

# Overseas retrofit programmes

## Lessons for New Zealand and the economic impacts

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# New Zealand homes are too cold...

Over 460,000 do not meet heating and energy needs

Rentals too cold most of the time

Pacific Peoples households most likely to be too cold, followed by Māori and Asian

Disabled people's homes much more likely to be too cold

## ...and in poor condition

**93%**

Roofs below a  
good condition

### Window defects

58% Rental

42% Owner-occupied

**49%**

Less than adequate  
roof insulation

**Entirely single-  
glazed**

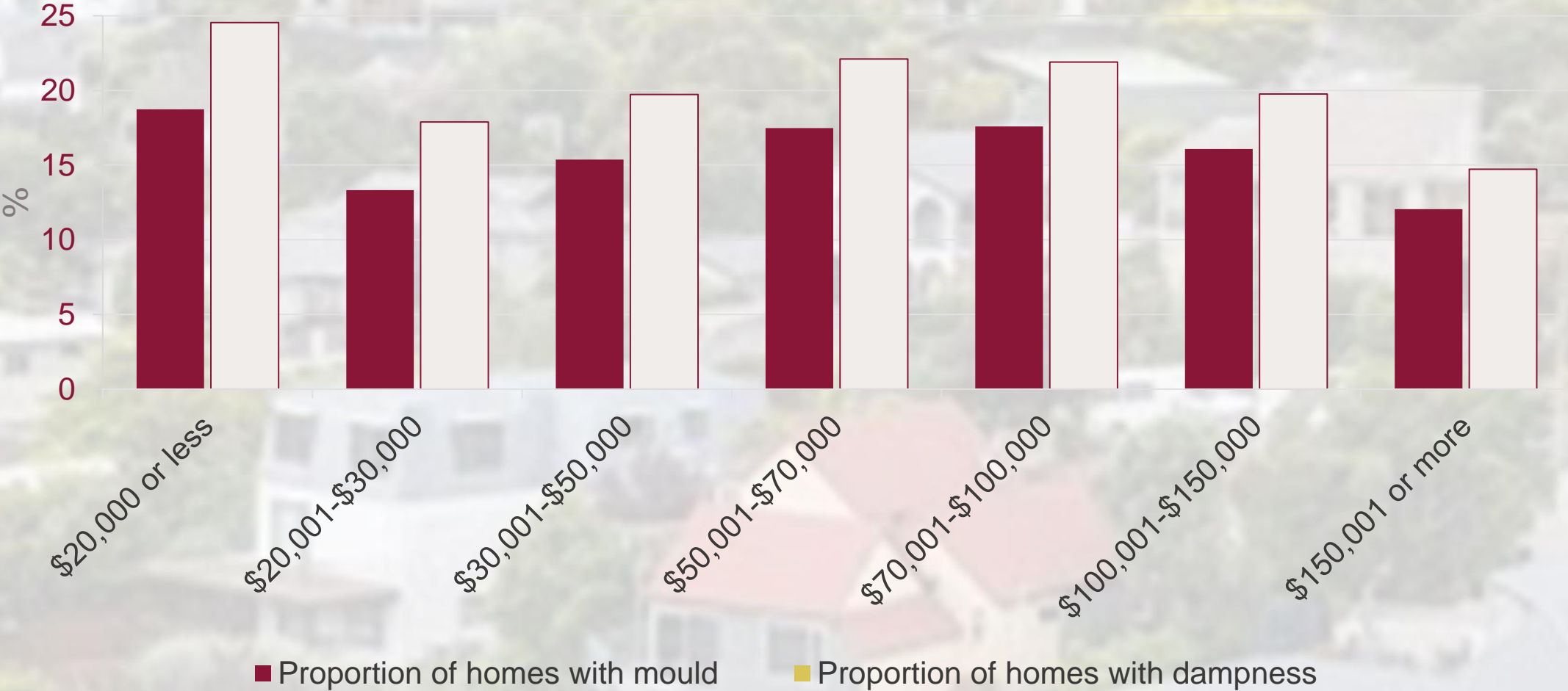
**76%**

**73%**

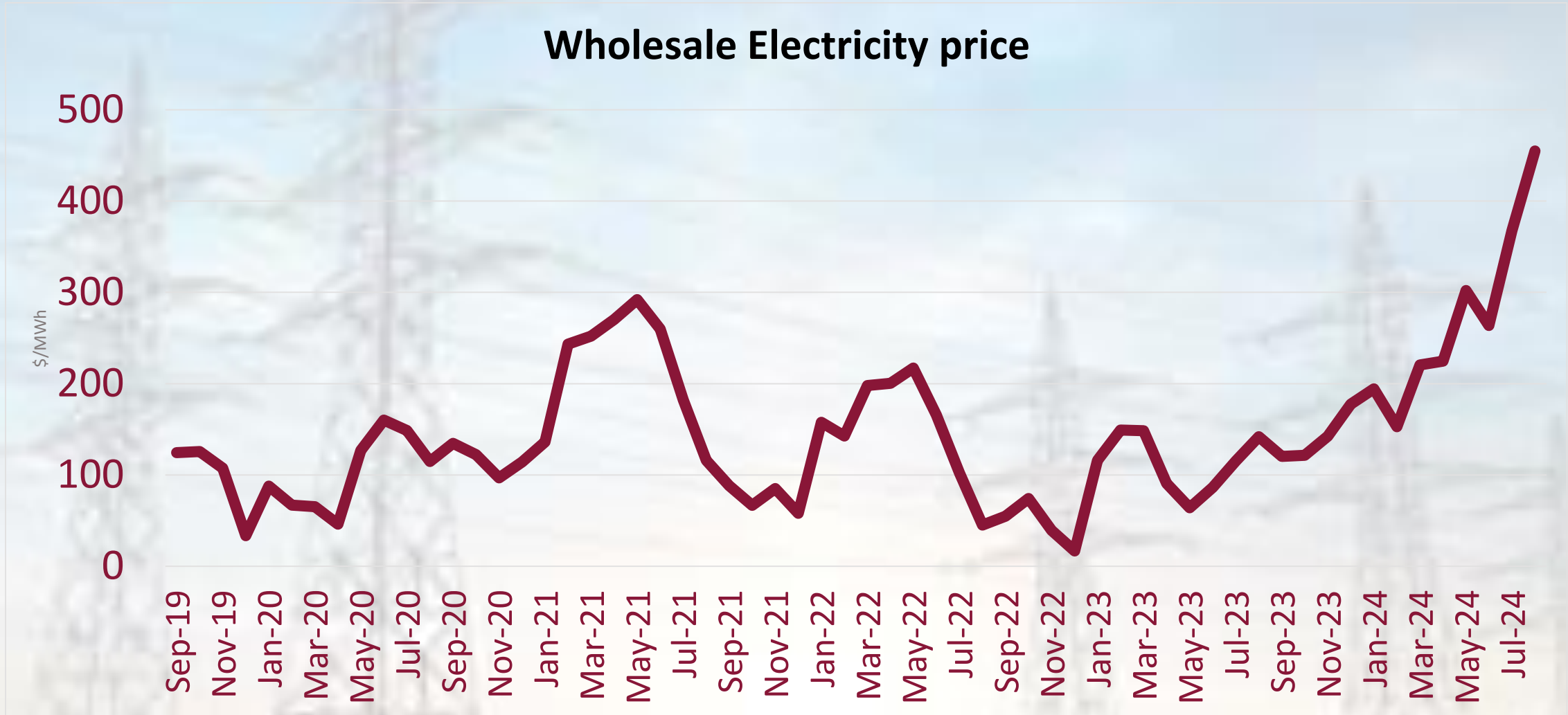
