Challenges to Achieving Sustainability in Social Housing Construction in New Zealand

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The Research Thesis is submitted in the achievement of the degree

Master of Applied Management

at Otago Polytechnic Auckland International Campus, New Zealand

(Final redacted version)

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February 22 2025

Declaration Concerning Thesis Presented for the

Degree of Master of Applied Management

I, Oleg Nikitin, of Auckland, New Zealand, solemnly and sincerely declare, in relation to the Thesis entitled:

"Challenges to Achieving Sustainability in Social Housing Construction in New Zealand"

(a) That the work was done by me, personally,

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Abstract

The housing crisis resulting in a lack of affordable housing has become an urgent problem that New Zealand faces due to various socio-economic and historical-political reasons. Social housing is one of the ways to address this problem and currently the country is experiencing a significant increase in the need for affordable and quality social housing. Given the growing need for social housing, it is vital to understand what actions need to be taken and by whom to balance the various aspects of sustainability of the social housing sector. This is more important as housing providers face various interrelated challenges, including financial, political, social, and institutional factors that significantly influence their activities. This paper aimed to identify the factors influencing the achievement of sustainability and, where possible, make recommendations to the management of housing providers and the government on how to overcome the emerging challenges. The results of this study reflected the practical experience of housing providers and showed that achieving true sustainability in this sector is possible only with a radical transformation of the existing relations. The recommendations developed in this paper propose that the state take on the function of a social customer, determining the need, parameters, and characteristics of social housing, while housing providers are proposed to become exclusively project operators, ensuring their economic efficiency. This study should become an occasion to think about the role and importance of social housing for society and encourage the government to change the established practice of manipulating housing policy to please political ambitions, putting social and environmental aspects at the forefront, i.e., to do what any government must do.

Keywords: achieving sustainability, social housing, social housing providers, challenges to achieve sustainability, sustainable construction, government policy

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List of Abbreviations

Abbreviation	Definition
BRANZ	Building Research Association of New Zealand
CHP	Community Housing Provider
CHRA	Community Housing Regulatory Authority
HASHAA	Housing Accords and Special Housing Areas Act
HCNZ	Housing Corporation of New Zealand
HNZ	Housing New Zealand Ltd
HNZC	Housing New Zealand Corporation
HUD	Ministry of Housing and Urban Development
IRRS	Income-Related Rent Subsidy
MBIE	Ministry of Business, Innovation and Employment
MSD	Ministry of Social Development
NZGBC	New Zealand Green Building Council
OAG	Office of the Auditor-General
OECD	Organisation for Economic Co-operation and Development
OPAIC	Otago Polytechnic Auckland International Campus
ROI	Return on Investment
UN	United Nations
USEPA	US Environmental Protection Agency

Chapter 1: Introduction

Chapter 1 discusses the background and prerequisites for this study. The chapter also sets the objectives and formulates the research questions and objectives. The main objective of this work is to identify the factors influencing the achievement of sustainability in the construction of social housing in New Zealand and, as a result, to provide recommendations and suggestions for actions that both social housing provider management and government can take to address the challenges that arise in addressing various aspects of sustainability. This chapter also demonstrates the importance and necessity of this study not only from a practical point of view, but also as a contribution to the body of knowledge on the issue of sustainability in the field of social housing construction. In addition, this chapter describes the study's process and phases aimed at achieving the set goals and objectives.

Definitions of Key Concepts Used in the Research Thesis

To avoid different interpretations of individual concepts used in this study, it is worth specifying and explaining the following.

Use of the concept of Social Housing Provider. According to the Public and Community Housing Management Act 1992, a Community Housing Provider (CHP) is an organisation that provides housing either as social rental housing, or as affordable rental housing, or both. However, a CHP must meet established standards and be registered with the Community Housing Regulatory Authority (CHRA) (New Zealand Legislation, 2024). According to the law, the state-owned rental operator, Kāinga Ora, is not a CHP. CHPs are typically churches, charities, iwi organisations, housing trusts and foundations whose primary purpose is to provide housing for people in need. CHPs replenish their housing stock in several ways: by building housing using various sources of funding; by renting housing from private owners to subsequently rent it to social tenants on a subsidised basis; by buying out housing

from private owners, etc. CHPs perform functions such as managing leases, including collecting and levying rent, maintaining properties, and carrying out repairs and development work. For CHPs, the main benefits of registering with the CHRA are exemption from income tax if certain conditions are met and a guaranteed income from renting out housing to those in need through the receipt of an Income-Related Rent Subsidy (IRRS) from the Ministry of Housing and Urban Development (HUD) to cover the difference between the amount of rent that a tenant must pay and the market rent for the property. At the same time, social housing providers can be not only CHPs but also other organisations that do not receive IRRS and are not registered with the CHRA. In particular, affordable housing can be provided by local councils, which they subsidise independently of the central government funding system, which means that rent for tenants is based on market rent, not their income (Auckland Council, 2024; Bishop, 2024; HUD, 2023, p. 2).

Thus, in New Zealand, there are several types of housing providers, all with the same mission – to build and deliver social housing to people in need. This study aims to focus on issues related to balancing the various aspects of sustainability in the development of social housing, which is relevant to all types of housing providers. In this regard, to avoid a narrow interpretation, it is proposed to use the definition of Social Housing Provider, which unites all types of housing providers for social purposes. At the same time, the study will be based on CHP, since it is for these organisations that the research questions may be most relevant.

The distinction between the concepts of ‘regular construction’ and ‘social housing construction’. ‘Social housing’ is a method of providing housing to citizens who do not have sufficient funds to purchase or rent housing at market prices (White & Nandedkar, 2021). In practice, this term covers many forms of real estate rental, the owners, and (or) managers of which are organisations of various forms of ownership pursuing non-profit goals, usually related to increasing the availability of housing for all segments of the population.

Replenishment of the housing stock by social housing providers is carried out through construction financed from different sources, among which the following can be mentioned: financing from the state through various programmes, borrowed funds under special lending programmes, and own funds, often accumulated over many decades of fundraising and other charitable activities. In such financing conditions, it is extremely important to ensure complex compromises between the economic, social, and environmental aspects of construction (Enwin & Ikiriko, 2023, p. 14).

The sources of financing for "regular" commercial housing construction are the construction companies' funds, customers' (investors') funds, or borrowed funds that provide a return commensurate with the expectations of the market level. "Regular" construction companies are focused on making a profit and adherence to the principles of sustainability for them is determined only by the requirements of legislation, design documentation, as well as the priorities, financial capabilities, and planning horizon of the customer (Correia, 2019). This study focuses on issues related to the sustainable construction of social housing, and therefore, when referring to "construction" in any context, it means that it refers to the construction of social housing, unless specifically stated otherwise.

Background of the Study

Housing is the basis of stability, and security and one of the most primary needs of a person, the presence of which is associated with their various life aspirations: starting a family, the opportunity for professional growth, educational and cultural self-improvement (Holland, 2018; Dawkins, 2023). At the same time, lack of housing or unsatisfactory housing conditions is one of the main causes of homelessness, worsening demographic situation, increased burden on government and social services, growth of internal family conflicts, and other social and economic problems of society (Kislitsyna, 2022). In the context of the New Zealand Agenda,

housing is also a key component of many aspects of Māori well-being, such as the health of whānau, the acquisition and use of te reo Māori, caring for whenua and the environment, the ability to provide sustenance and hospitality for oneself and others, and many other aspects of well-being unique to Māori culture (Menzies, 2023, p. 10).

On the other hand, the housing construction and improvement sector is one of the most major areas of the economy, which ensures the development and prosperity of society. Sustainable housing represents a multifaceted system that includes economic viability, environmental responsibility, and social justice. This system ensures not only the availability of housing in terms of its cost or rent, but also in such issues as access to the natural environment, proximity to basic services and infrastructure, and cultural adequacy. Sustainable housing also implements reasonable methods of production, energy, and resource use, and emphasises the need for decarbonisation (Correia, 2019; Eklova, 2020; Doleac et al., 2024).

However, despite the obvious importance and significance of housing for both the individual and society, according to the 2018 Census, approximately 102,000 people in New Zealand (or 2% of the population) were homeless (HUD, 2023, p. 4). This number includes not only those who can be seen on the streets, but also people living in motels or cars, forced to live with parents or friends, as well as residents of shelters (Dawkins, 2023; HUD, 2024d). However, the problem of homelessness or poor-quality housing is particularly acute for Māori people, who experience significantly worse housing conditions than other groups (Menzies, 2023, p. 7). The observed negative impacts are the result of the housing crisis, which has affected New Zealand through significant increases in house prices, due to historical underinvestment in social housing, the sale of state houses, the lack of tenant protections, and a tax system that favours homeowners and property investors. With slight change in the level of income of the population, significant growth in housing prices and the associated increase in rents is one of the main factors influencing the fact that the existing housing system cannot

provide safe, healthy, and affordable homes for all residents (Building Research Association of New Zealand (BRANZ), 2020, p. 2; Auckland Council, 2024; HUD, 2024d). The section The Impact of Historical Background on New Zealand's Social Housing Market further examines in detail the historical, political background and institutional factors that have shaped the modern social housing market in New Zealand.

Attempts to resolve the housing crisis have had limited impact in reducing prices and increasing the supply of housing on the market, prompting the New Zealand Government to seek a comprehensive approach to addressing the issues. The government has developed The Aotearoa New Zealand Homelessness Action Plan, which includes measures to stimulate supply growth in the social housing market, as well as the provision of a range of housing-related support services (HUD, 2024c). Social housing is provided to people of low socio-economic status or those with special needs by government, regional, or local councils on short or long-term subsidised rent through the rental operator, Kāinga Ora, or by independent CHP. In addition to the CHP, local councils, and Māori-owned organisations such as Ngāti Whātua Ōrākei and others also build and deliver social housing because they know, understand, and can best meet the needs of Māori people. According to Stats NZ (2024), as of March 2024, there were 90,520 social homes (about 4.5% of total housing in New Zealand). At the same time, due to inflationary processes that contribute to rising housing costs and rising rents, the demand for social housing is also growing (Wang & Gu, 2023). According to the Ministry of Social Development (MSD) (2024), as of 31 March 2024, there were 25,527 applicants on the New Zealand Housing Register, an increase of 6% compared to the same date in 2023.

At the same time as stimulating the construction of social housing, the New Zealand Government is trying to reduce the negative impact on the environment by increasing the energy and water efficiency of houses, using modern environmentally friendly technologies, materials, etc. (Fernandez et al., 2023). The application of such approaches forms sustainable

construction practices, which, unlike traditional approaches, proceed from the fact that short-term profit maximisation leads to the depletion of natural and social resources on which the well-being of the human community is based. Further, in the section Sustainable Development Concept in Construction, the difference between 'sustainable' and 'traditional' practices in construction will be considered in detail, so it is worth mentioning here that the implementation of sustainable construction practices is carried out through the application of mandatory rules and standards concerning the energy efficiency of new buildings, including the New Zealand Building Code, which sets minimum requirements for the energy efficiency of new buildings (New Zealand Green Building Council (NZGBC), 2024b). At the same time, following sustainable construction practices is also a global trend and a global task, which is reflected in the goals of sustainable development proclaimed by the United Nations. Adding relevance to this trend is the fact that the construction industry has a significant impact on the environment, as the sector accounts for almost 40% of global energy-related CO2 emissions (United Nations (UN), 2020). The result of this is a global recognition of the need to reduce the environmental impact of construction activities, which is discussed further in the section, Aspects of Achieving Sustainability in Construction. It is also worth noting that COVID-19, by disrupting the lives of billions of people around the world, has highlighted the fragility of economies in the face of global shocks. A direct consequence of the pandemic has been the closure of businesses and job losses, which has forced policymakers to look for ways to revive the global economy, the main condition for which has been to ensure sustainability, while focusing on the development of a "green" economy (Bjerde, 2021).

However, as will be seen in the section, Problems of the Social Housing Market, social housing providers face several challenges that impact their performance. Such problems include the constant need to raise funds to finance work, increasing costs of design and construction, the need to build associated infrastructure facilities, lack of access to land,

resistance from local communities, and others (Bratt, 2009; Masood et al., 2016). In addition, the fact that construction technologies that meet the principles of sustainability are constantly being improved and can be perceived as difficult to implement and without proven benefits can be identified as a problem, which reduces the motivation to use them (Mok et al., 2018). While these challenges are not unique to social housing providers, they are particularly relevant to these organisations because, as will be discussed further in the Funding for Social Housing Providers section the social housing sector faces low availability of capital, which constrains the development of the sector (Joynt, 2019, p. 25). Financial, political, social, and other factors force social housing providers to reduce costs, use low-paid workers, use low-quality materials, etc., (Masood et al., 2016). Therefore, in the context of operational constraints, it is critical for social housing providers to balance the political, economic, environmental, and social aspects of sustainability not only from an economic perspective but also in terms of creating homes that are sustainable for occupants throughout their life cycle (Kandaurova et al., 2015; Enwin & Ikiriko, 2023, p. 14; Doleac et al., 2024). Achieving this balance requires considering the views of many stakeholders in a systematic and comprehensive manner, making achieving sustainability goals a challenging task for housing providers. The sections, Aspects of Achieving Sustainability in Construction and Incorporating Sustainability Principles into the Work of Social Housing Providers, will further explore sustainability issues, including sustainable development of housing providers.

However, studies examining the impact of political, economic, environmental, and social factors on sustainability have not paid due attention to the application of sustainable practices in social housing construction (Moshood et al., 2024). Neither the existing housing policy framework, government programmes, nor current academic researches provide a full answer to the question of who must take what actions to overcome the challenges that arise on the path to achieving sustainability in social housing construction (Enwin & Ikiriko, 2023, p.

13; Doleac et al., 2024; Moshood et al., 2024). Most academic papers focus on and describe the various challenges that exist in the social housing construction sector, without adequately indicating how the identified challenges can be overcome by companies. Only a few studies attempt to address the challenges faced by social housing providers, for example, Austin et al. (2014), Fernandez et al. (2023), and Doleac et al. (2024). In this regard, this paper will examine the factors influencing the achievement of sustainability in the social housing construction sector in New Zealand.

Research Questions, Aim, Objectives and Significance of the Study

The issues of construction of sustainable social housing can be viewed from different points of view: from the residents, who are primarily concerned with various aspects of housing affordability (rental costs, transport accessibility, etc.); from the operating organisations, interested in operating costs and ease of maintenance; from the social housing providers, who, in conditions of limited funding, are interested in reducing construction costs, including through the use of unstable materials and technologies; from the government, pursuing the goal of increasing the supply of social housing on the market to reduce social tension in society; from banks and investment funds, on the contrary, interested in improving the cost of such housing. In addition, design companies, supervisory authorities, various public organisations, local communities, etc. participate in this issue to one degree or another and have their point of view. This study is based on the idea that to achieve sustainable development in any area, a balance must be ensured between various aspects and influencing factors. At the same time, achieving such a balance is possible only with a compromise consideration of influencing factors, as well as the opinions of all stakeholders. This idea is precisely the paradigm of this study, discussed further in the Research Paradigm section.

Given that the topic of sustainable social housing construction is extensive and multifaceted, this work will pay exclusive attention to issues related to the sustainable development of social housing providers. In this regard, the aim of this study is to identify the factors influencing the sustainable development of the social housing construction sector in New Zealand. In this context, the study will attempt to answer the following key question: who needs to take and what actions need to be taken to ensure the sustainable development of the social housing construction sector in New Zealand? Within the framework of the stated goal and to reveal the main research question, this paper will provide answers to the following additional questions:

1. What aspects of sustainable development are most important for social housing providers?

2. How do social housing providers achieve a balance between different aspects of sustainable development, what challenges do they face, and what compromises do they make?

3. What impact has public policy had and continues to have on the social housing sector and its sustainable development?

To answer the questions posed and achieve the stated goal, the following tasks will be completed in this study:

1. Discuss the importance of social housing in solving the problem of providing affordable and adequate housing to all citizens in need.

2. Discuss the historical background to the formation of the modern social housing market in New Zealand and the associated problems.

3. Identify the challenges (political, economic, environmental, social, etc.) that social housing providers face in implementing their projects and ways to overcome these challenges.

4. Discuss how the implementation of sustainable development principles in the activities of social housing providers (including modern environmental technologies) affects the environmental, social, and economic aspects of the life cycle of constructed housing.

5. Identify and discuss the impact of government policy on the formation of the social housing market and the implementation of sustainable development principles in the activities of social housing providers.

The practical results of this study will be recommendations to the management of social housing providers and the government on the actions they need to take to ensure the sustainable development of the social housing construction sector in New Zealand. In this regard, identifying and assessing the influencing factors will enable social housing providers to improve the quality of their planning, which will lead to increased production volumes. In addition, achieving sustainability in social housing providers, in addition to reducing negative environmental impacts, will also improve the quality of life of residents and reduce their operating costs, which is especially important for economically vulnerable sections of society. It is also worth remembering that sustainable development of companies, including social housing providers, on a global scale contributes to both the post-pandemic economic recovery and helps mitigate the effects of climate change.

This work may be useful to local councils and government bodies in New Zealand that oversee social housing development activities. The results of the study may be used to prepare, justify, and make decisions within the framework of the Kāinga Ora reform programme announced by the National-led coalition Government in May 2024. There may also be interest from future researchers in filling existing knowledge gaps and prepare the basis for new research since this work not only fills a knowledge gap but also provides an opportunity to go beyond the existing literature, which often reflects outdated approaches, for example, Bratt

(2009), Kandaurova et al. (2015) or Mok et al. (2018). All this determines the significance of this study in both academic and practical areas.

Structure of the Research

This dissertation consists of six chapters, each devoted to a specific area and stage of the research. Chapter one provided the background of the research, set the objectives, and tasks, and defined the questions that need to be answered during the research. Chapter two presents a literature review, which is a synthesis of existing knowledge and provides a comprehensive understanding of the topic. Chapter three covers the research design, methodology, data collection and analysis tools, participant characteristics, and the ethical approaches used in the study. Chapter four discusses the results of processing the information obtained during the data collection process through a literature review and semi-structured interviews. Chapter five summarises, explains, and interprets the findings of the present study and provides recommendations to the management of social housing providers and the government on the actions they must take to overcome the emerging challenges in connection with the need to consider various aspects of sustainable development. Limitations identified in the work and suggestions for future research are also outlined. The concluding chapter presents a summary of the main findings of the study.

Chapter 2: Review of the Literature

The purpose of this literature review is to synthesise existing knowledge, provide a comprehensive understanding of the topic, and provide a critical analysis of the existing literature covering sustainability issues in social housing construction. To prepare the literature review, relevant sources were used: articles in peer-reviewed journals, government statistics, reports from government, commercial, and public organisations, legislation, as well as media publications and thematic websites. The criteria for selecting literary sources are discussed in detail below in the Research Methodology section. This literature review consists of three parts. The first part of the review examines the problems of the New Zealand social housing market, including those related to the historical and political context. The second part of the review discusses issues related to the inclusion of sustainability principles in the work of social housing providers and the challenges they face in this regard. Part three provides an overview of the New Zealand social housing market and available information on social housing providers. This literature review and this study focus on the challenges faced by social housing providers in implementing sustainability principles in their operations.

Problems of the Social Housing Market

The social housing market is only one part of the housing sector in New Zealand, but it fully reflects the problems inherent in this area, taking into account the feature associated with the history of the development of this market, which dates to the late 19th century, when it became clear that there was a housing problem in society that needed to be addressed. Urban working-class housing of the time can be described as overcrowded, flimsy structures, few public spaces, and a lack of waste and waste disposal systems (Schrader & Birkinshaw, 2005). The New Zealand Government believed that a higher standard of living could be achieved if the state could prevail over ‘greedy’ urban landowners, and the Workers' Dwelling Act was

passed in 1905, under which the first state-owned houses were built to rent to workers from urban areas. The subsequent history of social housing in New Zealand largely reflects the history of the political struggle between the New Zealand National Party and the Labour Party of New Zealand, as well as the corresponding change in views and approaches to solving the housing problem. National Party Governments emphasised the importance of home ownership as the only desirable option for true New Zealanders, while Labour Governments promoted the alternative options of social public housing. It can be stated that in the social housing sector, a model has developed in which state housing is sold by National Governments, while Labour Governments restrict such sales. The latest changes to the system for providing people in need with social housing were announced in May 2024 by the National-led coalition Government. To improve financial performance and reduce losses, plans were announced to reorganise Kāinga Ora, including a restructuring of the contractual relationships between Kāinga Ora and social housing providers. According to Housing Minister Chris Bishop's announcement in January 2024, following the publication of a report into Kāinga Ora's efficiency showing the company's financial insolvency, the government intends to transfer a considerable proportion of public housing functions from Kāinga Ora to social housing providers and other social services. A broad review of the government's current housing programmes is also planned as part of measures to improve housing affordability (Bishop, 2024; New Zealand Government, 2024).

Housing affordability is a multiform concept, reflecting both the socio-economic processes occurring in society and the expectations of the population and their income. As of the end of 2023, New Zealand had the ninth highest house price to income per capita ratio in the world (house prices grew 20.2% faster than income growth between 2015 and 2023), indicating that housing is unaffordable for the average New Zealander. Unaffordable housing has had a profound impact on New Zealand society, with home ownership falling from 74% in

1991 to 65% in 2018, the lowest since 61.5% of private houses were owned in 1951 (Stats NZ, 2020a). There are several key factors that contributed to the emergence and development of this situation. In the 1990s and early 2000s, the government's immigration policy and the cheap New Zealand dollar led to a surge in migration to New Zealand and, as a result, an increase in demand for housing. In addition, after the stock market crash of 1987 and the global financial crisis of 2007-2008, investors saw real estate as a more attractive alternative to securities, which also contributed to the growth of demand. On the other hand, the housing market was dominated by small construction companies building houses according to individual designs, which, on the one hand, reduced the supply on the market, and on the other hand, did not allow construction companies to save money due to the scale of the projects they were implementing. However, low land availability (affected by both geographic and planning constraints) and unstable market conditions such as high inflation, monetary tightening, and the resulting impact on interest rates have put further pressure on housing affordability (Norman & Teahan, 2015; Murphy, 2020; Organisation for Economic Co-operation and Development (OECD), 2024).

Thus, New Zealanders who had been used to high levels of homeownership are now facing a ‘housing crisis,’ making it impossible for the average New Zealander to own their own home in the near future. The inability of people to buy or rent at market rates has increased demand for social housing. In this regard, the steps taken by both the Labour Government and the National Government in the social housing sector largely reflect attempts to find ways to improve the affordability of housing for large groups of the population. However, the attempts to resolve the housing crisis have had a minor impact on price dynamics and the volume of housing supply on the market. After rising by more than 40% in 2020 and 2021, house prices fell by around 15% by Q1 2023 due to a decline in purchasing power as a result of tightening mortgage rules. Tightening of credit policy amid a decline in the proportion of homeowners has not led to increased affordability of rental housing. Currently, there is a shortage of not

only affordable family housing but also insufficient social housing, as evidenced by the increase in the number of people registered on the Housing Register, as previously mentioned in Chapter 1. The insufficient amount of social housing being built is a consequence of both the organisational issues associated with the activities of Kāinga Ora and the challenges that social housing providers face in the course of their work, which will be discussed in more detail in the next chapters (Murphy, 2020; OECD, 2024; Bishop, 2024).

