



# Waharoa Business Hub

# Single Stage Business Case

Photo is provided with the courtesy of Stuff & Waikato Times

Prepared by:	Martin Butler, RCP Ltd
Prepared for:	Waikato Provincial Development Unit
Date:	25 <sup>th</sup> February 2020
Version:	1.5
Status:	Final Draft

### **Document Control**

### **Document Information**

	Position
Document ID	Waharoa Business Hub Business Case
Document Owner	RCP Ltd
Issue Date	25/02/20
Last Saved Date	
File Name	WBH Bus Case v1.5

### **Document History**

Version	Issue Date	Changes
1.4	19/12/19	Advanced draft for general review and consideration.
1.5	25/02/20	Final draft.

### **Document Review**

Role	Name	Review Status
Advisory Group Manager	Cristean Monreal – Director RCP	

### **Document Sign-off**

Role	Name	Sign-off Date
MPDC Project Sponsor   Promoter	Don Mcleod – CEO, MPDC	
Project Chair	Rukumoana Shaafhausen	

### **Project Sponsors**

The project wishes to acknowledge the co-funding support of:

- Open Country Dairy Limited
- Ingham Enterprises Pty Limited
- Waharoa Industrial Park/Clothier Family
- Balle Bros Limited

## Contents

Document Control	3
Contents	4
Executive Summary	6
Purpose Introduction Strategic Case Economic Case Commercial Case – Proposed Gas PPP Financial Case Management Case Next Steps	6 7 9 12 14 16 17
Introduction	18
The WBH Strategic Case	20
Strategic Context Investment Objectives, Existing Arrangements and Business Needs Potential Business Scope and Key Service Requirements Main Benefits Main Risks Key Constraints and Dependencies	20 24 25 27 28 29
The WBH Economic Case	30
Critical Success Factors The Short-listed Options Economic Assessment of the Preferred Options Non-monetary Benefits and Costs Risk and Uncertainty Testing the Preferred Option and Sensitivity Analysis	30 32 32 35 36 36
Commercial Case – Proposed Gas PPP	39
The NewCo PPP Proposal Risk Allocation	39 40
Financial Case - Affordability and Funding Req's	41
The Financial Costing Model	41
Mgm't Case: Planning for Successful Delivery	42
Project Management Planning Risk Management Planning	42 43
Next Steps	45
Annex One: Gas Situational Considerations	46
Process heat uses, sources and considerations Role of gas in switching from high to lower carbon fuels Gas Pricing Gas infrastructure Regulation and investment impacts	46 46 47 48
Annex Two: Employment & Training Hub Outline	49

Overview	49
Governance and Management	49
Fit with existing lwi employment and training – Peria Hub	49
Training Provision and throughput	50
Facilities and Operating costs	50

# **Executive Summary**

### Purpose

The purpose of the Waharoa Business Hub ("**WBH**") Project is to lift over the long term and in a sustainable way, the economic, social and cultural wellbeing of Waharoa, a small community six kilometres north of Matamata in the Waikato. To achieve a step-change, aggregate investments of between \$60-80m are planned in infrastructure, industry and employment connection. Ngāti Hauā are the life force of Waharoa and make up the majority of the township's estimated population of 480. Waharoa is a significantly deprived community and sits at 10 (worst level) on the New Zealand Index of Deprivation<sup>1</sup>.

Figure 1 below provides an aerial view of Waharoa. Existing industrial and residential areas, along with potential new industrial and residential areas are illustrated, noting that consultation on the new areas has not been undertaken as yet.

#### Figure 1: Waharoa Arial View



<sup>1</sup> Initially developed by the Ministry of Health following the 2013 census

### Introduction

The WBH Project has identified and progressed a set of interlocking masterplan projects that together, are necessary and therefore essential to lift economic, social and cultural wellbeing. This Business Case directly seeks funding for:

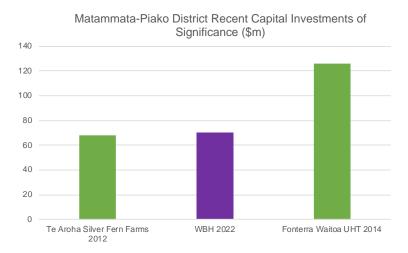
- A Crown/MPDC/Firstgas owned public private partnership ("PPP") that will fund a gas pipeline extension to Waharoa. Gas availability is a condition precedent for the Agri-Food Hub anchor project (outlined below). Annex 1 provides a detailed analysis of gas situational considerations.
- 2. An Employment and Training Hub, to be situated in Waharoa. The Employment and Training Hub will address the poor connection of locals to access local employment opportunities, particularly for those young people who are not in education, employment or training ("**NEET**").

In addition to these projects, the other linked critical projects are set out and comprise:

- 3. Agri-Food Hub post-harvest facility that will create ~50 roles and once fully commissioned generate greater than annually in outputs. This is the subject of its own PGF application.
- 4. A Rail Siding, adjacent to Factory Road, that if proven, will provide direct rail connectivity from Waharoa to Port of Tauranga enabling significant Heavy Vehicle movement reductions off the State highway and local road network. This project will be developed and self-funded by the landowners.
- 5. Matamata-Piako District Council ("**MPDC**") investment in potable water and wastewater capacity. Meaning?
- 6. A separate PPP funded residential housing initiative to lift the quality and availability of housing stock in Waharoa. Meaning?

The Matamata-Piako District Council ("**MPDC**") incepted the WBH, via a PGF application, and are the promoters of the endeavour. Beyond the life of the Project, the MPDC will continue to programme manage the initiative across all arms of the Council.

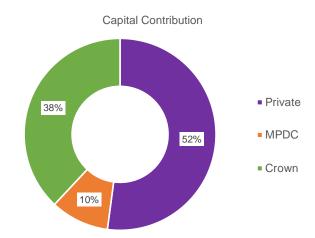
Together, these projects will represent a \$60-80m capital investment in Waharoa, which is of major significance for the district. The WBH will be the largest investment in the district since commissioning of Fonterra's \$126m UHT plant at Waitoa in 2014 and the \$68m Silver Fern Farms Te Aroha Plant in late 2012, as illustrated in Figure 2



#### Figure 2: Recent Major District Capital Investment Projects

The depth of commitment within the Matamata-Piako District to achieve this outcome is illustrated by the expected split of capital funding, as illustrated in Figure 3, with private contributions comprising over half the total.

Figure 3: Expected WBH Capital Contribution Split



### Strategic Case

### The strategic context

What would need to be true for Waharoa's location at the centre of one of New Zealand's food bowls and inside the Auckland | Hamilton | Tauranga 'Golden Triangle' to yield commensurate economic and social outcomes? The current reality is a community suffering some of the most extreme levels of deprivation in New Zealand with poor connection to these sources of wealth creation.

The strategic context for this series of linked investment, centres on harnessing this economic potential to deliver a step change in the current reality. This juxtaposition of clear potential and current situation was identified by the MPDC and formed the basis for their initial promotion of the Business Hub concept and PGF application for investigative funding.

### The case for change

The primary investment objectives of the WBH are to by June 2025 have:

- Established a cluster of at least five high capital intensity industrial processing businesses that can build on the strength of the primary sector comparative advantages of the region. Open Country Dairy ("OCD") and the planned Agri-Food Hub being two of these five. These businesses will in turn drive growth in supporting activity – transport, cool stores, maintenance etc.
- Created at least 200 permanent roles with a median salary of \$50k pa (noting the current median for process workers is \$45 - \$55k pa). Increase the GDP contribution of the district by between \$35 – \$40m predicated on a per capita GDP to \$38k, from \$25k currently and population increasing to 725 from 480 currently.
- 3. Reduce Waharoa **unemployment to 5% from >24%,** closer to prevailing average Waikato Region levels.
- 4. Improve the **Deprivation index to 6-7**, which would be more in line with neighbouring Matamata and the broader district.

Investment Objective One	Grow Waharoa's base of industrial processing businesses (in particular)
Existing Arrangements	Open Country Dairy's plant in Waharoa is the only business falling into this category.
Business Needs	From an infrastructure perspective, industrial processing businesses typically require: Gas (if they need a source of high heat energy for food processing, pasteurisation), potable water and wastewater and good transport options/connections. This is in addition to adequate power and broadband connectivity. Gas is judged to be the key 'lynch pin' infrastructure deficit.
Potential Scope	Reticulation of gas from Okoroire, through Matamata and on to Waharoa.

Table 4: The case for change is summarised for each investment objective below.

Potential Benefits	The reticulation of gas to Waharoa will enable the commissioning of the Agri- Food Hub which will create 50 roles, primarily process workers with a median salary of \$50k. The Project has an expectation that the Agri-Food Hub will encourage other industrial processing businesses to consider and co-locate to Waharoa.
Potential Risks	Failure to attract additional industrial processing businesses is the primary risk. Suitable alternate industrial land release within the Golden Triangle that offers comparable infrastructure and pricing could precipitate this risk.
Constraints and Dependencies	Wastewater and potable water present a constraint that is well understood by the MPDC with a careful mix of private interim arrangements planned. MPDC plan infrastructure development in the medium term. Adequate affordable and quality housing supply is a dependency. A plan to encourage market centric housing supply is under development.

Investment Objective Two	Drive quality employment growth
Existing Arrangements	Currently defined by the growth of Open Country Dairy Ltd (" <b>OCD</b> ") Waharoa.
Business Needs	Growth in the community base of higher capital intensity industrial businesses
Potential Scope	Grow the base from OCD and the intended Agri Food Hub to include at least three other industrial processing businesses by 2025. This base will foster the growth of support businesses.
Potential Benefits	The creation of ~200 new industrial processing roles in Waharoa.
Potential Risks	As per Objective One
Constraints and Dependencies	As per Objective One

Investment Obj. Three	Achieve a step-change in employment connection for local people and Ngati Haua
Existing Arrangements	MSD provide service from Matamata.
Business Needs	A Ngāti Hauā led and community centred approach is necessary to address the deep-seated work readiness/employment connection issues.
Potential Scope	Over a five-and-a-half-year period, in a relatively small community, return unemployment to levels that prevail for the region as a whole.

Potential Benefits	Significant improvement in community wellbeing across the spectrum of economic, social and cultural wellbeing.
Potential Risks	Ill-considered or unsuccessful efforts to improve employment connection will present a major set-back for a fragile community.
Constraints and Dependencies	Support from the wider district community, particularly business, to help Waharoa youth in particular build confidence and employment connection. A successful approach is dependent on its leadership by Ngati Haua and collaboration with the wider community.