Lack ground  
moisture barrier

Rentals more likely  
to have no heating  
or basic electric  
heaters

# Too many live with mould and dampness



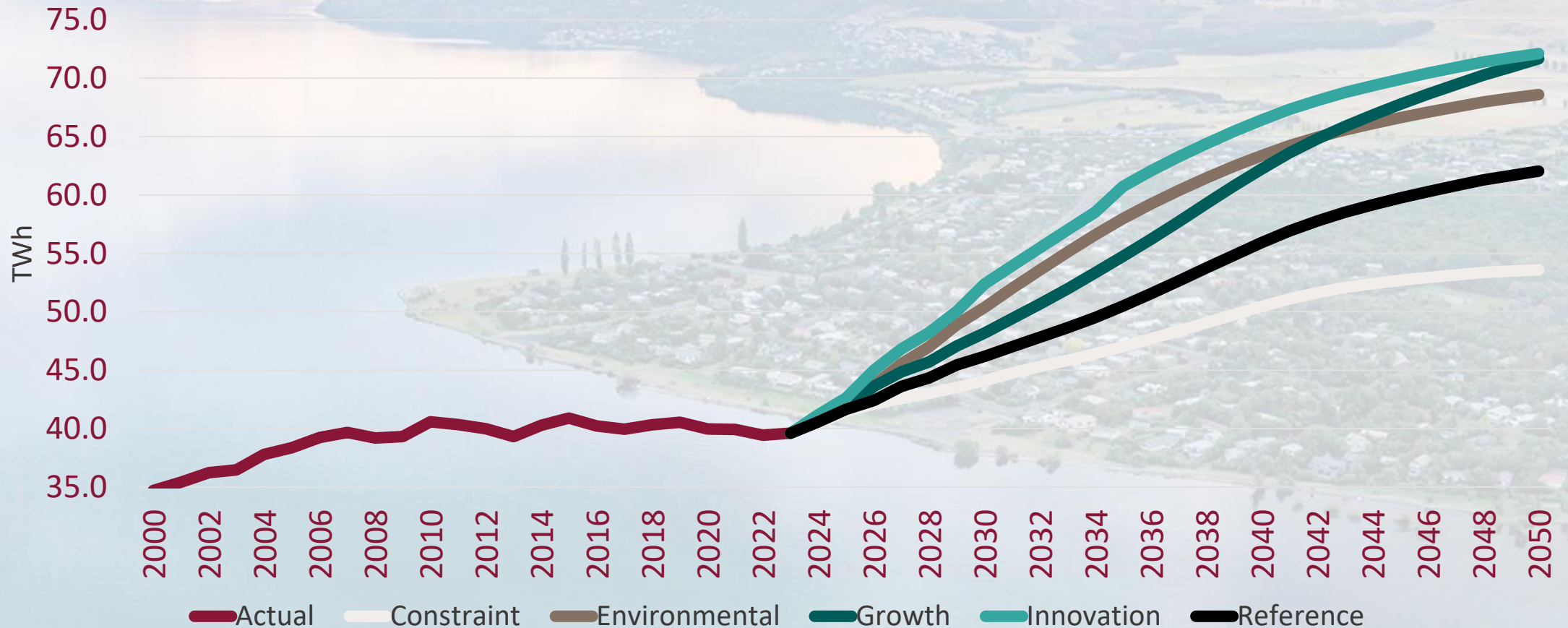
# Inadequate houses use more energy





# Electricity demand is only going to grow

## Total electricity demand



A modern, single-story house with white walls and a grey roof, set in a rural landscape. The house features a stone chimney and a stone-paved entrance. The background shows a green field and trees under a cloudy sky.

# We invest in housing, but in the wrong way

**What can we learn from overseas?**

# Europe

## **Ireland**

- Deep retrofit pilot programme (2017-2020)
- National retrofit programme (2020- present)

## **United Kingdom**

- Kirklees Warm Zone (2007-2010)
- RE:NEW (2009-2017)
- Carbon Emissions Reduction Target (CERT) (2008-2012) and Community Energy Saving Programme (CESP) (2009-2012)
- Green Deal and Energy Company Obligation (ECO) (2013-2015)

## **France**

- I Renovate Low Consumption Buildings (2010)
- Low-energy renovation (2011)

## **Netherlands**

- Energiesprong (2010-present)



# North America

## Canada

- Property assessed clean energy (PACE) Atlantic (2010-present)
- Greener homes initiative (2021-present)

## United States of America

- Weatherisation assistance programme (1976-present)
- Whole house rebate programme (2021-present)