In response to the challenges of deteriorating housing affordability, successive New Zealand Governments have developed and funded several social programmes to support people needing housing. Programmes developed over the past 10 years include Emergency Housing Special Needs Grants, Transitional Housing, Housing First, Whai Kāinga Whai Oranga, and others. However, while these governments have had good intentions, they have created a complex housing landscape for people in need. In particular, responsibility for social housing programmes is currently spread across different agencies and ministries, preventing the consolidation of planning, funding, and reporting in one place. The lack of such consolidation means that decisions on social housing are made without taking into account the views of local communities and households, and the decisions themselves are often politically motivated and do not take into account their effectiveness, including in the long term (Murphy, 2020; Wang & Gu, 2023; Bishop, 2024; OECD, 2024). This does not contribute to the certainty that existing providers and potential new entrants need to engage in social housing development actively. The situation is further made worse by the fact that tenants have little incentive or opportunity to move to more cost-effective, including more sustainable, housing, as the Accommodation Supplement provides less support than the Income-Related Rent Subsidy (IRRS), encouraging more people on the Housing Register to rent social housing. As the IRRS is linked to a specific property rather than a household, people are forced to move to other homes when they lose their IRRS entitlement, which means they end up occupying social housing as a market tenant

at market rates, undermining the government's efforts to provide social support to people in need (Murphy, 2020; Wang & Gu, 2023).

As mentioned earlier, the problem of lack of housing or poor-quality housing is particularly acute for Māori people, who historically face significantly worse housing conditions than other groups. For example, according to Stats NZ (2020b) and HUD (2023), Māori reported higher levels of housing unaffordability (13% for Māori compared to 8.8% for the rest of the population) and living in housing that is prone to damp and mould (40% for Māori compared to 21% for the rest of the population). In addition, Māori are disproportionately represented on social housing waiting lists, meaning that they are more likely to live in inadequate housing compared to the rest of the population. For example, as of 31 March 2024, there were 12,540 Māori people on the Housing Register, representing 49% of all applicants. However, compared to the same period in 2023, the number of Māori applicants on the Housing Register increased by 4% (MSD, 2024). But on the other hand, Māori own significant land resources with the potential to build affordable social housing. As noted in a report by the Office of the Auditor-General (OAG), in Māori areas there is significant demand from Māori individuals and organisations to use their land for housing, subject to appropriate government support and regulation (OAG, 2011). However, there are some restrictions on the use of Māori land for development, as most Māori land is owned by more than one person and is usually managed by trust companies, making development approval processes much more complex, including for Māori themselves. Under the Te Ture Whenua Māori Act 1993 (Maori Land Act 1993), changing the status of Māori land is subject to several significant restrictions that do not apply to ordinary privately owned land. In particular, Māori landowners can sell or gift their shares only after consulting with the "preferred classes of alienees" (a wide range of interested parties from the landowner's relatives, including former relatives, to Māori incorporation) and approval by the Māori Land Court. Such legislative requirements make any

new development on Māori lands impossible unless that development is for the benefit of Māori corporations (OAG, 2011; Menzies, 2023, p. 23). There are also additional barriers to building housing on Māori land: difficulties in obtaining finance due to banks' reluctance to accept Māori land as collateral due to the significant difficulties in changing the status of this land; existing planning restrictions, as Māori land is often designated agricultural land, which places certain limitations on housing designs and plans; lack of infrastructure such as water and electricity; and lengthy and expensive development processes, particularly where there are many owners of land (MBIE, 2021, p. 4; Menzies, 2023, p. 18; HUD, 2024b). However, some of the barriers identified are not unique to Māori or their lands, as similar issues are faced to varying degrees by all housing development organisations in New Zealand.

As shown above, New Zealand's social housing market is in many ways a legacy of previous social and economic policies, the significant changes of which are largely due to three main reasons: the need for spatial redevelopment of urban areas, difficulties in finding land plots, and the need to reduce government spending on housing assistance (Austin et al., 2014; Murphy, 2020). The need for redevelopment stems from the fact that, since the 1970s, the focus has shifted from providing social housing for low-income wage earners to supporting the most vulnerable households, resulting in residual exclusion and spatial concentration of poverty (Murphy, 2020; Fernandez et al., 2023; Dawkins, 2023; HUD, 2024c). Problems with finding land have arisen because the use of free or subsidised public land for housing has declined as a result of tightening Treasury regulations. This, in turn, forced the government to make a choice – either to dispose of the public housing stock or to find other sources to subsidise construction (Wang & Gu, 2023). Another consequence of the policy changes has been a trend towards less direct state involvement in the mass provision of social housing in favour of independent housing providers, housing associations and independent management organisations (Murphy, 2020; Wynne et al., 2022, p. 271). Growing housing affordability

issues have forced more households, including low-income, employed families, to seek help to cover housing costs, including through social housing (Fernandez et al., 2023; Dawkins, 2023). The growing demand for social housing was dictated by both inflationary processes that contribute to the growth of housing costs and rent growth, and the artificial and targeted underestimation of the cost of rent from social housing providers. Government-initiated tax changes have forced individuals to forego rental properties, which has increased demand for social housing (Wang & Gu, 2023). Distortions in housing construction planning also contribute to the growth in demand for social housing. According to Mooney (2024), the current focus of the New Zealand Government is on a territorial rather than a universal approach to meet housing needs, which means planning and responding to the needs of specific communities, without considering economic, environmental, and other aspects. The result of these policies is uneven levels of housing affordability across the country. Indirect evidence of this is that many public housing providers operate within the community.

An analysis of the experience of housing policy planning in England, Australia and New Zealand identified four factors influencing the effectiveness of measures taken to improve housing affordability: consistency of government in its commitment to the chosen course; relevant legislative framework; the strength and nature of the organisations involved in the provision of social housing; and, perhaps most importantly, the market conditions in which the policy operates (Austin et al., 2014). At the same time, the affordable housing policy is directly linked to profit-making as a means of cross-subsidising the construction of affordable housing without direct subsidisation, which is reflected in the system that allows for profit from issuing building permits and regulating the cost of housing through the allocation of land for construction. However, Austin et al. (2014) highlight the lack of transparency of this system in New Zealand, noting that rising house prices and indirect cross-subsidies help offset some of the costs of building affordable housing, but the scale and complexity of the projects make cost

increases difficult to track and manage. In this regard, given the stabilisation of market conditions, in the face of significant population growth, rising house prices and the potential for agricultural land to be developed for residential development, Auckland Council has made it clear that profit-making may be a policy option, although this approach and may face resistance from the wider community and, to some extent, the development industry. Auckland Council's position is driven by the fact that Auckland is experiencing population growth (Auckland currently has 1.66 million people and is projected to grow to 2.4 million by 2050), which will require the construction of 313,000 new houses over the next five years, including 11,000 social housing buildings with associated critical infrastructure. At the same time, the total cost of housing projects in Auckland is estimated at NZD 4.9 billion, financed by Kāinga Ora revenues and the Housing Acceleration Fund. Given Kāinga Ora's insufficient financial stability, the implementation of such large-scale construction plans by the Auckland Council is questionable and requires finding new sources of funding (Auckland Council, 2024).

Thus, in the context of growing demand for social housing, the low efficiency of the state rental operator, and the increasing market share of independent social housing providers, the issue of cost-effectiveness in the operation of social housing providers has become an urgent issue (Wang & Gu, 2023). As Fernandez et al. (2023) note, the survival and growth of independent providers reflect the effectiveness of government housing policy and are critical to the continuation of social housing construction. However, the environment in which social housing providers operate is increasingly challenging due to financial, political, and other factors affecting housing affordability, increasing numbers of people living in poverty, and limited access to credit (Dawkins, 2023; Fernandez et al., 2023). Providers face ongoing pressure to raise funds to finance the work, increasing design and construction costs, the need to build associated infrastructure, lack of access to land, resistance from local communities, and others (Bratt, 2009; Masood et al., 2016; Menzies, 2023, p. 18). In these circumstances,

there are several critical issues for the development of the social housing sector: housing providers have limited ability to access land; mechanisms for investing in social housing are extremely complex, bureaucratic, and politicised; the construction sector has currently reached its potential and almost do not implement innovation (Joynt, 2019, p. 50). In addition, independent social housing providers face resistance from regional authorities and subsidy restrictions (Coimbra & Almeida, 2013; Norman & Teahan, 2015). At the same time, New Zealand Government authorities recognise the existence of problems in the activities of social housing providers and, in turn, focus on the financial problems they face. In particular, it is noted that these companies must operate in an environment of fragmented government funding, sporadic charitable donations, and limited profit opportunities (Joynt, 2019, p. 25; Fernandez et al., 2023; HUD, 2023). Financial, political, social, and other factors force social housing providers to reduce costs, use low-paid workers and volunteers, use low-quality materials, etc. (Masood et al., 2016).

In this regard, there is a possibility that social housing providers will choose to build housing at a low initial cost while neglecting the life cycle costs of the house or the environmental impact of the technologies and materials used (Bratt, 2009; Coimbra & Almeida, 2013; Zeng et al., 2021). Other barriers identified in the sustainable and affordable housing literature include the challenge of coordinating multiple sources of financing, risks of increased regulatory and contractual obligations, and limited experience in building “green” projects (Mok et al., 2018; Wang & Gu, 2023). On the other hand, a problem is created by the fact that construction technologies that meet the principles of sustainability are constantly being improved and can be perceived as difficult to implement and without proven benefits, which reduces the motivation to use them, especially by organisations with limited experience in using such technologies (Mok et al., 2018; Wang & Gu, 2023). In this regard, in the context of existing operational constraints, social housing providers must strike a balance between the

economic, environmental, social, and other aspects of sustainable development (Enwin & Ikiriko, 2023, p. 14). However, achieving such a balance is a complex task, since construction companies in their quest for sustainable growth and development are faced with several issues that need to be taken into account, such as the need to balance long-term sustainability goals with immediate economic benefits; lack of political will to implement modern approaches; the resistance from both the professional community and future residents due to the unclear benefits of using modern approaches; poverty and inequality of future residents; limited resources, primarily financial; lack of public understanding of environmental issues and the importance of sustainable development (Correia, 2019; Eklova, 2020; Doleac et al., 2024). All these issues are interconnected, which means that the only way to overcome them is to use a comprehensive approach, that is, extracting knowledge from all areas to ensure the application of the most appropriate strategies and approaches.

Sustainable Development of Social Housing Providers

Constructing affordable housing for housing providers is a complex and challenging in the face of declining incomes for prospective occupants, limited availability of subsidies, the need to raise funds to finance the work, ever-increasing design and construction costs, resistance from local communities, etc. (Bratt, 2009; Norman & Teahan, 2015; Masood et al., 2016; Doleac et al., 2024). In these circumstances, social housing providers are forced to make critical trade-offs during the construction process that have long-term impacts on their ability to deliver high-performance housing to meet the needs and preferences of residents. These trade-offs revolve around the choice of site, the typology and design of housing that can be built on the site, the external and internal materials, fixtures and fittings, and additional amenities such as parking, play areas, or community gardens. The critical trade-off is between the current costs of construction and the future costs of repair and maintenance (Norman &

Teahan, 2015; Holland, 2018; James, 2022). As noted by Fernandez et al. (2023), social housing providers are willing to use a wider range of modern design solutions, materials and technologies, but due to various operational constraints, they opt for known, relatively inexpensive and already proven solutions, materials and technologies, which do not fully meet the needs of both the providers themselves and the needs of future residents. In this regard, it is worth noting that the interests of social housing providers and potential residents differ significantly. Housing providers have an interest in maintaining the value and functionality of their assets over the long term, while potential residents claim to have an interest in the location of the house, the security of its ownership, the availability of heating, ventilation, storage space, equipment, and household appliances (James, 2022, p. 7). All this means that the challenges associated with the provision of affordable housing do not end when the built house is commissioned. The true test of the success of affordable housing development is whether the home built provides decent, safe, comfortable, and affordable housing over time (Norman & Teahan, 2015; Shwashreh et al., 2024).

Sustainable Development Concept in Construction

Traditional economic approaches are based on the idea that in a market system, profit maximisation and satisfaction of consumer needs lead to increased human well-being and that market failures can be corrected by government policy. On the other hand, sustainable economics believes that short-term profit maximisation will ultimately lead to the depletion of natural and social resources on which the well-being of the human community and the survival of biological species are based. One of the main documents of the UN Conference on Environment and Development, Agenda 21, questioned traditional concepts of economic growth and raised the issue of the need to find patterns of consumption and production that meet the essential needs of humanity (UN, 1992). The progress of economic science has led to

greater consideration of the natural factor, since most traditional natural resources have become scarce, and many renewable natural resources, not having the proper value, have begun to deplete and degrade. At the same time, the interaction of social and environmental factors has led to the need to consider another important factor of production – social capital. This is why the topic of sustainable development has recently been gaining popularity both in the academic community and among companies operating in various sectors of the economy. Sustainability is also gradually becoming a trending topic in public discussion. It is often associated with climate change, ensuring sustainable growth in the quality of life of people, or using environmentally friendly technologies and materials (Coimbra & Almeida, 2013; Connell, 2018; Zeng et al., 2021; Shwashreh et al., 2024). At the same time, the concept of "sustainable development" itself does not have a single accepted definition, and each subject discussing sustainability builds its concept (Eklova, 2020).

According to the UN, sustainable development is the development of society to meet the life needs of the present generation without depriving future generations of people of this opportunity (UN, 2020). Another, more complete definition of sustainable development is given in the Earth Charter – an international declaration of fundamental principles and values for creating a just, sustainable, and peaceful global society in the 21st century. According to the Earth Charter (2024), sustainable development is a process of economic and social change in which natural resources, investment direction, orientation of scientific and technological development, personal development, and institutional changes are consistent with each other and strengthen the present and future potential to meet human needs and aspirations. At the same time, sustainable construction is often understood as environmentally responsible and resource-efficient processes throughout the entire life cycle of a building, from site selection to design, construction, operation, maintenance, reconstruction, and dismantling (USEPA,

2024). Thus, in a broad sense, sustainable development means the harmonious development of production, the social sphere, the population, and the natural environment.

Environmental component. From an environmental point of view, sustainable development should ensure the integrity of biological and physical natural systems. Degradation of natural resources, pollution, and loss of biodiversity reduces the self-healing capacity of ecological systems (Eklova, 2020; Bag et al., 2021; Earth Charter, 2024). In the context of construction, environmental sustainability is based on the 5Rs concept, which includes five main steps to achieve the set environmental goals: Refuse (refuse to build excessively and maximise the use of existing buildings); Reduce (assess the need for resources required for the construction and operation of a building and reduce this need to the minimum necessary levels); Reuse (reconstruction to provide the building with additional functions that extend its life cycle); Repair (restoration and repair, to ensure long-term operation, reducing the consumption of materials and resources); Recycle (recycle materials previously used for the construction of old buildings for their use in new construction or for other purposes). Of course, the most environmentally friendly approach is to do nothing since any construction is inherently non-environmental. However, following the 5Rs concept allows construction organisations to significantly reduce the negative impact on the environment, including through such simple and effective steps as:

- Proper selection of the land plot. The choice of the site determines whether the building located on it can be considered environmentally sustainable. The most preferable for construction are Brownfield sites, i.e., previously built with other buildings. The site should be easily accessible and located in densely populated areas with sufficient resource provision and public amenities.

- When designing a building, it is necessary to provide an opportunity for future residents to behave responsibly towards the environment. They should be provided with the

required facilities for waste recycling, sustainable transport accessibility, water, and energy conservation, etc.

- Reduction of CO2 and other greenhouse gas emissions. Emissions should be assessed throughout the life cycle of the building, and this assessment should include all internal and external sources required for the development, operation, and demolition of the building. Buildings with a zero-carbon footprint are classified as net zero carbon buildings. Emission reductions can be realised in the following categories:

  - Optimising energy use to reduce emissions generated by buildings. The building envelope and systems should be optimised to achieve the highest possible energy efficiency, reducing energy consumption. The energy required can be obtained from external renewable sources or by installing systems that produce renewable energy on-site. When the balance of the energy needed to operate it and the energy produced on-site is neutral, the building is classified as a net zero energy building.
  - Responsible use of materials and waste. Materials should be assessed throughout the building's life cycle, with preference given to recycled materials that do not contain harmful substances. Waste should be minimised throughout the life cycle and all waste should be recycled.
  - Reducing water use both inside and outside the building. Where possible, greywater and rainwater should be used instead of drinking water. Rainwater should be stored on site.
  - The land used for development should be easily accessible by the most environmentally friendly modes of transport: walking, cycling, renewable energy vehicles, and public transport. The use of unsustainable modes of transport, such as car transport, should be limited.

- Biodiversity should be supported by sufficient greenery planted both on the site and on the building facades and roof, as well as inside the building (Whang & Kim, 2015; Eklova, 2020; Shwashreh et al., 2024).

Economic component. The economic approach to the concept of sustainable development is based on the theory of the maximum flow of total income that can be produced subject to the preservation of the total capital with which this income is produced. This concept implies the optimal use of limited resources and the use of environmentally friendly, energy-saving technologies, implying the creation of environmentally acceptable products with the minimisation, recycling, and destruction of waste (UN, 1992; Eklova, 2020; USEPA, 2024). However, when deciding which capital should be preserved (e.g., physical, or natural, or human capital) and the extent to which different types of capital are interchangeable, as well as when valuing these assets, especially environmental resources, problems of correct interpretation and accounting arise. For example, investors, when assessing economic sustainability, usually consider only a limited part of the life cycle of a building, assessing their initial investment costs. At the same time, building owners, occupants, or local councils pay more attention to the costs of maintenance, operation, renovation, and dismantling. Therefore, it is necessary to assess economic sustainability both in general and at all phases of the life cycle (Eklova, 2020; Bag et al., 2021; Zeng et al., 2021; Shwashreh et al., 2024). In practice, due to the lack of an accepted methodology for calculating the economic sustainability of buildings, only continuous monitoring of costs and revenues throughout the life cycle can be an effective tool for ensuring optimised economic performance (Liu et al., 2022).

Social component. The social component of sustainable development is focused on people and aims to maintain the stability of social and cultural systems, including reducing the number of destructive conflicts between people. An important aspect of this approach is the idea of a fair distribution of benefits, which implies that a person should participate in the

processes that shape the sphere of his life, contribute to the planning, adoption, and implementation of decisions, as well as monitor their implementation (Eklova, 2020; Kislitsyna, 2022). In construction, social sustainability prioritises the safety and well-being of workers and the social impact of construction projects on society. Socially sustainable construction methods can improve living conditions, create jobs, and contribute to the overall development of local areas. Achieving social sustainability in construction is possible through steps such as:

- Integrating stakeholders into the construction process, primarily by discussing the project and important decisions with the relevant communities or local councils.
- Responsible sourcing of materials. The construction industry, as a major consumer of natural resources, must ensure sustainable and responsible use of materials. Companies can ensure responsible sourcing by working with suppliers who follow sustainable practices and certify both their products and supply chains.
- Designing and constructing functional and usable buildings. The usability of a building can be assessed in terms of efficiency, cost-effectiveness, and satisfaction.
- Following ethical considerations in their activities. This includes providing fair wages, safe working conditions, and career opportunities for workers (Whang & Kim, 2015; Eklova, 2020; Kislitsyna, 2022; Shwashreh et al., 2024).

Thus, it can be said that sustainable development in construction is a style of construction, the purpose of which is to mitigate negative environmental, social, and economic impacts throughout the life cycle of a house, from the stage of selecting a land plot to dismantling obsolete structures (MBIE, 2019, p. 4; USEPA, 2024; Shwashreh et al., 2024). In real life, the implementation of sustainable construction practices is carried out through the development and application of various programmes that encourage increased energy efficiency in construction, as well as through the introduction of mandatory state rules and

standards that consider energy efficiency issues. For New Zealand, an example of such rules is the New Zealand Building Code, which sets minimum requirements for the energy efficiency of new buildings (NZGBC, 2024b). In addition, various methodologies for assessment of the efficiency of buildings are being actively developed, providing for a voluntary rating assessment of sustainable buildings. Examples of such ratings are BREEAM (Building Research Establishment Environmental Assessment Method) in the United Kingdom, Energy Star and LEED (Leadership in Energy and Environmental Design) in the United States, and Homestar in New Zealand. The development of codes and standards is based on several international agreements and goals, the most well-known of which are the UN Framework Convention on Climate Change, which sets commitments to reduce greenhouse gas emissions, and the UN Sustainable Development Goals (SDGs), which cover a wide range of sustainability issues. The UN 2030 Agenda is built around these goals, defining an action plan for people, countries, and the planet by 2030. The Agenda includes 17 relevant goals, the implementation of which is possible only with a balance between three main components: economic growth, social responsibility, and environmental balance (UN, 2020). However, it is worth noting that none of the sections of the UN sustainable development concept specifically focuses on either sustainable construction in general or sustainable building construction (Eklova, 2020; UN, 2020).

Of the UN SDG, Goal 11 (make cities and human settlements inclusive, safe, resilient, and sustainable) is most closely related to construction and, particularly, the social housing sector (Stearns, 2012). As part of Goal 11, the UN also set a target to ensure universal access to adequate, safe, and affordable housing with basic services by 2030. However, sustainable housing must provide more than four walls and a roof. Sustainable housing must provide access to safe drinking water, heat, light, waste disposal, adequate space, and protection from cold, damp, heat, rain, wind, and other health hazards and risks associated with construction defects

(UN, 2020). In this regard, one of the key directions of the state's social policy should be to ensure access for everyone to adequate, safe, and affordable housing and basic services, including through stimulating the social housing construction market (Norman & Teahan, 2015; Kāinga Ora, 2022; Fernandez et al., 2023; HUD, 2023, p. 14). In the New Zealand context, measures to stimulate growth in the social housing market and provide a range of housing-related support services are delivered through the Aotearoa New Zealand Homelessness Action Plan, through which the government partners with local communities, housing companies, and charities to build and rent social housing (HUD, 2024c).

Regulatory Framework

All construction work in New Zealand, including social housing work, must comply with certain requirements set out in existing legislation. These requirements set out how, under what conditions, by whom the work can be carried out, the procedures and requirements for inspections, and consumer protection (New Zealand Legislation, 2024). The building regulation system that sets the framework includes the following key documents:

- The Building Act 2004, which is the main law governing the construction, renovation, demolition, and maintenance of buildings. The purpose of this Act is to ensure that buildings are safe, healthy, and meet minimum requirements;
- The Building Code, which is a set of laws setting out minimum requirements for the design and construction of buildings, covering issues such as structural stability, durability, fire protection, access, moisture control, utilities, and energy efficiency;
- Other Building Regulations, which set out specific measures for regulation, control, and reporting on individual issues. These are the Resource Management Act, Fire, and Emergency 2017, laws defining requirements for plumbing, gas, and electrical installations;

- Building-related standards, establishing specific, including quantitative, parameters that buildings and work technologies must comply with. These standards are developed by Standards New Zealand, which is a business unit of MBIE.

The existing regulatory framework includes only goals, functional requirements, and performance criteria, which enable architects and builders to use a wide range of materials and construction technologies, including the most innovative (NZGBC, 2024). However, the scope of design and construction capabilities is limited by the capabilities of the customers, which, in the context of this work, are social housing providers (Fernandez et al., 2023).

Aspects of Achieving Sustainability in Construction

At the start of any construction project, including social housing, the organisations involved are faced with a choice between two alternative paths to project implementation: either well-known and widely used traditional approaches or approaches based on sustainability principles. Traditional house building uses time-honoured construction methods and materials. Structural elements such as brick, concrete, and wood take centre stage here as these components have a proven record of accomplishment of strength, load-bearing capacity, ease of use, and affordability. Traditional approaches rely heavily on manual and labour-intensive processes carried out by experienced builders, which often require more time to complete a project. Modifications or changes that arise during the project can be complex and difficult to implement. However, traditional approaches offer greater flexibility in the choice of materials, as builders have historically used materials that are more readily available in a given region. At the same time, traditional construction contributes significantly to environmental problems such as deforestation, air and water pollution, and increased greenhouse gas emissions. In addition, homes designed using traditional approaches have low energy efficiency, which can lead to a reduced quality of life in them and increased operating

costs. In contrast to traditional approaches, sustainable construction implies an environmentally responsible integrated approach to the design, construction, and operation of buildings and infrastructure. The goal of sustainable construction is to limit the negative impact of buildings on the environment while achieving cost-effectiveness of construction and social orientation of the project (Connell, 2018; Zeng et al., 2021). In practice, sustainability in construction is achieved in two ways: through the use of environmentally friendly building materials, such as recycled materials (for example, slag-mineral mixtures, roofing felt, gypsum fiber and wood fiber boards), materials that require low energy costs for production (e.g. brick and wood), materials with low content of volatile organic compounds, etc.; through sustainable construction methods, such as the use of energy-efficient design that maximises the use of available resources, waste reduction at all stages of construction, the creation of comfortable and healthy buildings for residents with integrated green areas and natural lighting and ventilation, etc. (Zeng et al., 2021; Shwashreh et al., 2024). When building a sustainable home, the following technical aspects should be given priority:

- Effective thermal insulation of walls, floors, ceilings, foundations, and other surfaces, since thermal insulation saves the internal energy of the house, retains heat, and blocks cold air from the street.