Investment Objective Four	Improve GDP contribution
Existing Arrangements	Economic contribution (GDP per capita) is low in an absolute sense. Contribution is also low in the context of the 'opportunity that should be', given Waharoa's strategic golden triangle location and surrounding district. Real contribution is made lower by the poor employment connection of locals to local Waharoa roles.
Business Needs	A per capita GDP contribution that is in line with other NZ primary processing output focussed communities.
Potential Scope	Taking a 5-10-year view and reflective of natural advantages of Waharoa to be a hub for the high capital intensity value added processing of surrounding primary produce, per capita GDP should meet or exceed the national average of \$61k.
Potential Benefits	Restoration of economic, social and cultural wellbeing, subject to an employment connection step-change.
Potential Risks	Industry in Waharoa grows but employment connection does not. Stark contrasts that already exist are reinforced.
Constraints and Dependencies	Enduring wealth creation is founded in addressing critical infrastructure deficits – particularly gas and wastewater. These require the determination, committed intent and collaboration between Firstgas, the MPDC and the Crown.

Investment Objective Five	Economic Deprivation
Existing Arrangements	Waharoa sits at 10 (worst) on the NZ Index of Deprivation.
Business Goal	A score of 6-7, in line with the nearby Matamata community.
Potential Scope	Major progress toward the restoration of economic and social and cultural wellbeing, over the period to June 2025, is judged to be a realistic prospect.
Potential Benefits	The economic, social and cultural rejuvenation Waharoa, returning to the vibrancy that has characterised the community historically.

Potential Risks	Similar to employment connection – an unsuccessful effort will be a major setback.
Constraints and Dependencies	Similar to employment connection and GDP contribution. Central/local government and private sector and Iwi committed intent is required.

### **Economic Case**

The following short-listed options were selected for more detailed economic analysis in this business case:

- Option 1: Waharoa status quo option (retained as a baseline comparator)
- Option 2: Reticulate gas (to Waharoa) and establish and Employment and Training Hub programme.
- Option 3: Option (2) above + Agri-Food Hub and Rail Siding if proven (the preferred way forward). Please note that the Agri-Food Hub is the subject of a PDF application and the Rail Siding is expected to be privately funded if proven as economic.
- Option 4: Option (3) with gas further reticulated to Waitoa at an additional cost of ~\$10m.

#### Table 5: Options analysis results

NZD \$ (000)	Option 1: Do Nothing	Option 2: Gas + Emp   Training Hub only	Option 3: Gas + Emp   Training + Agri Food Hub + Rail	Option 4: = Opt. 3 but with gas extended to Waitoa	
Appraisal Period (years)	5.5 years to Jun 2025	5.5 years to Jun 2025	5.5 years to Jun 2025	5.5 years to Jun 2025	
Whole of life cash costs (undiscounted)	13,522	18,509	16,227	26,227	
Cost-benefit analysis	of monetary costs	s and benefits:			
Present Value of monetary benefits and costs	48,765	62,768	83,432	73,432	
Net Present Value <sup>2</sup>	0	14,003	34,667	24,667	
Multi-criteria analysis of non-monetary benefits:					
Community Spirit, 1=poor 10 = strong	1	5	10	10	
District Spirit, 1 = poor, 10 = strong	1	5	10	10	

<sup>&</sup>lt;sup>2</sup> A detailed outline of the NPV calculation is set out on page 31.

The options analysis is sensitive to changes in the:

- per capita GDP uplift, which is assumed to lift progressively to an increase of \$13k per capita by June 2025 under option three.
- changes to population, which grows from 480 to 725 under this option.

Of note, option three remains Net Present Value ("**NPV**") positive as long as some GDP improvement occurs. This is because the Present Value ("**PV**") costs and benefits of reduced Social Service provision and the Employment and Training Hub approximately net out. In addition, the gas infrastructure returns a small financing profit. In practice, it is most likely the NPV is understated.

Option three is the preferred option. Option three comprehensively addresses the lifting of Waharoa's economic and social wellbeing, which is reflected in its NPV and non-financial scores and does so in an affordable manner for all stakeholders.

### **Commercial Case – Proposed Gas PPP**

Gas infrastructure that delivers more than 75,000 GJ of gas annually is regulated, as a monopoly asset, under the Commerce Act. Regulation allows infrastructure providers a maximum allowable rate of return – currently 6.41% - in addition to a return of capital through depreciation charges, which is charged in proportion to gas usage across existing users. The Commerce Commission monitor the conduct of infrastructure providers. When new gas infrastructure is constructed, there is a natural issue of fairness between existing users and new users. Existing users do not wish to receive additional charges that amount to a subsidy on new users. Consequently, new infrastructure is generally committed to when new demand can justify the cost or existing users agree its necessity. Equally if gas pipeline service providers reduce or defer their charges, price caps prevent recovery/return to 'normal' pricing subsequently, which is commercially untenable.

For these reasons an interim commercial model, during the demand development period is necessary to bridge the gap between Agri-Food Hub initial demand and the gas demand level necessary to meet all costs.

A public private equity partnership approach is proposed to finance the development of a gas pipeline extension from Okoroire to Waharoa ("**NewCo**"). NewCo would be established for the purposes of financing and holding the asset through the demand development period, estimated to be no longer than five and a half years. On or before June 2025, Firstgas are expected to buy out the MPDC and the Crown.

All shareholders are expected to achieve the regulated rate of return of 6.41% on their investment, achieving a return that exceeds their respective costs of capital. This business case makes suggestions in relation to structure, recognising that shareholders will ultimately determine the terms.

The Agri-Food Hub gas demand is assessed by Firstgas to amortise one third of the capital cost of the pipeline. OCD are known to operate two coal boilers that are toward the end of their operating life. They have also confirmed they will convert to gas boilers, at the end of their operating life, if gas is available. Without any additional gas demand (which is fully expected), the conversion of these boilers will trigger sufficient demand to justify Firstgas buying out the other two shareholders.

Firstgas note that the NewCo PPP model is not the only option. The key for Firstgas is to ensure:

- 1. Capital investment in any new pipeline infrastructure earns the regulated rate of return
- 2. Existing users of the Firstgas network are not required to fund the incremental costs of the development.

Annex 1 provides a detailed analysis of gas situational and commercial considerations.

#### **Commercial and Business Risks**

However, while coal boiler conversion is expected and can be reasonably anticipated, along with additional new entrant demand prior to June 2025, there is no ironclad guarantee of either and this risk must be acknowledged. In this scenario, shareholders retain ownership of a long-life asset. Unless there was some material factor that impacted the suitability of Waharoa as a good industrial processing location, there is no reason to consider the asset to be impaired.

In addition to normal financial reporting requirements, as gas delivery in the volumes anticipated is the subject of regulated infrastructure provisions under the Commerce Act, NewCo will carry reporting requirements over its life. While the Board can contract Firstgas to undertake these obligations on its behalf, the responsibility remains with directors and cannot be delegated.

The sharing of these risks between the Crown, MPDC and Firstgas (in some agreed form) is the central commercial tenant of the business case. Without this core enabling infrastructure partnership, the WBH will not proceed.

### **Financial Case**

The financial analysis model for the preferred option (three) has been used to calculate the financial case for the Crown.

The proposed funding arrangements for NewCo are noted above, with MBIE Officials to identify the Crown funding source. Funding for the Waharoa Employment and Training Hub will be determined by the Waikato Provincial Development Unit. Ministry of Social Development are expected to fund a significant proportion.

The financial analysis of the preferred option demonstrates that it is affordable with operating costs being roughly offset by operating benefits through to June 2025. This leaves the capital cost of investment in NewCo, which is expected to generate a return well in excess of the cost of capital.

Table 6 below summarises the capital and operating expenditure commitments sought from the Crown.

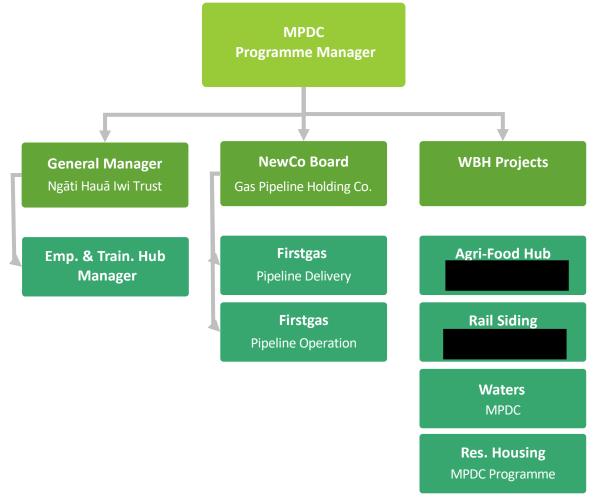
Crown Entities: \$ (000)	Jun 20 (six months)	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Total
Capital expenditure: <i>NewCo equity</i>	1,000	5,000	1,000			(9,601)	(2,601)
Operating expenditure: <i>Emp</i> & <i>Training Hub</i>	470	740	765	740	765	755	4,235
Total expenditure	1,470	5,740	1,765	740	765	(8,846)	1,634
GDP increment	0	1,456	4,684	5,639	9,122	12,791	34,667
Total CAPEX req'd	1,000	5,000	1,000			(9,601)	(2,601)
Total OPEX req'd	470	740	765	740	765	755	4,235

Table 6: Crown financial cost model for the preferred option

### **Management Case**

Beyond the life of the Waharoa Business Hub (feasibility and establishment) Project, the MPDC will appoint a Programme Manager to co-ordinate across the component projects. Each project will be accountable for its own governance and structure. This is illustrated in Figure 7 below:





### **Next Steps**

This Single Stage business case seeks the formal approval from the Waikato Provincial Development Unit to proceed to secure funding arrangements. Subsequently, the Project has been requested to:

- 1. Ensure submission of the Agri Food Hub PGF application for consideration in March.
- 2. Assist submission of a PGF application for Gas Infrastructure, expected to be in the name of Firstgas, also for consideration in March.
- 3. Assist with the submission of a PGF application for Employment and Training hub, expected to be in the name of the Ngati Haua Iwi Trust, also for consideration in March.

## Introduction

Waharoa is a tight knit community with an estimated population 480, primarily of Māori ethnicity. Local iwi, Ngāti Hauā are the life force and have a youthful population, with a median age of 28.5 years. However, Waharoa is impoverished. It sits at 10 on the New Zealand Index of Deprivation. Unemployment is high and estimated to exceed 30% of those that are of working age, in the workforce and living in Waharoa.

The interlocking masterplan projects, that together, comprise the WBH are set out in the following two tables. Table 8 sets out the projects that are directly the subject of this business case. Table 9 sets out the projects that are supported by direct projects and interlocked to lifting the economic and social wellbeing. This Single Stage Business Case seeks formal approval for an estimated **\$7m in CAPEX** through to June 2022 and an estimated **\$4.2m in OPEX** to June 2025 across the two projects set out in Table 8.

