Firstgas

AMP Appendices

Distribution

30 September 2025

Introduction

This document sets out a set of appendices to the Firstgas gas distribution asset management plan (AMP) for 2025, which can be found here.

The structure of the 2025 AMP appendices is set out in the following table.

AMP Appendices

Appendices		Description
A	**Glossary**	Sets out key terms and abbreviations
B	**Information disclosure Schedules**	AMP disclosure schedules required by Commerce Commission
C	**Asset management approach**	Overview of our approach to asset management
D	**Lifecycle management**	Explains our lifecycle-focused approach to managing our distribution assets
E	**Network development**	Explains our approach to developing our distribution network
F	**Compliance schedule**	Sets out how the AMP addresses relevant Information Disclosure requirements
G	**Director certificate**	A copy of the AMP's director certification

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Appendix A. GLOSSARY

TERM	DEFINITION
AI	Artificial intelligence
ALARP	As low as reasonably practicable.
AMMAT	Asset management maturity assessment tool.
AMP	Asset management plan
AMS	Asset management system
Capex	Capital expenditure – expenditure used to create new or upgrade existing assets
CIMS	Coordinated incident management system
COTS	Commercial off the shelf – terminology for technology solutions that are ready-made, vendor-supported products that can be configured or customised to meet specific organisational needs
CP	Cathodic protection
CPI	Consumer price index
DCVG	Direct current voltage gradient – survey technique used for assessing the effectiveness of corrosion protection on buried steel pipelines
DFA	Delegated financial authority
DPP	Default price-quality path
EAM	Enterprise asset management
FY26	Financial year 2026 – refers to our financial year from 1 October 2025 to 30 September 2026
GDB	Gas distribution business
GIS	Geographic information system
GJ	Gigajoule
GTB	Gas transmission business
HSE	Health safety environment
ICP	Installation control point
ICT	Information communications technology
ISO 55000	International standard for asset management
IT	Information technology
KPI	Key performance indicator
MAOP	Maximum allowable operating pressure
OEM	Original equipment manufacturer
Opex	Operational expenditure
PRE	Public reported escapes
RCMI	Routine corrective maintenance and inspections
RTE	Response time to emergencies
SaaS	Software as a solution
SAIDI	System average interruption duration index
SAIFI	System average interruption frequency index
SAMP	Strategic asset management plan
SCADA	Supervisory control and data acquisition

Term	Definition
SCMH	Standard cubic meters per hour
SIE	Service interruptions emergencies
TJ	Terajoule

Appendix B. INFORMATION DISCLOSURE SCHEDULES

This section includes the following Information Disclosure Schedules:

- Schedule 11a – report on forecast capital expenditure
- Schedule 11b – report on forecast operational expenditure
- Schedule 12a – report on asset condition
- Schedule 12b – report on forecast utilisation
- Schedule 12c – report on forecast demand
- Schedule 13 – report on AMMAT
- Schedule 14a – commentary on escalation

Firstgas' approach to forecast escalation is explained in Schedule 14a. This provides an explanation for differences between nominal and constant price capital expenditure forecasts (Schedule 11a) and operational expenditure (Schedule 11b).

Schedule 11a – report on forecast capital expenditure

11a(i): Expenditure on Assets Forecast

Category	RY25 $000 (nominal)	RY26 $000 (nominal)	RY27 $000 (nominal)	RY28 $000 (nominal)	RY29 $000 (nominal)	RY30 $000 (nominal)	RY31 $000 (nominal)	RY32 $000 (nominal)	RY33 $000 (nominal)	RY34 $000 (nominal)	RY35 $000 (nominal)
Consumer connection	2,740	1,204	1,108	1,019	937	862	793	729	671	617	568
System growth	1,071	1,191	1,096	1,008	927	853	784	721	664	610	561
Asset replacement and renewal	2,325	4,200	4,355	4,134	4,061	4,206	3,495	3,601	3,612	3,691	3,772
Asset relocations	176	520	418	442	428	435	444	454	464	474	485
Quality of supply	-	-	-	-	-	-	-	-	-	-	-
Legislative and regulatory	3	-	-	-	-	-	-	-	-	-	-
Other Reliability, Safety and Environment	1,019	106	485	496	467	478	409	418	383	449	459
Total reliability, safety and environment	**1,022**	**106**	**485**	**496**	**467**	**478**	**409**	**418**	**383**	**449**	**459**
Expenditure on network assets	**7,333**	**7,222**	**7,462**	**7,099**	**6,821**	**6,834**	**5,926**	**5,924**	**5,794**	**5,842**	**5,845**
Expenditure on non-network assets	223	264	286	213	219	220	225	230	235	242	251
Expenditure on assets	**7,556**	**7,486**	**7,748**	**7,312**	**7,040**	**7,054**	**6,151**	**6,154**	**6,028**	**6,084**	**6,096**
Cost of financing	30	25	26	24	24	23	18	19	19	19	20
Value of capital contributions	653	1,774	1,919	1,817	1,690	1,850	1,977	1,860	1,752	1,654	1,565
Value of vested assets											
Capital expenditure forecast	**6,933**	**5,737**	**5,855**	**5,519**	**5,373**	**5,226**	**4,192**	**4,313**	**4,295**	**4,450**	**4,551**
Assets commissioned	6,483	5,975	5,832	5,586	5,402	5,255	4,398	4,289	4,299	4,419	4,531

11a(i): Expenditure on Assets Forecast

Category	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)	RY31 $000 (constant)	RY32 $000 (constant)	RY33 $000 (constant)	RY34 $000 (constant)	RY35 $000 (constant)
Consumer connection	2,740	1,179	1,061	955	859	773	696	626	564	507	457
System growth	1,071	1,166	1,049	944	850	765	688	620	558	502	452
Asset replacement and renewal	2,325	4,110	4,170	3,873	3,723	3,773	3,068	3,093	3,035	3,035	3,035
Asset relocations	176	509	400	414	393	390	390	390	390	390	390
Quality of supply	-	-	-	-	-	-	-	-	-	-	-
Legislative and regulatory	3	-	-	-	-	-	-	-	-	-	-
Other Reliability, Safety and Environment	1,019	104	465	465	429	429	359	359	322	369	369
Total reliability, safety and environment	**1,022**	**104**	**465**	**465**	**429**	**429**	**359**	**359**	**322**	**369**	**369**
Expenditure on network assets	**7,333**	**7,066**	**7,145**	**6,651**	**6,253**	**6,129**	**5,201**	**5,087**	**4,868**	**4,803**	**4,702**
Expenditure on non-network assets	223	258	274	199	201	197	197	197	197	199	202
Expenditure on assets	**7,556**	**7,325**	**7,418**	**6,850**	**6,453**	**6,326**	**5,398**	**5,285**	**5,065**	**5,002**	**4,904**
Research and development	-	-	-	-	-	-	-	-	-	-	-

11a(i): Difference between nominal and constant price forecasts

Category	RY25 $000 (difference)	RY26 $000 (difference)	RY27 $000 (difference)	RY28 $000 (difference)	RY29 $000 (difference)	RY30 $000 (difference)	RY31 $000 (difference)	RY32 $000 (difference)	RY33 $000 (difference)	RY34 $000 (difference)	RY35 $000 (difference)
Consumer connection	-	26	47	64	78	89	97	103	107	110	111
System growth	-	26	47	64	77	88	96	102	106	109	110
Asset replacement and renewal	-	90	185	261	339	434	428	509	577	657	738
Asset relocations	-	11	18	28	36	45	54	64	74	84	95
Quality of supply	-	-	-	-	-	-	-	-	-	-	-
Legislative and regulatory	-	-	-	-	-	-	-	-	-	-	-
Other Reliability, Safety and Environment	-	2	21	31	39	49	50	59	61	80	90
Total reliability, safety and environment	**-**	**2**	**21**	**31**	**39**	**49**	**50**	**59**	**61**	**80**	**90**
Expenditure on network assets	**-**	**155**	**318**	**449**	**569**	**705**	**725**	**837**	**926**	**1,039**	**1,143**
Expenditure on non-network assets	-	6	12	13	18	23	28	32	38	43	49
Expenditure on assets	**-**	**161**	**330**	**462**	**587**	**727**	**753**	**870**	**963**	**1,082**	**1,192**