- Proper organisation of the heating, air conditioning, and ventilation system. The energy balance is optimised through a centralised ventilation system, using a heat recuperator. Heat-insulating double-glazed windows and polymer films that reflect infrared rays are installed on the windows. In addition, additional energy efficiency can be achieved using solar panels and a heat pump.

- Striving for the autonomy of a sustainable home, which should be independent of infrastructure, external electrical and gas networks, water supply, and sewerage. An

autonomous house involves installing sensors to maintain the internal microclimate through the control of climate control equipment and maintaining comfortable indoor air quality.

To avoid future upgrades and modernisations, modern construction approaches must consider the building's entire life cycle. In this regard, reducing the level of consumption of energy and material resources throughout the entire life cycle of a building from site selection, design, construction, operation, repair, and demolition, is the main task of sustainable development in construction (Zeng et al., 2021). In addition, another important goal of sustainable construction is the preservation and improvement of the quality of buildings, as well as the comfort of their internal environment, which in practice expands and complements classical building design with the concepts of economy, utility, durability, and comfort (Coimbra &Almeida, 2013; Eklova, 2020; Bag et al., 2021). The environmental benefits of a sustainable home include saving natural resources; reducing waste during construction; saving energy and water; and reducing air pollution. The social benefits include improving the quality of life by creating comfortable conditions (improving air quality, heat, and sound insulation); reducing the burden on urban infrastructure by reducing water, land, and air pollution; optimising transport links in cities by building residential areas near places of employment, schools and medical facilities; the aesthetic appeal of “green” buildings. However, despite the importance of the environmental and social benefits of sustainable homes, the real consumer primarily pays attention to the economic aspects. The specific economic benefits include the following: reducing energy consumption by using renewable sources; reducing water consumption; saving on servicing a sustainable building by optimising systems; and accelerated return on investment in sustainable buildings (Eklova, 2020; Bag et al., 2021; Zeng et al., 2021; Enwin & Ikiriko, 2023, p. 14; Shwashreh et al., 2024). According to Liu et al. (2022), the use of high-performance modern materials and systems reduces energy consumption by 55% in the first year of operation of sustainable houses and given that the

installed equipment requires less maintenance over time, the maintenance costs of such buildings are reduced by 6 - 8%. This is primarily due to the elimination of heat leakage through walls (by 40%) and roofs (by another 20%), as well as due to a reduction in water consumption (by 30%).

In addition to owners and tenants, the government can also benefit from the construction of sustainable housing. According to some estimates, if a large-scale programme to modernise the housing stock in New Zealand is implemented by 2050, the potential benefit could amount to $50 billion in savings on health care and energy (BRANZ, 2020, p. 49). In an attempt to stimulate the construction of sustainable housing, governments of some countries establish tax incentives and subsidise preferential terms on mortgages, which makes sustainable housing more attractive. For example, in the United States, potential buyers of LEED-certified housing are offered a reduced mortgage interest rate - on average up to 0.45%, and the home insurance rate, which is mandatory for lending, is reduced by an average of 0.2-0.4%, depending on the borrower. In addition, as a tax benefit, homeowners who install energy-saving equipment receive a tax deduction of up to 100% of their property taxes (USEPA, 2024). Sustainable homes are also more attractive from an investment perspective. According to a study by CoStar Group, “green” buildings can have a price premium of 6-11%, which is due to subsequent savings on utility bills, the lifespan of the buildings, and the trend towards green home ownership (CoStar Group, 2024, p. 4).

However, any project can have both advantages and disadvantages. It is worth noting that the disadvantages of sustainable housing include the high cost of design and construction, as well as possible errors and shortcomings due to insufficient experience and professional knowledge of designers and builders. According to some estimates, depending on the technologies and materials used, building a sustainable house will cost 50-200% more than a traditional one (Zeng et al., 2021). For example, according to Stats NZ (2024), for an eco-

friendly house of 155 sq. m, the construction cost is NZD 4,285 per square meter, which is significantly higher (by 84%) than the average cost of building a “ordinary” house (NZD 2,325 per square meter). The technological systems of a sustainable home require maintenance, which implies the presence of highly qualified specialists to repair solar panels, various types of heating, etc., which leads to an increase in operating costs. In addition, a modern sustainable home can quickly turn into an “ordinary” one if the developer or future owner, for whatever reason, decides to make any unstable changes to the project. In addition, for sustainable buildings, rent rates are set 3-9% higher than for “ordinary” buildings, which can be quite painful for the social housing market (Liu et al., 2022).

From a consumer perspective, energy efficiency and environmental sustainability of housing is an indicator that reflects how rationally the resources consumed are used, primarily water, electricity, and gas. All this is reflected in the systems for assessing the project's energy efficiency and environmental indicators. In New Zealand, in the housing sector, such ratings are used as Homestar, which assesses the operational characteristics of houses and the efficiency of resource consumption for newly built houses, or HomeFit, which assesses the health, comfort, energy efficiency and safety of already used houses (Holland, 2018). The Homestar system is an independent certification programme developed by the NZGBC and endorsed by the government. Homestar aims to raise home standards and works by comparing a new or refurbished home with benchmark values. Homes are rated on a scale of six to 10 stars. The certification process involves a range of processes including building contractor registration, design and build, assessment, audit, and home certification. A minimum Homestar rating of six stars ensures that a home will be warmer, drier, and healthier than a similar home built to the New Zealand Building Code. It will also use less energy and water, which is an important consideration. As you progress through the ratings, the home’s thermal performance will improve, and its sustainability credentials will be enhanced through features such as

recycling greywater (the wastewater from your shower used to flush toilets). At the same time, the developers of Homestar claim that the payback period for a six-star rating is 6-10 years, and for a ten-star rating, it will take more than 20 years, which may not be economically viable for houses bought with a mortgage and rented out (Holland, 2018; NZGBC, 2024a).

Funding for Social Housing Providers

In real life, housing providers strive primarily to ensure the financial and economic sustainability of their company, since economic stability is the key not just to successful operation, but to the survival of the company. Without sufficient funding, it is impossible to achieve environmental and social sustainability indicators. Survival issues are especially relevant for social housing providers, who are mostly charities. The current operations of social housing providers in New Zealand are largely supported by government funding in the form of the IRRS, as well as funding from various forms of philanthropy and sponsorship. However, if providers have existing long-term contracts with the HUD to provide social housing, then such providers are considered by banks to have a stable, ongoing income, which allows them to use borrowed funds. However, even with the IRRS, due to the relatively low rental yields of social housing, achieving an acceptable Interest Coverage Ratio (ICR) (2:1 is considered the minimum acceptable level) can be challenging for providers, reducing their access to borrowed funds, and therefore preventing them from growing the housing stock (Joynt, 2019, p. 25). The availability of funding, both equity and debt, is a major factor limiting the efforts of social housing providers to develop their housing stock. Funding can vary significantly across providers depending on how their finances are structured, most notably the extent to which the provider owns their housing stock. Many social housing providers were originally established as not-for-profit and charitable organisations, which typically do not require a market-level Return on Investment (ROI), but the capital they have is limited and has typically been

accumulated over decades of fundraising and other charitable activities. Given the inability of most providers to deliver an ROI that matches market expectations, it can be assumed that there is a low availability of capital in the social housing sector (Norman & Teahan, 2015; HUD, 2023; OECD, 2024). In the absence of direct or grant funding from the government, social housing providers are scrambling to find alternative sources of capital, which are dominated by unsustainable forms of funding such as selling existing assets and reinvesting the proceeds into new assets; reallocating funds by discontinuing investment in existing assets and redirecting funds to new projects; various partnership schemes where providers use existing assets as an equity contribution to partnership projects, investing the proceeds from the proceeds into the construction of new properties; project lending; direct fundraising (Mooney, 2024).

Unlike independent social housing providers, the funding model of the state-owned rental operator, Kāinga Ora, prior to the change of government in 2023, proposed that all capital expenditure on new social housing and the upgrading of existing houses would be financed by borrowing, with rental income used to fund ongoing operations and service debt. Since 2018, Kāinga Ora has issued bonds on the private markets as its main source of borrowing on behalf of its subsidiary Housing New Zealand Limited. According to the Independent Review of Kāinga Ora, Kāinga Ora's annual operating costs have increased from NZD 1.5 billion in 2019/20 to NZD 2.5 billion in 2022/23. During this period, Kāinga Ora has made a capital expenditure of approximately NZD 9 billion and increased its total debt to NZD 12.3 billion. Kāinga Ora owns over 72,000 houses and has an estimated asset value of NZD 45 billion. At the same time, the government's 2023 Economic and Fiscal Report forecasts that Kāinga Ora's operating deficit will widen to NZD 700 million by 2028, with debt increasing to NZD 23 billion by the same year. This is due to interest in the debt-financed capital investment programme and significant increases in other expenditures, including staff and maintenance

(Mooney, 2024; New Zealand Government, 2024; OECD, 2024). Following the publication of the mentioned above report showing Kāinga Ora's financial insolvency and the resulting reform and reorganisation process, Kāinga Ora will no longer receive funding in its own name but will instead be funded directly through the New Zealand Government (Bishop, 2024).

Since 2014, registered social housing providers have been eligible to receive the IRRS, which was previously only available to Kāinga Ora. Some providers also contract with the HUD to provide support services under government programmes such as Housing First and Transitional Housing (HUD, 2024c). The IRRS is paid to social housing landlords to cover the difference between what a tenant pays in rent and the market rent. These subsidies allow providers to maintain rents lower than in the private rental market, with tenants typically paying no more than 25% of their income in rent. The provision of IRRS to social housing providers has provided some incentive for their development, as previously such providers had only received limited subsidies through limited forms of government support and/or philanthropic sources (Mooney, 2024). In recent years, in addition to the IRRS, the government has been funding social housing providers through the Operating Supplement (OS), typically paid as a percentage premium on market rents to make new supplies more cost-effective (HUD, 2024c). According to the New Zealand Government (2024), the effectiveness of these measures can be seen in the growth in the number of houses managed by independent housing providers (18,520 houses in 2024 compared to 12,588 houses in 2023). The lack of availability of public funding remains the biggest limiting factor for the growth of the social housing sector, as in the current environment public funding is a key factor in supporting both new projects and ongoing leases through subsidies for tenants (Mooney, 2024). In this regard, given the negative assessment of Kainga Ora, the government has allocated an additional NZD 140 million in the 2024 budget exclusively to housing providers to fund the construction of 1,500 new social housing places (Bishop, 2024). However, the shift in funding in the social housing sector from government-

managed agencies to independent providers creates opportunities for negative consequences, as long-term reliance on public funding may mean that charities and community organisations will move away from their original roles and the lines between the public and private sectors will begin to blur, which can lead to abuse (Doleac et al., 2024). In this regard, a lack of accountability and transparency in the activities of social housing providers can undermine public trust and hinder the sector from addressing pressing social and environmental issues (Enwin & Ikiriko, 2023, p. 15; Doleac et al., 2024).

Incorporating Sustainability Principles into the Work of Social Housing Providers

In conditions of limited funding for achieving the objectives facing housing providers, the concept of sustainable development becomes especially relevant, which should be focused on the implementation of a set of tasks to ensure a strategic balance in solving socio-economic problems and preserving natural resources (Kandaurova et al., 2015; Mok et al., 2018). Achieving such a balance is possible with a certain combination of interrelated social, economic, and environmental components that either negatively or positively affect the company's future activities (Mok et al., 2018; Enwin & Ikiriko, 2023, p. 14; Doleac et al., 2024). The key to achieving sustainability in construction projects is meeting the needs of various stakeholders. Sustainable construction projects should support a healthy environment and integrate economic and social aspects into various processes and decisions throughout the project life cycle. The implementation of sustainable construction requirements throughout the project life cycle begins early in the design process, when customer expectations, quality standards, and technical specifications are collected and documented. Requirements include a wide range of technical and managerial characteristics, such as the technologies used, materials, equipment, quality, safety, and performance (Mok et al., 2018; James, 2022). Therefore, achieving sustainable results in construction is only possible through the creation of

a structured work process that includes a sustainability-oriented component (Haeffele & Storr, 2019).

From the point of view of Correia (2019), the projection of the concept of sustainable development to the company level should be considered from the perspective of a systems approach, since a company is, in fact, a system – a complex of interacting heterogeneous elements. According to this opinion, sustainability in a broad sense is defined as the ability of a system (i.e., a company) to maintain its equilibrium state under the influence of various external factors. The application of a systems approach in the study of problems of company management as a complex socio-economic system requires special attention to key characteristics that reflect the extent to which the company can function and develop in the face of dynamic changes in the internal and external environments. Based on this approach, a business that is sustainable in the long term, in addition to economic benefits, must also consider other non-economic components of the value of the goods it creates or consumes. According to this approach, companies are responsible for the results of their activities not only to their owners, but also to other stakeholders, which avoids a situation where decisions made by company managers aimed at obtaining short-term economic benefits, but does not take into account social and environmental consequences, making businesses unsustainable (Mok et al., 2018; Correia, 2019; Haeffele & Storr, 2019; Enwin & Ikiriko, 2023).

Within this logic, the introduction of sustainable development principles and goals into the activities of an individual company should simultaneously cover three dimensions of its business environment: economic, social and environmental, which is reflected, for example, in the concept of the “Triple Bottom Line”, which links the value of business with the interests of society (Stearns, 2012; Correia, 2019). In relation to New Zealand, a fourth principle can also be added to this concept – considering cultural heritage, i.e., considering the needs of the Māori people when building housing (Stearns, 2012). However, the implementation of any new

approaches in the work of any company is almost always difficult for a number of reasons: any complex changes in business processes require time; long payback period for investments; the area of sustainability seems intangible for many companies (Kandaurova et al., 2015). In this regard, to analyse a company's success in implementing a sustainable development strategy, it is necessary to determine quantitative indicators of sustainable development. These indicators are intended primarily to solve the following tasks: developing a sustainable development strategy; information support for planning and decision-making processes; monitoring the goals and processes of strategy implementation; comparative analysis; informing, engaging, and interacting with stakeholders; integral performance assessment in the field of sustainable development. The introduction of sustainability indicators allows companies to specify their goals, and set specific and monitorable targets, providing a clear vision and understanding of overall sustainability policy goals. However, many companies operating in the social housing market do not have clearly defined target quantitative indicators of sustainability. The above-mentioned rating systems (BREEAM, Energy Star, LEED and Homestar) are more of a marketing nature, focused on consumer demand since they do not establish mandatory requirements and liability measures for non-compliance. Therefore, it is important for social housing providers to have legislatively established quantitative indicators of project sustainability, which is noted in many sources, for example Kandaurova et al. (2015), Mok et al. (2018), Enwin and Ikiriko (2023), Wang and Gu (2023), Moshood et al. (2024) and others.

The challenges of implementing sustainability principles in the construction industry, including in terms of social housing construction, is confirmed by the results of the 27th annual survey of CEOs of New Zealand's largest companies, conducted by PwC, which show that despite significant concerns about the risks associated with achieving sustainability goals, executives still view these goals as ambitious, optional, or long-term objectives (PwC, 2024b). At the same time, 85% of CEOs note that their main task in terms of achieving sustainable

development goals is primarily to increase energy efficiency (including reducing consumption) of the companies they lead. Survey results show New Zealand business leaders lack confidence when it comes to implementing specific strategies to achieve sustainability goals. In this regard, business leaders see regulatory challenges, low returns on investments in clean technologies, or even the complete absence of such technologies in certain sectors as the biggest obstacles. Also, 68% of executives indicate a lack of demand from external stakeholders to achieve sustainable development goals to varying degrees (PwC, 2024b). In this regard, with social housing providers facing several challenges affecting their performance, the implementation of sustainable construction practices becomes a struggle with an unobvious outcome (Kandaurova et al., 2015; Mok et al., 2018; Zeng et al., 2021). In reality, despite the declared goals, housing providers strive to primarily ensure the financial and economic sustainability of their company, which most often increases operations that affect the irrational use of resources and environmental pollution, which directly contradicts the principles of sustainable development (Whang & Kim, 2015; Zeng et al., 2021; James, 2022, p. 7). In these conditions, achieving sustainable development goals in the construction of social housing is only possible with a systematic and comprehensive consideration of political, economic, environmental, and social factors that affect the company's activities (Enwin & Ikiriko, 2023, p. 14).

Despite environmental, economic, and social issues being closely interrelated, research shows that all these factors have varying degrees of correlation. Therefore, in a real project, when there are limitations related to the availability of financing and resources, an individual approach should be applied considering the relevant factors.

Relationship between environmental and economic aspects. In the implementation of construction projects, the strongest dependence is observed between the environmental and economic aspects of sustainable development. This means that when economic aspects are balanced with environmental issues, they have a greater impact on sustainable construction

than social factors. The following economic factors show the closest connection with environmental issues: clear planning of project implementation terms and conditions; knowledge management; retention of qualified labour; quality management of works; management of construction costs; accounting and management of future operating costs. On the other hand, factors such as the introduction of innovative technologies or the predominant use of local labour and materials have no correlation with environmental issues (Whang & Kim, 2015; Eklova, 2020; Shwashreh et al., 2024).

Relationship between environmental and social aspects. Compared to economic aspects, social factors have a low correlation with environmental issues. Among environmental aspects, the quality of the indoor environment shows the strongest relationship with such a social issue as well-being. And such a factor as conscious management of environmental issues has a high correlation with such social factors as culture/heritage and community. This means that when implementing construction projects, when considering issues related to environmental problems, it is necessary to carefully consider harmonisation with cultural heritage and also try to ensure the quality of the indoor environment to achieve the well-being of society (Whang & Kim, 2015; Eklova, 2020; Shwashreh et al., 2024).

Relationship between social and economic aspects. The lowest correlation exists between social and economic factors of sustainable development. Such economic factors as competitiveness, retention of skilled labour, and life cycle costs do not have a significant correlation with social factors. At the same time, a slightly greater connection with social issues is manifested in such factors as supporting the local economy using local resources and the commercial viability of the project. Thus, although there are gaps in the correlation between economic factors, these gaps depend on the practical balance between social and economic factors in specific projects (Whang & Kim, 2015; Eklova, 2020; Shwashreh et al., 2024).

All this means that environmental factors are the most important of the three issues, but achieving a balance between all aspects directly depends only on solving economic problems. At the same time, by following only certain factors, the achievement of sustainable development goals cannot be effectively realised. In addition, to achieve balance, housing providers, based on environmental and economic factors that have a high correlation with each other, should harmonise those social factors that show a higher correlation with economic and social issues.

Description of the Social Housing Market in New Zealand

According to the latest available data from the report Housing in Aotearoa: 2020, there were over 1.8 million dwellings in New Zealand at the 2018 Census (Stats NZ, 2020b). While privately owned housing accounts for just over 90% of all residential properties in New Zealand, only 64.5% of houses are owner-occupied (the lowest rate since the 1950s), down from 73.8% of households in the 1990s, with even lower rates for Māori (50%) and Pasifik peoples (40%). However, the decline in home ownership has been offset by growth in the rental housing market, which includes private rented and social housing. Thus, according to the report, private rental housing accounts for over 450,000 dwellings (approximately 25% of all housing in the country), home to just over 1.4 million people. Due to the vulnerability of certain demographic groups to housing difficulties (including low-income people, Māori and Pacific peoples, young people, and people with mental health problems), over 185,000 people live in social housing. Social housing accounts for 5% of New Zealand's total housing market and is provided by three main bodies: central government, local government, and community organisations. The main provider in the social housing sector is the rental operator, Kāinga Ora, which manages social housing provided by the government. As of March 2024, Kāinga Ora was responsible for 72,000 houses, with a further 18,520 houses managed by independent

social housing providers (New Zealand Government, 2024). At the same time, the number of houses managed by independent providers is growing every year (in 2023, 12,588 houses were managed by independent providers), and social housing providers do not plan to stop at the results achieved, intending to further increase their housing stock (more than 40% of providers plan to increase their housing stock by more than 100% over the next ten years). However, according to the OECD (2024), housing providers plan to increase the housing stock through measures that do not involve large-scale financing: expansion and intensification of housing construction on existing sites; renting housing from private owners for the purpose of subsequent renting to tenants on a subsidised basis; the use of different development types and changing approaches and commercial models in working with tenants. Local authorities directly provide less than 1% of the national housing stock (approximately 20% of the total social housing stock), with most of the housing (95%) provided by Councils intended for older people. Kāinga Ora, as a public housing provider, is also responsible for providing housing to people on the Housing Register (MSD, 2024).

Currently, responsibility for the delivery of social housing programmes and the outcomes of these programmes is divided between several agencies and ministries in New Zealand. Thus, the MSD assesses eligibility for social housing and administers support for people in need of housing through a system of various programmes and grants, the HUD funds housing and related services in the social housing sector, including through subsidies to housing providers, while Kāinga Ora is responsible for the maintenance of houses and manages rentals. In addition, Te Pūni Kokiri, the Department of Corrections, health agencies, and other government agencies are also involved in the planning and funding of social housing for specific social categories of people or in specialised cases. In accordance with the provisions of the Public and Community Housing Management Act 1992 (New Zealand Legislation, 2024), social housing is provided to people on the Housing Register who have the greatest

housing need. Housing is provided for as long as needed, but on a case-by-case basis, meaning that the person must have a genuine and serious housing need. For example, the applicant must be able to demonstrate that they do not currently own their own home or have access to privately rented accommodation that meets their needs. In addition, each applicant must meet a certain minimum age, citizenship, maximum income, and asset value criteria to be included on the Housing Register. In the statutory social housing system, the MSD is responsible for checking applications for inclusion on the Housing Register, making decisions on the application, including determining where the applicant will be placed on the waiting list, and assessing how much the applicant will pay for rent. In turn, Kāinga Ora, or independent social housing providers act as landlords and are responsible for identifying potential tenants for specific properties, preparing, and administering leases, charging, and collecting rent, maintaining the property, carrying out repairs, buying, selling, and developing the property (Murphy, 2020; Kāinga Ora, 2022; Bishop, 2024; New Zealand Legislation, 2024).