Direct Projects	Est. Capital Cost \$m	Est. Perm. Full-Time Roles Created	Crown support sought?	Notes
<ul> <li>(1) Gas pipeline</li> <li>infrastructure.</li> <li>Reticulation of an</li> <li>extension to the</li> <li>Firstgas network from</li> <li>Okoroire, through</li> <li>Matamata, to</li> <li>Waharoa.</li> </ul>	\$21m	Construction only	\$7m in PPP Holding Company equity participation to co-fund one third of the cost.	MBIE to approve/disprove and identify appropriate Crown source of funds.
(2) Waharoa Employment and Training Hub		2	\$4.2m in OPEX through to June 2025	Led by Ngāti Hauā, the creation of an employability, skill development and driver licencing and job opportunity hub within the Waharoa community that can meet the needs of NEET candidates in particular, targeting 30-50 trainees in year one. MBIE to approve/disprove and identify appropriate Crown source of funds.

Table 8: Direct Projects - the subject of this business case

 Table 9:
 Indirect Projects – central to purpose

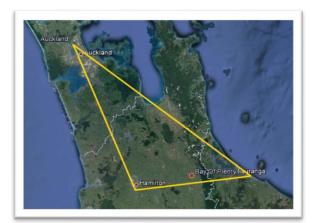
Indirect Projects	Est. Capital Cost \$m	Est. Perm. Full-Time Roles Created	Crown support sought?	Notes
(3) Agri-Food Hub post-harvest vegetable processing plant.		50	Yes. Separate PGF Application submitted.	Gas availability is a condition precedent for the project.
(4) Waharoa Rail Siding and Stevedoring Business		4-7	No - Private	If proven, will be privately funded by the landowner and represents a key partnership with KiwiRail and district businesses supporting with freight volumes.
(5) Potable Water and Wastewater	\$	Not known	No - MPDC	Medium term, WBH demand ramp will drive significant investment. Provision will be included in the MPDC long term plan
(6) Quality and affordable residential housing stimulation PPP.	\$2-3m seed equity is anticipat ed	Construction Only	Yes – pending confirmation.	Trust representing district business and possibly Iwi interests provides equity and purchases development land. Crown entity takes title over sub-divided development land and provides development finance.

# The WBH Strategic Case

### Strategic Context

Despite Waharoa's location within the Matamata-Piako District – one of New Zealand's food bowl's, rich in agriculture and horticulture and more broadly the Auckland-Hamilton-Tauranga Golden Triangle, this community sits at number ten on the New Zealand index of economic deprivation. The question is why?

In 2004, Open Country Dairy ("**OCD**") opened its Waharoa Plant which produces cheese, whey, anhydrous milk fat and whole milk powder. OCD Waharoa now employs over 120 staff and has been proceeded by cool store and transport businesses. However, beyond this cluster, business growth has been limited despite bare industrial land being available for sale or lease.



Coupled with this, employment connection of locals to the opportunities that do exist has been limited. Recent survey results indicate that in excess of 90% of Waharoa employees reside in the district or Bay of Plenty, commuting to work each day.





Two central challenges are perceived to contribute to the current state, as follows:

- Waharoa has infrastructure deficits in: gas availability (cost effective source of high heat/steam necessary in many industrial processes, particularly food processing); wastewater; potable water, affordable/quality residential accommodation and the active use of rail assets. These deficits have led to an isolation from the logical downstream processing activities that closely link to the primary sector resource outputs of the region.
- 2. Intergenerational unemployment and disenfranchisement, subsequent to retrenchment of the former NZ Dairy Co-op factory has left many predominantly Ngāti Hauā Iwi with a lack of employment connection or ability to connect.

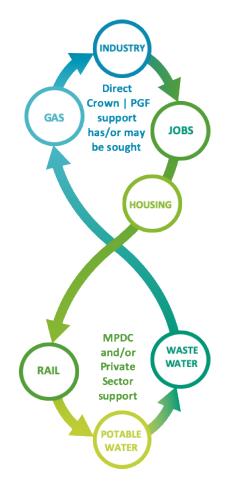
Pure market-based outcomes, combined with social services delivery, have unfortunately failed Waharoa. These challenges have proved too significant. The WBH Project aims to lift the economic and social wellbeing of Waharoa through:

- i. Engagement of Ngāti Hauā, as the township's life force, in permanent employment opportunities that link to the natural 'food bowl' advantages of the district.
- ii. Directly addressing infrastructure deficits gas in particular as the major 'domino' and rail as an under-utilised asset with the potential to enhance freight connectivity and resilience.
- iii. Indirectly addressing infrastructure deficits wastewater, water via the Matamata-Piako District Council ("**MPDC**").
- iv. Indirectly addressing the housing deficit via interested third parties (explained subsequent).
- v. Promoting the WBH with golden triangle industries and securing in principle commitment to the Agri-Food Hub facility, creating 50 permanent roles, as the anchor project.

#### Waharoa Business Hub ("WBH") Overview

Figure 10 illustrates the set of interlocking masterplan project components that comprise the WBH that support each other, and together, deliver the step-change in economic and social wellbeing. PGF/Crown support is sought to directly to support the following components, which are the basis of this business case:

- Gas reticulation. Gas is the key infrastructure 'domino' necessary to support primary sector industrial process businesses. Crown PPP equity partner participation is sought from this business case.
- The anchor **Industry** project is the establishment of an Agri-Food Hub post-harvest vegetable processing facility, that will create 50 permanent roles. Gas, as a source of high heat energy for steam, is a pre-requisite for environmentally friendly and economic operation. The Agri-Food Hub is the subject of a <u>separate PGF application</u> – not this business case.
- The Ngāti Hauā Iwi Trust will lead the establishment and operation of an employment and training hub that will have a strong initial focus on NEET youth. Local employers are keen to provide **Jobs** for locals who are work ready with a good attitude. A funding commitment for this is sought as part of this business case.



4. Increasing the stock of affordable quality **Housing** is essential for both Waharoa and the Matamata-Piako District. MPDC are leading an initiative, in concert with Iwi and local business, to achieve this. Crown financing support may be sought at a future date.

### Waharoa Business Hub: Single Stage Business Case | 21

Figure 10: WBH interlocking components

- 5. A Rail Siding at Waharoa is operationally feasible, however road transport competition to the Port of Tauranga is fierce, making the securement of minimum efficient scale ("MES") freight volumes essential. Notwithstanding MES requirements, rail will contribute significantly to the utility of the Business Hub. If proven, it is expected the rail siding will be funded privately.
- 6. **Wastewater** and **Potable Water** requirements are principally a MPDC responsibility, however may also be met by private arrangements. The MPDC are developing a Water Plan for Waharoa with provision for this made in the Long Term Plan. Private sector arrangements are being structured to provide a bridge between new demand and longer term infrastructure.

### Alignment to existing trends

There are a strong set of national macroeconomic trends that support the development of the WBH and suggest we are at a strategically beneficial tipping point.

**Industrial land**, suitable for processing activities is in short supply within the Golden Triangle, particularly Auckland. Industrial land value sales over the last three years in Mangere, East Tamaki/Highbrook and Wiri indicate a range of \$500 - \$650 per Sq. M<sup>3</sup>. Recent market reports by Bayley's Real estate indicate tenancy vacancy rates of 1.7%<sup>4</sup>. This compares with a price range of \$80 - \$120 per Sq. M in Waharoa.

Figure 11 illustrates national growth in the relevant primary sectors. The 20-year **compound annual growth rate** in relevant national primary sector outputs is estimated at 4.3%.

As the graph illustrates, this overall growth has been very consistent. Growth, that exceeds system growth, is expected to continue to attract investment. By inference, this is expected to hold true also for the Matamata-Piako District.





The demands of **Golden Triangle Urban expansion** are placing significant pressure on traditional horticulture growing districts e.g. Pukekohe, Kumeu and Tauranga surrounds. This, in turn, is resulting in a displacement of horticulture activity into the eastern Waikato and other suitable regions. This trend has driven the growth in horticulture around Waharoa and Matamata over the last three decades. Clearly, at a point where MES can be reached, upstream and down-stream activities in the value chain will adjust to optimise efficiency and effectiveness. Where should packing and sorting occur? Where should processing occur? How can transport costs be optimised? What is the most logical path to market?

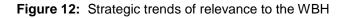
<sup>&</sup>lt;sup>3</sup> RCP and Bayleys research.

<sup>&</sup>lt;sup>4</sup> Auckland Industrial Market, Bayleys Research, Annual 2019 publication.

The **Zero Carbon Act**, which sets the goal of New Zealand achieving carbon neutrality by 2050 and national standards for **freshwater management** will have a profound impact on how primary sector value chains are reset. Specifically, for the Matamata-Piako District:

- 1. Gas boilers are expected to be the preferred source of process high heat, in preference to coal or diesel boilers. Annex 1 provides a detailed analysis of gas situational considerations.
- 2. Subject to the MES threshold, primary producers will look to reduce road transport costs by locating processing activity close to sources of supply.
- 3. Where gas infrastructure is reticulated, bio fermentation of waste biomatter is expected to become a preferred disposal method in the future. The fermentation process produces methane, which in turn is scrubbed to meet quality standards and sold into the gas reticulation system via an injection point.

Figure 12 below provides a simple summary of the key alignment to existing trends.





# Investment Objectives, Existing Arrangements and Business Needs

### **Investment Objectives**

The investment objectives of the WBH are to by June 2025 have:

- Established a cluster of at least five high capital intensity industrial processing businesses that link to the natural primary sector comparative advantages of the region. OCD and the planned Agri-Food Hub being two of these five. These businesses will in turn drive growth in supporting activity – transport, cool stores, maintenance etc.
- 2. Created at least **200 permanent roles** with a **median salary of \$50k pa** (noting the current median for process workers is \$45 \$55k pa).
- 3. Increased the **GDP contribution** of the district by between **\$35 \$40m** predicated on a per capita GDP to \$38k, from \$25k currently and population increasing to 725 from 480 currently.
- 4. Reduce Waharoa unemployment to 5%, closer to prevailing average Waikato Region levels.
- 5. Improve the **Index of Deprivation to 6-7**, which would be more in line with neighbouring Matamata and the broader district.

### **Existing Arrangements and Business Needs**

**Industrial Processing Businesses**: OCD is currently the only business falling into this category. Of note, OCD creates approximately 60 indirect roles via IcePak cool stores and Waharoa Transport. From an energy perspective, OCD currently utilises two coal boilers<sup>5</sup> as its source of high heat. By 2025, as its coal boilers are toward the end of their life, OCD has signalled its desire to convert to gas.

**Quality Role Growth**: OCD is the only Waharoa business of substance that is currently growing. In the last year OCD have increased permanent staff ~10 FTE. While this is significant, a broader employment base is required.

**Employment Connection**: As noted, this is unacceptably high - >30% - particularly with youth. Led by Ngāti Hauā, a concerted effort to intervene at a base level, help with life skills and getting drug free, specifically for the large cohort of 50-60 NEET youth in the community is critical.

**GDP Contribution**: By way of indication the median income is currently \$35k. Waharoa is blessed with the strategic advantage of location within a food bowl that's within the golden triangle and only 65Km from Port of Tauranga. Currently, this is an opportunity lost.