# The models



Atomised market



Market intermediation model



One-stop shop



Energy services agreement



Managed energy services agreement

# Ireland National Retrofit Programme

Three grant packages

Upgrade the BER to Advisory Report

Requirements for rentals

Expand Local Authority Retrofit Programme

Expand Energy Company Obligation  
Low-cost loan guarantee

Focused training

# Kirklees Warm Zone

Place-oriented  
retrofit  
programme

Targeted at wards  
in energy poverty

Classified by  
deprivation level,  
and/or already  
insulated

Neighbourhoods  
were saturated

Ward completed  
before moving on

Three waves of  
adoption



# Lessons for New Zealand - Part 1



**RETROFITS  
MUST BE  
AFFORDABLE  
AND LOW RISK**



**A SIMPLE  
PROCESS FOR  
PARTICIPANTS**



**A NEW HEATER  
IS NOT ENOUGH**



**HOMEOWNERS  
HAVE DIFFERENT  
FINANCING  
NEEDS**



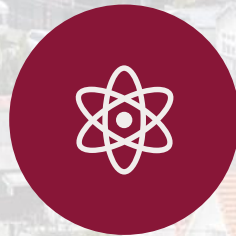
**A PILOT DEEP  
RETROFIT  
PROGRAMME  
WILL ADD VALUE**



# Lessons for New Zealand - Part 2



**PROJECT  
MANAGEMENT  
INFLUENCES  
COST AND  
UPTAKE**



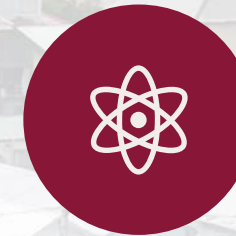
**BEHAVIOURAL  
MECHANISMS,  
SUCH AS  
ENERGY  
PERFORMANCE  
CERTIFICATES,  
COULD BE  
EXPLORED**