Kāinga Ora is a Crown agency and was created in 2019 by the merger of Housing New Zealand, its subsidiary Homes, Land, Community (HLC), and the KiwiBuild division of the Ministry of Housing (Kāinga Ora, 2022). Kāinga Ora was created with two main functions: to act as a landlord for social housing and to be the agency responsible for urban development. In addition, Kāinga Ora provides a range of additional services related to home ownership, leases properties to community service providers, and implements activities to improve the productivity of the construction sector. The ultimate regulatory body for Kāinga Ora is the HUD. Since its inception, Kāinga Ora has faced several challenges that continue to plague it today, including rapid growth, rapidly rising procurement costs, restrictive policies, and a wide range of complex government requirements in relation to asset management and leasing policies (Mooney, 2024; New Zealand Government, 2024). As Bishop (2024) notes, Kāinga Ora has a sufficient degree of autonomy and discretion to address these challenges, but weak

governance limits its ability to do so effectively. Rapidly increasing expenditure and debt, among other issues, highlight the ineffective use of public funding and the financial instability of Kāinga Ora, which is a legitimate public concern leading to Kāinga Ora's inability to maintain and renew its assets in the future and, most importantly, undermines Kāinga Ora's social licence (Mooney, 2024; Bishop, 2024). In this regard, the challenges facing New Zealand's housing sector are best addressed through a combination of government, community, private and philanthropic development, and funding programmes, making it particularly important to engage independent housing providers to address the issues at hand (Fernandez et al., 2023). In turn, independent housing providers are growing their presence in the market, largely because not-for-profit organisations such as Habitat for Humanity and others are not burdened with complex governance structures and have access to more reliable feedback mechanisms, allowing them to organise more effective work. Independent housing providers are an alternative to public housing such as Kainga Ora and private housing on the open market. By providing a proven model for the development and management of affordable housing options, independent providers offer flexible, responsive, and cost-effective housing options that provide better social conditions for tenants as they seek to tailor their approaches to the needs of the people they work with. To achieve this, independent providers offer a range of emergency housing options, affordable rental options, additional comprehensive housing services, and assistance with home ownership (Haeffele & Storr, 2019).

The Community Housing Regulatory Authority's register of social housing providers includes 94 organisations managing 18,520 houses. The purpose of this register is to ensure transparency in the regulation of housing providers and to provide potential tenants with information about market participants (HUD, 2024a). To increase the supply of affordable, healthy, and high-quality housing, as well as to share experiences and learn from best practices, social housing providers come together in various associations, such as Community Housing

Aotearoa (CHA) at a national level and The Auckland Community Housing Providers' Network (ACHPN) at a regional level. In practice, social housing providers take many different forms, from charities to not-for-profit organisations to public limited companies, and vary in size and structure, offering a wide range of housing options and additional specialist services. Housing providers are located throughout the country and range from local iwi and charities to larger organisations working with government and local councils (HUD, 2024c). The registered social housing providers represent several types of organisations, which can be divided as follows. Firstly, there are various charitable organisations, such as Habitat for Humanity, The Salvation Army Social Housing, and others. The main activity of such organisations is social support for various groups of people on a wide range of issues and, in this regard, housing construction is considered by them as one of the elements of such support. Secondly, these are organisations providing social housing on a territorial principle, usually limited by the boundaries of a settlement, community, etc. (for example, CORT Community Housing). In this regard, it is necessary to separately mention organisations belonging to Māori (for example, Ngāti Whātua Ōrākei) and engaged in the provision of social housing to members of a certain iwi, usually living compactly in one territory. Such organisations have better knowledge, understanding, and ability to meet the needs of Māori people, but are not always registered social housing providers, as they are part of larger Māori companies, including trusts (Menzies, 2023, p. 24). Thirdly, individual housing providers (for example, CNSST Foundation) specialise in providing housing to specific social groups, such as older people; women who have experienced violence; people recently released from prison; drug addicts, etc. The narrow specialisation of such organisations follows from the need to meet the specific needs of these social groups.

Chapter 3: Research Method

As noted earlier in Chapter 1, this study focuses on the key question – what practical steps need to be taken, and by whom, to overcome emerging challenges and sustainable development in the social housing sector. The focus of this research question and the resulting additional questions are on the existing idea in both the scientific community and the practitioner sector, which is that achieving sustainability in a company, including a construction company, requires a balance between the economic, environmental, and social aspects of sustainability. Achieving this balance is particularly important for social housing providers operating in a context of political uncertainty and severe financial and operational constraints (Kandaurova et al., 2015; Enwin & Ikiriko, 2023, p. 14; Doleac et al., 2024).

This chapter is structured as a description of the background and process of the study, starting with a brief overview of the objectives and research questions outlined in Chapter 1. It then describes the research paradigm and process, the design, and the methodology used. In addition, the rationale for the choice of the research approaches and instruments used is provided. This chapter also describes the stages of the research, including the formation of the research objectives and questions, the study and analysis of existing knowledge by the chosen research design, the selection of participants for semi-structured interviews, and the process of collecting and analysing the obtained data. The final part of this chapter discusses the ethical standards and considerations applied during the research.

Research Aim and Questions

As discussed in previous chapters, due to various socio-economic reasons, there is a growing demand for social housing in New Zealand. However, there is a growing need not just for social housing, but for sustainable social housing, as such housing helps reduce environmental impacts, improve the quality of life of residents, and reduce long-term operating

costs for energy, water, and maintenance (Shwashreh et al., 2024). As such, balancing the economic, environmental, and social aspects of sustainability in social housing developments has become a key challenge for social housing providers (Moshood et al., 2024).

In this regard, the aim of this study is to identify the factors influencing the sustainable development of the social housing construction sector in New Zealand. In this context, the study attempts to answer the following key question: what actions need to be taken and who must take them to ensure the sustainable development of the social housing construction sector in New Zealand? Within the framework of the stated objective and to reveal the main question of the study, the following additional questions were also formulated:

1. What aspects of sustainable development are most important for social housing providers?
2. How do social housing providers achieve a balance between different aspects of sustainable development, what challenges do they face, and what compromises do they make?
3. What impact has public policy had and continues to have on the social housing sector and its sustainable development?

The practical results of this study include recommendations for social housing provider management and government on what they must do to achieve sustainability in the social housing sector.

Research Design

This study follows the interpretive research paradigm used in most qualitative studies, which is based on the existence of multiple realities that can be understood through research. The methodology used is qualitative research methods, which focus on exploring ideas through appropriate analysis, synthesis, categorisation, and interpretation (Bhandari, 2020). Specifically, this study used desk research to collect and analyse information and data on both

the historical and political background of the development of the social housing market in New Zealand and the current challenges in implementing sustainable development principles in the field of social housing construction. Based on the information collected during the desk research, relevant questions were formulated, and semi-structured interviews were conducted with participants selected using a purposive sampling approach. Thematic analysis was used to process and critically analyse the information obtained during the study in order to identify prevailing viewpoints and trends. In addition, historical institutionalism approaches were also used to analyse the data in a historical and political context, as the contemporary New Zealand social housing market is largely a legacy of previous socio-economic policies. As this study underwent an ethical approval process, it also included ethical considerations necessary to protect research participants' rights, enhance credibility, and maintain academic integrity.

Research Paradigm

Any systematic search for knowledge, including scientific research, can be viewed through various research paradigms, which are understood as a symbiosis of ideas, beliefs, or representations within which theories and practices can operate. This study is based on the idea that in order to achieve sustainable development of the company, including a company operating in the social housing market must ensure a balance between the economic, environmental and social aspects of sustainability. Such a balance is possible through certain compromises that social housing providers are willing to make in order to achieve their goals, which means that the sustainable development of a company is largely a consequence of the decisions made by management based on their knowledge, experience, and understanding of the challenges facing the company (Correia, 2019; UN, 2020; Enwin & Ikiriko, 2023). Thus, to answer the questions posed in this study, it is most important to study and interpret the experiences of decision makers in the field of implementing social housing construction

programmes and/or determining economic policies in social housing provider companies. In this regard, it is entirely appropriate to follow the interpretive research paradigm and use appropriate qualitative research methods when conducting this study.

Research Methodology

This work collects and examines data on factors influencing the achievement of sustainability in the activities of social housing providers. The collection of data for the study is based not only on the study of literary and regulatory sources but also on communication with the management of companies operating in the social housing construction market, that is, based on subjective assessments and opinions. In this regard, to achieve the goals outlined in this study and answer the questions posed, the use of the qualitative research method is the most preferable. Qualitative research methods aim to clarify and explain the subjective (experience, attitudes, behaviour) aspects of the interaction of research subjects to study their thoughts, ideas, or experiences. This type of research requires a small number of respondents, open-ended questions are asked of respondents, and the results of the study are mainly expressed in words rather than in numbers (Bhandari, 2020). In this regard, it is worth noting that other researchers who have previously researched sustainability in social housing have also preferred to use qualitative research methods, for example, Bratt (2009), Coimbra and Almeida (2013), Norman and Teahan (2015), Connell (2018), Holland (2018), Zeng et al. (2021), Doleac et al. (2024), and others.

In this study, to synthesise existing knowledge and provide a comprehensive understanding of the topic, a review was initially conducted, an analysis was performed and a literature review of existing literature covering the issues of sustainability of social housing development was prepared. The methodology for preparing the literature review was desk research, which is understood as a method of collecting information that involves the analysis

of data available both within the organisation and publicly. The sources of information used were government statistics, reports from government, commercial and public organisations, legislation, research results from universities and non-profit research organisations, as well as media publications and thematic websites. To prepare the literature review, a two-step literature search was conducted, which initially involved selecting relevant sources and then conducting a full-text analysis. The literary sources selected as a result of the full-text analysis were accepted for further research. The selection of literary sources was based on the following main ideas:

1. The role of social housing in solving the problem of providing affordable and adequate housing for all citizens in need.

2. Factors influencing the achievement of sustainability and maintaining a balance between all aspects of sustainability in the construction of social housing.

The academic literature used in this paper was searched through the Robertson Library and the Google Scholar search engine. The main search terms were achieving sustainability, social housing, social housing providers, challenges to achieve sustainability, sustainable construction, government policy, and others. The search for statistical and regulatory information, as well as official reports, was conducted on the websites of government agencies, government organisations, Kāinga Ora, and organisations working in the field of social housing construction. In addition, relevant news and analytical materials were examined on these websites. Also, for broader coverage of information, a search for relevant works on the topic of the study, posted on the websites of universities and various research organisations, was conducted through the Google search engine.

Based on the collected information, relevant questions were then formulated, and semi-structured interviews were conducted with managers responsible for the implementation of construction programmes and determining economic policy in organisations operating in the

field of social housing construction in New Zealand. In the context of this work, the format of a semi-structured interview was chosen precisely because it is intended to explore the personal opinions, experiences, perceptions, and assessments of the participants. It was assumed that an informal conversation around a predetermined set of questions will provide a more holistic view of the research topic and capture the complexity of the participants' experiences.

The information obtained from the literature review and semi-structured interviews was processed and critically analysed to identify prevailing views and trends to confirm or refute the initial ideas and assumptions. The main approach to processing the information obtained was thematic analysis, which is understood as a method for identifying semantic patterns in the data obtained and describing them in the context of the research objectives. Since, as noted earlier, New Zealand's contemporary social housing market is a legacy of previous social experiments reflecting changing economic factors and political ideologies, historical institutionalism approaches were also applied in the study. The results of the analysis of the collected data were used to formulate relevant conclusions and prepare recommendations for achieving sustainability in the social housing sector in New Zealand.

Selection Criteria for Research Participants

The selection of interview participants for this study was carried out within the framework of a purposive sampling approach since it was initially assumed that the necessary data could only be provided by people with the relevant information. In the framework of this study, it was assumed that in companies operating in the social housing market, information relevant to the objectives of the study would be possessed by specialists who met the following criteria:

1. Participants must be specialists in their companies responsible for the implementation of social housing construction programmes and/or determining economic policy.

2. Participants must have information on the problems that social housing providers face during construction (economic, environmental, social, etc.).

3. Participants must have information on the implementation of sustainable development principles in the company (including in terms of modern eco-technologies) and the problems arising in this regard.

4. Participants must express their opinions, perceptions, and assessments regarding the situation in the construction of social housing within the company and in the market.

These criteria may be met by either company executives or line managers responsible for the implementation of social housing construction programmes and/or determining economic policy. Based on these criteria, formal letters of request for interviews explaining the objectives of the study were prepared and, after the current study had been approved by the OPAIC Research Ethics Committee, were sent by e-mail to social housing providers registered in the CHRA and Kāinga Ora. A list of independent providers listed in the Register is provided in Appendix A. Interviews were conducted with representatives of the companies that agreed to participate in the study. At the same time, as was assumed at the beginning of the work, the role of interviewees was taken on either by the heads of the companies or by the heads of the relevant areas of work (the companies independently determined the direct participants in the interviews based on the criteria specified in the request letter).

Data Collection

Data collection is an essential stage of research and is the process of collecting and assessing information from multiple sources to answer research questions (Bhandari, 2020).

This study collected both primary and secondary data. To synthesise existing knowledge and provide a comprehensive understanding of the topic, the study reviewed and analysed existing literature covering both sustainability issues in social housing development and issues reflecting the historical, political, and economic aspects of the development of the social housing market in New Zealand. The sources of information used included government statistics, reports from government, commercial and public organisations, legislation, research findings from universities, non-profit research organisations, and individual academics, as well as media publications and thematic websites. The criteria for selecting literature sources were described in more detail earlier in this chapter in the Research Methodology section.

Primary data were collected through direct face-to-face interaction between the researcher and respondents through semi-structured interviews with specialists responsible for implementing social housing construction programmes and/or setting economic policy in registered social housing providers in New Zealand. The selection criteria for interview participants are detailed earlier in this chapter in the Research Participants section. Interview requests were sent to Kāinga Ora and 78 of the 94 registered providers, as contact details could not be found for 16 providers due to the lack of a website and no contact information in CHRA. Twenty-four organisations responded to the requests for interviews, of which 11 declined to participate in the study for various reasons, which will be discussed in more detail below. It is also worth noting that no responses were received from Kāinga Ora. The characteristics of the organisations that responded to the request for participation in the study are presented in Table 1. The data presented in Table 1 shows that the majority of those who agreed to participate in the study were small and medium-sized housing providers operating in all regions of New Zealand. At the same time, the large and largest (over 1000 rental housing stock numbers) organisations either did not respond to the request or declined to participate.

Table 1

Characteristics of Companies that Responded to the Request to Participate in the Study

Participant	Rental Housing Stock Numbers	Operating Area	Focus	Research Participation Status
P1	101-200	New Zealand	Elderly people	Participant
P2	101-200	South Island		Participant
P3	201-500	Auckland		Participant
P4	101-200	North Island		Participant
P5	11-50	Northland, Auckland		Participant
P6	0-10	Auckland		Participant
P7	11-50	Manawatu Whanganui	Recently released prisoners, refugees	Participant
P8	11-50	Otago		Participant
P9	11-50	Auckland	Elderly people	Participant
P10	over 1500	North Island	People with disabilities, older people, those on low incomes	Participant
P11	0-10	Wellington	People with autism	Participant
P12	201-500	Palmerston North, Auckland, Manawatu Whanganui		Participant
P13	201-500	Manawatu Whanganui	People from the community	Participant
P14	11-50	Auckland		Refused to participate
P15	201-500	Wellington	Elderly people	Refused to participate
P16	11-50	Auckland		Refused to participate
P17	0-10	New Zealand		Refused to participate
P18	501-1000	Northland, Auckland	Homeless people, and people with chronic mental health problems	Refused to participate
P19	51-100	Auckland		Refused to participate
P20	201-500	Auckland		Refused to participate
P21	0-10	Whangarei		Refused to participate
P22	0-10	Northland	Education, housing, health and environmental services	Refused to participate
P23	0-10	Auckland		Refused to participate
P24	0-10	Manawatu Whanganui		Refused to participate

Technically, interviews were conducted in one of two formats: online and via written responses to e-mails. The face-to-face interview option was not chosen by any of the participants (the interview format was determined by the participants themselves, based on their convenience). With the participants' permission, all online interviews were audio and video recorded using tools built into Microsoft Teams. Correspondence with interview participants was conducted via e-mail using the OTAGO Polytechnic e-mail service. The interviews were conducted in September and October 2024. The average interview time was 45 minutes, ranging from 37 to 56 minutes depending on the participant's background and communication style. A total of nine participants were interviewed, but after seven interviews it became clear that the participants did not provide any new data related to the research questions. This indicated that data saturation had been reached when new themes no longer arose during the interview series. The interview questions were selected in such a way that the interview participants had the opportunity to return to the same topic two or more times. This was done to increase the reliability of the information received and to exclude "random" answers based on a "situational" understanding of the question. The interview participants were asked open questions, which could be divided into two groups. The first group of questions were ordinary questions designed to establish a dialogue and understand how involved the participant was in the topic of social housing construction. The first group of questions also aimed at obtaining general information about the company and the processes related to sustainable development. In answering the first group of questions, the interview participants outlined the contours of the topics that were then discussed in more detail. The following questions were asked:

- *Tell me a little about yourself, your role in the company, and your involvement in the topic of social housing construction.*

- *Tell me about the company you work for and what the company does in the social housing market.*

- *Is there any particular topic or aspects related to social housing that you would like to focus on during the interview? If there is such a topic, then tell me in detail about it and explain why it is important to you.*

- *How is your organisation involved in the issue of social housing construction?*

The second set of questions were the key information-gathering questions in line with the aim and objectives of this study. This set of questions focused on the practices of companies in the social housing sector, the challenges they face, and the measures they take to minimise the impact of various factors and ensure sustainable growth. In addition, all interview participants were asked how they perceived the direction and prospects for the development of the social housing sector in New Zealand. Specifically, the following questions were asked:

- *How much interest in sustainable development issues exists in the company? What is this connected with?*

- *What challenges does the company face when building social housing? Why do you think the company is facing these challenges? What measures are taken by the company to minimise the influence of external factors and ensure sustainable growth?*

- *How does the company understand sustainable development? What principles of sustainable development do the company follow? How important do you think the principles of sustainable development are for a company and why?*

- *How does the company achieve a balance between different aspects of sustainable development? What compromises does the company make and is it ready to make in the future?*

- *How does the implementation of sustainable development principles in the company's activities affect various aspects of the life cycle of implemented projects? How much interest do different stakeholders have in sustainability issues? Who and why?*
- *How do you envision sustainable development in the social housing sector over a 10-year horizon?*
- *How does the organisation interact with the government and Kāinga Ora in social housing? How does policy change affect the social housing sector?*
- *What actions should the government take to achieve sustainability in the social housing sector?*

Prevention of bias in the participants' responses and, accordingly, preservation of integrity and objectivity were achieved through the clear formulation of the research questions and objectives, as well as through preliminary review and approval of the interview questions by the supervisors, reviewers, and the Research Ethics Committee. Compliance with ethical principles such as informed consent, confidentiality, and avoidance of conflicts of interest, as well as a clear definition of the criteria for selecting interview participants, contributed to the overall validity and reliability of the study. The study's reliability was also achieved through standardisation of the interview conditions for all participants, which meant each participant was asked the same questions in the same order.

Data Analysis

In a broad sense, data analysis is a structured sequence of steps that leads from raw data to actionable insights (Bhandari, 2020). In this study's context, data analysis was done using two main approaches: thematic analysis and historical institutionalism. Historical institutionalism is neither a specific theory nor a specific method, but rather an approach that studies how the context in which policymaking takes place influences policy choices and their

subsequent continuity or transformation. In this paper, within the framework of historical institutionalism, the changing approaches to the formation of the social housing market were traced from the late 19th century to the present day.

Thematic analysis was used as the main approach for processing information obtained from conducting semi-structured interviews. According to Bhandari (2020), thematic analysis is a method of systematically breaking down and grouping information obtained during a qualitative study by combining isolated judgments and quotations using an appropriate code, which helps to identify significant themes. In this study, the raw data collected from the interviews were transcribed verbatim and analysed thematically through multiple readings to identify patterns, themes, and significant ideas. This stage of the analysis sought to develop a comprehensive understanding of the participants' narratives and experiences for use in subsequent stages. An inductive approach and open coding technique were used to identify and annotate significant segments of the text. Codes were generated according to content, focusing on important words, meaningful phrases, and meaningful statements. Consistency and reliability of coding were achieved through constant comparison of codes and related data segments. Codes with similar meanings or relationships were then grouped into broader categories that encompassed underlying patterns and structures and were further grouped into themes. This work utilised an abstraction technique to capture the participants' experiences, highlighting themes central to the study. The result of these actions was the interpretation of the obtained results, the formulation of conclusions and the development of recommendations based on the questions and objectives of the study.

Ethical Considerations

Adherence to ethical considerations is necessary to protect the rights of research participants, enhance the validity, and maintain the academic integrity of the research

(Bhandari, 2020). Therefore, the actual research work within the framework of this project began only after the application for the study was approved by the OPAIC Research Ethics Committee (reference number AIC-RE-2024-35). During the preparation of this study, several potential risks and vulnerabilities were identified that could lead to a loss of confidentiality of data and harm to the well-being of the participants, and therefore several steps were taken to prevent problems from arising.

A potential vulnerability for the research participants was the fact that the individuals interviewed were representatives of their companies, which in the event of incorrect (from the company's point of view) answers could be grounds for disciplinary action. In this regard, to exclude any negative consequences, formal requests were sent to social housing providers asking for permission for the relevant employees to participate in the study. The companies were informed about the goals and objectives of the study, as well as the issues to be discussed. Also, immediately before the interview, each participant was informed that participation in the interview was voluntary and that there was an opportunity to refuse participation without explanation and any consequences at any stage. Also, the participants who agreed to be interviewed were informed that their personal data would not be disclosed in any reports, presentations, or public documentation and were asked to sign the appropriate consent form to confirm their awareness and willingness to share the information. During the interview, the study participants were not forced to provide specific answers. The Participant Information Sheet received by each participant is presented in Appendix B, and the Consent Form is presented in Appendix C. Appendix D contains a letter from the Research Ethics Committee approving this study.

As already indicated above, the interview format was determined by the participants themselves, based on their convenience. With the permission of the participants, audio and video recordings of all online interviews were made. Correspondence with the interview

participants by e-mail was carried out exclusively using the OTAGO Polytechnic mail service, with measures taken to ensure the confidentiality of the correspondence. All notes made during the study were not created or stored in any personal or private storage devices (e.g., phone, Dropbox, Google Docs, USB sticks, etc.). By OTAGO Polytechnic's information policy, all notes made during the study, including audio and video files, emails, paper notes, etc. are the property of OTAGO Polytechnic and not the individual who created or received them. Therefore, as outlined in both Te Pūkenga NZ Disposal Authority DA424, the GDA6, and the GDA7, all data collected during the study, including notes made on all available storage media, have been uploaded and will be stored for seven years in OTAGO Polytechnic's OneDrive, which uses two-factor authentication (password and specific mobile phone message) for researcher access. After this period, all data will be permanently deleted.

Chapter 4: Findings

This chapter discusses the findings of the literature review and semi-structured interviews. Since New Zealand's current social housing market is largely a product of past government economic and social policies that reflect prevailing views, economic conditions, and political ideologies at a given time, the first part of this chapter attempts to analyse the influence of political ideologies over time on the formation of the social housing market. The second part of this chapter presents the results of the processing of information obtained during interviews with managers and specialists representing New Zealand social housing providers. The final part of this chapter presents a summary of key findings in graphical and tabular form.

The Impact of Historical Background on New Zealand's Social Housing Market

The housing crisis is a major national economic and social issue for New Zealand society, with house prices rising significantly faster than household incomes in recent years, putting enormous pressure on social housing providers as fewer and fewer households have access to housing in the private market. However, despite the changing economic and political conditions, New Zealand society continues to aspire to own a home, with some politicians encouraging this approach through the promotion of a stable democracy based on property ownership. However, the growing problems in the housing sector have led to political acceptance of the housing crisis and the need for action to address it (White & Nandedkar, 2021).

Changes in Social Housing Policy

From the outset, public debates about public housing policy in New Zealand have focused largely on the extent to which government should be allowed to intervene in the housing market. In general, Labour Governments have argued that the private market does not

provide good housing for working people and that the state should step in to house those the market cannot or will not accommodate. National Governments, on the other hand, have argued that any intervention discourages private investment in housing and stifles self-sufficiency. Accordingly, they have sought to reduce the state's role in housing provision. However, since the 1950s, all governments have agreed that the state should provide housing for those in need, particularly those suffering from racial and other forms of discrimination in the market. The approaches to housing policy taken by different governments have shaped the conditions under which the social housing market has emerged in New Zealand (Murphy, 2020; White & Nandedkar, 2021).