**Economic Deprivation:** Currently this sits at 10 with Waharoa being the second most deprived area in New Zealand for educational achievement.

<sup>&</sup>lt;sup>5</sup> Firstgas estimate their energy consumption to be 300,000 GJ. Conversion to gas will reduce CO2 emissions by 9,370 tonnes.

Table 13: Summary of the existing arrangements and business needs

Investment Objective One	Industrial Processing Businesses
Existing Arrangements	Only one in Waharoa – OCD.
Business Needs	Gas, wastewater and potable water.
Investment Objective Two	Quality Role Growth
Existing Arrangements	Currently driven by the growth of OCD.
Business Needs	Growth in the base of industrial processing businesses.
Investment Objective Three	Employment Connection
Existing Arrangements	MSD provide service from Matamata.
Business Needs	A Ngāti Hauā led and community centred approach.
Investment Objective Four	GDP Contribution
Existing Arrangements	Economic contribution is low in both absolute and opportunity lost terms.
Business Needs	Per capita GDP contribution in line with other primary processing output focussed communities.
Investment Objective Five	Economic Deprivation
Existing Arrangements	Waharoa sits at number 10 on the NZ Index of Deprivation.
Business Needs	A score of 6-7 in line with the nearby community of Matamata.

### **Potential Business Scope and Key Service Requirements**

The reticulation of gas to the Waharoa Industrial Zone is the critical enabler for this project. While there are other infrastructure requirements, gas is judged to be the critical 'domino' that will carry the other components. Two key options exist:

- Reticulation of gas from Okoroire, through Matamata and on to Waharoa provisional cost \$20m
- 2. Reticulation of gas per (1) but extending on to Waitoa, 20km north of Waharoa<sup>6</sup>.

The latter option would complete the reticulation of gas across the eastern Waikato plain. Fonterra Waitoa currently utilise coal boilers as their source of high heat and could convert to gas in the future. More generally, gas reticulation would enable a progressive intensification of Waitoa as well and provide more opportunities for biowaste fermentation and injection of resulting methane gas back into the pipeline.

However, Waitoa is outside of the project scope and establishing a co-investment model between: Firstgas, MPDC and the Crown to meet Waharoa's need is felt to be the primary focus.

<sup>&</sup>lt;sup>6</sup> Fonterra Waitoa meet their energy needs of an est. 1,500,000 GJ via coal boilers. Conversion to gas would reduce C02 emissions by 56,221 tonnes based on Firstgas estimates.

Table 14: Potential business scope and key service requirements

Service Requirements	Scope Assessment				
(in decreasing order of relevance compared to the investment objectives)	Minimum Scope	Intermediate Scope	Maximum Scope	Out of Scope	
Gas Reticulation	Waharoa		Waitoa (~\$60m capital cost)	Extended Matamata reticulation	
Employment & Training Hub	Incremental addition to existing Regional Training delivery	Waharoa Emp. & Train Hub	Hub concept expanded to District		

### **Main Benefits**

The following key direct and indirect benefits are expected as a consequence of the WBH:

Table 15: Analysis of potential benefits that can be expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Description
Employment creation and connection.	Waharoa residents	Direct	The initial improved connection to existing employment opportunities, followed by creation of new permanent roles offering expected median incomes of \$50k.
Compelling Business Hub Golden Triangle location	Industrial Processing Businesses	Direct	Cost effective location that meets gas, wastewater and water requirements and well located in terms of road and rail transport.
Reduced social service costs	The Crown	Direct	Waharoa is a high cost community (relative to size) for MSD, NZ Police and MoH.
Support service growth	Agri Centric Service Providers	Indirect	Transport, cool store, maintenance providers will all experience demand growth.
Rising industrial land prices	Waharoa Industrial Landowners	Indirect	Land prices are expected to rise by at least \$25 Sq. M from their current average of \$80 - \$120 per Sq. M.
Rising house values	Waharoa Residential Owners	Indirect	House prices can be expected to rise as economic opportunity and services develop.

However, there are some benefits that are difficult to quantify. These are captured below:

Table 16: Analysis of potential benefits that cannot be reliably expressed in monetary terms

Main Benefits	Who Benefits?	Direct or Indirect?	Quantitative or Qualitative?	Description and Possible Measures
Community wellbeing and pride.	Waharoa residents	Direct	Qualitative	View of Kaumatua
Crime – reported and unreported.	Waharoa residents	Direct	Quantitative	NZ Police data

### Main Risks

The principal specific risk to the success of the WBH would be the failure to attract new primary processing businesses to Waharoa. These businesses are capital intensive requiring major and long-term commitments to be made in the land, the labour and the capital required. Availability of new Golden Triangle industrial land, with the infrastructure amenities discussed, would compete directly with Waharoa for new entrant demand. However, the WBH is not a speculative undertaking. The commitment in principle to a significant facility in Waharoa can be interpreted as market confirmation of latent demand.

in Waharoa can be interpreted as market confirmation of latent demand.

Given that local employment connection is currently poor, is there a risk that Waharoa employment grows but local connection does not improve? This would be a high risk were it not for the strong governance, organisation and commitment of Ngāti Hauā. Employment connection success hinges on Ngāti Hauā being provided the resources to lead an intervention that is physically located in Waharoa. The WBH Project considers this to be low risk given the high calibre, commitment and consistent support the project has received from Ngāti Hauā Iwi.

#### Likelihood Consequence **Comments and Risk Management** Main Risks (H/M/L) (H/M/L) **Strategies** Failure to attract new н L An awareness and promotion strategy Primary Processing are planned for the New Year. businesses Promotion of the Agri-Food Hub development commitment will be significant for the market. Failure to achieve н L Ngāti Hauā ongoing engagement, employment connection support and ownership of key components of the WBH Project is critical.

#### Table 17: Initial risk analysis

A risk register has been developed and will be progressively updated as more detailed analysis is undertaken.

### **Optimism bias**

Based on the nature of the investment proposal, the expected net benefits could be reduced by 20% to reflect the effects of optimism bias. This loading will be progressively reduced as the accuracy of the estimates for proposal costs and benefits improves.

### **Key Constraints and Dependencies**

The proposal is subject to the following constraints and dependencies. These will be monitored during the project.

Table 18: Key	constraints and	dependencies
---------------	-----------------	--------------

Constraints	Notes
Gas infrastructure	This is well understood with a detailed and evolved plan emerging.
Wastewater and Potable Water	This is also well understood. A careful mix of private interim arrangements and medium term MPDC infrastructure development is planned.
Dependencies	Notes and Management Strategies
Housing supply	A plan is being developed to encourage market centric housing supply development.

## The WBH Economic Case

### **Critical Success Factors**

The following critical success factors were identified by stakeholders through the course of the Project:

#### Table 19: Critical Success Factors

Generic Critical Success Factors	Broad Description	Proposal-Specific Critical Success Factors
Strategic fit and business needs	How well the option meets the agreed investment objectives, related business needs and service requirements, and integrates with other strategies, programmes and projects.	Secure a flagship primary producer processing enterprise(s) for the WBH.
Potential value for money	How well the option optimises value for money (i.e., the optimal mix of potential benefits, costs and risks).	Secure interest from enterprise(s) that are well capitalised and can bring significant equity to the capital structure.
Hub enterprise capacity and capability	How well the option(s) match the ability of potential WBH enterprises to deliver outputs closely aligned to the district's primary sector resources and create high-quality employment.	WBH businesses will align with the processing of district horticulture or agriculture outputs and have significant permanent labour requirements.
Potential affordability	How well the option can be met from likely available funding and matches other funding constraints.	MPDC/Crown/Firstgas PPP co- funding for gas infrastructure is a pre-requisite.
Potential achievability	How well the option is likely to be delivered given the organisations ability to respond to the changes required and matches the level of available skills required for successful delivery.	Balle Bros are the NZ market leader in market gardening and vegetable processing. The business was founded following WW1.

Under the five dimensions, stakeholders identified a long list of in-scope options as follows:

Dimension	Description	Options within each Dimension
Industrial Hub Candidate Businesses	In relation to the business hub proposal, what levels of participation are possible?	<ul> <li>District or regionally based businesses (Fonterra, Tatua, Silverfern Farms, Greenlea Meats, Inghams Poultry, Grace LLP etc) who may consider Waharoa as a good industrial processing expansion option.</li> <li>Waharoa incumbent operator expansion – OCD and Balle Bros.</li> <li>Auckland businesses seeking Golden Triangle cost effective expansion.</li> </ul>
Infra. service solutions	How can infrastructure services be provided?	<ul> <li>Gas – sufficient new demand identified to fully amortise pipeline costs and normal return.</li> <li>Gas – some new demand identified, but PPP type structure to cover demand development period required.</li> <li>Potable Water – MPDC investment in provision</li> <li>Wastewater – Combination of private arrangements and MPDC investment.</li> </ul>
Ideal Business Hub targets	What sort of businesses are an ideal fit?	<ul> <li>High capital intensity food processing businesses serving export markets and utilising local primary produce e.g. dairy factory, meat processing, vegetable processing.</li> <li>Agri   Hort   Primary Producer support businesses.</li> <li>Industrial producer requiring volume road/rail access.</li> </ul>
Implementation	How quickly can Business Hub implementation occur?	<ul> <li>Gas infrastructure will take ~18-24 months to commission, with the Agri-Food Hub requiring a similar period for construction and commission.</li> </ul>
Funding options	How can it be funded?	<ul> <li>Combination of private sector equity investment and Crown debt funding – either via direct PGF application, Crown Infrastructure Fund or MBIE Energy Fund.</li> </ul>

Table 20: Possible long-list options classified by the five dimensions of choice

#### Long-list options assessment

Through the Feasibility Phase of the WBH, the potential long-list options in each of the five dimensions were assessed against the investment objectives and critical success factors via a direct representation method. A Waharoa Business Hub Schema was developed and approved by the Project Governance Group. This positioned the Business Hub possibility, along with its benefits and unique attributes. This was used extensively to canvas and test interest.

Unsurprisingly, incumbent interest from Balle Bros and OCD was found to provide the strongest foundation. Expansion interest from business located – or who would otherwise locate – in Auckland, seeking cost effective Golden Triangle alternatives is perceived to be the next most prospective category. Interest and options here are still being pursued.

#### The status quo or do-nothing option

Sub developed industrial land options, for sale or lease, are available in Waharoa today. However, an infrastructure 'chicken and egg' situation exists. Without further infrastructure, the utility of the land is limited to logistics, support services and light industrial activity. While there is demand for these services – e.g. stock foods, vehicle maintenance etc, demand has its natural limits.

From an employment connection and social wellbeing perspective, these businesses tend to create minimum wage, fork truck operator, warehouse support roles. While not denigrating the importance of these sources of employment, industrial processing businesses create a higher calibre of entry level employment, develop transferable skills and provide a pathway to team leader roles.