11a(ii): Consumer Connection

GDB connection type	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
Mains Extensions/Subdivsions	-	-	-	-	-	-
Service Connections - Residential	2,740	1,179	1,061	955	859	773
Service Connections - Commercial	-	-	-	-	-	-
Customer Easements	-	-	-	-	-	-
Consumer connection expenditure	**2,740**	**1,179**	**1,061**	**955**	**859**	**773**
Capital contributions funding consumer connection	356	695	742	668	601	773
Consumer connection less capital contributions	**2,384**	**483**	**318**	**286**	**258**	**-**

11a(iii): System Growth

	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
Intermediate pressure: Main pipe						
Intermediate pressure: Service pipe						
Intermediate pressure: Stations						
Intermediate pressure: Line valve						
Intermediate pressure: Special crossings						
Intermediate Pressure total						
Medium pressure: Main pipe	1,071	1,166	1,049	944	850	765
Medium pressure: Service pipe						
Medium pressure: Stations						
Medium pressure: Line valve						
Medium pressure: Special crossings						
Medium Pressure total	**1,071**	**1,166**	**1,049**	**944**	**850**	**765**
Low Pressure: Main pipe						
Low Pressure: Service pipe						
Low Pressure: Line valve						
Low Pressure: Special crossings						
Low Pressure total						
Other network assets: Monitoring and control systems						
Other network assets: Cathodic protection systems						
Other network assets: Other assets (other than above)						
Other network assets total						
System growth expenditure	**1,071**	**1,166**	**1,049**	**944**	**850**	**765**
Capital contributions funding system growth	139	583	734	661	595	535
System growth less capital contributions	**932**	**583**	**315**	**283**	**255**	**229**

11a(iv): Asset Replacement and Renewal

	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
Intermediate pressure: Main pipe	-	-	-	-	-	-
Intermediate pressure: Service pipe	-	-	-	-	-	-
Intermediate pressure: Stations	159	101	240	240	240	240
Intermediate pressure: Line valve	-	50	65	50	50	50
Intermediate pressure: Special crossings	-	600	184	-	-	-
Intermediate Pressure total	**159**	**751**	**489**	**290**	**290**	**290**
Medium pressure: Main pipe	1,149	2,321	3,113	3,100	3,198	3,218
Medium pressure: Service pipe	118	-	18	18	-	-
Medium pressure: Stations	-	50	65	40	40	50
Medium pressure: Line valve	221	145	65	40	40	50
Medium pressure: Special crossings	186	50	-	220	75	75
Medium Pressure total	**1,674**	**2,566**	**3,260**	**3,418**	**3,353**	**3,393**
Low Pressure: Main pipe	-	-	-	-	-	-
Low Pressure: Service pipe	-	-	-	-	-	-
Low Pressure: Line valve	-	-	-	-	-	-
Low Pressure: Special crossings	-	-	-	-	-	-
Low Pressure total	**-**	**-**	**-**	**-**	**-**	**-**
Other network assets: Monitoring and control systems	-	473	260	15	15	15
Other network assets: Cathodic protection systems	63	295	136	136	50	50
Other network assets: Other assets (other than above)	430	25	25	14	15	25
Other network assets total	**493**	**793**	**421**	**165**	**80**	**90**
Asset replacement and renewal expenditure	**2,325**	**4,110**	**4,170**	**3,873**	**3,723**	**3,773**
Capital contributions funding asset replacement and renewal						
Asset replacement and renewal less capital contributions	**2,325**	**4,110**	**4,170**	**3,873**	**3,723**	**3,773**

11a(v): Asset Relocations

Project or programme	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
All other projects or programmes - asset relocations	176	509	400	414	393	390
Asset relocations expenditure	**176**	**509**	**400**	**414**	**393**	**390**
Capital contributions funding asset relocations	158	458	360	373	353	351
Asset relocations less capital contributions	**18**	**51**	**40**	**41**	**39**	**39**

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11a(vi): Quality of Supply

Project or programme	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
All other projects or programmes - quality of supply						
Quality of supply expenditure						
Capital contributions funding quality of supply						
Quality of supply less capital contributions						

11a(vii): Legislative and Regulatory

Project or programme	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
All other projects or programmes - legislative and regulatory						
Legislative and regulatory expenditure						
Capital contributions funding legislative and regulatory						
Legislative and regulatory less capital contributions						

11a(viii): Other Reliability, Safety and Environment

Project or programme	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
All other projects or programmes - other RSE	1,019	104	465	465	429	429
Other reliability, safety and environment total	**1,019**	**104**	**465**	**465**	**429**	**429**
Capital contributions funding other RSE						
Other RSE less capital contributions	**1,019**	**104**	**465**	**465**	**429**	**429**

11a(ix): Non-Network Assets

Project or programme	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)
Routine - ICT	110	60	31	31	31	31
Routine - buildings and facilities	59	42	43	19	20	16
Routine - plant and equipment	54	157	200	150	150	150
All other projects or programmes - routine expenditure						
Routine expenditure	**223**	**258**	**274**	**199**	**201**	**197**
Atypical expenditure						
Atypical expenditure						
Atypical expenditure						
Atypical expenditure						
Atypical expenditure						
All other projects or programmes - atypical expenditure						
Atypical expenditure	-	-	-	-	-	-
Expenditure on non-network assets	**223**	**258**	**274**	**199**	**201**	**197**

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Schedule 11b – report on forecast operational expenditure

11b: Expenditure on Assets Forecast

Category	RY25 $000 (nominal)	RY26 $000 (nominal)	RY27 $000 (nominal)	RY28 $000 (nominal)	RY29 $000 (nominal)	RY30 $000 (nominal)	RY31 $000 (nominal)	RY32 $000 (nominal)	RY33 $000 (nominal)	RY34 $000 (nominal)	RY35 $000 (nominal)
Service interruptions, incidents and emergencies	1,508	1,623	1,658	1,695	1,732	1,770	1,809	1,849	1,890	1,931	1,974
Routine and corrective maintenance and inspection	3,699	4,162	4,776	4,881	5,261	5,656	5,780	5,907	6,037	6,170	6,306
Asset replacement and renewal											
Network opex	**5,207**	**5,785**	**6,434**	**6,576**	**6,993**	**7,426**	**7,589**	**7,756**	**7,927**	**8,101**	**8,280**
System operations and network support	2,005	3,142	3,791	3,875	3,960	4,047	4,136	4,227	4,320	4,415	4,512
Business support	3,550	3,762	3,845	3,929	3,997	4,071	4,160	4,266	4,316	4,411	4,554
Non-network opex	**5,554**	**6,904**	**7,636**	**7,804**	**7,957**	**8,118**	**8,297**	**8,494**	**8,636**	**8,826**	**9,067**
Operational expenditure	**10,761**	**12,689**	**14,071**	**14,380**	**14,950**	**15,544**	**15,886**	**16,250**	**16,563**	**16,927**	**17,346**