The housing sector in New Zealand has been largely shaped by factors such as colonial policy, direct state intervention in regulating relations in the housing market, and indirect influence through economic and financial reforms. The indigenous population of New Zealand, the Māori, traditionally lived in communities on the land of their ancestors, which had significant cultural and social value. At the same time, the desire to live on the land was and is perceived by the Māori as a source of mana and contributes to the growth of community well-being (Paul et al., 2020, p. 3). With the onset of the colonial era, European settlers, many of whom came from English slums, established a new trend in favour of individual houses, each built on a separate plot of land. This trend led to land becoming a “commodity” with the main value being financial. Land and, accordingly, housing became objects of trade and profit, rather than a collective resource that must be shared for the safety and well-being of the entire society. Such ideas have placed the interests of large landowners and power elites in conflict with the interests of indigenous populations, landless working classes, and smallholders. Growing cities, with limited land resources, have become places where money can be made, and where ‘speculative excitement’ brings significant profits to urban landowners (Ferguson, 1994; Schrader & Birkinshaw, 2005; Paul et al., 2020, p. 7).

Housing Policy in 1935-1950. The first steps towards resolving the housing issue came in the 1930s, when the Great Depression forced the first Labour Government, elected in 1935, to challenge the speculative private housing market and launch a public housing construction programme. In fact, the first Labour government, led by Prime Minister Micheal Joseph Savage, outlined the contours of the modern concept of social housing in New Zealand. Micheal Savage viewed housing as an inalienable right of the citizen, and the issue of building social housing was presented to him as a moral problem, the solution of which was possible through "practical Christianity." The process was initiated by the creation of the State Advances Corporation in 1936, which provided mortgages and was responsible for managing public housing. The government's actions sought to achieve several objectives simultaneously: to promote economic activity by increasing construction and to solve the housing problems associated with the housing shortage. The 1936 budget provided for the construction of 5,000 public houses, but the lack of relevant experience and capacity to build these houses directly forced the government to hand over the implementation of this project to private companies, albeit under strict state control. The public housing built was an alternative to private renting and was provided only to families consisting of two working parents since it was believed that only working people deserved state assistance. Tenants could remain in the housing indefinitely, provided they complied with the terms of the lease. Initially, rents for such housing were calculated based on the cost of construction, maintenance, and insurance, but rising costs coupled with fixed rents meant that by 1945 the government did not have enough money to maintain and service the housing. Another problem that caused social tension in society was that rising market rents created a "privileged" class of workers living in public housing and having lower costs compared to those who rented private housing. Despite the difficulties, 32,000 public houses were built between 1937 and 1949, which effectively represented a paradigm shift in New Zealand's housing system, as government planning, funding,

construction, and maintenance were able to provide decent and affordable housing to many who could not previously afford it. The policy framework laid down by the First Labour Government not only made the state the most important player in the housing sector but also established the basic principle that housing became a citizen's right, along with other rights such as education or health care (Ferguson, 1994; Schrader & Birkinshaw, 2005; Paul et al., 2020, p. 8).

Housing Policy in 1950-1980. The housing problems and the associated growth of social tensions were some of the factors that led to the National Government coming to power in 1949 and changing the vector of housing policy since this government promoted the ideology of a stable democracy based on property ownership. In particular, the government stimulated the development of the construction industry through such measures as selling state housing to tenants on credit and guaranteeing the purchase of unsold housing from developers on the private market. In addition, the government shifted the focus of its housing policy from competition with the private sector to providing affordable housing only to needy groups of the population. However, already with the arrival of the next Labour Government, a pattern began to take shape that would be established for the coming decades, in which state housing would be sold by National Governments, while Labour Governments would restrict such sales. By the 1970s, home ownership had risen from 50.5% in 1936 to 68% in 1971, meaning that public housing was no longer seen by all governments as a necessary competitive element with the private sector and was provided solely as a social support measure for people on low incomes. Housing policies during these decades, although different under National and Labour Governments, continued to recognise the importance of government regulation in housing and emphasised the importance of public housing, albeit targeted. The 1970s saw a process of reducing and eventually eliminating the policy of providing housing to a wide range of people

in favour of providing public housing to targeted groups (Ferguson, 1994; Schrader & Birkinshaw, 2005; Thorns, 2006; Paul et al., 2020, p. 12; Murphy, 2020).

Housing Policy in 1984-1990. The election of the Fourth Labour Government in 1984 began a period of significant economic reform in New Zealand, moving it from one of the most heavily regulated economies to one of the most deregulated, which involved a radical restructuring of the economy. The reforms involved significant corporatisation of state agencies with a view to their eventual privatisation, with an emphasis on the economic efficiency of the newly created companies comparable to the private sector. Although the reforms were significant in changing New Zealand's economic landscape, they did not directly affect the social welfare sector until a change of government in the 1990s. It is worth noting, however, that the reforms changed the way housing need was measured, from maintaining a simple list of people in need of public housing to developing sets of criteria for assessing that need. This led to the idea of public social housing moving further and further away from its original purpose as an alternative to private housing, towards meeting the needs of target groups, i.e., public housing has finally become a form of social security (Ferguson, 1994; Schrader & Birkinshaw, 2005; Thorns, 2006; Paul et al., 2020, p. 12; Murphy, 2020).

Housing Policy in 1990-1999. From 1991 onwards, the housing sector was subject to neoliberal reforms by the Fourth National Government, with the aim of moving away from welfare programmes towards market-based approaches to social housing provision. This approach was supported by the idea that the existing housing system failed to deliver equity, autonomy, efficiency, and personal choice. One of the targets of these reforms was the Housing Corporation of New Zealand (HCNZ), which was transformed into a state-owned enterprise, Housing New Zealand Ltd (HNZ), with profitability targets set for it. One of the mechanisms for achieving these commercial targets was the introduction of market rents in the social housing sector. Thus, between 1992 and 1999, rents for public housing increased by 106%,

while in the private sector the increase was only 23%. The introduction of market rents was justified by the assumption that this would lead to better utilisation of assets (public housing) and more efficient operation, as well as to address the problem of growing inequalities in access to housing assistance for the poor. At the same time, the government introduced various subsidy measures designed to help those who could not afford the rent. The essence of these measures was that part of the rent had to be paid by the tenant, who was thus encouraged to minimise their rental costs (by moving to another social housing if the rent was too high). In addition, HCNZ stopped issuing mortgages, transferring this function to private banks, which refused to work with risky loans, which created difficulties for people with low incomes trying to access the housing market through mortgage lending. As a result, the implementation of these policies led to an increase in housing poverty and a deterioration in housing conditions for a part of the country's population. At the same time, this period became the first experience of introducing neoliberal policies in the housing sector in New Zealand (Ferguson, 1994; Schrader & Birkinshaw, 2005; Thorns, 2006; Murphy, 2020).

Housing Policy in 1999-2008. With the election of a new Labour Government in 1999, further changes to housing policy occurred. In particular, the profitability requirements of HNZ were abolished, with the company being reintegrated into the Housing New Zealand Corporation (HNZC) in order to return to its original social objectives, and the system of calculating rents for social housing based on the tenant's income was reinstated, which effectively meant returning the ‘social’ meaning to social housing. However, although income-related rents were reinstated, the government continued subsidising, while strictly controlling tenants, preventing them from enjoying low rents as their incomes increased. Also, throughout this period, the idea of home ownership remained a key goal of the government, and mortgage programmes were expanded as a support measure for those on low incomes (Thorns, 2006; O'Leary, 2013; Murphy, 2020). In implementing this policy, as Thorns (2006) notes, the

government acted in collaboration with the private sector, assigning itself the role of an intermediary, providing assistance to other actors in this role and creating new forms of public-private partnership, which laid the foundations for future relations in the field of social housing.

Housing Policy in 2008-2016. The Fifth National Government in 2008 saw a return to the neoliberal policy reforms of the 1990s, which focused on two key areas: housing affordability and social housing. In terms of housing affordability, the government saw the problem as being the over-bureaucratisation of the planning system, which limited the supply of land for development and led to rising housing costs. Framing housing problems as the result of poorly functioning markets and over-bureaucratisation of the system led to the development and passage of the Housing Accords and Special Housing Areas Act 2013 (HASHAA), which relaxed planning rules and freed up large tracts of land for housing development. However, HASHAA did not have any significant impact on housing costs and affordability, as land allocated under HASHAA was perceived as guaranteed development, and therefore less risky and therefore more valuable to developers. This, in turn, led to an increase in land costs and the cost of housing built, which did not improve its affordability.

In relation to social housing, National Government policy during these years was guided by the report of the Housing Shareholders' Advisory Group, which was used to develop the reforms that became the Social Housing Reform Act 2013 (SHRA). The social housing reforms set out in the SHRA had three key areas. Firstly, existing tenancies were renegotiated to move public housing away from being a 'lifetime' service and towards being a temporary service provided only when needed. In addition, the government moved to create and support third-party social housing providers to reduce the role of the state in social housing delivery without losing overall control over the sector. Secondly, the government changed the regulatory framework governing social housing providers. It allowed social housing providers to access funding through the IRRS, which had previously only been available to HNZ/HNZC

tenants. However, social housing providers were not provided with any additional targeted grants, which forced them to seek other forms of financing through the private market, which effectively meant the commercialisation of the social housing sector. The third key area was the equity transfer programme, which provided for the sale of public housing to social housing providers at a reduced rate through appropriate tenders. At the same time, providers were to be financed by private capital.

Although the National Government reforms were innovative in the New Zealand context and created a market for social services, they led to mixed results, since the social housing sector, without receiving the much-needed financial support, never became an alternative to the private market. At the same time, the commercialisation of the social housing market contradicted the objectives of the housing providers, who were mostly public and charitable organisations. Also, a direct result of the reforms was the doubling of house prices in Auckland between 2008 and 2016 due to insufficient regulation of the mortgage lending system, aimed at issuing loans to investors speculating on price increases. It is worth noting that mortgage lending did not pursue and does not pursue any social goals, since it continues to be largely targeted at wealthy citizens, allowing them to make tax-free investments in capital gains in housing, thereby fueling a speculative bubble in the rental housing market (O'Leary, 2013; McLeay, 2022, p. 2; Murphy, 2020; White & Nandedkar, 2021). At the same time, these reforms formed a direct context that preceded the arrival of the Sixth Labour Government and influenced subsequent decisions.

Housing Policy After 2017. In 2017, the Labour-NZ First coalition Government ended the housing fire sale and began to deliver on election promises to make transformative changes to the housing sector, including expanding the supply of public housing. A key element of their housing policy was the flagship KiwiBuild programme, which aimed to address housing affordability by building 100,000 affordable homes over 10 years. The programme involved

purchasing vacant land for resale to developers, with the requirement that 20% of the homes built by public housing and 40% be ‘affordable’ homes, as defined by KiwiBuild criteria. Despite these ambitious plans, the programme failed to deliver the desired results, with homes built under the programme failing to attract buyers and builders failing to meet the targets (only 258 homes had been built by September 2019). Moreover, the KiwiBuild programme was largely focused on the creation of affordable market housing rather than social housing.

However, despite the problems with the implementation of the KiwiBuild programme, the government did not lose its desire for broader and more direct regulation of the housing market, which led to the development of two key areas of housing policy: the introduction of the Urban Growth Agenda programme and the creation of Kāinga Ora – Homes and Communities (or Kāinga Ora). The creation of Kāinga Ora effectively represented a significant reconfiguration of the state housing agency HNZC. Kāinga Ora was created as an agency responsible for urban development and the management of social housing, which effectively meant a dual role: a landlord of social housing and a developer. This was done to maximise the organisation's capabilities, but the division of responsibility between the two roles created certain problems, especially for social housing, since in the context of the adoption of market principles in the social housing sector, there were risks of a shift in focus towards the development function at the expense of the social function. In many ways, these risks have proven to be justified, as in May 2024, in an effort to improve financial performance and reduce losses, the National-led coalition Government announced plans to reorganise the social housing system, including a reorganisation of Kāinga Ora, including a restructuring of the contractual relationship between Kāinga Ora and social housing providers (McLeay, 2022, p. 5; Murphy, 2020; White & Nandedkar, 2021; Kāinga Ora, 2022; Bishop, 2024; New Zealand Government, 2024).

All this suggests that the social housing sector is now firmly entrenched in the market framework created by neoliberal reforms, which have seen recent governments, both Labour and National, distance themselves from many of their stated commitments to housing, in particular the direct provision of sufficient social housing and the indirect provision of an institutional framework of equal opportunity for all citizens to either own their own homes or afford to rent decent housing on the private market. Housing has become a commodity and an object of investment in the eyes of many economic actors, with rising prices being a source of profit. A simple division between homeownership and renting has now been established in public discourse, and the role of housing as a source of basic human needs has been lost. The New Zealand social housing market is now the result of the persistent influence of both its political and cultural-historical contexts. The formation and implementation of contemporary housing policy principles are framed within the logic and assumptions of market primacy, but these policies also reflect different dependencies and political commitments to housing rights and forms of housing intervention. All this creates unique forms of hybrid policy that reflect both the currently dominant neoliberal logic and the contextual aims and values of political parties (McLeay, 2022, p. 8; Paul et al., 2020, p. 29; White & Nandedkar, 2021; Bishop, 2024). And it is in these contexts that social housing providers operate.

Changing Approaches to Comfortable Housing

The design of state housing has been the subject of criticism from the outset. In particular, the first state housing for workers was criticised for being ‘too posh’ and costing the budget a lot of money. However, by the 1980s the criticism had turned in the opposite direction: new state housing was described by critics as stingy, poor quality, and slum-like. However, the criticism was largely dependent on the political point of view. National argued that the state should not build ‘luxury’ housing for workers, while Labour believed that raising the standard

of housing would improve living standards. To avoid copying the British working-class slums, the first state housing was designed and built to the highest possible standards within the budgets set. In addition, the rule was that no two houses should be exactly alike so that their residents could not be identified as state tenants. A similar approach was taken by the First Labour Government when developing housing estates. The state-built housing estates were intended to house both wealthy and poor working people, in an effort to avoid the creation of class-based neighbourhoods and the spread of spatial poverty. As with individual dwellings, each home was designed to last for 60 years and was to be built using quality labour and materials.

While the state houses built in the 1930s and 40s certainly raised the standard of housing in New Zealand, rising construction costs in the 1950s forced the National Government to lower the standards for new state housing. As a result, in mass housing estates such as South Auckland and Porirua, uniform design, a predominance of poor households, and a lack of services and amenities created ghetto communities. Subsequent governments have learned from these experiences and attempted to correct the mistakes. As early as the 1970s, new public housing estates were built next to more expensive private homes and closer to workplaces, transport links, and other amenities. At the same time, the design of houses began to pay more attention to the needs of tenants, primarily the cultural and physical characteristics of the Māori and Pacific peoples. However, the reduction in standards for public housing did not go unnoticed and by the beginning of the 21st century, it became clear that the existing housing stock was subject to rapid ageing and deterioration due to both poor construction quality and lack of proper maintenance. Dampness, mould, lack of ventilation, and thermal insulation are observed in more than half of all public rental houses. The poor condition of the housing stock, modern lifestyles, contemporary trends and technologies in construction, as well as climate change, forced the government to adopt the Healthy Homes Guarantee Act 2017, which sets

minimum standards for housing rented by both social housing providers and private landlords. All rental homes had to comply with the new standards by 1 July 2024. In addition, reflecting the importance of housing to human well-being, housing standards have been identified as one of the 12 objectives of the Living Standards Framework (LSF), developed by The Treasury of New Zealand to encourage both governments and the wider community to think about the impact of policies on different aspects of well-being, as well as the long-term consequences of policy decisions (Ferguson, 1994; Schrader & Birkinshaw, 2005; McLeay, 2022, p. 9; Bishop, 2024).

Interview Results

The results of the semi-structured interviews and associated thematic analysis are discussed later in this section. Thematic analysis revealed eight themes, each with several subthemes, representing a detailed overview of the various views and experiences shared by the participants. The results obtained are analysed in more detail below.

Companies that Refused to Take Part in the Study

All organisations that refused to participate in the study were asked to justify their reasons for refusal. One of the main reasons was that companies are currently not constructing social housing and are using previously acquired housing without any significant opportunity to influence its sustainability parameters. At the same time, some organisations justified their lack of activity in housing construction by the lack of government funding.

> *"As such, we have no role in any new builds or new development projects and all of the properties we manage which were purchased from local councils divesting themselves of social housing are established and, in many cases, quite old" (P15).*

"Same as most CHRA members, we do not have any plan for our new project due to lack of government funding" (P14).

Two organisations also indicated that they had just begun their activities and did not yet have sufficient information to formulate their position and participate in interviews.

"Unfortunately, we are not in a position to participate as we are too early in the game and have nothing substantial to offer at this time" (P23).

In addition, reasons given included the fact that despite membership in CHRA, the organisations' work is currently focused on social functions unrelated to social housing.

"Our organisation provides mental health services; we are not involved in the construction of social housing" (P18).

"Unfortunately, we will not have the relevant experience at this stage to provide insight into your research, as we do not yet have any active assets within our CHP portfolio" (P22).

In addition to the organisations that directly indicated their unwillingness to participate in the study and indicated the reasons for this decision, it is also worth mentioning the companies that did not respond to the requests at all. Considering that requests for interviews were sent twice, with a frequency of two weeks to officially designated e-mail addresses, it can be assumed that the lack of any response is due to a certain reluctance on the part of social housing providers to participate in such research. The reasons for this policy should therefore be the subject of a separate study.

Themes Identified During the Analysis Interview

A thematic analysis of the responses given by interview participants revealed several prevailing themes relating to the activities of social housing providers. The themes identified are presented below in the context of the research questions in this study.

Impact of Sustainability on the Life Cycle of Projects. All participants were asked the following question:

"How does the implementation of sustainable development principles in the company's activities affect various aspects of the life cycle of implemented projects?"

This question repeats one of the research questions and aims to find out whether the interview participants understand the importance of sustainable development and to what extent they are ready to follow a sustainable agenda. Most are well aware that sustainable technologies have the potential to reduce households' costs for the maintenance of houses in the long term but are more inclined to assess the economic sustainability of their organisations, since after the construction is completed, the house becomes an asset and it is important to understand what the costs of its operation and maintenance will be.

> *"Keeping the house sustainable for the person living in it is really important. People should not spend extra money on maintaining the house, thereby hating the house they live in. The house should be healthy" (P6).*
>
> *"We understand that we will have to operate the houses we build for 25-50 years. We invest in these things and are interested in keeping them as low maintenance as possible over a long period of time" (P4).*
>
> *"A sustainable home must first and foremost be affordable. Affordable both in terms of construction costs, and this is an important factor, but also affordable for people to live in comfortably. And here we are talking not only about the cost, but also about the energy efficiency of the house, so as not to overpay for electricity" (P8).*

At the same time, the issue of housing affordability is covered by interview participants in a broader context than just social housing, since, according to their observations, in areas of mass construction of modern sustainable social housing, the cost of real estate increases, as infrastructural changes appear in such areas that improve people's lives.

"Now we are building new housing in an area where there is already a residential zone, and we are seeing that in that area the property value is increasing because we are upgrading the public stormwater facilities, and that is following the sustainability goals" (P3).

On the other hand, providers express mixed opinions about the impact of sustainable technologies on operating costs, as they doubt the durability of sustainable materials.

"There is a lot of talk about eco-friendliness of materials, but we need to understand the veracity of these claims. What are we trying to find - a product that is eco-friendly or a product that is only considered eco-friendly? Talk about eco-friendliness does not take into account how long sustainable materials will last. You know sustainable wood can rot faster than unsustainable brick" (P3).

In any case, all participants agreed that sustainability is above all a long-term planning process that takes into account all the risks and challenges that an organisation may face. In this regard, in the research question on what challenges social housing providers face and the compromises made to achieve a balance between the different aspects of sustainability, several themes emerged that describe not only the problems and their solutions but also the general understanding of the sustainability agenda by the interviewees, which is very important for understanding the context in which the respective organisations operate.

Parties Interested in a Sustainable Agenda. Social housing providers, by the nature of their work, work with different stakeholders, often with different attitudes towards the sustainability agenda. And while tenants have little or no influence on decisions, government, investors, local councils, company management, etc. can influence the policies and decisions of housing providers in a wide range. Therefore, the following questions were asked during the interview:

"How much interest do different stakeholders have in sustainability issues? Who and why?"

"How much interest in sustainable development issues exists in the company? What is this connected with?"

In response to this question, interviewees expressed the view that an interesting situation has arisen now, where the topic of sustainability is of little interest to tenants, Boards, and some external stakeholders, but is actively promoted by the government, banks, and other lenders.

> *"This is a growing interest all the time. So, if we look at the government, the funding often comes with the tag that you can get more if you can demonstrate that you are putting in additional sustainability features, like geothermal heating, for example. The same goes for the banks that are lending to us because they are interested in making a profit" (P8).*

Boards are more interested in the number of houses built and the development of their companies.

> *"As I have already said, our Board is focused on the development of the company, and it is very important for them that they manage the assets well and effectively" (P9).*
>
> *"Many of our stakeholders simply want to support us in building more homes. They want to see a return on their money, which should simply be profitable" (P5).*

At the same time, tenants' interest in the sustainable agenda is largely limited to issues of affordability (lower rent) and whether housing meets their expectations of comfort, as, according to providers, many tenants simply do not understand the benefits of sustainable housing.

> *"For them, sustainability will be a fairly general concept, as they simply want to pay lower bills and have the design suit their needs" (P4).*

"And you know, for most renters, what really matters is affordability. A lot of them just can't access the market. So, we need to get to a price point or a way to buy that actually fits their needs" (P3).

Thus, the responses of the interview participants demonstrate the varying degrees of interest of various stakeholders in a sustainable agenda, in connection with which the sustainable development of companies is possible only if management understands the goals facing the relevant organisations.

Interest in Sustainable Agenda Among Housing Providers. Achieving a positive result in any activity is possible only with a clear understanding of the goals and objectives. In this regard, the interview participants were asked the following questions:

"How does the company understand sustainable development? What principles of sustainable development do the company follow? How important do you think the principles of sustainable development are for a company and why?"

A certain revelation in the responses received was the fact that the interview participants understand the term sustainable development differently and, accordingly, have different ideas about the goals of implementing sustainable approaches in their projects. Interest in the topic of sustainability ranges from indifference among some participants to a high degree of interest.

"And then, to me, sustainability doesn't matter, sustainability just comes down to management issues, how the company is run" (P5).

"What principles of sustainability? What are you talking about? Yeah, so, there are some things that we are working on, as part of our development strategy at the moment. We are just doing our job" (P8).

"We build sustainable buildings in terms of providing tenants with really good homes. It was important to us that they were oriented correctly on the site, were easily

accessible to our tenants, and also fit into the environment. That was quite an important factor for us" (P9).

At the same time, participants note that interest in the topic of sustainable development is limited by the framework of legislation, the volume of financing, and the requirements of investors. At the same time, it is noted that this interest is based on the organisation's goals to improve their economic indicators, and not on following the environmental and social agenda.

"There is some interest but mostly this is limited to compliance enforced by Council. Could go further and will be likely to in future" (P7).

"We tried to build as much many sustainable building features into our new design that we can, but we're obviously somewhat limited by funding, so we didn't go as far as what we would want to" (P9).

"So, I would say that when we talk about sustainability, we have a very low level of understanding and implementing that into our products. We comply with building codes and, you know, that's it" (P4).

"Currently, our Council has little interest in sustainability, so only implements mandated requirements in terms of sustainability" (P7).

"We cannot find a balance between accessibility and investor requirements to include sustainable attributes in the project" (P4).

"In terms of sustainability, we want to show our sponsors and our donors that we are doing a really good job with the money that they give us. We try to use sustainable technology as much as possible because it impacts the margin that we can make from houses" (P5).