Hence, the key disadvantage of the status quo, is that it is unlikely that the market will address and coordinate all the infrastructure deficit issues in the foreseeable future or be able to address employment connection. Hence Waharoa will likely remain at 10 on the index of deprivation.

### **The Short-listed Options**

On the basis of this analysis, the recommended short-list for further assessment, is as follows:

- Option 1: Waharoa status quo option (the baseline comparator).
- Option 2: Reticulate gas and establish and Employment and Training Hub programme.
- Option 3: Option (2) above + Agri Food Hub and Rail Siding if proven (the preferred way forward)
- Option 4: Option (3) with gas further reticulated to Waitoa at an additional cost of ~\$40m.

### **Economic Assessment of the Preferred Options**

The assessment methodology used is an economic cost benefit analysis, over five and a half years, to generate a Net Present Value ("**NPV**") signal, utilising a risk adjusted discount rate, based on the Crown's weighted average cost of capital ("**WACC**"). The preferred options are compared to the status quo 'do nothing' alternative to calculate the NPV. Terminal values are not brought to account. The benefits and costs considered are:

### Improvement in Waharoa's Gross Domestic Product ("GDP")

The improvement in GDP is the most economically significant element of the cost benefit analysis.

Currently, GDP can largely be defined by the final goods produced by the OCD Waharoa plant. As noted, the flagship Agri-Food Hub processing plant will create ~50 roles and with final goods adding \$40 - \$60m pa to Waharoa's GDP. However, somewhat complicating the analysis, over 90% of OCD current employees do not reside in Waharoa and commute each day, with this employment dynamic being quite pervasive.

Hence actual GDP per capita is significantly lower than one might expect. To address this dynamic, an increase in per capita GDP approach has been used where:

- Starting GDP per capita of \$25k across 480 pop. Inferring a \$12m GDP for Waharoa in total is assumed.
- By June 2025, under the preferred WBH option (three), GDP per capita is estimated to rise to \$38k on 725 pop. Hence total GDP of \$27.6m or an increase of \$15.6m.
- As a point of reference, in June 2019, New Zealand's GDP per capita was NZD \$61k.
- June 2025 additional locals in the workforce are estimated to increase by: (725 pop. \* 50% labour force participation \* 95% employment) minus (480 pop. \* 50% labour force participation \* 70% employment) = 176. This reconciles with the 200 additional roles targeted.

#### **Reduced Social Services Costs**

A simple approach has been adopted. Intense employment connection efforts are assumed to bring unemployment levels down to just above the current national average of 4.2% over the five-year period. Jobseeker benefit savings are utilised as a proxy for all benefit savings including the accommodation supplement.

In line with deprivation levels, crime is an issue for Waharoa. While the population is forecast to grow, the set of interventions planned are expected to bring down levels of crime overall and thus deliver a benefit.

#### **Gas Infrastructure PPP returns**

The Crown's proposed one third equity stake in the pipeline holding company is assumed, in line with the intended shareholders agreement, to be purchased by Firstgas on or before the conclusion of year five. At this point the Crown will receive a return compounded at the regulated rate of return for the monopoly asset. Hence the positive differential between cost of funds and return on funds generates a positive return.

For this not to be true, OCD will need to have chosen to replace their aging coal boilers with other than gas boilers and/or the WBH has been totally unsuccessful in attracting additional processing businesses to Waharoa.

OCD's coal boilers are known to be toward the end of a normal operational life for such an asset and to be fully depreciated. As noted, a boiler that delivers high heat for pasteurisation and other food processing requirements is at the heart of the process. The OCD Board have been very clear with the Project that their intent is replace their coal boilers with gas boilers but will not be drawn into commercial commitments around this.

#### **Employment and Training Hub Costs**

Year One costs of \$840k are expected to taper toward \$765k pa over the period. Led by Ngāti Hauā, this will represent a significant and intense intervention to break the cycle of deprivation. Focussing initially on NEET youth a life skills and specific job skills programme, leading directly to employment opportunity is planned. This programme has been demonstrated to be successful in parallel situations.

### **Major assumptions**

Table 21 sets out the preferred option with an outline of major assumptions following.

Waharoa Business Hub ("WBH") Economic Cos	Crown WACC = 10 yr. Govt Bond Rate	1.500%				4 4 2 97	ممر المعما ا			poly gas as			
	Risk adjustment factor applied Effective Risk Adjusted 6 month Crown WACC	1.489%					Avg Jobsee			ipoly gas as	iser		
000)				2	2	4	-	,	7		9	10	<b>c</b>
00)	Period Discount Factor	0 1.000	1 1.015	2 1.030	3 1.045	4 1.061	5 1.077	6 1.093	1.109	8 1.126	1.142	1.159	Sum
afits Category + Notes	Component	Jun-20	Dec-20	Jun-21	Dec-21	Jun-22	Dec-22	Jun-23	Dec-23	Jun-24	Dec-24	Jun-25	
Improvement in Waharoa's GDP	Component	Jun-20	Dec-20	Jun-21	Dec-21	Jun-22	Dec-22	Jun-25	Dec-25	Jun-24	Dec-24	Jun-25	
Improvement in wanaroa's GDP	Opt 3 WBH scenario Waharoa pop.	480	480	500	525	550	525	550	600	650	700	725	i i
	Opt 1 Status Quo	480	480	480	480	480	480	480	480	480	480	480	
	Opt 1 Status Quo	400	400	400	400	400	400	400	400	400	400	400	
NZ GDP = \$300b Jun 2019	Opt 3 WBH Per Capita GDP (per half yr.)	12.5	12.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	
NZ Pop = 4.922m Jun 2019	Opt 1 Status Quo GDP (per half yr.)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
NZ per Capita GDP = \$60.95k @ Jun 2019	opt i otatao ado obi (por nali jit)	1210	1210	1210	1210	1210	1210	1610	1210	1210	1210	1210	
····· F-····· ···· ···· ·····	Opt 3 WBH GDP (discounted)	6,000	5,912	7,282	7,785	8,295	8,045	8,557	9,468	10,395	11,337	11,882	
	Opt 1 Status Quo GDP (discounted)	6,000	5,912	5,825	5,740	5,656	5,573	5,491	5,410	5,331	5,253	5,176	
	Opt 3 - Opt 1 GDP Increment \$ (000)			1,456	2,045	2,639	2,473	3,066	4,058	5,064	6,084	6,707	3
Reduced Social Services Costs													1
	Opt 3 WBH Scenario on Jobseeker	100	90	60	55	50	45	40	35	30	25	20	
	Opt 1 Status Quo on Jobseeker	100	100	100	100	100	100	100	100	100	100	100	
	Assumed avg. Jobseeker cost per 6 mths	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	\$ 5.7	
	-												
	Opt 3 scenario cost (discounted)	572	507	333	301	270	239	209	181	152	125	99	
	Opt 1 Status Quo cost (discounted)	572	564	555	547	539	531	523	516	508	501	493	
	Opt 3 - Opt 1 Saving \$ (000)	0	57	229	257	286	315	343	372	400	429	458	
Reduced economic cost of crime													
TSY est. of economic cost of crime in 2003 = \$9		1.38	1.31	1.24	1.17	1.10	1.03	0.96	0.89	0.82	0.76	0.69	
NZ Pop in 2003 = 4.027m	Opt 1 Status Quo	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
Assume constant costs = \$2.26k per capita for I		660 660	618 650	601	587	570	503 613	484 604	483 595	476 586	463 578	430	
Assume \$2.75k per capita for Wahaora	Opt 1 Status Quo cost (discounted)	066	650 32	641 40	631 44	622 52	613 110				578	569 139	
Investment Return on gas pipeline PPP infrastri	Opt 3 - Opt 1 Saving	0	32	40	44	52	110	120	112	110	115	139	L
Investment Return on gas pipeline PPP Intrastri	Opt 2 & 3 Purch. of 1/3 stake of "NewCo"	(\$7,000)	(\$7,225)	(\$7,457)	(\$7,696)	(\$7,943)	(\$8,198)	(\$8,461)	(\$8,733)	(\$9,013)	(\$9,302)	(\$9,601)	i i
	Accrued regulated rate of return 6.42%	(\$7,000)	(\$225)	(\$7,437) (\$232)	(\$7,676) (\$239)	(\$7,743) (\$247)	(\$255)	(\$263)	(\$272)	(\$280)	(\$7,302) (\$289)	(\$7,601) (\$299)	
	Firstgas purchase of Crown NewCo Stake		(9223)	(3232)	(\$237)	(\$247)	(\$255)	(\$205)	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(\$200)	(\$207)	\$9,601	
	Opt 3 - Opt 1 Investment Return	(\$7,000)										\$8,282	
s Employment & Training Hub	opto opt medalent ketam	(\$7,000)										30,202	ļ
	Staff	70	70	70	70	70	70	70	70	70	70	70	Ī
	Third Party Training Providers	250	250	250	250	250	250	250	250	250	250	250	
	Other Operating Costs	50	50	50	50	50	50	50	50	50	50	50	
	Computers & Peripherals	50				25			25			15	
	Premises fitout & furniture	50											
	Total cash cost	470	370	370	370	395	370	370	395	370	370	385	
	Total PV cost	470	365	359	354	372	344	339	356	329	324	332	
													L
on Present Value Scenario	Present Value (PV)												NPV
1 Do nothing benfits and costs	48,765	4,768	4,698	4,629	4,561	4,494	4,428	4,363	4,299	4,236	4,174	4,113	
3 Gas + Emp I T Hub + Agri F Hub + Rail b and c	s 83,432	(2,702)	4,422	5,988	6,543	7,083	6,960	7,524	8,448	9,438	10,425	19,304	3
										W	hole of life		
												1	1
												3	

#### Table 21: Preferred Option Cost Benefit Analysis ("CBA") Overview

- A progressive lift in per capita GDP to \$13k across a population that increases to 725 is claimed by this CBA. The Present Value ("**PV**") of this benefit is \$33.6m for the period through to June 2025. As a point of reference, the Agri-Food Hub, is expected to deliver **PV**" in final goods pa FY 2023-2025 e.g undiscounted. However without gas infrastructure and improved employment connection this would not be possible. The amount claimed is believed to be conservative.
- The Crown will see return of its capital and a super normal profit on its gas infrastructure investment and this is brought to account. Firstgas and the MPDC recover their capital and normal costs to an NPV zero outcome which is not considered further.
- 200 additional roles will be created in Waharoa by June 2025, noting that the Agri Food Hub will count for 50 of these.
- OCD will replace its coal boilers with gas on or before June 2025.
- An intensive employment and training process, over a five and half year period, can bring unemployment down to close to national levels, within a small community.

### **Assessment period**

A nominal assessment period of five and a half years is assumed, with no terminal values being brought to account. Five and half years is deemed a sufficient period for potent benefits to materialise.

### **Discount and inflation assumptions**

A discount rate of 2x the current 10yr. Government Bond rate has been utilised. The 2x premium reflects risk adjustment to the risk-free WACC.