11b: Expenditure on Assets Forecast

Category	RY25 $000 (constant)	RY26 $000 (constant)	RY27 $000 (constant)	RY28 $000 (constant)	RY29 $000 (constant)	RY30 $000 (constant)	RY31 $000 (constant)	RY32 $000 (constant)	RY33 $000 (constant)	RY34 $000 (constant)	RY35 $000 (constant)
Service interruptions, incidents and emergencies	1,508	1,588	1,588	1,588	1,588	1,588	1,588	1,588	1,588	1,588	1,588
Routine and corrective maintenance and inspection	3,699	4,073	4,573	4,573	4,823	5,073	5,073	5,073	5,073	5,073	5,073
Asset replacement and renewal											
Network opex	**5,207**	**5,660**	**6,160**	**6,160**	**6,410**	**6,660**	**6,660**	**6,660**	**6,660**	**6,660**	**6,660**
System operations and network support	2,005	3,074	3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630
Business support	3,550	3,681	3,681	3,681	3,664	3,651	3,651	3,664	3,626	3,626	3,664
Non-network opex	**5,554**	**6,755**	**7,311**	**7,311**	**7,294**	**7,281**	**7,281**	**7,294**	**7,256**	**7,256**	**7,294**
Operational expenditure	**10,761**	**12,415**	**13,471**	**13,471**	**13,704**	**13,941**	**13,941**	**13,954**	**13,916**	**13,916**	**13,954**
Research and Development	-	-	-	-	-	-	-	-	-	-	-
Insurance	-	-	-	-	-	-	-	-	-	-	-

11b: Difference between nominal and constant price forecasts

Category	RY25 $000 (difference)	RY26 $000 (difference)	RY27 $000 (difference)	RY28 $000 (difference)	RY29 $000 (difference)	RY30 $000 (difference)	RY31 $000 (difference)	RY32 $000 (difference)	RY33 $000 (difference)	RY34 $000 (difference)	RY35 $000 (difference)
Service interruptions, incidents and emergencies	-	35	71	107	144	183	221	261	302	344	386
Routine and corrective maintenance and inspection	-	90	203	308	439	583	708	835	965	1,097	1,233
Asset replacement and renewal											
Network opex	-	**125**	**274**	**416**	**583**	**766**	**929**	**1,096**	**1,267**	**1,441**	**1,619**
System operations and network support	-	68	161	245	330	417	506	597	690	785	882
Business support	-	81	164	248	333	420	509	603	690	785	891
Non-network opex	-	**149**	**325**	**493**	**663**	**837**	**1,016**	**1,200**	**1,380**	**1,570**	**1,773**
Operational expenditure	-	**273**	**599**	**909**	**1,246**	**1,603**	**1,945**	**2,296**	**2,646**	**3,011**	**3,392**

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Schedule 12a – report on asset condition

12a: Report on Asset Condition

Operating Pressure	Asset category	Asset class	Units	Grade 1	Grade 2	Grade 3	Grade 4	Grade unknown	Data accuracy (1–4)	% of asset forecast to be replaced in next 5 years
Intermediate Pressure	Main pipe	IP PE main pipe	km							
Intermediate Pressure	Main pipe	IP steel main pipe	km			100%			3	-
Intermediate Pressure	Main pipe	IP other main pipe	km							
Intermediate Pressure	Service pipe	IP PE service pipe	km							
Intermediate Pressure	Service pipe	IP steel service pipe	km			100%			3	-
Intermediate Pressure	Service pipe	IP other service pipe	km							
Intermediate Pressure	Stations	Intermediate pressure DRS	No.	0%	6%	38%	56%		3	6.00%
Intermediate Pressure	Line valve	IP line valves	No.	10%	14%	36%	40%		3	2.00%
Intermediate Pressure	Special crossings	IP crossings	No.	32%	9%	50%	9%		3	-
Medium Pressure	Main pipe	MP PE main pipe	km		1%	10%	89%		3	-
Medium Pressure	Main pipe	MP steel main pipe	km			100%			3	-
Medium Pressure	Main pipe	MP other main pipe	km							
Medium Pressure	Service pipe	MP PE service pipe	km		2%	8%	90%		3	-
Medium Pressure	Service pipe	MP steel service pipe	km			100%			3	-
Medium Pressure	Service pipe	MP other service pipe	km							
Medium Pressure	Stations	Medium pressure DRS	No.			42%	58%		3	-
Medium Pressure	Line valve	MP line valves	No.	16%	7%	31%	46%		3	0%
Medium Pressure	Special crossings	MP special crossings	No.	27%	14%	43%	16%		3	-
Low Pressure	Main pipe	LP PE main pipe	km		10%	22%	68%		3	-
Low Pressure	Main pipe	LP steel main pipe	km							
Low Pressure	Main pipe	LP other main pipe	km							
Low Pressure	Service pipe	LP PE service pipe	km		10%	22%	68%		3	-
Low Pressure	Service pipe	LP steel service pipe	km			100%			3	-
Low Pressure	Service pipe	LP other service pipe	km							
Low Pressure	Line valve	LP line valves	No.			46%	54%		3	-
Low Pressure	Special crossings	LP special crossings	No.							
All	Monitoring and control systems	Remote terminal units	No.	89%	11%				3	100%
All	Cathodic protection systems	Cathodic protection	No.		2%	85%	13%		3	2.0%

Schedule 12b – report on forecast utilisation

12b: Forecast Utilisation of Heavily Utilised Pipelines

Region	Network	Pressure system	Nominal operating pressure (NOP) (kPa)	Minimum operating pressure (MinOP) (kPa)	Total capacity at MinOP (scmh)	Remaining capacity at MinOP (scmh)	Utilisation |scmh |RY25	scmh | RY26	scmh | RY27	scmh | RY28	scmh | RY29	scmh | RY30	Utilisation | kPa | RY25	kPa | RY26	kPa | RY27	kPa | RY28	kPa | RY29	kPa | RY30	Comment
Waikato	Hamilton	Hamilton MP4	400	200	13,460	1,585	11,614	11,440	11,266	11,091	10,917	10,742	241	244	247	250	253	256	During 2024, Hamilton MP4 Minimum pressure was 231 kPa at an estimated MP4 flow rate of 11,875 scmh.

12b: Forecast Utilisation of Heavily Utilised Pipelines

Disclaimer for supply enquiries
This information in the table contains modelled estimates of utilisation and capacity. Any interested party seeking to invest in supply from First Gas distribution networks should their retailer and confirm availability of capacity.

12b: Forecast Utilisation of Heavily Utilised Pipelines

Disclaimer for supply enquiries
1. A "heavily utilised"pressure system is a pressure system where the modelled flow rate, at system peak during 2024 is 500 scmh or greater and it's utilisation pressure drop equals or exceeds 40% from the nominal operating pressure (NOP). First Gas security standard set the MinOP at 50% of NOP.
2. The total capacity of a "heavily utilised" pressure system is determined by adjusting the flow rates in the model until the pressure system allowable MinOP is reached. The remaining capacity is calculated by subtracting the current year flow rate of the pressure system from the total capacity.
3. A forecast flow is determined for each year and this is applied to the model by proportioning the flow evenly across the system.
4. The observed mininum pressure in the Hamilton MP4 system was 231 kPa which is slightly lower than the high utilisation pressure threshold of 240 kPa. The MP4 piping system is not undersized and the root cause of the lower than expected pressure is being investigated. Modelling studies have indicated that there is restriction somewhere in the system so pressure recorders are being deployed to identify the possible location of the restriction (s).