Most housing providers, while noting the importance of the environmental and social agenda, primarily understand sustainability as the financial, economic, and organisational sustainability of a company, believing that sustainability is simply a matter of planning and

managing resources and people. Also, most housing providers note that an important aspect of sustainability is the durability of the buildings constructed since long service life allows for a return on investment.

"I see sustainable development this way: we can talk more about economic aspects, and then about social ones" (P3).

"Sustainable development means that the organisation remains financially sustainable" (P7).

"Sustainability is about following a lot of environmental principles. And you know, it's a little bit about construction, the main thing is that the houses are well built and of high quality" (P9).

"Obviously, sustainable means a low carbon footprint. And, you know, low emission products and materials, all that type of thing" (P8)

"So, sustainability for us is community sustainability. So, we're creating a place that people want to live in, enjoy living in there and don't feel threatened by the environment when they live in their home" (P6)

"If we talk about sustainability, then first of all we need to talk about organisational sustainability. We need to be sure that when public policy changes, we can change with it and we can maintain some flexibility" (P6).

"You know, we have a contract with the Ministry of Housing for social housing and we believe that they have sustainability criteria built into their financial models. They don't want to fund things that are not going last too long" (P9).

The interviewees' responses show they have a wide range of views on the sustainability agenda. These views are primarily based on the different experiences of companies and interviewees in overcoming the challenges they have encountered in their work. In addition,

some interviewees' responses suggest that they do not fully understand the mechanisms by which governments make decisions regarding the social housing sector.

Challenges and Issues Faced by Social Housing Providers. All interview participants showed unanimity in their answers to the following questions:

"What challenges does the company face when building social housing? Why do you think the company is facing these challenges?"

The main challenges were high construction costs, lack of available land, and insufficient funding, coupled with bureaucratic barriers to government funding. Financial sustainability was the dominant one for all study participants. It is noted that the use of sustainable technologies and materials leads to additional costs that are not supported by appropriate funding, which forces one to seek a balance between the amount of housing built and modern approaches.

> *"And money plays a significant role in construction issues. We are forced to abandon some projects and decisions due to insufficient funding" (P4).*
>
> *"But what we don't have access to anymore is capital from the government. What we have available to us at the moment is a little bit of operating funding for the final stages of building the houses. So, we still have to shoulder a lot of the financial burden of building the houses ourselves" (P5).*
>
> *"I think the main factor that is problematic for us is access to capital. With the change of government, there was a whole bunch of policy changes that basically removed any source of capital from the central government, any source of subsidised capital. So now we are stuck in our development" (P4).*

At the same time, housing providers are not so much concerned about funding issues as they are about the inconsistent policy of the government in providing this funding.

Participants also note the frequent changes in the rules governing the procedure for providing state funding.

> *"So, there are two really important issues for us. One is obviously the amount of funding that is being provided to support community housing providers. It's simple - we need more funding to build more homes. The second is the policy itself. Obviously, and the reality is, the government's policy is inconsistent, and that's a big problem" (P5).*

> *"We had just started building, but the political conditions changed. And that had a big impact on us because we applied for funding, and then the rules changed about how they were going to use the funding. So, it took a long time to get approved" (P9).*

Complaints against the government also include the high degree of bureaucracy in the processes and the resulting lack of access to state funding for many social housing providers. It is noted that bureaucratic barriers further complicate the ability of housing providers to maintain sustainability in their projects.

> *"There's only a limited number of providers that they want to contract with. So, we have to go through the required, you know, application process and then government approval to secure that funding, which then allows us to move on to the actual work on the project" (P4).*

> *"The process of applying for funding for a project through the Ministry of Housing is time-consuming. For one of our current projects, we had been working on various iterations of the application for the last four years. And we had to narrow our project to meet the funding criteria" (P9).*

In addition to issues related to public funding, interviewees also noted serious challenges that required them to make appropriate compromises, such as high construction costs and lack of available land.

"I think the main problem at the moment is the cost of construction. It is very expensive to build. As you know, we have an escalation of costs, and it is really beyond our means. We build at a very high rate per square meter because we have supply problems. For example, some materials come from abroad and this affects the construction time" (P3).

"Land has become a significant cost in the delivery of public housing, you know, it's upwards of 50% of the total project cost. And it creates social outcomes that are not great because you're putting a whole bunch more people onto much smaller sites" (P4).

Interviewees noted that without government support, housing providers are unable to undertake new construction. At the same time, according to interviewees, the government has distanced itself from the needs and requirements of most housing providers. They are currently largely excluded from discussions on issues related to public policy, and particularly the financing of the social housing sector.

"I don't see the community housing sector being well represented or supported in discussions about the future of public housing funding. And that is very worrying for the sector" (P5).

"Directly government funded organisations, of which there are not many, are becoming an obstacle to central government funding for small providers" (P7).

It is also worth noting that housing providers are aware that public funding deprives them of certain flexibility in implementing projects due to the need to fulfill contractual obligations, which affects sustainability and, first, its social component. The high degree of dependence on public funding forces housing providers to seek ways to achieve a balance between the various aspects of their development.

Solutions for Emerging Challenges at the Provider Level. Developing the theme of challenges faced by housing providers, interview participants were asked the following questions:

"What measures are taken by the company to minimise the influence of external factors and ensure sustainable growth?"

"How does the company achieve a balance between different aspects of sustainable development? What compromises does the company make and is it ready to make in the future?"

When describing the challenges that housing providers face in their work, participants have a positive outlook on their organisations' prospects for achieving a balance between the various aspects of sustainability. However, as the achievement of sustainability goals is undermined by funding constraints, housing providers are primarily forced to look for ways to reduce costs. Cost reduction is a key topic for all participants, as it is the only area in which housing providers can have any influence on the outcome.

> *"We don't have much control over funding, so the only thing we can really control is our expenses" (P9).*

The study participants believe cost reduction is only possible with strict technical and economic justification of decisions taken, as well as with clear planning that considers all risks and provides for an appropriate control system. Attention is also drawn to the need for ongoing work with contractors to reduce construction costs.

> *"In the early stages of a project, we need to do some analysis to understand the pros and cons and financial feasibility. We may need to get some funding or other support for the initiatives we want to implement" (P8).*
>
> *"So, I think for us, strategic planning helps us balance all the factors that come into play and plan our spending to keep up with the times" (P9).*
>
> *"Controlling the building contractors who build on our behalf allows us to keep prices down and ensure that the homes we build remain affordable" (P5).*

All interviewees believe that a balance between the various aspects of sustainable development can be achieved with reasonable consideration of the requirements of HomeStar, LifeMark Standards, and others. At the same time, they note that obtaining a HomeStar six-star rating is one of the conditions for concluding a contract with the HUD, and this carries an additional financial burden. At the same time, the participants disagree on the ways to achieve sustainability. Some of them believe that there is no need to invent anything new, you just need to take already working solutions and apply them, while others believe that it is necessary to constantly study innovative approaches and construction technologies.

> *"You know, the whole idea of building according to Home Star principles or something like that is great. And it gives you a longer life cycle. But equally, it comes at a cost. So, in order to find a balance between sustainability and investor requirements, we have to exclude some Home Star things from the project" (P4).*
>
> *"I think anyone who's building homes should be looking at ways to make them more sustainable and definitely looking at what's already been done. So don't try to reinvent the wheel, as they say. Look at what's working, what's affordable, take small steps" (P8).*

As practical steps to reduce costs, participants suggest measures such as using local resources, avoiding expensive sustainable technologies, using Brownfield sites, multi-story, and modular construction, and saving on land rent by buying out land plots.

> *"If we talk about sustainability, for example, during construction we try to use a local design team, local subcontractors and suppliers. To reduce the carbon footprint, we use local labour and materials. Where possible, we use low maintenance recycled materials. In terms of ecology, for example, we try to use local plants and trees" (P3).*

"What we are not doing now is solar heating. We don't have the money to do it, and we can't find anyone to finance us for that level of sustainability because it has a long payback period. And solar heating is not mandatory" (P6).

"Usually, we build multiunit on Brownfield sites. We buy a site, tear down one house and build 10 houses. So, it's kind of a sustainability principle. And then it makes sense economically" (P3).

Despite the importance and necessity of planned work to ensure a balance in sustainability issues, an equally key area of activity for housing providers is working with the government and government organisations to lobby interests in terms of financing construction programmes. In this regard, a promising area of work may be the organisational transformation of activities in conjunction with the search for new sources of financing to ensure economic sustainability.

"Organisations like us need to be as flexible as possible, but at the same time we need to ask ourselves why we always rely entirely and heavily on government funding to deliver public housing. So, the challenge for our sector is not just to rely on government, but to act more like a commercial housing provider. By that I mean we need to provide a wider range of housing services, so that we have a broader revenue base. We need to use our resources to provide a direct commercial service to the market, not just a charity service" (P5).

*"So, I don't like the terminology of a nonprofit. We are a purpose-*driven organisation, *and the idea that we are providing a charitable service and don't want to make a profit is completely wrong. We have to be really successful in the business activities that we do. So economic sustainability is very important to i Board and my senior management team" (P4).*

As can be seen from the responses of the study participants, finding a balance between the various aspects of sustainable development lies in optimising internal costs and interacting with the government to finance relevant projects. Such approaches may indicate that housing providers are focused on survival issues since they do not discuss their future development goals.

In the research question of what impact government policy has on the social housing market and the sustainable development of its participants, the key theme was the inconsistent and contradictory government policy towards the social housing sector, which does not allow housing providers to plan their activities for the long term. All interview participants agreed that government policy towards the social housing sector is the basis for their sustainable development.

The Impact of Public Policy on Social Housing Providers. In the context of studying the topic of the influence of public policy on the development of housing providers, interview participants were asked the following questions:

"How does the organisation interact with the government and Kāinga Ora in social housing? How does policy change affect the social housing sector?"

From the responses to these questions, it became clear that the essence of the complaints of housing providers against the government is the lack of a logically understandable policy on the part of the government, as well as the lack of a clear strategy for the development of the social housing sector. In particular, all interview participants point out that the policy often changes based on the electoral preferences of voters and does not have clearly defined benchmarks and indicators that allow for planning the activities of housing providers in the long term.

"The government seems to be more focused on developing certain areas of the country where they feel there is a real housing shortage, such as Rotorua, but their policies

change with each new government, and it is quite difficult to know what they actually want to achieve in terms of housing" (P9).

"Obviously, and the reality is, the government's policy is inconsistent, and that's a big problem" (P5).

"The government is making a whole bunch of contradictory demands. On one hand, they demand that we build carbon-neutral houses, and on the other hand, they demand that we build more houses without spending too much government money. So, we build as much as we can" (P4).

At the same time, individual housing providers, despite the contradictory government policy, do not see this as a particular problem, philosophically believing that frequent changes in political course are a kind of stability.

"I think our current government is in some ways no different from any previous one. They come and go, they want to do something, including changing housing policy or funding. And we just work and do our job" (P6).

"Under the previous government, we did the same thing. We had a contract, and we worked according to it. Now we have a new government and nothing has changed. It's just a process. So, I think it's a procedure, it's just bureaucracy, but it takes time" (P3).

The government's attempts to develop the social housing sector in isolation from institutional problems in this sector are viewed negatively by interviewees, as they lead to an increase in land prices and a further increase in the cost of real estate. Participants attribute this to the fact that in New Zealand housing is primarily viewed as an investment, rather than as a pressing need.

"I think with their very aggressive buying of land for development, they have actually driven up land prices, making housing even more unaffordable" (P5).

"And if you want to reduce government intervention in our economy, the only way to do that is to reduce spending, and housing is certainly a good option because it's a significant capital. But the flip side of that is that housing costs are going up" (P6).

"New Zealand has a long-standing housing affordability problem. You know what our house prices are? That's because housing is seen as an investment. But those prices are skewed relative to household income growth" (P4).

While placing high hopes on government funding, interviewees also note that small and medium-sized housing providers are not a priority for the government, which prefers to communicate with Kāinga Ora and large CHPs, thereby distancing itself from the problems and urgent needs of other market participants. In this regard, they express concern that such a model could create problems in saturating the market with the appropriate amount of housing since large providers are not able to cover the entire volume of needs.

"The government is currently only talking about a few housing providers who will be their strategic partners, and that's a small percentage of the existing community housing providers. So, it's actually a very uncertain time for our sector where there will be a few winners, and even if they win, I'm not sure they'll actually be able to build enough housing" (P5).

Thus, the interviewees make it clear that social housing providers are largely dependent on the policies implemented by the government. In this regard, housing providers are faced with a choice of their work strategy – either developing new projects through borrowed financing and, accordingly, fulfilling contractual obligations, or mothballing in the current conditions of limited funding without clear prospects for the future. In this regard, they have a short planning horizon, which forces them to use only financially accessible technologies and materials, minimising the attraction of credit resources. Therefore, the solution to the issues of

sustainable development of social housing providers primarily depends on the strategy that the government must define.

Solutions for Emerging Challenges at the Government Level. Since the current survival and development of the social housing market depends on the understanding of public policy in the long term, the interview participants were asked the following question:

"What actions should the government take to achieve sustainability in the social housing sector?"

According to interview participants, the government needs to develop and coordinate with all political forces and market participants on a long-term national strategy for the development of social housing that considers the principles of sustainability.

> *"If our goal is sustainable development, then we need to have a National Sustainable Housing Strategy. If we had that and it was agreed by all parties in government and everyone was committed to that strategy, then we would be in a different space" (P6).*
>
> *"I think what we need as a country is a housing plan that lives beyond the election cycle" (P4).*

At the same time, the state should participate only in regulating relations in the social housing market and not directly deal with issues of construction, ownership, and management of social housing, transferring these functions to housing providers.

> *"They need to take Kāinga Ora back to basics and make them a public housing provider alongside the community housing sector. I think they need to stop trying to experiment with a whole bunch of things" (P4).*
>
> *"The public housing sector needs to be activated in both asset ownership and asset management to essentially take over the government's place. And you know, it's pretty clear that they're going to be the best managers of these assets" (P5).*

The state, based on open and clear rules, must also change its financial policy towards social housing providers, ensuring equal opportunities for all market participants.

> *"The Crown must equalise the playing field for public funding. Community housing providers must have equal access to capital and be responsible for delivering the homes that are needed. The funding itself must be planned and long-term" (P4).*

In addition, according to the interviewees, the government should change its tax policy for homeowners by introducing a capital gains tax for developers. This will, on the one hand, reduce the attractiveness of housing as an investment, and on the other hand, use the money received for the construction of social housing.

> *"I think that additional taxes on developers is an area that we could improve in New Zealand. That would make sure that they are contributing to affordable housing. And then people have started to do business in housing and that has distorted our market, that is unhealthy. And so, I think that is the main reason why we have a growing gap between the haves and the have-nots and a growing need for social housing. We need some form of wealth tax, a capital gains tax" (P8).*

From what the interview participants said, the main idea becomes clear: the state should be concerned with the overall issue of housing availability for the country's residents, which should indirectly affect the social housing market.

Assessing the Prospects for a Sustainable Agenda in the Social Housing Sector. At the end of the interview, all participants were asked to provide a forecast regarding the prospects for the development of a sustainable agenda in the social housing sector, for which the following question was asked:

"How do you envision sustainable development in the social housing sector over a 10-year horizon?"

The providers diverged in their assessments of the social housing sector's future, from extremely negative to extremely optimistic. In their opinion, in the future, demand for social housing is likely to increase due to growing social inequality. For the same reason, government subsidies for the social housing sector may decrease. At the same time, rates for infrastructure development will increase and requirements for housing quality will become more stringent, which will lead to further growth in its cost. At the same time, regardless of the assessment of the future, all participants noted that any long-term forecasts depend on current decisions made by the government, which currently cannot be logically understood due to the lack of a clear development strategy.

> *"Ultimately, it comes down to whether the government is prepared to put in place policies that will provide an environment for better, higher quality, more sustainable housing. Will they simply set parameters around the construction sector, around expectations of how to build. If not, then we'll just have different people doing different things" (P5).*

Summary of Key Findings

This study examined the influence of the political and economic context on the formation of the social housing market and analysed data obtained during interviews with managers and specialists representing New Zealand social housing providers. In line with the stated objective, the literature review identified some factors influencing sustainable development in the social housing construction sector, which are presented in Table 2. The themes and subthemes that emerged during the interviews and were discussed in detail in the previous section are described in detail in Table 2 and briefly indicated in Figure 1.

Figure 1

Factors Affecting Sustainable Development of the Social Housing Construction Sector

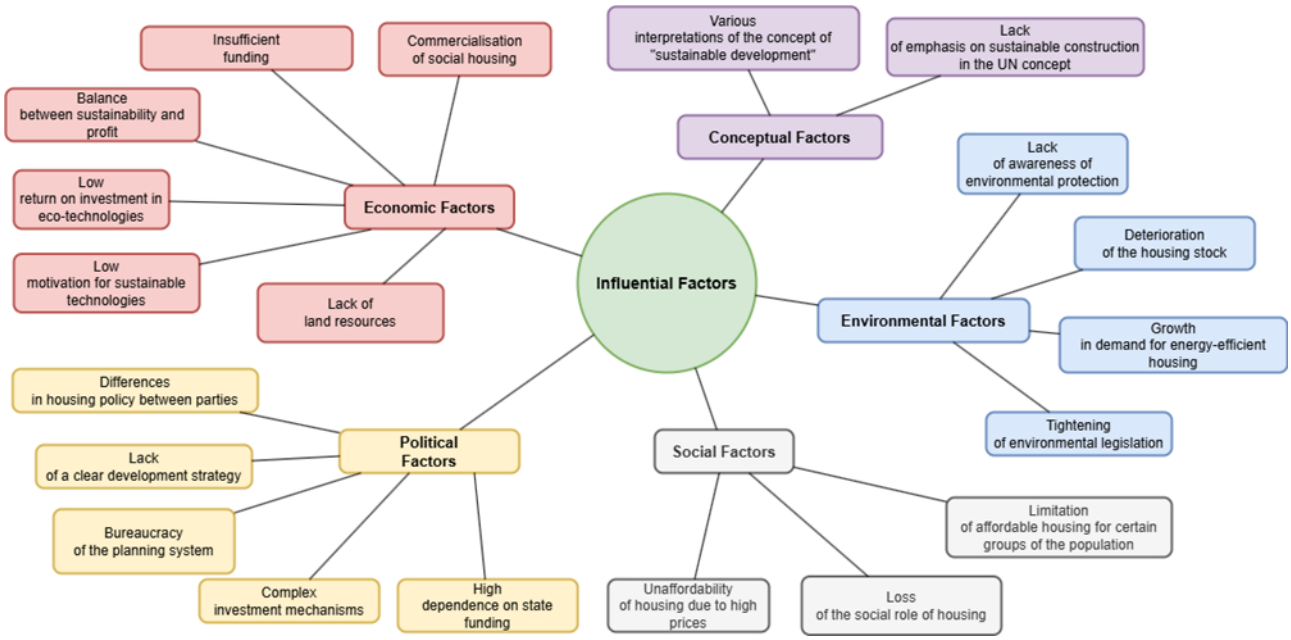

Table 2

Factors Affecting Sustainable Development of the Social Housing Construction Sector

Group of Factors	Factors
Economic	- Current housing policy is framed within the logic of the primacy of market approaches, which is the basis for the "commercialisation" of the social housing sector. - Social housing providers operate in conditions of insufficient and fragmented public funding, sporadic charitable donations, and little opportunity for profit, which limits their development efforts. - To survive, housing providers need to balance long-term sustainability goals with immediate economic benefits. - There is little interest and motivation among external stakeholders to use sustainable technologies. - Low returns on investment in environmentally friendly and sustainable technologies. - Low availability of land resources. - Low rental returns from social housing. - Sustainable construction technologies are improving and are perceived as difficult to implement and have no proven benefits, which reduces the motivation to use them. - The social housing construction sector has currently reached its potential and is not innovating.

Group of Factors	Factors
Environmental	- Compliance with international treaties and trends in the field of environmental protection leads to tightening of legislation regulating environmental aspects. - Modern lifestyle, new trends and technologies in construction increase the demand for sustainable energy-efficient housing. - Unsatisfactory condition of the housing stock, including social housing. - There is insufficient understanding and awareness in society of the importance of issues related to environmental protection.
Social	- The high ratio of housing prices to per capita income caused by the housing crisis makes housing unaffordable for people and increases the demand for social housing. - The loss of the "social" role of housing as a source of basic human needs and the consideration of housing as a commodity and an object for investment. - Shifting the focus of housing policy from competition with the private sector to providing affordable housing only to certain groups of the population in need.
Political	- There are significant differences in housing policy between different political forces, making this policy inconsistent and tied to the electoral cycle. - Lack of a clear understanding of what social housing is (an alternative to the private rental market or a measure of social support). - Lack of a strategy for the development of the social housing sector. - Excessive bureaucratisation of the social planning system and unclean responsibility for the implementation of social housing construction programmes. - Mechanisms for investing in social housing are extremely complex, bureaucratised and politicised. - High dependence on public funding blurs the boundaries between the public and private sectors, which is fraught with abuse. - There are no legislatively established quantitative targets for the development of the social housing sector.
Conceptual	- The concept of 'sustainable development' does not have a single generally accepted definition, and each subject, discussing sustainability, builds its own concept. - None of the sections of the UN concept of sustainable development specifically focuses on either sustainable construction in general or sustainable building construction in particular.

A discussion of the identified factors in the context of the research questions will be presented below in the Discussion and Recommendations chapter, but in general it can be stated that the themes identified by the interview participants overlap with the factors identified in Table 2 and Figure 1. The themes and subthemes that emerged during the interviews and were discussed in detail in the previous section are presented in Table 3 and briefly outlined in Figure 2.

Figure 2

Themes Identified During the Analysis

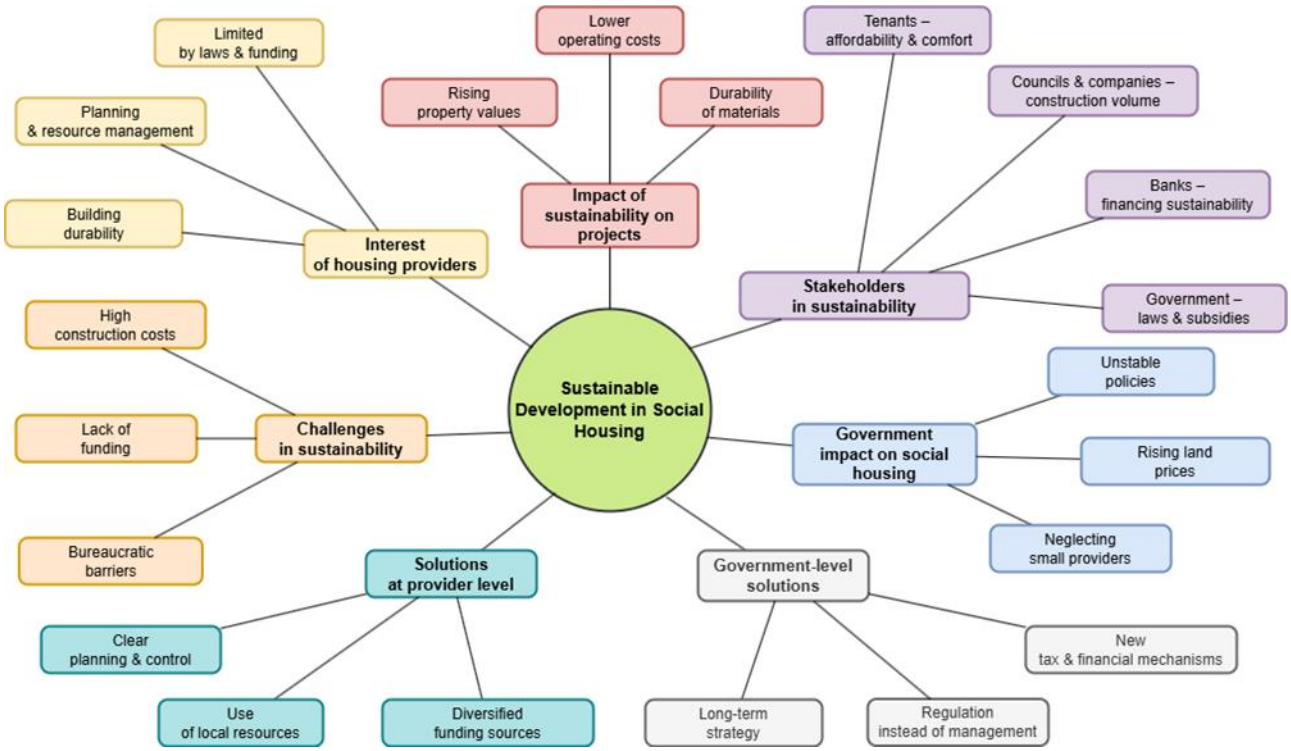

Table 3

Themes Identified During the Analysis

Research Questions	Themes	Subthemes
What aspects of sustainable development are most important for social housing providers?	1. Impact of sustainability on the life cycle of projects	- Rising property values in areas of mass social housing development. - Sustainable technologies potentially reduce operating costs in the long term. - There are concerns about the durability of modern sustainable materials.
How do social housing providers achieve a balance between economic, environmental, social, and other aspects of sustainable development, what challenges do they face, and what compromises do they make?	2. Parties interested in a sustainable agenda	- Tenants' interest in sustainability is limited to issues of housing affordability and its compliance with their ideas of comfort. - Councils and external stakeholders are more interested in the number of houses built and issues of development of their companies. - Banks and other lenders are actively interested in promoting the sustainable agenda. - The government is promoting the sustainable agenda through legislative innovations and financing mechanisms.