#### **Estimated costs**

The basis for estimating costs is well documented in this analysis.

#### **Taxation**

All dollar figures are expressed in GST exclusive terms.

#### Estimating monetary benefits

The basis of estimating monetary benefits are documented above and believed to be conceptually simple and conservative to avoid optimism bias.

#### Table 22: Estimated monetary benefits from the WBH

Undiscounted Monetary Benefits	\$ (000) Estimates through to June 2025	Description
Improvement in Waharoa GDP	33,592	Based on pop. Increase to 725 and per capita GDP increase to \$38k
Reduced cost of Social Services	3,146	Jobseeker reduction and crime reduction using Treasury estimates of economic cost.
Investment returns on Gas Infra PPP	2,601	Return over risk adjusted WACC.
Employment and Training Hub cost	(4,235)	Cumulative cost of Emp. and Training Hub over five years.

### **Non-monetary Benefits and Costs**

Some key benefits could not be reliably quantified in monetary terms and are described below

Table 23: Non-monetary benefits (and costs, if any) from the investment proposal

Non-monetary Benefits	Description
Waharoa community spirit.	The WBH will lift community spirit over time. Waharoa is very much seen as a poor relation to Matamata.
District spirit.	The Matamata-Piako district is proud of its strong primary sector contribution to NZ, beautiful lush and fertile land, Hobbiton and the work and lifestyle opportunities this blessed natural environment provides for the community. However, Waharoa - somewhat inexplicably – does not participate in what is all around. Through participation this project is expected to lift the social, cultural and economic wellbeing of Waharoa

### **Risk and Uncertainty**

#### **Risk identification and measurement**

The key risks have been revisited and assessed for each of the short-listed options

#### **Risk assessment**

Through the course of the Project, the following key risks have been identified:

Table 24: Risk assessment and risk management strategies

Risk	Consequence (H/M/L)	Likelihood (H/M/L)	Comments and Risk Management Strategies
Employment connection remains poor	Η	L	Critical that the Employment and Training Hub is led by the Ngāti Hauā Iwi Trust.
WBH growth does not extend beyond the Agri Food Hub	Н	L	The WBH Golden Triangle option is perceived to be very competitive. Promotions with Realtors and Industry are planned.

This risk analysis was also used to inform the development of the risk register, attached to this business case.

### **Testing the Preferred Option and Sensitivity Analysis**

The purpose of this section is to identify the preferred option, test the robustness of this option using sensitivity analysis and present the overall results of the options analysis.

### Identifying the preferred option

Table 25 below presents the results of the cost benefit analysis using core assumptions.

Table 25: Presenting the results of the options analysis

NZD \$ (000)	Option 1: Do Nothing	Option 2: Gas + Emp   Training Hub only	Option 3: Gas + Emp   Training + Agri Food Hub + Rail	Option 4: = Opt. 3 but with gas extended to Waitoa			
Appraisal Period (years)	5.5 years to Jun 2025	5.5 years to Jun 2025	5.5 years to Jun 2025	5.5 years to Jun 2025			
Whole of life cash costs (undiscounted)	13,522	18,509	16,227	26,227			
Cost-benefit analysis of monetary costs and benefits:							
Present Value of monetary benefits and costs	48,765	62,768	83,432	73,432			
Net present value	0	14,003	34,667	24,667			

Multi-criteria analysis of non-monetary benefits:						
Community Spirit, 1=poor 10 = strong	1	5	10	10		
District Spirit, 1 = poor, 10 = strong	1	5	10	10		

#### Table 26 below provides the detailed analysis of these options:

Waharoa Business Hub ("WBH") Economic Cost | Benefit Analysis NPV Calculation

	Crown WACC = 10 yr. Govt Bond Rate Risk adjustment factor applied Effective Risk Adjusted 6 month Crown WACC	1.500% 2 1.489%					Regulated r Avg Jobsee			poly gas as	set		
\$ (000)	Period Discount Factor	0 1.000	1 1.015	2 1.030	3 1.045	4 1.061	5 1.077	6 1.093	7 1.109	8 1.126	9 1.142	10 1.159	Sum
Benefits Category + Notes	Component	Jun-20	Dec-20	Jun-21	Dec-21	Jun-22	Dec-22	Jun-23	Dec-23	Jun-24	Dec-24	Jun-25	
Improvement in Waharoa's GDP	Opt 2 Waharoa Pop	480	480	480	495	510	525	540	555	570	585	600	1
	Opt 3 WBH scenario Waharoa pop.	480	480	500	525	550	525	550	600	650	700	725	
	Opt 1 Status Quo	480	480	480	480	480	480	480	480	480	480	480	
	Opt 2 GDP per capita (per half year)	12.5	12.83	13.15	13.48	13.80	14.13	14.45	14.78	15.10	15.43	15.75	
NZ GDP = \$300b Jun 2019	Opt 3 WBH Per Capita GDP (per half yr.)	12.5	12.5	15.0	15.5	16.0	16.5	17.0	17.5	18.0	18.5	19.0	
NZ Pop = 4.922m Jun 2019 NZ per Capita GDP = \$60.95k @ Jun 2019	Opt 1 Status Quo GDP (per half yr.)	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
NZ per Capita GDP = \$60.95k @ Jun 2019	Opt 2 GDP	6,000	6,156	6,312	6,670	7,038	7,416	7,803	8,200	8,607	9,024	9,450	82,676
	Opt 3 WBH GDP	6,000	6,000	7,500	8,138	8,800	8,663	9,350	10,500	11,700	12,950	13,775	103,375
	Opt 1 Status Quo GDP	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	66,000
	Opt 2 GDP (discounted)	6,000	6,066	6,128	6,381	6,634	6,887	7,141	7,394	7,647	7,900	8,152	
	Opt 3 WBH GDP (discounted)	6,000	5,912	7,282	7,785	8,295	8,045	8,557	9,468	10,395	11,337	11,882	
	Opt 1 Status Quo GDP (discounted)	6,000	5,912	5,825	5,740	5,656	5,573	5,491	5,410	5,331	5,253	5,176	
Reduced Social Services Costs	Opt 3 - Opt 1 GDP Increment \$ (000)	-	-	1,456	2,045	2,639	2,473	3,066	4,058	5,064	6,084	6,707	33,592
Reduced Social Services Costs													
Jobseeker Bene. (assumed as proxy for all pay		100	95	90	85	80	75	70	65	60	55	50	
	Opt 3 WBH Scenario on Jobseeker Opt 1 Status Quo on Jobseeker	100 100	90 100	60 100	55 100	50 100	45 100	40 100	35 100	30 100	25 100	20 100	
	Assumed avg. Jobseeker cost per 6 mths												
	Opt 2 scenario cost Opt 3 scenario cost	572 572	543 515	515 343	486 315	458 286	429 257	400 229	372 200	343 172	315 143	286 114	4,719 3,146
	Opt 1 Status Quo cost	572	572	572	572	572	572	572	572	572	572	572	6,292
	Opt 2 scenario cost (discounted)	572	535	500	465	431	398	366	335	305	275	247	
	Opt 3 scenario cost (discounted) Opt 1 Status Quo cost (discounted)	572 572	507 564	333 555	301 547	270 539	239 531	209 523	181 516	152 508	125 501	99 493	
	Opt 3 - Opt 1 Saving \$ (000)	0	57	229	257	286	315	343	372	400	429	458	3,146
Reduced economic cost of crime													
TSY est. of economic cost of crime in 2003 = \$9	Opt 2 - WBH Crime reduced by 25% .1b Opt 3 WBH - Crime halved over five years	1.38 1.38	1.34 1.31	1.31 1.24	1.27 1.17	1.24 1.10	1.20 1.03	1.17 0.96	1.13 0.89	1.10 0.82	1.07 0.76	1.03 0.69	
NZ Pop in 2003 = 4.027m	Opt 1 Status Quo	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
	Opt 2 scenario cost Opt 3 WBH scenario cost	660 660	644 627	627 619	630 614	631 605	632 541	631 529	630 536	627 536	623 529	620 498	6,954 6,295
	Opt 1 Status Quo cost	660	660	660	660	660	660	660	550 660	660	527 660	660	7,260
A	Opt 2 scenario cost (discounted)	660	634	609	602	595	587	578	568	557	546	535	
Assume constant costs = \$2.26k per capita for Assume \$2.75k per capita for Wahaora	NZ Opt 3 WBH scenario cost (discounted) Opt 1 Status Quo cost (discounted)	660 660	618 650	601 641	587 631	570 622	503 613	484 604	483 595	476 586	463 578	430 569	
• • • • • • • • • • • • • • • • • • •	Opt 3 - Opt 1 Saving	0	32	40	44	52	110	120	112	110	115	139	874
Investment Return on gas pipeline PPP infrastr													
	Opt 4 Crown fund of Waitoa ext Opt 2 & 3 Purch. of 1/3 stake of "NewCo"	(\$17,000) (\$7,000)	(\$7,225)	(\$7,457)	(\$7,696)	(\$7,943)	(\$8,198)	(\$8,461)	(\$8,733)	(\$9,013)	(\$9,302)	(\$9,601)	
	Accrued regulated rate of return 6.42%	(***/****/	(\$225)	(\$232)	(\$239)	(\$247)	(\$255)	(\$263)	(\$272)	(\$280)	(\$289)	(\$299)	
	Firstgas purchase of Crown NewCo Stake											\$9,601	
Costs Employment & Training Hub	Opt 3 - Opt 1 Investment Return	(\$7,000)										\$8,282	1,282
	Staff	70	70	70	70	70	70	70	70	70	70	70	
	Third Party Training Providers	250	250	250	250	250	250	250	250	250	250	250	
	Other Operating Costs Computers & Peripherals	50 50	50	50	50	50 25	50	50	50 25	50	50	50 15	
	Premises fitout & furniture	50				25			25			15	
	Total cash cost	470	370	370	370	395	370	370	395	370	370	385	4,235
	Total PV cost	470	365	359	354	372	344	339	356	329	324	332	3,943
Option Present Value Scenario	Present Value (PV)												NPV (\$m)
1 Do nothing benfits and costs	48,765	4,768	4,698	4,629	4,561	4,494	4,428	4,363	4,299	4,236	4,174	4,113	-
2 Gas + Emp IT Hub only benefits and costs	62,768	(2,702)	4,532	4,660	4,960	5,235	5,559	5,858	6,135	6,456	6,755	15,320	14.003
3 Gas + Emp IT Hub + Agri F Hub + Rail b and c 4 = Opt. 3 but with gas extended to Waitoa	's 83,432 73,432	(2,702) (12,702)	4,422 4,422	5,988 5,988	6,543 6,543	7,083 7,083	6,960 6,960	7,524 7,524	8,448 8,448	9,438 9,438	10,425 10,425	19,304 19,304	34.667 24.667
	73,432	(,, 02)	.,	2,700	2,010	.,000	2,700	.,	-,	.,	,	,001	2.000
										W	hole of life o		40
												1	13,552 18,509
												2	1/ 077

### Testing the robustness of the options analysis

As can be seen from the detailed analysis panel, the cost benefit analysis is most sensitive to changes in the per capita GDP assumptions. However, even if these benefits ultimately amounted to zero, in cash terms the Employment and Training Hub costs would be largely offset by the reduction in social services costs. This would leave a small investment benefit associated with the Crown gas infrastructure PPP holding.