**TRUST IS KEY**



**ROBUST TO  
CHANGES IN  
GOVERNMENT  
AND  
GOVERNMENT  
POLICY**



**ENERGY  
SAVINGS ARE  
ONLY A  
FRACTION OF  
THE TOTAL  
BENEFIT**



# The economic impacts of retrofits



# Population is growing

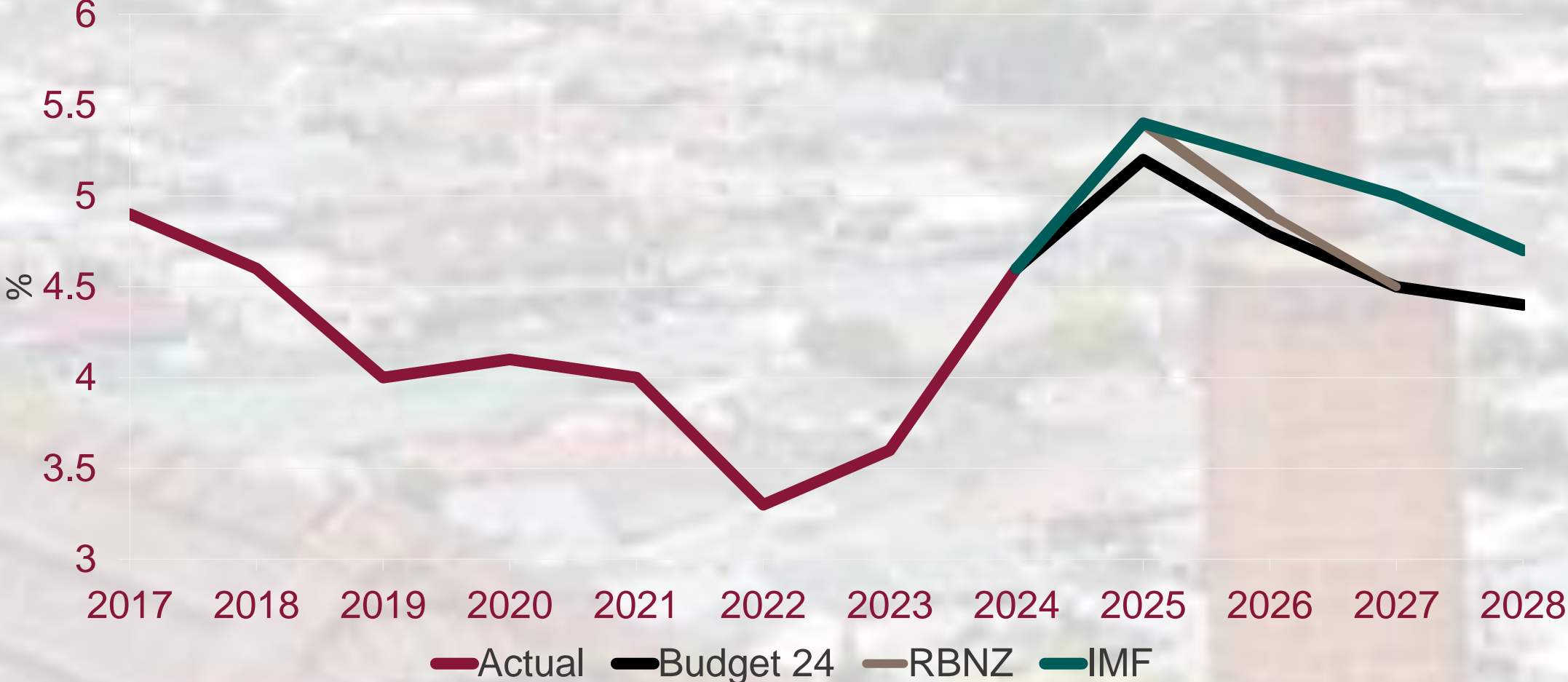


# Building consents have fallen



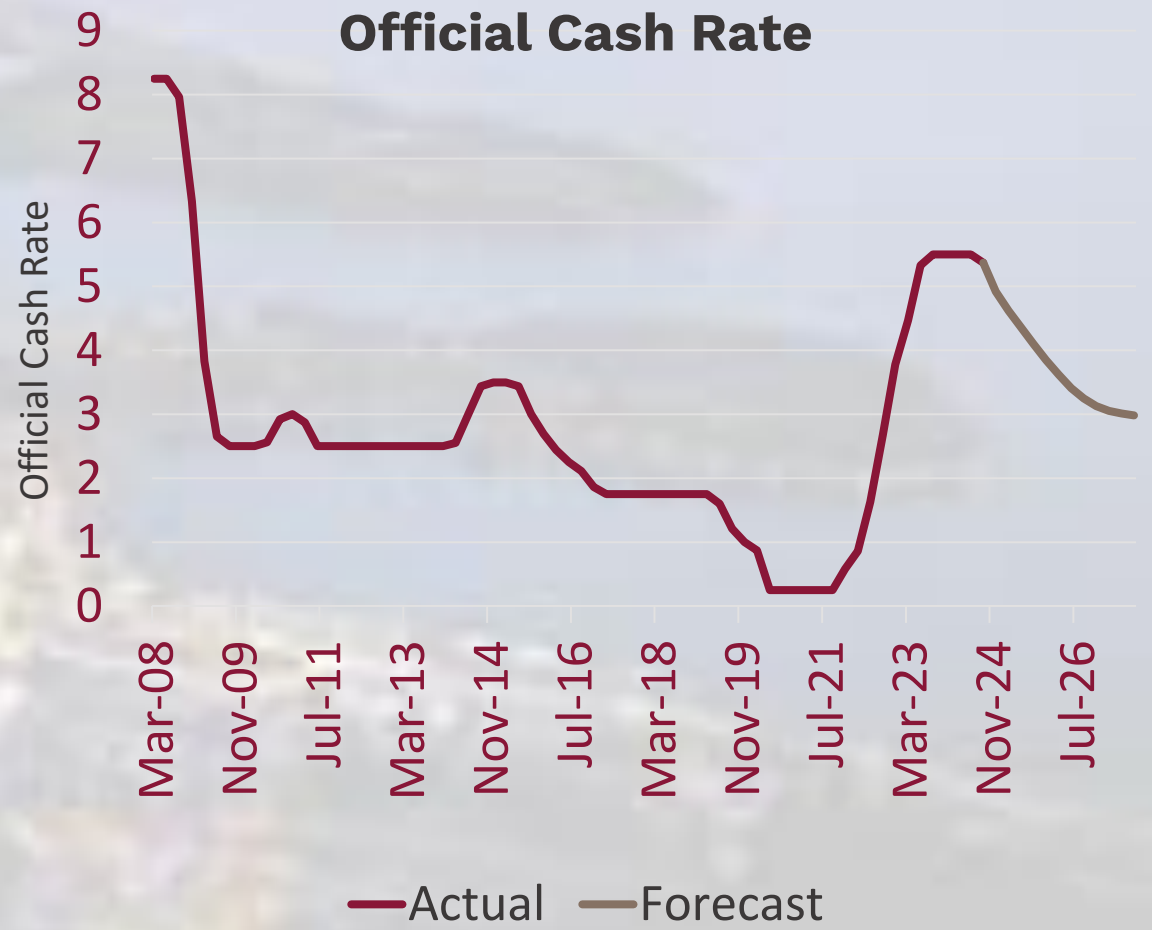
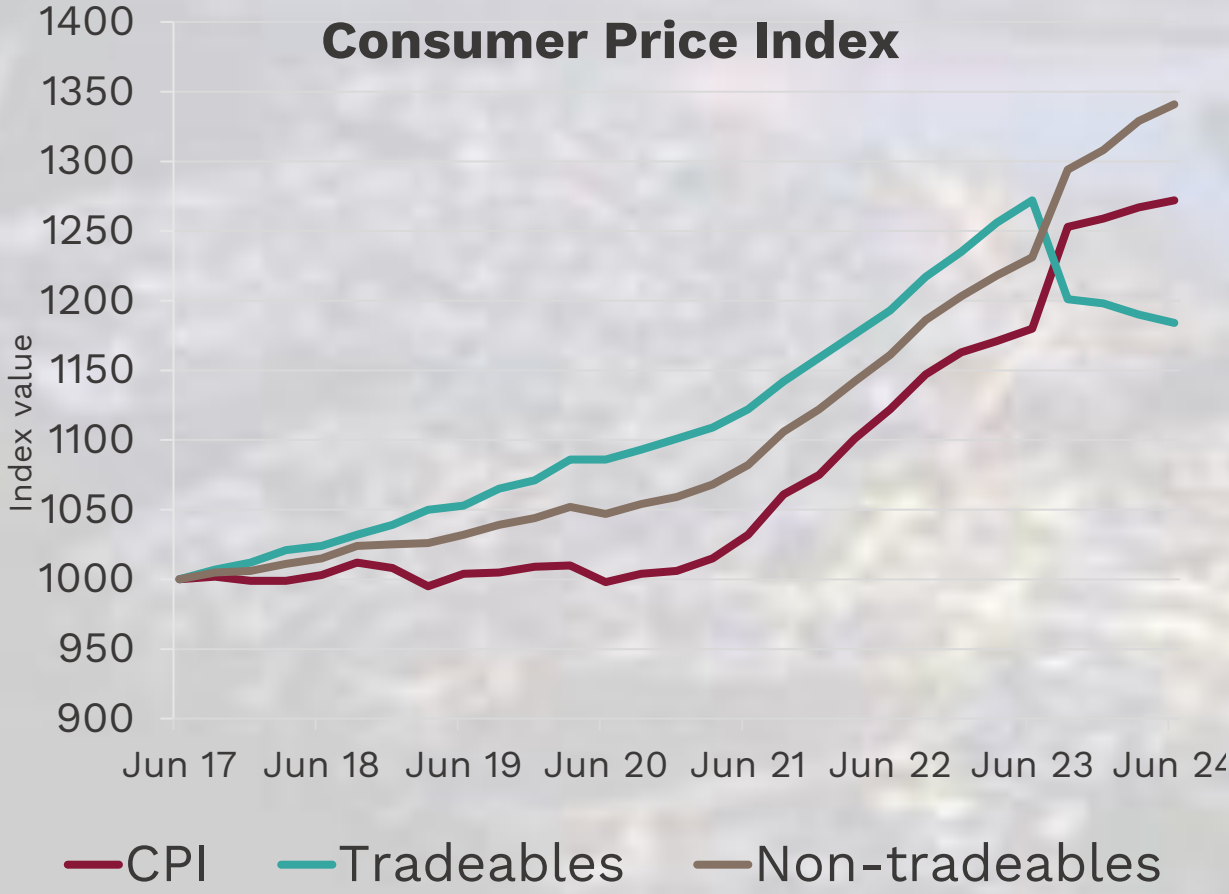


