented, including agreements reached with council and asset owners, and incorporate feedback and agreements into the consent applications. It'll minimise the risk of delays or onerous requests for further information!

3. Innovative engineering design

Innovative civil engineering design, combined with standardised construction techniques, can enhance efficiency and reduce costs in preparing the site for your housing development.

Where possible, standardise design for infrastructure - roads, drainage systems and utilities - and ensure learnings from site investigations are incorporated into designs. Ensure design co-ordination workshops are held to enable the project team to discuss any issues that may impact other disciplines and work through solutions ahead of any site works starting.

Ideally, the house designs and layouts are fully integrated with the site design, so that site levels and infrastructure can be designed to fit first-time with the houses that are planned to be built on the site or delivered pre-constructed. If this isn't possible, ensure the design process is documented to enable the future housebuilders to have a clear understanding of what has been constructed and any risks or limitations they need to be aware of.

Conduct Safety in Design workshops with the client, constructor and other key stakeholders to ensure compliance and safety for constructors, the community, and future asset owners.

Involve constructors early in the design phase to optimise construction sequencing and material use.

4. Construction management and project close-out

Develop a detailed project plan covering all phases, from pre-construction to close-out and ensure adherence to council regulations and obtain all necessary consents, approvals and permits.

Notwithstanding the detailed project plan, also plan for the unplanned!

Brownfield sites are notorious for delivering the unexpected. Encourage early notification when unplanned issues are found during construction, to give the project team as much time as possible to resolve them.

It's recommended you maintain clear and consistent communication with all stakeholders, including local authorities, contractors, and the community and identify potential risks early and develop mitigation strategies. Pro-active communication is a key to delivering a successful project, that integrates seamlessly into the existing community.

Prioritise health and safety by conducting regular site inspections and safety audits.

Implement robust quality control measures to ensure all work meets the required standards and keep thorough records of all project activities, changes, and approvals.

Prepare a detailed closeout plan, including final inspections, documentation handover, and post-project reviews.

Where you can, incorporate sustainable practices and materials to minimise environmental impact and meet regulatory requirements, as well as conduct post-project reviews to identify lessons learned and improve future project management practices.

By following these guidelines and tips, you can navigate the complexities of developing a community housing project on a brownfield site in Aotearoa New Zealand, ensuring a successful and sustainable outcome.

When you start to plan your next new social housing development

Harrison Grierson recommends getting in touch with a community housing specialist when you are planning your next project. It can save you time and money in the long run to engage with a specialist who understands brownfield site development.

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