#### The preferred option

The preferred option is option three. This achieves the highest NPV outcome and qualitative benefits scores. Accordingly, option three is deemed to most comprehensively lift of Waharoa's economic and social wellbeing within affordability parameters.

# Commercial Case – Proposed Gas PPP

A public private partnership approach is proposed toward the development of the gas pipeline extension from Okoroire, through Matamata, to Waharoa. "NewCo" would be established for the purposes of financing and holding the asset through the demand development period, estimated to be no longer than five and a half years.

### The NewCo PPP Proposal

Partners: The Crown, MPDC and Firstgas each own on third of the equity in NewCo.

**Capitalisation**: NewCo is capitalised to \$21m - \$20m for pipeline construction and \$1m for working capital and contingency. Classes of share are outlined below. Funds will be progressively called as determined by the Board.

Operation: NewCo will contract Firstgas to:

- a) Construct the pipeline extension for a fixed price;
- b) Act as agent for NewCo rendering all customer billing
- c) Act as agent for NewCo in completing all regulatory reporting required

**Constitution**: Each shareholder will elect a director and agree an independent chair. It should be noted that while NewCo can delegate the task of completing regulatory returns, the accountability will still vest with the Board.

Shareholders Agreement: The shareholders will agree three classes of share whereby:

- The Crown receives the compounded allowable rate of return on this monopoly asset as payment(s) from Firstgas, proportionate to the equity purchased.
- MPDC receives the return of its cost of capital as payments from Firstgas, proportionate to the equity purchased. The differential between this and the regulated rate of return will be recovered by way of a targeted rate on industrial land owners in Waharoa.
- Firstgas will receive dividends up to a level commensurate with the regulated rate of return on its holding
- Any wash-up distributions will apply equally.

Shareholders will also agree a Put/Call construct that enables Firstgas to acquire Crown and MPDC holdings in equal proportions as Waharoa gas demand develops.

Firstgas note that the NewCo PPP model is not the only option. The key for Firstgas is to ensure:

- 1. Capital investment in any new pipeline infrastructure earns the regulated rate of return
- 2. Existing users of the Firstgas network are not required to fund the incremental costs of the development.

Annex 1 provides a detailed analysis of gas situational and commercial considerations.

## **Risk Allocation**

Key PPP risks have been identified, evaluated and recorded in the risk register, attached to this business case

The procurement risks are proposed to be apportioned between the parties as outlined in the following table:

#### Table 27: Risk allocation table

	Potential Risk Allocation					
Risk Category	Firstgas	MPDC	Crown			
Design risk	$\checkmark$					
Construction and development risk	$\checkmark$					
Transition and implementation risk	$\checkmark$					
Availability and performance risk	$\checkmark$	$\checkmark$	$\checkmark$			
Operating risk	$\checkmark$	$\checkmark$	$\checkmark$			
Variability of revenue risks	$\checkmark$	$\checkmark$	$\checkmark$			
Termination risks	$\checkmark$	$\checkmark$	$\checkmark$			
Technology and obsolescence risks	✓	✓	$\checkmark$			
Control risks	✓	$\checkmark$	$\checkmark$			
Residual value risks	✓	✓	$\checkmark$			
Financing risks	✓	✓	$\checkmark$			
Legislative risks	✓	✓	$\checkmark$			
Other project risks	$\checkmark$	$\checkmark$	$\checkmark$			

While coal boiler conversion is expected and can be reasonably anticipated, along with additional new entrant demand prior to June 2025, there is no ironclad guaranty of either and this risk must be acknowledged.

In addition to normal financial reporting requirements, as gas delivery in the volumes anticipated is the subject of antitrust legislation under the Commerce Act, NewCo will carry reporting requirements over its life. While the Board can contract Firstgas to undertake these obligations on its behalf, the responsibility remains with directors and cannot be delegated.

The sharing of these risks between the Crown, MPDC and Firstgas is the central commercial tenant of the business case.

# Financial Case - Affordability and Funding Req's

## **The Financial Costing Model**

### Financial costing approach

The financial analysis model, summarised previously as the base case, has been used to estimate WBH capital and operating costs. Key assumptions in the model have been set out previously.

The proposed funding arrangements to finance the NewCo Gas Holding Company entity are via a PPP equal equity share model between Firstgas, MPDC and the Crown. Funding for the Waharoa Employment and Training Hub will be determined by the Waikato Provincial Development Unit. Ministry of Social Development are expected to fund a significant proportion.

#### Impacts on the financial statements

The financial impacts of the project over the intended analysis period are shown below. The timing of calls on NewCo equity have been estimated, as is the timing of capital return. Total NewCo CAPEX is negative as a capital return, exceeding investment, is expected.

\$ (000)	Jun 20 (six months)	Jun 21	Jun 22	Jun 23	Jun 24	Jun 25	Total
Capital expenditure: <i>NewCo equity</i>	1,000	5,000	1,000			(9,601)	(2,601)
Operating expenditure: <i>Emp</i> & <i>Training Hub</i>	470	740	765	740	765	755	4,235
Total expenditure	1,470	5,740	1,765	740	765	(8,846)	1,634
GDP increment	0	1,456	4,684	5,639	9,122	12,791	34,667
CAPEX required	1,000	5,000	1,000			(9,601)	(2,601)
OPEX required	470	740	765	740	765	755	4,235

#### Table 28: Financial costing model

### **Overall affordability**

The preferred option is believed to be both affordable and to represent good value for money for all stakeholders.

# Mgm't Case: Planning for Successful Delivery

### **Project Management Planning**

#### Programme management arrangements

The proposed PPP co-investment in gas infrastructure and the Employment and Training Hub projects is an integral part of the Waharoa Business Hub programme, which comprises a portfolio of projects as outlined.

Beyond the life of the Waharoa Business Hub Project itself, the MPDC will assume the role of overall programme management. The key arrangements are as follows:

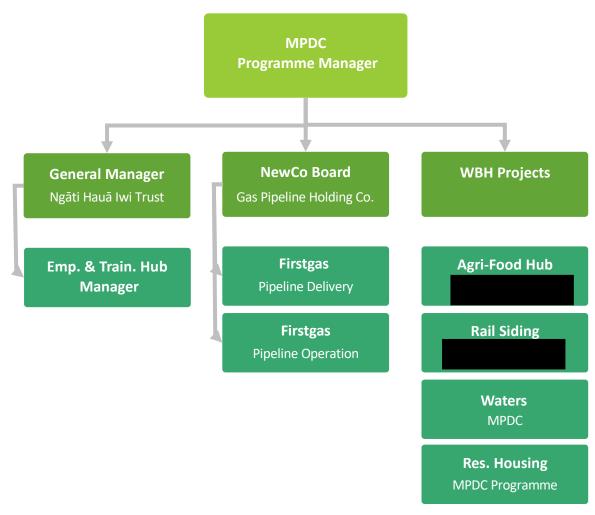
- MPDC will nominate a staff member as the Programme Management Lead.
- The Programme Lead will establish a regular cadence of meetings with key participants.
- The Programme Lead will coordinate ongoing communication/consultation with the wider community.

#### **Project governance and management arrangements**

Upon this investment proposal receiving formal approval, the following arrangements will be made:

- Pursuant to the NewCo Shareholders Agreement, the shareholders will appoint its Board of Directors.
- The NewCo Board will execute agreements with Firstgas to: design, construct and commission the gas pipeline; operate the pipeline and manage customer billing and fulfil regulatory obligations.
- The Ngāti Hauā Iwi Trust will manage the Waharoa Employment and Training Hub. A manager for the Hub will be appointed and report into the General Manager of the Trust. The Board of Trust will provide governance oversight of the Hub.

#### Figure 29: Waharoa Business Hub organisational structure



#### **Project plan and milestones**

The following key project milestones are planned

Table 30: Project plan timetable

Key Project Milestone	Approximate Date		
Waharoa Employment and Training Hub Manager appointed	March 2020		
First NEET youth Intake programme – Employment and Training Hub	March 2020		
NewCo Shareholders Agreement executed	May 2020		
Firstgas commissioned to build pipeline	June 2020		
Waharoa Agri-Food Hub fully operational	early 2023		

### **Risk Management Planning**

As noted, the MPDC will appoint an overall Programme Manager, who will also assist with the management of risks across the project.

### **Risk register**

The register lists all the identified risks and the results of their analysis and evaluation. Information on the status of the risk is also included. The risk register is intended to be periodically updated and reviewed throughout the course of a project.

#### Table 31: Risk register

#	Risk
1.	Inception risk. The fragility of this business case centres on the multiple public and private stakeholders that must align on intent and commitments. Failure in alignment/commitment with any key stakeholder - MPDC, Crown, Firstgas support; Agri Food Hub in particular, prior to execution of key agreements.
2.	Any future release of 'Golden Triangle' industrial land, the competes directly with the WBH, prior to gas demand maturing to the point where infrastructure costs are covered.
3.	Any Public Policy, relating to gas, that reduces its competitiveness, security or resilience as a source of industrial process heat.
4.	Attracting industrial processing business, particularly that linked to primary resources, proves harder than expected.
5.	Improving employment connection proves intractable but the WBH is successful commercially. This results in a widening the wealth gap and further community disenfranchisement.
6.	WBH demand grows quicker than the MPDC long term plan for wastewater and water ultimately tainting Waharoa's emerging reputation as the new location for industrial process business in the Golden Triangle.
7.	Residential housing supply initiative (which is formative) underperforms but the WBH is successful. Consequently, labour is competed away from existing district businesses, creating discord. Note that several businesses (who want to help WBH) have expressed this concern.

## **Next Steps**

This Single Stage business case seeks the formal approval from the Waikato Provincial Development Unit to proceed to final arrangements. The Provincial Development Unit have requested that the Project:

- 1. Ensure submission of the Agri Food Hub PGF application for consideration in March.
- 2. Assist submission of a PGF application for Gas Infrastructure, expected to be in the name of Firstgas, also for consideration in March.
- 3. Assist with the submission of a PGF application for Employment and Training hub, expected to be in the name of the Ngati Haua Iwi Trust, also for consideration in March.

Thank you for your consideration of this Business Case to advance the economic, social and cultural wellbeing of Waharoa.

Nga mihi

#### **Martin Butler**

Waharoa Business Hub Project Leader - RCP Ltd.