Schedule 12c – report on forecast demand

SCHEDULE 12c: REPORT ON FORECAST DEMAND

12c(i): Consumer Connections

Category	RY25	RY26	RY27	RY28	RY29	RY30
Residential	798	479	407	346	294	250
Commercial	52	32	29	26	24	21
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
Connections total	**850**	**511**	**436**	**372**	**318**	**271**

12c(ii): Gas Delivered

Category	RY25	RY26	RY27	RY28	RY29	RY30
Number of ICPs at year end (at year end)	63,901	63,912	63,828	63,572	63,116	62,418
Maximum daily load (GJ per day)	25,675	27,396	26,526	25,633	24,535	23,415
Maximum monthly load (GJ per month)	795,930	849,274	822,313	794,632	760,589	725,868
Number of directly billed ICPs (at year end)	-	-	-	-	-	-
Total gas conveyed (GJ per annum)	8,439,226	8,284,217	8,021,234	7,751,214	7,419,146	7,080,460
Average daily delivery (GJ per day)	**23,121**	**22,696**	**21,976**	**21,236**	**20,326**	**19,399**
Load factor	**88.36%**	**81.29%**	**81.29%**	**81.29%**	**81.29%**	**81.29%**

Schedule 13 – report on AMMAT

13(i): Asset Management Capability, Self Assessment Questions

Question No.	Function	Question	Score	Evidence—Summary	Why	Who	Record/documented Information	Assessed maturity level
3	**Asset management policy**	To what extent has an asset management policy been documented, authorised and communicated?	3	Firstgas has a published AM Policy available through the Nucleus document management system	Widely used AM practice standards require an organisation to document, authorise and communicate its asset management policy (eg, as required in PAS 55 para 4.2 i). A key pre-requisite of any robust policy is that the organisation's top management must be seen to endorse and fully support it. Also vital to the effective implementation of the policy, is to tell the appropriate people of its content and their obligations under it. Where an organisation outsources some of its asset-related activities, then these people and their organisations must equally be made aware of the policy's content. Also, there may be other stakeholders, such as regulatory authorities and shareholders who should be made aware of it.	Top management. The management team that has overall responsibility for asset management.	The organisation's asset management policy, its organisational strategic plan, documents indicating how the asset management policy was based upon the needs of the organisation and evidence of communication.	The asset management policy is authorised by top management, is widely and effectively communicated to all relevant employees and stakeholders, and used to make these persons aware of their asset related obligations.
10	**Asset management strategy**	What has the organisation done to ensure that its asset management strategy is consistent with other appropriate organisational policies and strategies, and the needs of stakeholders?	2	Strategic asset management plan (SAMP) is under development and previous asset strategies require updates to suit current and future operations. Evidence of some disconnection to organisation objectives.	In setting an organisation's asset management strategy, it is important that it is consistent with any other policies and strategies that the organisation has and has taken into account the requirements of relevant stakeholders. This question examines to what extent the asset management strategy is consistent with other organisational policies and strategies (eg, as required by PAS 55 para 4.3.1 b) and has taken account of stakeholder requirements as required by PAS 55 para 4.3.1 c). Generally, this will take into account the same polices, strategies and stakeholder requirements as covered in drafting the asset management policy but at a greater level of detail.	Top management. The organisation's strategic planning team. The management team that has overall responsibility for asset management.	The organisation's asset management strategy document and other related organisational policies and strategies. Other than the organisation's strategic plan, these could include those relating to health and safety, environmental, etc. Results of stakeholder consultation.	Some of the linkages between the long-term asset management strategy and other organisational policies, strategies and stakeholder requirements are defined but the work is fairly well advanced but still incomplete.
11	**Asset management strategy**	In what way does the organisation's asset management strategy take account of the lifecycle of the assets, asset types and asset systems over which the organisation has stewardship?	2	Some assets strategies are present, while other asset require strategies to be developed. Lifecycle strategies for some assets require updates to suit current and future operating environment.	Good asset stewardship is the hallmark of an organisation compliant with widely used AM standards. A key component of this is the need to take account of the lifecycle of the assets, asset types and asset systems. (For example, this requirement is recognised in 4.3.1 d) of PAS 55). This question explores what an organisation has done to take lifecycle into account in its asset management strategy.	Top management. People in the organisation with expert knowledge of the assets, asset types, asset systems and their associated life-cycles. The management team that has overall responsibility for asset management. Those responsible for developing and adopting methods and processes used in asset management	The organisation's documented asset management strategy and supporting working documents.	The long-term asset management strategy takes account of the lifecycle of some, but not all, of its assets, asset types and asset systems.
26	**Asset management plan(s)**	How does the organisation establish and document its asset management plan(s) across the life cycle activities of its assets and asset systems?	2	Asset class strategy documents are under development and will align with the finalised SAMP and business objectives. An overview of asset lifecycle management is document in our asset management plan.	The asset management strategy need to be translated into practical plan(s) so that all parties know how the objectives will be achieved. The development of plan(s) will need to identify the specific tasks and activities required to optimize costs, risks and performance of the assets and/or asset system(s), when they are to be carried out and the resources required.	The management team with overall responsibility for the asset management system. Operations, maintenance and engineering managers.	The organisation's asset management plan(s).	The organisation is in the process of putting in place comprehensive, documented asset management plan(s) that cover all life cycle activities, clearly aligned to asset management objectives and the asset management strategy.
27	**Asset management plan(s)**	How has the organisation communicated its plan(s) to all relevant parties to a level of detail appropriate to the receiver's role in their delivery?	3	Regular meetings and presentations from general and senior managers about the need to update current asset strategies has improved communication of plans. Yearly stakeholder presentation and social media promotion captures wider audience.	Plans will be ineffective unless they are communicated to all those, including contracted suppliers and those who undertake enabling function(s). The plan(s) need to be communicated in a way that is relevant to those who need to use them.	The management team with overall responsibility for the asset management system. Delivery functions and suppliers.	Distribution lists for plan(s). Documents derived from plan(s) which detail the receivers role in plan delivery. Evidence of communication.	The plan(s) are communicated to all relevant employees, stakeholders and contracted service providers to a level of detail appropriate to their participation or business interests in the delivery of the plan(s) and there is confirmation that they are being used effectively.
29	**Asset management plan(s)**	How are designated responsibilities for delivery of asset plan actions documented?	3	The Chief Operating Officer is responsible for the delivery of the asset management plans. Asset engineers are responsible for maintaining plans and asset planning for ensuring plans are being executed. These responsibilities are documented in position descriptions as appropriate.	The implementation of asset management plan(s) relies on (1) actions being clearly identified, (2) an owner allocated and (3) that owner having sufficient delegated responsibility and authority to carry out the work required. It also requires alignment of actions across the organisation. This question explores how well the plan(s) set out responsibility for delivery of asset plan actions.	The management team with overall responsibility for the asset management system. Operations, maintenance and engineering managers. If appropriate, the performance management team.	The organisation's asset management plan(s). Documentation defining roles and responsibilities of individuals and organisational departments.	Asset management plan(s) consistently document responsibilities for the delivery actions and there is adequate detail to enable delivery of actions. Designated responsibility and authority for achievement of asset plan actions is appropriate.
31	**Asset management plan(s)**	What has the organisation done to ensure that appropriate arrangements are made available for the efficient and cost effective implementation of the plan(s)? (Note this is about resources and enabling support)	2	A contractor is utilised for the execution of works. Quarterly meetings are completed and contract KPIs reviewed. . Further refinements are required to improve internal resource capability.	It is essential that the plan(s) are realistic and can be implemented, which requires appropriate resources to be available and enabling mechanisms in place. This question explores how well this is achieved. The plan(s) not only need to consider the resources directly required and timescales, but also the enabling activities, including for example, training requirements, supply chain capability and procurement timescales.	The management team with overall responsibility for the asset management system. Operations, maintenance and engineering managers. If appropriate, the performance management team. If appropriate, the performance management team. Where appropriate the procurement team and service providers working on the organisation's asset-related activities.	The organisation's asset management plan(s). Documented processes and procedures for the delivery of the asset management plan.	The organisation has arrangements in place for the implementation of asset management plan(s) but the arrangements are not yet adequately efficient and/or effective. The organisation is working to resolve existing weaknesses.
33	**Contingency planning**	What plan(s) and procedure(s) does the organisation have for identifying and responding to incidents and emergency situations and ensuring continuity of critical asset management activities?	3	Firstgas has comprehensive Emergency response plans and crisis management plans to respond to incidents and emergencies. The plans are aligned to the New Zealand Coordinated Incident Management System.	Widely used AM practice standards require that an organisation has plan(s) to identify and respond to emergency situations. Emergency plan(s) should outline the actions to be taken to respond to specified emergency situations and ensure continuity of critical asset management activities including the communication to, and involvement of, external agencies. This question assesses if, and how well, these plan(s) triggered, implemented and resolved in the event of an incident. The plan(s) should be appropriate to the level of risk as determined by the organisation's risk assessment methodology. It is also a requirement that relevant personnel are competent and trained.	The manager with responsibility for developing emergency plan(s). The organisation's risk assessment team. People with designated duties within the plan(s) and procedure(s) for dealing with incidents and emergency situations.	The organisation's plan(s) and procedure(s) for dealing with emergencies. The organisation's risk assessments and risk registers.	Appropriate emergency plan(s) and procedure(s) are in place to respond to credible incidents and manage continuity of critical asset management activities consistent with policies and asset management objectives. Training and external agency alignment is in place.
37	**Structure, authority and responsibilities**	What has the organisation done to appoint member(s) of its management team to be responsible for ensuring that the organisation's assets deliver the requirements of the asset management strategy, objectives and plan(s)?	3	Firstgas has appointed staff who have responsibility for ensuring that the organisation's assets deliver the requirements of the asset management strategy, objectives and plan(s). They have been given the necessary authority to achieve this.	In order to ensure that the organisation's assets and asset systems deliver the requirements of the asset management policy, strategy and objectives responsibilities need to be allocated to appropriate people who have the necessary authority to fulfil their responsibilities. (This question, relates to the organisation's assets eg, para b), s 4.4.1 of PAS 55, making it therefore distinct from the requirement contained in para a), s 4.4.1 of PAS 55).	Top management. People with management responsibility for the delivery of asset management policy, strategy, objectives and plan(s). People working on asset-related activities.	Evidence that managers with responsibility for the delivery of asset management policy, strategy, objectives and plan(s) have been appointed and have assumed their responsibilities. Evidence may include the organisation's documents relating to its asset management system, organisational charts, job descriptions of post-holders, annual targets/objectives and personal development plan(s) of post-holders as appropriate.	The appointed person or persons have full responsibility for ensuring that the organisation's assets deliver the requirements of the asset management strategy, objectives and plan(s). They have been given the necessary authority to achieve this.