	3. Interest in sustainable agenda among housing providers	- Housing providers' interest in the sustainability agenda is limited by the scope of legislation, the volume of funding, and investor requirements. - Most housing providers believe that sustainability is a matter of planning and managing resources and people. - Housing providers note that an important aspect of sustainability is the durability of the buildings constructed.
	4. Challenges and issues faced by social housing providers	- High construction costs, lack of available land, and inadequate financing are the main challenges that require compromises. - Using sustainable technologies and materials results in additional costs not supported by adequate financing. - Bureaucratic barriers and inconsistent government policies complicate the ability of housing providers to maintain sustainability in projects.
	5. Solutions for emerging challenges at the providers level	- Clear planning that considers all risks, and a strict control system will allow housing providers to develop sustainably. - The use of sustainable solutions is only possible with a strict feasibility study and the availability of appropriate financing. - Cost reduction can be achieved by using local resources and avoiding expensive sustainable technologies. - It is necessary to expand funding sources and carry out organisational changes.
What impact has public policy had and continues to have on the social housing sector and its sustainable development?	6. The impact of public policy on social housing providers	- The government's policy towards the social housing sector is inconsistent and contradictory, depending on the electoral cycle. - The government's attempts to develop the social housing sector have led to rising land prices and rising property values. - The government has distanced itself from the problems of small and medium-sized housing providers.
	7. Solutions for emerging challenges at the government level	- It is necessary to develop and coordinate with all political forces a long-term national strategy for the development of social housing.

		- The government should participate only in regulating relations in the social housing market and not directly deal with issues of construction, ownership, and management of social housing. - It is necessary to change the financial and tax policy in relation to social housing providers, ensuring equal opportunities for all market participants. - It is necessary to be concerned with the issue of housing availability for residents of the country in general.
	8. Assessing the prospects for a sustainable agenda in the social housing sector	- Long-term forecasts depend on current decisions made by the government, which do not lend themselves to logical understanding.

From the information presented in Table 2 and Table 3, it is clear that both the authors of the existing literature and the interview participants agree in their assessments when describing the state of affairs in the social housing sector. During the collection and analysis of data, it became apparent that housing, including social housing, is one of the essential elements of national policy. Political struggle, economic, and social conditions, and the public understanding of what is the common good have shaped the landscape in which housing providers operate. Currently, the social housing sector has finally established a market framework for work, primarily providing for ensuring economic sustainability, which, however, contradicts the goals of housing providers, who are mostly public and charitable organisations. This contradiction was reflected in the responses of interview participants, who indicated the need to ensure the financial sustainability of their organisations as their key task. At the same time, housing providers do not see their future in isolation from state housing policy, preferring to talk about their companies as part of a large social programme that must be provided with stable state financing. In this regard, it is worth noting that both the authors of literary sources and the interview participants indicated that to plan any development, the

state must develop and agree with all market participants on a corresponding strategy. The creation of such a strategy requires a broad public dialogue, so in the next chapter, a discussion of the results obtained in this work will be presented.

Chapter 5: Discussion and Recommendations

This chapter attempts to explain and interpret the findings of this study and to provide some insights into the future of the New Zealand social housing market. It also provides some recommendations for both social housing management and the government on how they can address the emerging challenges of addressing sustainability issues. The discussion in this chapter is centered around the research questions outlined earlier and is largely focused on comparing the interview findings with the literature.

Discussion of Research Results

A comprehensive analysis of the interviewees' responses, literary sources, and historical background allows us to draw the following picture of the New Zealand social housing market. Currently, this market is dominated by the only state rental operator, Kāinga Ora, which has the largest housing stock and receives the bulk of state funding for the construction of social housing. At the same time, independent social housing providers, which are usually charities and public organisations, have a significantly smaller volume of housing stock and are forced to constantly solve problems of ensuring financial and economic sustainability. Moreover, they see various state support programmes as one of the foundations of their development. Therefore, joining a stable flow of state funding is becoming a pressing goal for all housing providers. Indeed, during the interviews, when discussing sustainability, none of the participants positioned the work of their organisation as an independent and cost-effective project. Moreover, when discussing the future of the social housing sector, all participants preferred to see their companies as part of a large state social programme provided with stable funding. This may indicate that social housing providers, despite various kinds of statements and nods towards sustainable development, do not have a significant desire and aspirations to develop their companies, preferring to live in the existing realities and cherishing the hope for

a change in government policy. The current situation largely suits all participants. Thus, the state has the opportunity to manipulate social housing providers by redistributing funding and receiving “controlled” organisations that implement initiatives of interest to the government, which in turn allows them to solve social problems with minimal effort. In addition, interaction with independent providers is, in some way, a restraining factor for the “appetites” of Kāinga Ora. However, it is worth noting that despite the negative assessment of Kainga Ora’s activities, any practical steps to reform the social housing sector are not discussed in the public space, which is more evidence of “ritual” dissatisfaction with the work of Kāinga Ora associated with the change of government. In turn, housing providers, especially large ones, receive a significant and stable source of funding, allowing them to develop niche projects, such as housing intended for certain communities or ethnic groups, which largely violates the principles of social justice. In the current structure of relations, social and environmental aspects are practically absent, which have become truly optional for all participants in the social housing market. All this suggests saying that the social housing market has become extremely politicised at present, and the boundary between the public and private sectors has already been virtually erased. In this regard, it is necessary to talk not so much about the sustainable development of social housing providers, but to determine what social housing is for the state, how important it is and what place it occupies in plans.

Adding relevance to this conclusion is the fact that, as an integral part of New Zealand's political landscape, housing has effectively become a commodity and an investment object in the eyes of many economic actors, with rising housing prices becoming a source of profit (McLeay, 2022, p. 2). The direct consequences of the dominant institutional structure (public policy, legal and financial systems) were the loss of the social role of housing as a source of basic human needs, the growth of demand for social housing, the deterioration of the quality of the housing stock, and the growth of rents (White & Nandedkar, 2021; Bishop, 2024). It is

worth noting that the widespread commercialisation of the social housing market contradicts the goals of housing providers, who are mostly public and charitable organisations (Fernandez et al., 2023). These contradictions were directly reflected in the results of the analysis of the data obtained during the interviews. A summary of the data obtained in the research questions showed that sustainable development is acute and relevant for social housing providers.

Question 1: What aspects of sustainable development are most important for social housing providers? In response to this question, all interview participants agreed that sustainable technologies can make homes more comfortable and reduce household maintenance costs in the long term. This thesis is repeatedly confirmed by various sources, for example, Eklova (2020), Bag et al. (2021), Zeng et al. (2021), Shwashreh et al. (2024) and others, according to which the use of sustainable technologies reduces the consumption of all types of energy by 55% in the first year of operation. However, in this regard, it is worth noting that these sources provide only relative values and do not consider specific cases related to social housing, which does not allow us to assess how economically justified the use of sustainable approaches are in the construction of social housing. Also, all interview participants believe sustainable approaches reduce the negative impact on the environment, primarily through energy-efficient technologies, reduced consumption of natural resources and waste minimisation. And this opinion repeats the advantages of using sustainable approaches, which have become certain cliches and were previously described in the Review of the Literature section, which have been repeatedly stated in literary sources and are known to housing providers. At the same time, as follows from the interview results, housing providers are more interested in their own economic sustainability, rather than the wellbeing and economy of residents, since after the completion of construction, the house becomes an asset, and it is important for the owner to understand what the costs of its operation and maintenance will be. This position of the interview participants fits perfectly into the logic of the commercialisation

of the social housing market when its participants are forced to calculate their costs and income from renting out housing at all stages of the life cycle of a building (Eklova, 2020). This is especially true in a context where the cost of building a sustainable home in New Zealand is 84% higher than the cost of building an 'ordinary' home, making the construction costs out of proportion to the savings in running costs (Stats NZ, 2024). In this regard, the concerns expressed by some participants regarding the extent to which sustainable technologies can impact operating costs are not so much due to the lack of reliable information from housing providers regarding the durability of sustainable materials, but rather to their concerns that, in an environment of unstable financing, the costs of modern technologies will not pay for themselves over the life cycle of the building, which could reduce housing affordability.

The interview participants pay special attention to the topic of housing affordability, arguing that, according to their observations, in areas of mass construction of modern sustainable social housing, the cost of real estate increases, which, in turn, affects rents, which can be 3 - 9% higher than that of "ordinary" houses. The same conclusions are reached by the authors of academic studies and various reports, indicating that the payback period for a house that meets Homestar-10 standards is more than 20 years, which makes it economically unprofitable to rent out such a house (Liu et al., 2022; NZGBC, 2024). In this regard, as noted by the interviewees, the acceptable limit for the application of sustainable technologies is the Homestar-6 level, where the payback period is about 10 years. That is, housing providers attach primary importance to the payback period of the project and therefore tend to consider the life cycle of a house not through the degree of impact on the environment, but through the costs that they will incur in connection with the construction, operation and dismantling of the house. All this indicates that they make environmental and social aspects dependent on economic ones.

Question 2: How do social housing providers achieve a balance between different aspects of sustainable development, what challenges do they face, and what compromises do they make? In the responses to this question, several themes emerged that describe both the problems and the ways to solve them, as well as the general understanding of the sustainability agenda by interviewees, which is especially important for understanding the context in which the respective organisations operate. According to interviewees, the current situation is one in which the sustainability topic is of little interest to tenants, Boards and some external stakeholders, but is actively promoted by government and banks since it allows the former to score political points and the latter to make money in the long term. In many ways, this position contradicts the widely held view that tenants, and by extension housing providers, have a high level of interest in the sustainability agenda (Correia, 2019; James, 2022, p. 13; Fernandez et al., 2023). Indeed, according to the Rental Housing Trends and Preferences Report, 73% of tenants value environmentally responsible property management and want landlords to implement energy-efficient technologies (MRI, 2024). Interest in sustainable rental housing is growing, but tenants' motives are more focused on financial savings than environmental ethics, with tenants on average willing to pay only 9% more for sustainable housing than for "regular" homes. Among the motives for renting a low-emission home, around 40% of tenants primarily mention savings due to lower energy bills (PwC, 2024a). However, in cases where savings on operating costs are "eaten up" by higher rents, interest in the sustainable agenda decreases, which is confirmed by the interview results. At the same time, for housing providers themselves, interest in the topic of sustainable development is limited solely by the framework of legislation, the volume of financing and the requirements of investors. This interest is based on the goals of improving economic indicators, rather than following the environmental and social agenda. In this regard, it is worth saying that housing providers perceive sustainable development through the prism of financial, economic, and

organisational aspects, which boil down to issues of planning and managing resources and people. The same priorities in the activities of housing providers, as previously shown in the Review of the Literature section, are also indicated by many authors of academic works, for example Whang and Kim (2015), Zeng et al. (2021) and James (2022).

In the context of priority areas of activity, it is worth noting that even though most housing providers are charities when discussing the importance of the sustainable agenda for society, interview participants note the greater importance of environmental aspects than social ones. This position is not fundamentally new for academic research, which points to the strongest dependence between environmental and economic issues of sustainable development. This means that when economic aspects are balanced with environmental issues, they have a greater impact on sustainable construction than social factors. The closest connection with environmental issues is shown by such economic factors as clear planning of the timing and conditions of project implementation; knowledge management; retention of skilled labour; quality management; construction cost management; accounting for and managing future operating costs. The same factors such as the introduction of innovative technologies or the predominant use of local labour and materials have no correlation with environmental issues (Whang & Kim, 2015; James, 2022, p. 15). These statements correspond to the opinions of interview participants, who pay primary attention to planning and risk assessment. As already mentioned in the previous chapter, housing providers are skeptical about the introduction of modern technologies and materials but are ready to actively use local resources, which allows them to save significantly. In terms of social issues of sustainable development, the authors of various studies note the low connection of these factors with both economic and environmental aspects (Kislitsyna, 2022). However, interviewees, despite the prevalence of the economic agenda in their answers, on the contrary, note the importance of social issues in the implementation of projects, pointing to the need for harmonisation with cultural heritage to

ensure the quality of the internal environment for achieving the well-being of society. Perhaps this is due to the social nature of organisations that supply social housing.

The prevalence of economic, financial, and political aspects in the responses, to the detriment of environmental and social ones, follows from practical experience in overcoming the challenges that housing providers faced in their work. In this regard, the main challenges were named as high construction costs, lack of available land, and insufficient financing coupled with a bureaucratic procedure for obtaining it. Similar problems are also covered in academic works and reports of various organisations. It is noted that housing providers are forced to work in an environment of fragmented government funding, sporadic charitable donations, limited opportunities for profit, and a lack of affordable land and other resources (Joynt, 2019, p. 25; Fernandez et al., 2023; HUD, 2024c). According to Stats NZ (2020b), in New Zealand, land and infrastructure costs are the most significant item in the structure of housing construction costs (up to 35%), followed by the cost of building materials (up to 24%), various taxes and fees (up to 21%) and the cost of labour (up to 20%). Since 2019, the cost of building a house has increased by 41%, the cost of residential land in densely populated Auckland has increased by 50% over the past 10 years, and tax and fee rates have increased by about 40% since 2013. At the same time, the rate of growth of the cost of building materials and labour is comparable to the rate of inflation (about 2% per year). All this significantly limits the ability of housing providers to reduce their costs and makes them dependent on external, primarily government funding. However, the unavailability or limited availability of finance is becoming the biggest constraint to the growth of the social housing sector (Mooney, 2024). At the same time, as follows from the interviews, housing providers are concerned not so much with the issue of financing, as with the issue of inconsistent government policy in providing this financing. The lack of clearly defined guidelines for the development of the social housing sector forces its participants to make a difficult choice of strategy for their work

– either the development of new projects through various loan financing schemes and, accordingly, the fulfillment of strict contractual obligations that do not always correspond to social goals, or conservation in the current conditions of limited financing without clear prospects for the future.

In a situation where the government has effectively distanced itself from the needs and requirements of most housing providers, interviewees agree that reducing their costs is the only area in which they can somehow influence the outcome. However, as can be seen from the above structure of housing construction costs, the capabilities of housing providers in this matter are limited and allow for economic sustainability only in the short term. As mentioned above, housing providers see ways to reduce their costs in the use and attraction of local resources, working with contractors to reduce construction costs, selective use (with due justification) of modern technologies and materials, development of Brownfield sites, etc. All these approaches are not new or of any interest, since they are described in many sources on both sustainable development and economic planning, for example, Whang and Kim (2015), Eklova (2020), Zeng et al. (2021) and Shwashreh et al. (2024). Indeed, certain methods of reducing costs are a matter of policy for specific organisations. At the same time, the proposals made by interview participants, such as expanding funding sources and carrying out organisational changes in the relevant organisations, deserve attention. This means housing providers should provide socially oriented services in their activities and commercial ones, allowing organisations to pay current expenses and develop without relying on government funding. This approach may require changes in the conditions for providing housing, the parameters of the housing being built, as well as the status of this housing (emergency housing, long-term housing, etc.), which will certainly affect the social component of sustainable development. However, social issues are largely the responsibility of the state.

Question 3: What impact has public policy had and continues to have on the social housing sector and its sustainable development? An analysis of historical changes in the institutional conditions in which the social housing market was formed showed that at present New Zealand lacks any clear and understandable strategy for the development of this market. Moreover, there is no understanding of what social housing is and what its status is – emergency housing, a commercial asset, or an economic policy instrument representing an alternative to the private rental market. The government's social housing policy changes in accordance with the preferences of voters within the electoral cycle. Also, the fact that responsibility for the implementation of social housing construction programmes is distributed among various agencies and ministries, which does not allow for the consolidation of planning, financing, and reporting, does not add stability. The lack of such consolidation leads to the fact that decisions related to social housing are made without taking into account the opinions of local communities and households, and the decisions themselves are often politically motivated and do not take into account their effectiveness, including in the long term (Murphy, 2020; Wang & Gu, 2023; Bishop, 2024; OECD, 2024). Similar thoughts were expressed by interview participants. The key themes in their responses were the high degree of bureaucratisation of the financing system through government mechanisms, frequent changes in policy, and the lack of a strategy and clearly defined guidelines for the development of the social housing sector. At the same time, interview participants tend to evaluate the attempts made by the government to develop the social housing sector negatively, since these attempts lead to an increase in land prices, a further increase in the cost of real estate, and a decrease in the affordability of housing. This view is supported by statistics. In 2024, the average house cost 7 times the average household income, and servicing a 20-year mortgage on the average house cost 49.1% of the average household income. As a result, the home ownership rate is 65%, which is the lowest level since 1951. On the other hand, the rate of rent growth significantly exceeds mortgage

payments. Since 2007, average rent payments have increased by 93%, while mortgage payments have increased by only 48.8% (Stats NZ, 2024). All this indicates that housing, including rental housing, is unaffordable for a wide range of people. At the same time, the fact that people do not have the opportunity to buy or rent housing at market prices is the reason for the increased demand for social housing (the growth in the number of people registered on the Housing Register) and requires the government to take measures to intensify its construction. According to Bishop (2024), the government is trying to free up land for social housing, remove bureaucratic barriers, increase funding for the social housing sector, including by providing incentives to local communities and councils to support development. However, despite the government's efforts, social housing providers do not see any significant changes in real life, and therefore their main demand for the government is to develop and agree with all market participants an appropriate national development strategy, which would allow for long-term planning. At the same time, this strategy should not only consider the principles of sustainability but also provide for changes in financial and tax policies in relation to social housing providers (reducing the tax burden and facilitating financing), homeowners (capital gains tax) and developers. It is also worth noting that the interview participants do not see the future of their organisations, or the social housing sector as a whole, in isolation from state housing policy. At the same time, while wishing to receive stable state funding, housing providers, nevertheless, want to limit the role of the state exclusively to regulatory functions, transferring issues of construction, ownership, and management of social housing to the level of housing providers. However, such an approach may create preconditions for uncontrolled spending of funds and an increase in the cost of building social housing. Another serious consequence of long-term reliance on public funding will be a blurring of the boundaries between the public and private sectors, which could lead to new abuses (Doleac et al., 2024).

Addressing a research aim. The main objective of this study was to find the factors influencing the achievement of sustainability in the social housing sector in New Zealand. According to Morfaw (2014), a sustainable project is understood as a general approach related to the effective management of projects, programmes, organisations, and people, and requiring the establishment of certain indicators and standards for formulation, design, financing, implementation, monitoring, and evaluation. At the same time, the sustainability of a project can be determined by five key factors: socio-cultural respect, community participation, political cohesion, economic and environmental sustainability (Eklova, 2020). The projection of the concept of sustainable development to the company level should be considered from the point of view of a systems approach, in which the company, as a system, must maintain its balance state in the face of various external factors (Correia, 2019). In this regard, to assess the success of a company in implementing a sustainable development strategy, it is necessary to determine quantitative indicators of sustainable development (Enwin & Ikiriko, 2023, p. 14; Moshood et al., 2024). At the same time, as a comparative analysis of the experience of housing policy planning in England, Australia and New Zealand shows, political will has the greatest impact on the effectiveness of measures taken to develop the housing sector. Thus, the basis for success in the field of social housing construction in England was the recognition that high-quality and timely planning plays a critical role in meeting housing needs, while in Australia and New Zealand, inconsistent and highly politicised interest in this issue, on the contrary, limits the development of the housing industry (Austin et al., 2014).

Earlier in the previous chapter, Table 2 outlined some of the factors influencing sustainable development in the social housing construction sector identified in the literature, and Table 3 outlined the themes and subthemes that emerged during the interviews. From the analysis of the data obtained, it follows that the main factor influencing the achievement of sustainability in the work of social housing providers is the lack of clear and understandable

guidelines for the development of the relevant organisations. The absence of such guidelines does not allow the social housing sector to develop sustainably, which affects the growing need for social housing and the state's ability to meet this need. In this regard, it is necessary to establish appropriate target quantitative indicators that determine the volumes, timing and resources required for the construction of social housing. At the same time, as shown above, the establishment of such indicators is associated with significant changes in the institutional foundations of the existing New Zealand social housing market, which is possible only if agreement is reached between political parties, social housing providers, Māori organisations, large landowners, local councils, etc. Thus, the main factor influencing the achievement of sustainability in the social housing sector is the lack of political cohesion among all stakeholders. Achieving such cohesion is a complex and non-trivial task, in connection with which the government must take the appropriate initiative and responsibility.

Recommendations

As already repeatedly mentioned above, the main complaint from housing providers to the government comes down to a single and extremely important issue – the lack of any strategy for the development of the social housing sector that is understandable to the public. Developing such a strategy requires the participation of both government and social housing providers. In this regard, in response to the main research question and based on the results obtained, this section provides recommendations to both parties. These recommendations are summarised in Table 4, and explanations of these recommendations are given below.

Table 4

Recommendations

Recipient of Recommendations	Issues to be Addressed	Description
Government	Determine the role and importance of social housing for society	It is necessary to determine whether social housing serves as emergency housing, social support, a commercial asset, or an alternative to the private rental market
	Determine the target groups of the population to whom social housing will be provided	State funding should only support projects that benefit society as a whole, without discrimination
	Developing a strategy for social housing market growth	Key targets, deadlines, and resources for a 5–10-year period must be defined
	Develop a system of control and indicators for the implementation of the developed strategy	Implementing accountability measures for failing to meet set targets
Social Housing Providers	Set up organisational processes in their activities like commercial enterprises	Improve economic efficiency, revise social projects to make them more profitable
	Actively interact with the government and investors to lobby for their interests	Lobby interests, attract additional funding sources, establish connections with large businesses
	Reduce construction costs	Work with contractors, implement a tender system to select cost-effective contractors
	Justification of technical and economic decisions, planning based on efficiency	Analyse technologies and materials, assess payback, consider tenant preferences
	Use modular construction and multi-story buildings	Increase housing area without raising land costs, possibly reduce comfort levels to lower construction expenses

Recommendations for Government. As can be seen from the recommendations presented in Table 4, for the sustainable development of the social housing sector, the government needs to define the cornerstones of its social policy. First of all, it is necessary to define the role and importance of social housing for society. It is important to understand what social housing is – emergency housing, a means of social support for certain groups of the population, a commercial asset that allows for profit or an alternative to the private rental market. As shown above, understanding of this issue changes with changes in political course,

which makes the direction of development of the social housing sector uncertain. In addition, it is necessary to determine for what period the housing is provided – for the duration of difficulties, for a certain period or for the entire life of the tenant, since despite the fact that the existing rules determine the procedure for providing social housing, tenants, in an attempt to retain the right to live in this housing, use various schemes to conceal their income, for example, by providing false documents, etc. (MSD, 2023). In this regard, it is necessary to eliminate bias in the provision of housing, for which purpose it is necessary to determine the target groups of the population to whom social housing will be provided. It seems obvious that the state should finance only projects designed for the benefit of the whole society, based on established goals, objectives and priorities.