## Annex One: Gas Situational Considerations

This annex provides an overview of the situational considerations that relate to the reticulation of natural gas<sup>7</sup> through to Waharoa.

### Process heat uses, sources and considerations

Process heat is defined by the International Energy Agency as energy "primarily used for warming spaces and industrial processes". Often this takes the form of steam or hot water from boiler systems or hot gases. From a New Zealand industrial perspective, process heat is central to turning primary sector resources into products. Industrial uses make up 79% of all process heat used<sup>8</sup>. Some key examples include:

- Processing of milk into powder
- Pasteurisation
- Meat, vegetable and other food processing
- Wood, pulp and paper manufacture processes

Fossil fuels, mainly coal and gas in New Zealand and diesel in some other jurisdictions, are the staple forms of process heat energy. This is primarily due the suitability of fossil fuels to the efficient distribution of a high energy source and technical compatibility with boiler systems.

While electricity is commonly thought of as a ubiquitous form of energy, it has limitations for process heat. It is not considered technologically viable as a source of medium or high temperature process heat at present. Even as or when electricity does become viable, the need to upgrade of the distribution grids and transmission networks, necessary to supply the amount of energy required, will take decades to complete and will involve significant cost.

Process heat is significant at a national level and is estimated to comprise one third of New Zealand's total energy consumption.

Process heat systems are capital intensive with many components, such as boilers, having long life spans. From an economic perspective, 15-20 years is normal for a coal boiler, however its useful operating life may extend much longer.

### Role of gas in switching from high to lower carbon fuels

While a fossil fuel, gas does present a real option to reduce greenhouse gas emissions, particularly if it is used to displace coal. Gas burns cleaner than coal because gas contains less carbon for the energy content delivered. Additionally, gas does not contain significant amounts of sulphur, atomic nitrogen, particulate, or ash. Gas is also more flexible to changing process requirement loads, with greater ability to flex up and down. The transportation of gas by pipeline also has benefits in taking trucks off the road.

By way of example, Fonterra Waitoa has a requirement for 1,500,000 GJ of process heat energy pa and currently uses coal. If this plant switched to gas, a 41% reduction in CO2 emissions would occur as follows:

Coal status quo 137,250 tonnes CO2 Gas 81,029 tonnes CO2 (in addition to the local environmental benefits noted)

<sup>&</sup>lt;sup>7</sup> Natural gas is primarily Methane. When extracted from the ground it may also contain Ethane, Propane, Butane and Pentane. Natural gas is sourced from onshore and offshore wells in the Taranaki region, with pipeline network reticulation through much of the North Island.

<sup>&</sup>lt;sup>8</sup> Process Heat – Overview fact sheet, MBIE, 2018.

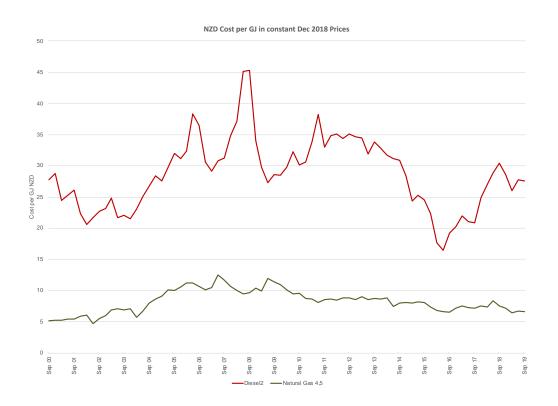
Converting the five remaining large North Island users of coal (including the Huntly Power Station), to gas, is estimated to reduce CO2 emissions by 500,000 tonnes per annum<sup>9</sup>

Beyond the immediate coal-to-gas substitution benefits, there is a growing interest in lowering the carbon emissions of gas networks. Biogas, or the methane produced from the fermentation of biomatter from wastewater, industrial process waste, landfills etc can be scrubbed and blended with natural gas in existing pipelines. Additionally, hydrogen can be blended to improve the energy value relative to CO2 released on combustion. These are emerging technologies globally and, in many cases, are currently more expensive than natural gas. Changes to the current quality specification for gas – which is based on natural gas – are likely to be required to improve cost effectiveness. However, these developments all point to the growing interest and investment in gas as a continued cost-effective energy source for industry globally.

In line with Government policy, targeting carbon neutrality by 2050, MBIE are currently consulting on the banning of new coal boiler installation to deliver industrial process heat and lifting the cap on carbon prices from \$25/t to \$50/t. Government have also signalled that funding will be provided to replace existing coal boilers in schools and hospitals.

### **Gas Pricing**

Graph (i) below illustrates the pricing of industrial diesel and gas over the last 20 years. To allow for the effects of inflation, prices are adjusted to reflect constant 2018 prices<sup>10</sup>. As can be seen, gas prices have followed the major trends in fossil fuel pricing and have been constant at \$6 - \$8 /GJ over the last decade. Coal prices are not available over this time period, however, are known to closely track gas as a rule.



Graph i: Diesel vs. Gas constant pricing

<sup>&</sup>lt;sup>9</sup> Firstgas submission to Interim Climate Committee, 15/11/19.

<sup>&</sup>lt;sup>10</sup> MBIE website – Real quarterly average fuel prices to Sep 2019 – December 2018 prices

## Gas infrastructure Regulation and investment impacts

Gas pipeline infrastructure in New Zealand that transmits more than 75,000 GJ per annum is regulated under Part 4 (s55A) of the Commerce Act 1986. This places information disclosure and price-quality obligations on pipeline providers. The Commerce Commission administers this regulation on behalf of Government.

Under price-quality regulation, gas pipeline owners are currently allowed a return of 6.41% on assets, in addition to a return of capital based on agreed depreciation charges. Pipeline charges are calculated by determining the return and depreciation on the regulated asset base, estimating operating costs and a tax allowance, and then charging users generally in proportion to use of the network. This provides the incentive to ensure that all elements of the pipeline network are fully utilised. An important pricing principle evaluated by the Commerce Commission is that additional revenue earned from any group of customers exceeds the additional costs of serving them.

This is a key imperative for Waharoa. If Firstgas financed the entire cost of a gas pipeline to Waharoa, then additional revenue earned from the pipeline would initially not be sufficient to recover additional costs. The effect would be higher charges to other pipelines users. Hence existing users prefer new users to "fully pay their way" or not connect to a network. In the alternative, Firstgas could choose to recover less than its allowed rate of return. However, in doing so it would not have the ability to raise prices later (due to its regulatory caps), so this approach is commercially untenable.

The NewCo PPP structure is designed to resolve this problem, allowing Firstgas to take full ownership when demand is developed. MPDC and the Crown must also receive the regulated rate of return for their direct participation, with some flexibility in terms of how the return is comprised. MPDC and the Crown also receive a significant indirect benefit through GDP growth that results and improvement in social wellbeing.

# Annex Two: Employment & Training Hub Outline

This annex provides an outline of the emerging Waharoa Employment & Training Hub plan.

### Overview

Ngāti Hauā Iwi members are the life force of Waharoa. Following a hui at the Raungaiti Marae on 07/08/19, to discuss improving local employment connection, the concept of a Ngāti Hauā led Employment and Training Hub, located in the community, emerged.

Significant barriers to employment connection exist within the community. Intergenerational unemployment, loss of connection and confidence, drug dependency, lack of transport to get to and from work, suitable work attire, CV and interview skills are just some of the complex set of factors that contribute to the challenge. Waharoa has a youthful population, with a median age of 28.5 years and helping youth and young people is a priority. However, there are also older community members, who are keen to work but need help to secure suitable employment.

### **Governance and Management**

Durable solutions can only come through supporting Ngāti Hauā leaders in the community. Accordingly, the Employment and Training Hub will be governed and managed by the Ngāti Hauā Iwi Trust. An Employment & Training Hub Manager will be appointed and report into the General Manager of the Trust.

Recruitment of the right Hub Leader is critical. We do have a senior Ngāti Hauā leader with considerable and respected standing in the community, whom we are hopeful will be able to take-up the role. This will be on a part-time/significant time seconded basis but must enable other employment needs to be met.

### Fit with existing lwi employment and training – Peria Hub

Ngāti Hauā currently has a growing pipeline of talent based at Mangateparu School – Peria Hub (Agri-Tech hub). Part of the Mangateparu School site has been renovated to deliver horticultural based training programs in partnership with Wintec. This Hub was launched in February 2019 and currently has 11 NEET students from Ngāti Hauā attending. Ngāti Hauā Iwi Trust have entered into a partnership with Waikato Tainui & MSD to establish an Employment Broker position focused on assisting Ngāti Hauā tribal members into jobs, apprenticeships and cadetships.

As the needs of Waharoa Iwi are judged to be both specific and acute, the Waharoa Hub will be managed and run separately.

This does not preclude, that in the future, when specific and acute needs have been addressed, that a merging of the Hubs will make good sense. However, this is not for today and the funding sought is specifically for employment and training connection in Waharoa.

In similar vein, the Ruapehu Recruitment model has been studied. Local lwi established and Employment and Training Hub for the communities of Ohukune, Raetihi and Waioru. Over time, they have evolved their Hub into a community recruitment business, that is self-funding. Ruhapehu Recruitment is now providing community employment needs and training but also valued by local businesses for the service they provide.

Ruhapehu Recruitment does provide a vision for the future. But given the depth of challenge for Waharoa, we are reluctant to layer any other objectives at this stage.

### **Training Provision and throughput**

The budget allows for \$250k per half year for third party training providers. In the early stages of the Hub, a focus on NEET youth will be the priority. Based on research and recommendations we have a preferred programme with a proven track record of success with similar youth.

- Potential job/employer discussions are undertaken. The objective is to provide a ramp for graduating youth into these roles.
- NEET youth candidate meetings to assess needs, requirements and status
- A Marae based programme for ~20 youth over a 10-day period. Focus on culture, life skills, personal confidence and resilience, working in teams and being drug and alcohol free.
- For 10-12 trainees, a skill specific intensive 10-day programme follows. This is tailored to the end-game role specific skill requirements.

In calendar 2020, the running of three of these programmes is envisaged.

In addition to the above, a strong focus will be placed on driver licence training, including Learners Licence. This has been identified as a barrier. Many NEET youth do not have good literacy skills and thus do not achieve their Learners Licence. With no Public Transport available, this in turn locks them out of employment mobility and all roles for which a driver's licence is a requirement.

### **Facilities and Operating costs**

The ex-gratia use of a former Community Play Centre, owned by the MPDC, is hoped for. Fit-out and furniture to make it suitable for study/lecture/presentation/office etc will be necessary, with the costs of same not having been assessed at this time.

It will be important for the Hub to have the resources to ensure graduates can get to/from work. The growth of new roles in Waharoa itself will probably take 24 months to really gain traction. Hence a number of the initial roles are likely to be District based. As noted, with no Public Transport all transport is private. Reliance on whanau to provide transport, or to loan of a vehicle are all points of potential failure that must be mitigated.