Question No.	Function	Question	Score	Evidence—Summary	Why	Who	Record/documented Information	Assessed maturity level
40	**Structure, authority and responsibilities**	What evidence can the organisation's top management provide to demonstrate that sufficient resources are available for asset management?	3	Project execution and maintenance KPIs track the completion of work against the schedules and identifies resource constraints, including specialist vendors, tools and equipment.	Optimal asset management requires top management to ensure sufficient resources are available. In this context the term 'resources' includes manpower, materials, funding and service provider support.	Top management. The management team that has overall responsibility for asset management. Risk management team. The organisation's managers involved in day-to-day supervision of asset-related activities, such as frontline managers, engineers, foremen and chargehands as appropriate.	Evidence demonstrating that asset management plan(s) and/or the process(es) for asset management plan implementation consider the provision of adequate resources in both the short and long term. Resources include funding, materials, equipment, services provided by third parties and personnel (internal and service providers) with appropriate skills competencies and knowledge.	An effective process exists for determining the resources needed for asset management and sufficient resources are available. It can be demonstrated that resources are matched to asset management requirements.
42	**Structure, authority and responsibilities**	To what degree does the organisation's top management communicate the importance of meeting its asset management requirements?	2	Driven from business strategy. KPI from Business Plan, quarterly business reviews. Driven from business strategy. KPI from BP, quarterly business reviews. Monthly reporting. BI Dashboard in flight. PDP and team goal setting. Business outside of operations require further work to link asset management with objectives.	Widely used AM practice standards require an organisation to communicate the importance of meeting its asset management requirements such that personnel fully understand, take ownership of, and are fully engaged in the delivery of the asset management requirements (eg, PAS 55 s 4.4.1 g).	Top management. The management team that has overall responsibility for asset management. People involved in the delivery of the asset management requirements.	Evidence of such activities as road shows, written bulletins, workshops, team talks and management walk-abouts would assist an organisation to demonstrate it is meeting this requirement of PAS 55.	Top management communicates the importance of meeting its asset management requirements but only to parts of the organisation.
45	**Outsourcing of asset management activities**	Where the organisation has outsourced some of its asset management activities, how has it ensured that appropriate controls are in place to ensure the compliant delivery of its organisational strategic plan, and its asset management policy and strategy?	2	A robust contractor management and consultancy process is in place, however it lacks some linkages back to AM policy and strategy for the engaged resources to understand plans.	Where an organisation chooses to outsource some of its asset management activities, the organisation must ensure that these outsourced process(es) are under appropriate control to ensure that all the requirements of widely used AM standards (eg, PAS 55) are in place, and the asset management policy, strategy objectives and plan(s) are delivered. This includes ensuring capabilities and resources across a time span aligned to life cycle management. The organisation must put arrangements in place to control the outsourced activities, whether it be to external providers or to other in-house departments. This question explores what the organisation does in this regard.	Top management. The management team that has overall responsibility for asset management. The manager(s) responsible for the monitoring and management of the outsourced activities. People involved with the procurement of outsourced activities. The people within the organisations that are performing the outsourced activities. The people impacted by the outsourced activity.	The organisation's arrangements that detail the compliance required of the outsourced activities. For example, this this could form part of a contract or service level agreement between the organisation and the suppliers of its outsourced activities. Evidence that the organisation has demonstrated to itself that it has assurance of compliance of outsourced activities.	Controls systematically considered but currently only provide for the compliant delivery of some, but not all, aspects of the organisational strategic plan and/or its asset management policy and strategy. Gaps exist.
48	**Training, awareness and competence**	How does the organisation develop plan(s) for the human resources required to undertake asset management activities - including the development and delivery of asset management strategy, process(es), objectives and plan(s)?	2	AM training carried out as required. requirements are not documented. This is an area under review for improvement.	There is a need for an organisation to demonstrate that it has considered what resources are required to develop and implement its asset management system. There is also a need for the organisation to demonstrate that it has assessed what development plan(s) are required to provide its human resources with the skills and competencies to develop and implement its asset management systems. The timescales over which the plan(s) are relevant should be commensurate with the planning horizons within the asset management strategy considers e.g. if the asset management strategy considers 5, 10 and 15 year time scales then the human resources development plan(s) should align with these. Resources include both 'in house' and external resources who undertake asset management activities.	Senior management responsible for agreement of plan(s). Managers responsible for developing asset management strategy and plan(s). Managers with responsibility for development and recruitment of staff (including HR functions). Staff responsible for training. Procurement officers. Contracted service providers.	Evidence of analysis of future work load plan(s) in terms of human resources. Document(s) containing analysis of the organisation's own direct resources and contractors resource capability over suitable timescales. Evidence, such as minutes of meetings, that suitable management forums are monitoring human resource development plan(s). Training plan(s), personal development plan(s), contract and service level agreements.	The organisation has developed a strategic approach to aligning competencies and human resources to the asset management system including the asset management plan but the work is incomplete or has not been consistently implemented.
49	**Training, awareness and competence**	How does the organisation identify competency requirements and then plan, provide and record the training necessary to achieve the competencies?	2	Our Learning Management System; AKO holds the required learning plans for roles. internal training modules and assessments are currently being developed/updated to cover these learning plans. Internal assessors are also being trained	Widely used AM standards require that organisations to undertake a systematic identification of the asset management awareness and competencies required at each level and function within the organisation. Once identified the training required to provide the necessary competencies should be planned for delivery in a timely and systematic way. Any training provided must be recorded and maintained in a suitable format. Where an organisation has contracted service providers in place then it should have a means to demonstrate that this requirement is being met for their employees. (eg, PAS 55 refers to frameworks suitable for identifying competency requirements).	Senior management responsible for agreement of plan(s). Managers responsible for developing asset management strategy and plan(s). Managers with responsibility for development and recruitment of staff (including HR functions). Staff responsible for training. Procurement officers. Contracted service providers.	Evidence of an established and applied competency requirements assessment process and plan(s) in place to deliver the required training. Evidence that the training programme is part of a wider, co-ordinated asset management activities training and competency programme. Evidence that training activities are recorded and that records are readily available (for both direct and contracted service provider staff) e.g. via organisation wide information system or local records database.	The organisation is the process of identifying competency requirements aligned to the asset management plan(s) and then plan, provide and record appropriate training. It is incomplete or inconsistently applied.
50	**Training, awareness and competence**	How does the organization ensure that persons under its direct control undertaking asset management related activities have an appropriate level of competence in terms of education, training or experience?	2	A robust contract and contractor management policy process is in place with training and competency requirements and the impacts of work loads are discussed during quarterly meetings and contract updates and KPIs.	A critical success factor for the effective development and implementation of an asset management system is the competence of persons undertaking these activities. organisations should have effective means in place for ensuring the competence of employees to carry out their designated asset management function(s). Where an organisation has contracted service providers undertaking elements of its asset management system then the organisation shall assure itself that the outsourced service provider also has suitable arrangements in place to manage the competencies of its employees. The organisation should ensure that the individual and corporate competencies it requires are in place and actively monitor, develop and maintain an appropriate balance of these competencies.	Managers, supervisors, persons responsible for developing training programmes. Staff responsible for procurement and service agreements. HR staff and those responsible for recruitment.	Evidence of a competency assessment framework that aligns with established frameworks such as the asset management Competencies Requirements Framework (Version 2.0); National Occupational Standards for Management and Leadership; UK Standard for Professional Engineering Competence, Engineering Council, 2005.	The organization is in the process of putting in place a means for assessing the competence of person(s) involved in asset management activities including contractors. There are gaps and inconsistencies.
53	**Communication, participation and consultation**	How does the organisation ensure that pertinent asset management information is effectively communicated to and from employees and other stakeholders, including contracted service providers?	2	Firstgas communication plans are primarily focused in external stakeholder. The need for better internal communications around the importance of Asset Management and the Asset Management systems is required.	Widely used AM practice standards require that pertinent asset management information is effectively communicated to and from employees and other stakeholders including contracted service providers. Pertinent information refers to information required in order to effectively and efficiently comply with and deliver asset management strategy, plan(s) and objectives. This will include for example the communication of the asset management policy, asset performance information, and planning information as appropriate to contractors.	Top management and senior management representative(s), employee's representative(s), employee's trade union representative(s); contracted service provider management and employee representative(s); representative(s) from the organisation's Health, Safety and Environmental team. Key stakeholder representative(s).	Asset management policy statement prominently displayed on notice boards, intranet and internet; use of organisation's website for displaying asset performance data; evidence of formal briefings to employees, stakeholders and contracted service providers; evidence of inclusion of asset management issues in team meetings and contracted service provider contract meetings; newsletters, etc.	The organisation has determined pertinent information and relevant parties. Some effective two way communication is in place but as yet not all relevant parties are clear on their roles and responsibilities with respect to asset management information.
59	**Asset Management System documentation**	What documentation has the organisation established to describe the main elements of its asset management system and interactions between them?	2	The Firstgas AMP references the main elements of the asset management system.	Widely used AM practice standards require an organisation maintain up to date documentation that ensures that its asset management systems (ie, the systems the organisation has in place to meet the standards) can be understood, communicated and operated. (eg, s 4.5 of PAS 55 requires the maintenance of up to date documentation of the asset management system requirements specified throughout s 4 of PAS 55).	The management team that has overall responsibility for asset management. Managers engaged in asset management activities.	The documented information describing the main elements of the asset management system (process(es)) and their interaction.	The organisation in the process of documenting its asset management system and has documentation in place that describes some, but not all, of the main elements of its asset management system and their interaction.