These cornerstones should form the basis of a strategy for the development of the social housing market, defining target indicators, deadlines for achieving them, and the necessary resources for a 5–10-year period. At the same time, the strategy should not be limited to simply indicating the number of houses and the cost that should be built. This strategy should:

- determine society's need for social housing (i.e., the amount of housing and the regions where it is most in demand), and establish clear and understandable rules for its provision, payment, seizure, etc.

- review social housing standards, building codes, and regulations to consider both current and future requirements for comfortable and sustainable housing. One of the guidelines in this matter, for example, could be the already applied Homestar standards system. At the same time, the established standards should become mandatory.

- create a system of economic, financial, and tax levers that motivate market participants to use sustainable materials and technologies. The motivational system should not simply encourage housing providers to use sustainable approaches, but force them to compete, thereby contributing to the development of the industry.

- leave the state only with regulatory functions in the social housing market, transferring functions such as housing construction and property management to private companies. The state should become exclusively a customer of the social function and not a customer of the facility. In this regard, Kāinga Ora cannot continue to operate within its current functionality and must be reorganised or liquidated based on the adopted concept.
- revise the system of financing social housing providers, providing for project financing based on competition between housing providers. The state must determine the need for social housing in a particular area, and housing providers must offer corresponding projects developed based on the technical specifications issued by the state. The state must also conduct technical, environmental, and cost assessments of the projects proposed for implementation to eliminate various types of abuse. At the same time, it is necessary to exclude direct state financing of housing providers, especially those created under large trusts. Financing should be carried out by banks and investment companies in terms of return on investment. In this scheme, the state will act as a guarantor for banks and investment funds, and will also subsidise interest rates, which should make financing more accessible.
- the state should take on the issues of providing housing providers with land and adapting the territorial zoning system to the tasks of building social housing. At the same time, it is necessary to exclude attempts by landowners to inflate the cost of land, providing, for example, a mechanism for the forced seizure of land for construction needs at fixed prices, regardless of the status and position of the owner.

Of course, the development strategy proposed is a complex and ambitious task that requires a radical revision of the current legislation and a broad public dialogue and agreement on several issues. That is why this strategy must be agreed upon with all stakeholders. In this regard, as part of practical steps, the government needs to:

- appoint a person responsible for developing the said strategy and create a corresponding ‘working group’;
- determine the time frame for developing the strategy, draw up and approve a corresponding ‘road map’;
- involve representatives of interested parties, specialised organisations, and the scientific community in the work on developing the strategy to study various points of view, international experience, and academic knowledge regarding the goals of the strategy;
- start a media campaign explaining the goals and objectives of the work being carried out;
- work with parliament, political parties, etc. to promote the strategy being developed;
- develop a system of control and indicators for the implementation of the developed strategy, including measures of responsibility for failure to meet established indicators.

This strategy should unite society around a socially significant project and give impetus to the development of social and environmental components of sustainability. It is the state that must take responsibility for creating institutional conditions for the development of society as a whole and its individual institutions.

Recommendations for Social Housing Providers. As noted earlier, social housing providers are mostly churches, housing funds, charities, and public organisations with a clearly expressed social focus in their activities. Unlike the government or purely commercial organisations, social housing providers are severely limited in their financial and economic freedom since social projects are usually unprofitable. Currently, the state is an unlimited source of funding for social housing providers, joining which is their goal, allowing them to develop sustainably and implement any technologies by using public money. However, this

does not contribute to increasing the comfort and affordability of housing for people, since it results in abuse and rising housing costs. This model of behavior requires urgent change, since it is in fact nothing more than “parasitism” on state funding or “welfare dependency” in the terms of the Social Security Act 2018.

In the proposed concept of the social housing market, the state should become a “social customer,” and housing providers should compete with many other organisations for the right to implement social projects, earning money on the further operation of constructed facilities. Therefore, without changing the existing model of relationships, it is premature to talk about the sustainable development of the social housing sector. In this regard, despite the previously expressed criticism of the commercialisation of the social housing market, it is worth recognising that in the current conditions of unclear prospects, without market approaches it is impossible to achieve sustainable development of housing providers. Housing providers need to set up organisational processes in their activities like commercial enterprises. The key task of housing providers should be the economic efficiency of their work. This means that it is necessary to both expand the list of commercial projects and review the indicators of social projects, making them more economically profitable (based on available financing, making houses smaller in area, less comfortable, etc.). In addition, it is necessary to actively work with contractors to reduce construction costs and, if necessary, change contractors that inflate the cost. In the construction market's competition, one solution may be a tender system for finding contractors. It is also necessary to establish a system of technical and economic justification, examination, accounting and control of decisions taken, considering all risks, including in terms of the technologies and materials used. All design solutions must be justified and economically viable. Housing providers must understand when and under what conditions certain decisions will pay off. There should also be a clear understanding of what technologies are more in demand among future tenants. One approach in this case could be to increase rents

for tenants living in sustainable buildings and saving on operating costs. Revision of approaches also involves working with the government, government organisations, banks, private investors, etc. to lobby their interests and attract additional sources of funding. In this regard, it is extremely useful for the management of housing providers to be members of various organisations and associations to express their position. It is also important to establish relationships with large businesses located in the organisation's activity area to receive various material and financial assistance. However, it is worth understanding that such interaction is just one form of ‘begging’ and does not ensure full-scale sustainable development.

Of course, the implementation of these recommendations is limited by the capabilities of each specific organisation, but it is obvious that practical steps must be based on an initial assessment of the situation and a study of the capabilities of a particular organisation. When implementing these recommendations, housing providers should not be viewed as social services that are an ‘appendage’ of the state, but as a business solving social problems. In this regard, it is worth understanding that the main goal of any business is to make a profit, i.e., to achieve success, a business must have financial and economic stability (Wang & Gu, 2023). However, as follows from the interview results, social housing providers are not financially stable organisations since they are entirely dependent on external unstable and unpredictable sources. Diversification of funding sources could be a way out for housing providers, but in the current conditions they are unable to attract significant borrowed funds from banks and private investors due to their inability to ensure the return on these investments. In turn, this makes it impossible for housing providers to implement new projects aimed at their development. In this regard, they need to make a difficult decision – either return to their roots, i.e., to charity (collecting donations, targeted assistance to those in need and sustainable development as a charitable or public organisation) or build their work on sustainable development as an economically profitable social business project.

Chapter 6: Conclusion

The main objective of this study was to identify factors influencing sustainable development in the social housing construction sector and to develop recommendations for the management of social housing providers and the government on the actions they need to take to ensure the sustainable development of this sector. To synthesise existing knowledge and ensure a comprehensive understanding of the topic, this paper reviewed existing literature on sustainability issues, as well as reflecting the historical, political, and economic aspects of the development of the social housing market in New Zealand. In addition, semi-structured interviews were conducted with specialists responsible for the implementation of social housing construction programmes and/or determining economic policy in registered social housing providers. This chapter summarises the results of the work carried out and presents some limitations and suggestions for future research.

Limitations and Future Research Opportunities

A certain limitation of this study was the fact that representatives of the largest social housing providers and Kāinga Ora, whose opinions would have been interesting to know, did not participate in the study. The lack of information about the opinions of "big players" makes the picture of the existing relationships in the social housing market incomplete, especially considering that such market participants have a significant dependence on government funding. In this regard, it is worthwhile in future research to find out the reasons for the reluctance of individual organisations to participate in studies aimed at finding the reasons limiting their development. Understanding such reasons will allow future researchers to draw a more realistic picture of the social housing market, and the government and housing providers to exclude subjective factors from their work.

The interviews conducted as part of this study provided extensive qualitative data, but the lack of additional quantitative data limits the generalisability of the results. It would therefore be useful in future research to, for example, conduct a questionnaire or survey of politicians and/or tenants to explore their views on the sustainability agenda and plans for the development of the social housing sector. It would also be useful to explore what social housing means to tenants, why they live in it, what features of it they are particularly interested in, and what tricks they use to retain their right to live in this housing. Studying this issue is important for understanding the extent to which the sustainability agenda influences housing quality and tenants' satisfaction with life in social housing. All this would make it possible to draw a completer and more substantiated picture of the system of relationships developing in the social housing market and the prospects for its development, which, in turn, would be an important step in preparing for the development of a strategy for the development of the social housing sector, as discussed above.

This study found that some social housing providers have some doubts about the economic feasibility of using sustainable approaches in social housing construction, believing that such approaches have long payback periods. At the same time, academic sources, while providing a general description of the economic benefits of using sustainable technologies, do not allow us to assess the economic justification for using certain technologies specifically in social housing construction. In this regard, to fill the existing knowledge gap, future researchers should use specific cases in the social housing sector to assess the economic feasibility of using sustainable approaches and such an active focus on social and environmental issues. It also seems useful to develop a methodology for calculating the economic sustainability of buildings and to determine quantitative indicators of sustainable development in the social housing sector.

Practical Contributions

Despite some limitations, this study has made a practical contribution to the sustainability of the New Zealand social housing sector. In particular, the practical outcome of this study is recommendations for the management of social housing providers and the government on the actions they need to take to ensure the sustainability of the social housing construction sector. These recommendations can be used to develop appropriate decisions aimed at improving management effectiveness and serve as a major step in preparing for the development of the social housing sector strategy, as discussed above. The results of the study can also be used to prepare, justify, and make decisions under the Kāinga Ora reform programme announced by the National-led coalition Government in May 2024. In addition, future researchers can fill the knowledge gap, gain ideas, and prepare the basis for new research.

Research Summary

The results of the analysis of the data obtained in the framework of this work allow us to assert that the modern housing market, including social housing, is extremely politicised and has become an element of the struggle between various political forces. Housing has become a commodity and an object for investment in the eyes of many economic actors, and rising prices for it have become a source of profit (McLeay, 2022, p. 2). The direct consequences of the dominant institutional structure (public policy, legal and financial systems) were the loss of the social role of housing as a source of basic human needs, an increase in demand for social housing, a deterioration in the quality of the housing stock, and an increase in rents (White & Nandedkar, 2021; Bishop, 2024). Political struggle, economic, and social conditions, as well as society's understanding of what is the common good have shaped the landscape in which housing providers operate. Currently, the social housing sector has finally established a market

framework for work, primarily providing for ensuring economic sustainability, which, however, contradicts the goals of housing providers, who are mostly public and charitable organisations. Limited access to land resources, complexity, bureaucracy, and politicisation of mechanisms for investment in social housing have become critical issues for the development of the social housing sector. This sector has reached its potential and is hardly innovating (Joynt, 2019, p. 50). In these conditions, the topic of sustainable development for housing providers has transformed into a question of the struggle for stable state funding. At the same time, social and environmental issues have ceased to be relevant, since their significance and importance are limited exclusively by the framework of mandatory regulatory requirements. On the other hand, the government has effectively distanced itself from the pressing problems of most housing providers, preferring to interact with the social housing sector through Kāinga Ora and individual large CHPs. In the current conditions, the main factor influencing the sustainable development of the social housing sector is the lack of political consensus, which is why it is necessary to talk not so much about the sustainable development of this sector, but rather to determine what this sector is for the state, how important it is and what the state's vision of its future is. In this regard, a certain impetus for the sustainable development should be a fundamental transformation of the existing relations – the state must assume the function of a social customer, determining the need, parameters, and characteristics of social housing, while housing providers must become project operators, ensuring their economic efficiency. It is in this logic that recommendations are given to the management of social housing providers and the government regarding the actions they must take for the sustainable development of the social housing sector. This study should not be taken as a set of dogmatic statements, but as an occasion to think about the role and importance of social housing for society and to encourage the government to change the established practice of manipulating housing policy

to suit political ambitions, putting social and environmental aspects first, i.e., to do what any government must do.

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Appendix A

List of Registered Community Housing Providers

Organisation	Geographic Location	Focus
Abbeyfield New Zealand Incorporated	Northland, Auckland, Waikato, Manawatu Whanganui, Wellington, Tasman, Nelson, Otago, Canterbury	Elderly people
Accessible Properties NZ Limited	Auckland, Waikato, Bay of Plenty, Wellington, Canterbury	People with disabilities, older people, those on low incomes, and the organisations that support them
Airedale Property Trust	Auckland	
Airedale Residential Limited	Auckland	
Auckland City Mission Housing Limited	Auckland (central Auckland)	
Auckland Community Housing Trust	Auckland	
Autism Charitable Trust Board	Wellington	People with autism
Bays Community Housing Trust	Auckland (North Shore)	People who had experienced mental ill health, young people and the elderly
Christchurch Methodist Central Mission	Nelson, Marlborough, West Coast, Canterbury	
Claud Switzer Memorial Trust Board	Kaitaia	Elderly people
CNSST Foundation	Auckland	
Comcare Charitable Trust	Dunedin, Canterbury	People who experience mental illness or addictions
Community of Refuge Trust	Auckland	
Compassion Housing Limited	Wellington	Elderly people
De Paul House Charitable Trust	Auckland	
Duffus Memorial Trust	Northland	Elderly people
Dwell Housing Trust	Wellington	
Habitat for Humanity Central Region Limited	Napier, Hastings, Palmerston North, Coromandel, Taupō, Hamilton, Tauranga, Waikato, Rotorua, Manawatu Whanganui, Bay of Plenty, Gisborne, Hawkes Bay, Masterton, Wellington	
Habitat for Humanity (Nelson) Limited	Nelson	
Habitat for Humanity New Zealand Limited	Northland, Auckland, Waikato, Taranaki, Manawatu Whanganui, Bay of Plenty, Gisborne, Hawkes Bay, Wellington, Tasman, Nelson, Otago, Southland, Canterbury	

Organisation	Geographic Location	Focus
Habitat for Humanity Northern Region Limited	Northland, Auckland	
Haumaru Housing Limited Partnership	Auckland	Elderly people
Home in Place (New Zealand) Limited	Palmerston North, Auckland, Manawatu Whanganui	
Homes of Choice Limited	Auckland, Waikato, Bay of Plenty	People with disabilities
Housing for Social Benefits Limited	Auckland	
Just Housing Otepoti	Otago	
Kāhui Tū Kaha Limited	Northland, Auckland	Homeless people, youth and people with chronic mental health problems
Mahitahi Kainga Trust	Auckland	People with disabilities
Manawa Community Housing Trust	Tauranga, Bay of Plenty	Maori
Manawatu Community Housing Trust	Manawatu Whanganui	Recently released prisoners, refugees
Mangatawa Papamoa Blocks Incorporated	Tauranga	
Marlborough Sustainable Housing Trust	Marlborough	People from the community
Modus Community Housing Limited	Auckland	
Monte Cecilia Housing Trust	Auckland	
New Zealand Housing Foundation	Northland, Auckland, Canterbury	
Ngāti Kahungunu ki Poneke Community Services Incorporated (trading as Kahungunu Whānau Services)	Wellington	
One Double Five Whare Āwhina Community House Trust	Whangarei	
Otangarei Papakāinga Limited	Whangarei	
Ōtautahi Community Housing Trust	Canterbury	
Pathway Affordable Housing Limited	Christchurch	
Penina Trust	Auckland (South Auckland)	Pacific people and Māori
Porirua Whanau Centre Trust	Whangarei, Wellington	
Poua Ki Raro Limited	Wellington	
Queenstown Lakes Community Housing Trust	Otago	
Raukawa Housing Charitable Trust	Manawatu Whanganui	
Stevenson Village Limited	Auckland (East Auckland)	Elderly people
Tāmaki Housing Association Limited Partnership	Auckland	Construction of new housing to replace demolished housing
Tauranga Community Housing Trust	Bay of Plenty	
Te Āhuru Mōwai Limited Partnership	Porirua	
Te Hau Ora o Ngāpuhi Limited	Northland	Maori
Te Kainga Atawhai Housing Limited	Auckland	
Te Rūnanga o Kirikiriroa Charitable Trust	Hamilton	Maori

Organisation	Geographic Location	Focus
Te Runanganui O Ngati Porou Trustee Limited	Gisborne	
Te Toi Mahana	Wellington	
Te Uru Karaka Limited	Auckland	
The Nelson Tasman Housing Trust	Tasman, Nelson	
The Salvation Army	Auckland, Waikato, Taranaki, Gisborne, Wellington, Otago, Marlborough, Canterbury	
Trust House Limited	Manawatu Whanganui	People from the community
Tupoho Housing Limited	Manawatu Whanganui	
Tūranganui-a-Kiwa Housing Limited	Gisborne	
VisionWest Community Trust	Auckland, Canterbury	
Waiohiki Community Charitable Trust	Hawkes Bay	
Wesley Wellington Mission Incorporated	Wellington	Elderly people, families with small children
WERA Aotearoa Charitable Trust (WACT)	Rotorua	
Whangarei Accessible Housing Trust	Northland, Auckland	People with disabilities
Whai Māia Charitable Trust 1	Auckland	People from the community
Whatever It Takes Trust Incorporated	Hawkes Bay	People with mental health problems

Appendix B

Participant Information Sheet

Title of project
Challenges to Achieving Sustainability in Social Housing Construction in New Zealand

General summary of project

Housing is the basis of stability, and security, and one of the most primary human needs. At the same time, lack of housing is one of the main causes of homelessness, worsening demographic situation, increasing burden on government and social services, growth of internal family conflicts, and other social and economic problems of society. According to the 2018 Census, approximately 102,000 people in New Zealand (or 2% of the population) were severely homeless, which is considered a serious problem by the New Zealand government. To address these challenges, the government is encouraging growth in the housing market by building social housing and providing subsidized rentals to people with low socioeconomic status or those with special needs.

At the same time as stimulating the construction market, the government is establishing mandatory standards to reduce the negative impact on the environment using modern technologies and the implementation of the principles of sustainable development. The use of construction technologies and materials that meet sustainability requirements extend and complement classical building design with concepts of economy, utility, durability, and comfort, which, while the initial cost of some technologies is quite high, can reduce the life cycle cost of houses and make housing more affordable.

However, in trying to achieve sustainable development goals, social housing providers face financial and other pressures that force them to reduce costs, including by building housing at a low initial cost, while neglecting the cost of the life cycle of the house or the impact of the technologies and materials used on the environment. Given operational constraints, housing providers must balance the economic, environmental, and social dimensions of sustainability. In this regard, this paper will explore the factors influencing the achievement of sustainability and maintaining balance in the activities of social housing providers, as well as provide practical recommendations on the actions they should take to overcome emerging challenges.

Research aims of project

The purpose of this study is to identify and theorise the factors influencing the balance between economic, environmental, social, and other aspects in the construction of social housing in New Zealand. At the same time, the practical results of the study will be recommendations and proposals to the management of social housing providers on the actions that they could take to maintain such a balance.

PARTICIPATION

What type of participants are being sought?

As part of this work, interviews will be conducted with managers responsible for the implementation of construction programs and determining economic policy in organisations operating in the field of social housing construction in New Zealand. Requests for interviews will be made to Kāinga Ora, Habitat for Humanity, and other independent social housing providers registered on the relevant Register. Technically, interviews will be conducted in one of three formats: face-to-face, online, or in the form of written responses to e-mails. The interview format will be determined based on the location of the interviewees and the convenience of the participants. For the convenience of processing the collected material, the preferred option is to respond to e-mails. With the permission of the participants, all face-to-face and online interviews will be recorded using a voice recorder provided by OPAIC, with strict measures taken to ensure the confidentiality of their responses, including commercial information.

How will confidentiality and/or anonymity be protected?

All personal information of participants will not be disclosed in any reports, presentations, or public documentation.

Can participants change their minds and withdraw from the project?

To avoid possible unforeseen negative consequences for study participants, before the interview, each participant will be informed about the goals and objectives of the study, as well as that participation in the interview is voluntary and there is an opportunity to refuse participation without explanation and any consequences. Participants who agree to be interviewed will be asked to sign a consent form to confirm their awareness and willingness to share information. During the interview, research participants will not be pressured to give specific answers. In addition, questions that may cause discomfort or violate respondents' privacy will not be asked. The participant can withdraw any information provided before signing the consent form. The participant may also refuse to answer any specific question and ask to turn off the recorder/camera/audio/video at any stage of the interview.

DATA COLLECTION

What data or information will be collected and how will it be used?

The questions of this study relate exclusively to the professional activities of the participants and, to a greater extent, are related to the activities of the companies in which they work. The research questions do not affect the privacy of participants.

The analysis of the data obtained in this study will be used to formulate relevant conclusions and may be published in reports, presentations, and other public documentation, but any data included will not be associated in any way with any specific participant without that participant's prior consent.

A copy of the study results may be requested from OTAGO Polytechnic.

Data storage

According to OTAGO Polytechnic's information policy, all records made during the research process, including audio files, emails, paper notes, and others are the property of OTAGO Polytechnic and not of the individuals who created or received them. In this regard, as outlined in both Te Pūkenga NZ Disposal Authority DA424, the GDA 6, and the GDA 7, all data collected during the research process, including recordings made on all possible storage media, will be stored for seven years in OneDrive OTAGO Polytechnic, which uses two-factor identification (password and specific mobile phone message) for researcher access. After this period, all data will be permanently deleted.

CONTACT

What if participants have questions?

If a research participant has any questions now or in the future, the following persons may be contacted:

Researcher:	Supervisor:	Supervisor:
Oleg Nikitin	Lorraine Skelton	Yury Zhukov

Appendix C

Consent to Participate in a Research Project (Consent Form)

Title of Project
Challenges to Achieving Sustainability in Social Housing Construction in New Zealand

DECLARATION
I have read the information sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I understand that:

- My participation in the project is entirely voluntary and I am free to refuse to answer any particular question.
- I am free to stop participating at any time.
- I can choose to withdraw information provided without giving reasons and without any disadvantage.
- I cannot withdraw any information I have supplied after finishing the semi-structured interview.
- My data will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for seven years after which it will be destroyed. If it is to be kept longer than seven years my permission will be sought.
- The results of the project may be published and/or used at a presentation at an academic conference, but my anonymity/confidentiality will be preserved.
- I can ask to receive a copy of the research findings.

Please mark or circle the selected option:

- I *agree* / *do not agree* that this interview can be recorded.

Any additional information given or conditions agreed to:

I agree to take part in this project under the conditions set out in this Information Sheet.

..... (Participant name)

..... (Participant signature)

..... (Date)

This project has been reviewed and approved by the Otago Polytechnic Auckland International Campus Research Ethics Committee.
Reference number: **AIC-RE-2024-35**

Appendix D
Research Ethics Committee Approval

Oleg Nikitin

From: OPAIC Apps
Sent: 21 августа 2024 г. 9:48
Subject: Research Ethics Application Approved

Research Ethics Application Approval

20 August 2024

Lead Researcher: Oleg Nikitin

Co-Researchers:

Dear Oleg Nikitin

Reference Number: AIC-RE-2024-35

Title of Application: Challenges to Achieving Sustainability in Social Housing Construction in New Zealand

Thank you for your application for ethics approval for this project.

The review panel has considered your revised application including responses to questions and issues raised. We are pleased to inform you that we are satisfied with the revisions made and confirm ethical approval for the project.

Many thanks for your considered responses to our recommendations.

We wish you well with your work and remind you that at the conclusion of your research you should send a brief report with findings and /or conclusions to the Research Ethics Committee.

All correspondence regarding this application should include the reference number assigned.