# Unemployment is increasing





# The economy is turning around



# Retrofits can play a role

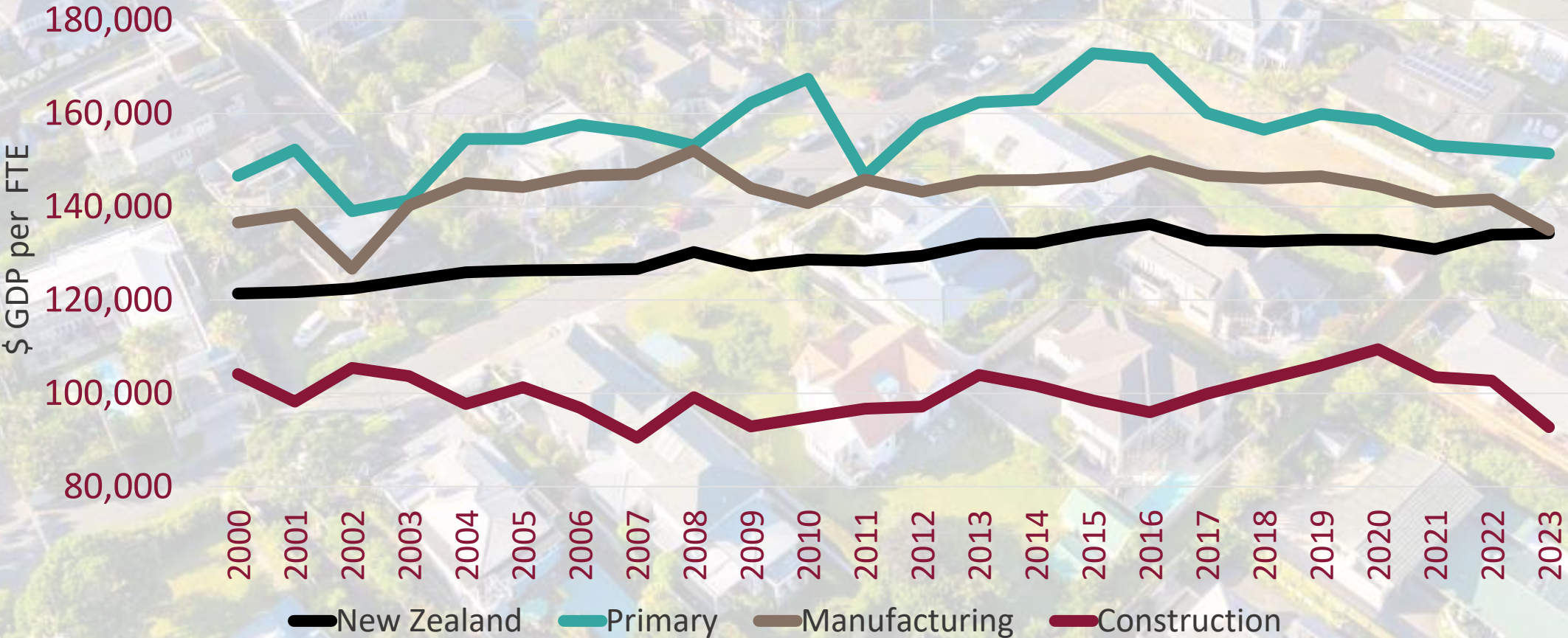
Scenario 1 - All houses with Mould/Damp

Scenario 3 - Deep retrofit Deprivation 7-10 and medium retrofit remaining mould/damp

% difference from business as usual		Scenario 1	Scenario 3
<b>GDP</b>		-3.1	-2.2
<b>Exports</b>		-2.7	-1.9
<b>CPI</b>		4.4	3.0
<b>House prices</b>		-0.5	-0.2
<b>Government income</b>		1.5	1.0
<b>Household income</b>	Bottom quintile	3.1	2.1
	Low quintile	2.5	1.7
	Middle quintile	3.6	2.5
<b>Labour demand</b>	Semi-skilled	-1.3	-0.9
	Skilled	0.2	0.1
	High Skilled	0.3	0.2



# Productivity needs to improve





*Making sense of the numbers*