Question No.	Function	Question	Score	Evidence—Summary	Why	Who	Record/documented Information	Assessed maturity level
62	**Information management**	What has the organisation done to determine what its asset management information system(s) should contain in order to support its asset management system?	3	Documents define the data required to be stored in Maximo, Meridian (the technical engineering document vault), GIS and Nucleus document control system as primary asset information systems. These systems contain data to be able to support asset life cycle.	Effective asset management requires appropriate information to be available. Widely used AM standards therefore require the organisation to identify the asset management information it requires in order to support its asset management system. Some of the information required may be held by suppliers. The maintenance and development of asset management information systems is a poorly understood specialist activity that is akin to IT management but different from IT management. This group of questions provides some indications as to whether the capability is available and applied. Note: To be effective, an asset information management system requires the mobilisation of technology, people and process(es) that create, secure, make available and destroy the information required to support the asset management system.	The organisation's strategic planning team. The management team that has overall responsibility for asset management. Information management team. Operations, maintenance and engineering managers	Details of the process the organisation has employed to determine what its asset information system should contain in order to support its asset management system. Evidence that this has been effectively implemented.	The organisation has determined what its asset information system should contain in order to support its asset management system. The requirements relate to the whole life cycle and cover information originating from both internal and external sources.
63	**Information management**	How does the organisation maintain its asset management information system(s) and ensure that the data held within it (them) is of the requisite quality and accuracy and is consistent?	2	This assessment has highlighted that this area requires improvement. The current processes rely on individuals to manually manage data.	The response to the questions is progressive. A higher scale cannot be awarded without achieving the requirements of the lower scale. This question explores how the organisation ensures that information management meets widely used AM practice requirements (eg, s 4.4.6 (a), (c) and (d) of PAS 55).	The management team that has overall responsibility for asset management. Users of the organisational information systems.	The asset management information system, together with the policies, procedure(s), improvement initiatives and audits regarding information controls.	The organisation has developed a controls that will ensure the data held is of the requisite quality and accuracy and is consistent and is in the process of implementing them.
64	**Information management**	How has the organisation's ensured its asset management information system is relevant to its needs?	3	Recent project to upgrade Maximo to the latest version engaged external consultants to review current operation, data structure and content. The project will refine current use to align with good industry practice and use of Maximo. Other information systems remain stable with regular vendor reviews.	Widely used AM standards need not be prescriptive about the form of the asset management information system, but simply require that the asset management information system is appropriate to the organisations needs, can be effectively used and can supply information which is consistent and of the requisite quality and accuracy.	The organisation's strategic planning team. The management team that has overall responsibility for asset management. Information management team. Users of the organisational information systems.	The documented process the organisation employs to ensure its asset management information system aligns with its asset management requirements. Minutes of information systems review meetings involving users.	The organisation's asset management information system aligns with its asset management requirements. Users can confirm that it is relevant to their needs.
69	**Risk management process(es)**	How has the organisation documented process(es) and/or procedure(s) for the identification and assessment of asset and asset management related risks throughout the asset life cycle?	3	Firstgas has a risk management procedure that is implemented across the business. Risk management processes include enterprise risk, bowties and an assurance plan. New assets and modifications to assets are assessed for risk through project design or management of changes processes. Individual risks are managed through a risk item register, incident investigations and risk registers Yearly public safety audits inspect the network for risks to the public.	Risk management is an important foundation for proactive asset management. Its overall purpose is to understand the cause, effect and likelihood of adverse events occurring, to optimally manage such risks to an acceptable level, and to provide an audit trail for the management of risks. Widely used standards require the organisation to have process(es) and/or procedure(s) in place that set out how the organisation identifies and assesses asset and asset management related risks. The risks have to be considered across the four phases of the asset lifecycle (eg, para 4.3.3 of PAS 55).	The top management team in conjunction with the organisation's senior risk management representatives. There may also be input from the organisation's Safety, Health and Environment team. Staff who carry out risk identification and assessment.	The organisation's risk management framework and/or evidence of specific process(es) and/ or procedure(s) that deal with risk control mechanisms. Evidence that the process(es) and/or procedure(s) are implemented across the business and maintained. Evidence of agendas and minutes from risk management meetings. Evidence of feedback in to process(es) and/or procedure(s) as a result of incident investigation(s). Risk registers and assessments.	Identification and assessment of asset related risk across the asset lifecycle is fully documented. The organisation can demonstrate that appropriate documented mechanisms are integrated across life cycle phases and are being consistently applied.
79	**Use and maintenance of asset risk information**	How does the organisation ensure that the results of risk assessments provide input into the identification of adequate resources and training and competency needs?	3	Where risk assessments identify actions, these are incorporated into the asset information system with an action owner and timeframe for close out. This is monitored by management and audited to ensure proper close out. Where training needs are identified these are updated in the training matrix	Widely used AM standards require that the output from risk assessments are considered and that adequate resource (including staff) and training is identified to match the requirements. It is a further requirement that the effects of the control measures are considered, as there may be implications in resources and training required to achieve other objectives.	Staff responsible for risk assessment and those responsible for developing and approving resource and training plan(s). There may also be input from the organisation's Safety, Health and Environment team.	The organisations risk management framework. The organisation's resourcing plan(s) and training and competency plan(s). The organisation should be able to demonstrate appropriate linkages between the content of resource plan(s) and training and competency plan(s) to the risk assessments and risk control measures that have been developed.	Outputs from risk assessments are consistently and systematically used as inputs to develop resources, training and competency requirements. Examples and evidence is available.
82	**Legal and other requirements**	What procedure does the organisation have to identify and provide access to its legal, regulatory, statutory and other asset management requirements, and how is requirements incorporated into the asset management system?	3	The public safety management system procedure is reviewed and updated each year to ensure latest Acts, Regulations and Standards are incorporated into documents and communicated. Information disclosure requirements are reviewed as part of AMP and ID delivery process.	In order for an organisation to comply with its legal, regulatory, statutory and other asset management requirements, the organisation first needs to ensure that it knows what they are (eg, PAS 55 specifies this in s 4.4.8). It is necessary to have systematic and auditable mechanisms in place to identify new and changing requirements. Widely used AM standards also require that requirements are incorporated into the asset management system (e.g. procedure(s) and process(es))	Top management. The organisations regulatory team. The organisation's legal team or advisors. The management team with overall responsibility for the asset management system. The organisation's health and safety team or advisors. The organisation's policy making team.	The organisational processes and procedures for ensuring information of this type is identified, made accessible to those requiring the information and is incorporated into asset management strategy and objectives	Evidence exists to demonstrate that the organisation's legal, regulatory, statutory and other asset management requirements are identified and kept up to date. Systematic mechanisms for identifying relevant legal and statutory requirements.
88	**Life Cycle Activities**	How does the organisation establish implement and maintain process(es) for the implementation of its asset management plan(s) and control of activities across the creation, acquisition or enhancement of assets. This includes design, modification, procurement, construction and commissioning activities?	3	Processes and procedures are in place to manage and control implementation of asset management plans. The Project management manual provides the process for design, modification, procurement, construction and commission of assets. Design standards manage the design and provide control with design, whilst asset maintenance standards provide management during its life cycle. These are controlled through review cycles established in the document control system.	Life cycle activities are about the implementation of asset management plan(s) i.e. they are the "doing" phase. They need to be done effectively and well in order for asset management to have any practical meaning. As a consequence, widely used standards (eg, PAS 55 s 4.5.1) require organisations to have in place appropriate process(es) and procedure(s) for the implementation of asset management plan(s) and control of lifecycle activities. This question explores those aspects relevant to asset creation.	Asset managers, design staff, construction staff and project managers from other impacted areas of the business, e.g. Procurement	Documented process(es) and procedure(s) which are relevant to demonstrating the effective management and control of life cycle activities during asset creation, acquisition, enhancement including design, modification, procurement, construction and commissioning.	Effective process(es) and procedure(s) are in place to manage and control the implementation of asset management plan(s) during activities related to asset creation including design, modification, procurement, construction and commissioning.
91	**Life Cycle Activities**	How does the organisation ensure that process(es) and/or procedure(s) for the implementation of asset management plan(s) and control of activities during maintenance (and inspection) of assets are sufficient to ensure activities are carried out under specified conditions, are consistent with asset management strategy and control cost, risk and performance?	3	Firstgas has a document management system to manage controlled documents. This includes processes for review and auditing of documents and processes by internal auditor to ensure that the processes are maintained.	Having documented process(es) which ensure the asset management plan(s) are implemented in accordance with any specified conditions, in a manner consistent with the asset management policy, strategy and objectives and in such a way that cost, risk and asset system performance are appropriately controlled is critical. They are an essential part of turning intention into action (eg, as required by PAS 55 s 4.5.1).	Asset managers, operations managers, maintenance managers and project managers from other impacted areas of the business	Documented procedure for review. Documented procedure for audit of process delivery. Records of previous audits, improvement actions and documented confirmation that actions have been carried out.	The organisation has in place process(es) and procedure(s) to manage and control the implementation of asset management plan(s) during this life cycle phase. They include a process, which is itself regularly reviewed to ensure it is effective, for confirming the process(es)/ procedure(s) are effective and if necessary carrying out modifications.

Question No.	Function	Question	Score	Evidence—Summary	Why	Who	Record/documented Information	Assessed maturity level
95	**Performance and condition monitoring**	How does the organisation measure the performance and condition of its assets?	3	Performance and condition monitoring are communicated using a BI report with monthly reporting of metrics between senior and general management.	Widely used AM standards require that organisations establish implement and maintain procedure(s) to monitor and measure the performance and/or condition of assets and asset systems. They further set out requirements in some detail for reactive and proactive monitoring, and leading/lagging performance indicators together with the monitoring or results to provide input to corrective actions and continual improvement. There is an expectation that performance and condition monitoring will provide input to improving asset management strategy, objectives and plan(s).	A broad cross-section of the people involved in the organisation's asset-related activities from data input to decision-makers, i.e. an end-to end assessment. This should include contactors and other relevant third parties as appropriate.	Functional policy and/or strategy documents for performance or condition monitoring and measurement. The organisation's performance monitoring frameworks, balanced scorecards etc. Evidence of the reviews of any appropriate performance indicators and the action lists resulting from these reviews. Reports and trend analysis using performance and condition information. Evidence of the use of performance and condition information shaping improvements and supporting asset management strategy, objectives and plan(s).	Consistent asset performance monitoring linked to asset management objectives is in place and universally used including reactive and proactive measures. Data quality management and review process are appropriate. Evidence of leading indicators and analysis.
99	**Investigation of asset-related failures, incidents and nonconformities**	How does the organisation ensure responsibility and the authority for the handling, investigation and mitigation of asset-related failures, incidents and emergency situations and non conformances is clear, unambiguous, understood and communicated?	3	Documented processes are established for incident management, including internal or external audits, asset related failures or near misses and other incidents. Weekly meetings review each incident. Incident actions and closeouts progress are monitored monthly by senior management.	Widely used AM standards require that the organisation establishes implements and maintains process(es) for the handling and investigation of failures incidents and non-conformities for assets and sets down a number of expectations. Specifically this question examines the requirement to define clearly responsibilities and authorities for these activities, and communicate these unambiguously to relevant people including external stakeholders if appropriate.	The organisation's safety and environment management team. The team with overall responsibility for the management of the assets. People who have appointed roles within the asset-related investigation procedure, from those who carry out the investigations to senior management who review the recommendations. Operational controllers responsible for managing the asset base under fault conditions and maintaining services to consumers. Contractors and other third parties as appropriate.	Process(es) and procedure(s) for the handling, investigation and mitigation of asset-related failures, incidents and emergency situations and non conformances. Documentation of assigned responsibilities and authority to employees. Job Descriptions, Audit reports. Common communication systems i.e. all Job Descriptions on Internet etc.	The organisation have defined the appropriate responsibilities and authorities and evidence is available to show that these are applied across the business and kept up to date.
105	**Audit**	What has the organisation done to establish procedure(s) for the audit of its asset management system (process(es))?	3	Firstgas have an established audit procedure and assurance plan to ensure compliance against external and internal requirements. The AMS is periodically reviewed by an external provider, last done in 2022.	This question seeks to explore what the organisation has done to comply with the standard practice AM audit requirements (eg, the associated requirements of PAS 55 s 4.6.4 and its linkages to s 4.7).	The management team responsible for its asset management procedure(s). The team with overall responsibility for the management of the assets. Audit teams, together with key staff responsible for asset management. For example, Asset Management Director, Engineering Director. People with responsibility for carrying out risk assessments	The organisation's asset-related audit procedure(s). The organisation's methodology(s) by which it determined the scope and frequency of the audits and the criteria by which it identified the appropriate audit personnel. Audit schedules, reports etc. Evidence of the procedure(s) by which the audit results are presented, together with any subsequent communications. The risk assessment schedule or risk registers.	The organisation can demonstrate that its audit procedure(s) cover all the appropriate asset-related activities and the associated reporting of audit results. Audits are to an appropriate level of detail and consistently managed.
109	**Corrective & Preventative action**	How does the organisation instigate appropriate corrective and/or preventive actions to eliminate or prevent the causes of identified poor performance and non conformance?	3	Where poor performance or non conformance is identified, an investigator is assigned to perform an investigation of the issue. The aim of the investigation is to determine the root cause and develop actions to remediate the poor performance. The issue is assigned an owner who is responsible to ensure the actions are implemented. An audit is carried out on completed investigations by the internal auditor to ensure actions have been completed.	Having investigated asset related failures, incidents and non-conformances, and taken action to mitigate their consequences, an organisation is required to implement preventative and corrective actions to address root causes. Incident and failure investigations are only useful if appropriate actions are taken as a result to assess changes to a businesses risk profile and ensure that appropriate arrangements are in place should a recurrence of the incident happen. Widely used AM standards also require that necessary changes arising from preventive or corrective action are made to the asset management system.	The management team responsible for its asset management procedure(s). The team with overall responsibility for the management of the assets. Audit and incident investigation teams. Staff responsible for planning and managing corrective and preventive actions.	Analysis records, meeting notes and minutes, modification records. Asset management plan(s), investigation reports, audit reports, improvement programmes and projects. Recorded changes to asset management procedure(s) and process(es). Condition and performance reviews. Maintenance reviews	Mechanisms are consistently in place and effective for the systematic instigation of preventive and corrective actions to address root causes of non compliance or incidents identified by investigations, compliance evaluation or audit.
113	**Continual Improvement**	How does the organisation achieve continual improvement in the optimal combination of costs, asset related risks and the performance and condition of assets and asset systems across the whole life cycle?	3	Project performance metrics are continuously monitored, with an annual review undertaken to assess effectiveness and support ongoing improvement. The Risk item Register (RIR) is used to record poor performing assets and assess for remediation or replacement. Maintenance is reported monthly; faults and corrective maintenance are actively managed. Improvements are completed as part of incident investigation audits or added to the RIR for assessment and action.	Widely used AM standards have requirements to establish, implement and maintain process(es)/procedure(s) for identifying, assessing, prioritising and implementing actions to achieve continual improvement. Specifically there is a requirement to demonstrate continual improvement in optimisation of cost risk and performance/condition of assets across the life cycle. This question explores an organisation's capabilities in this area—looking for systematic improvement mechanisms rather that reviews and audit (which are separately examined).	The top management of the organisation. The manager/team responsible for managing the organisation's asset management system, including its continual improvement. Managers responsible for policy development and implementation.	Records showing systematic exploration of improvement. Evidence of new techniques being explored and implemented. Changes in procedure(s) and process(es) reflecting improved use of optimisation tools/techniques and available information. Evidence of working parties and research.	There is evidence to show that continuous improvement process(es) which include consideration of cost risk, performance and condition for assets managed across the whole life cycle are being systematically applied.
115	**Continual Improvement**	How does the organisation seek and acquire knowledge about new asset management related technology and practices, and evaluate their potential benefit to the organisation?	2	Regular attendance at industry conferences or workshops by employees across the business result in development of processes to align with current good practice. Improvements are assessed, scoped and estimated similar to project optioneering.	One important aspect of continual improvement is where an organisation looks beyond its existing boundaries and knowledge base to look at what 'new things are on the market'. These new things can include equipment, process(es), tools, etc. An organisation which does this (eg, by the PAS 55 s 4.6 standards) will be able to demonstrate that it continually seeks to expand its knowledge of all things affecting its asset management approach and capabilities. The organisation will be able to demonstrate that it identifies any such opportunities to improve, evaluates them for suitability to its own organisation and implements them as appropriate. This question explores an organisation's approach to this activity.	The top management of the organisation. The manager/team responsible for managing the organisation's asset management system, including its continual improvement. People who monitor the various items that require monitoring for 'change'. People that implement changes to the organisation's policy, strategy, etc. People within an organisation with responsibility for investigating, evaluating, recommending and implementing new tools and techniques, etc.	Research and development projects and records, benchmarking and participation knowledge exchange professional forums. Evidence of correspondence relating to knowledge acquisition. Examples of change implementation and evaluation of new tools, and techniques linked to asset management strategy and objectives.	The organisation has initiated asset management communication within sector to share and, or identify 'new' to sector asset management practices and seeks to evaluate them.

Schedule 14a – commentary on escalation

This Schedule requires GTBs to provide explanatory notes to reports prepared in accordance with clause 2.6.6.

This Schedule is mandatory—GTBs must provide the explanatory comment specified below, in accordance with clause 2.7.2. This information is not part of the audited disclosure information, and so is not subject to the assurance requirements specified in section 2.8.

Commentary on difference between nominal and constant price capital expenditure forecasts (Schedule 11a)

In the box below, comment on the difference between nominal and constant price capital expenditure for the current disclosure year and 10-year planning period, as disclosed in Schedule 11a.

Box 1: Commentary on difference between nominal and constant price capital expenditure forecasts

The difference between constant and nominal price capex in Schedule 11a is based on a forecast CPI of 2.2%.

Commentary on difference between nominal and constant price operational expenditure forecasts (Schedule 11b)

In the box below, comment on the difference between nominal and constant price operational expenditure for the current disclosure year and 10-year planning period, as disclosed in Schedule 11b.

Box 2: Commentary on difference between nominal and constant price operational expenditure forecasts

Our approach for operational expenditure forecasts, as set out in Schedule 11b, is equivalent to the approach for capital expenditure, described above.

Appendix C. Asset Management Approach

This section outlines our structured and integrated approach to asset management, which is designed to achieve our organisational objectives, fulfil stakeholder expectations, and deliver value across the lifecycle of our assets. It reflects the key components of our asset management system (AMS), in alignment with ISO 55001.

Key elements of this include:

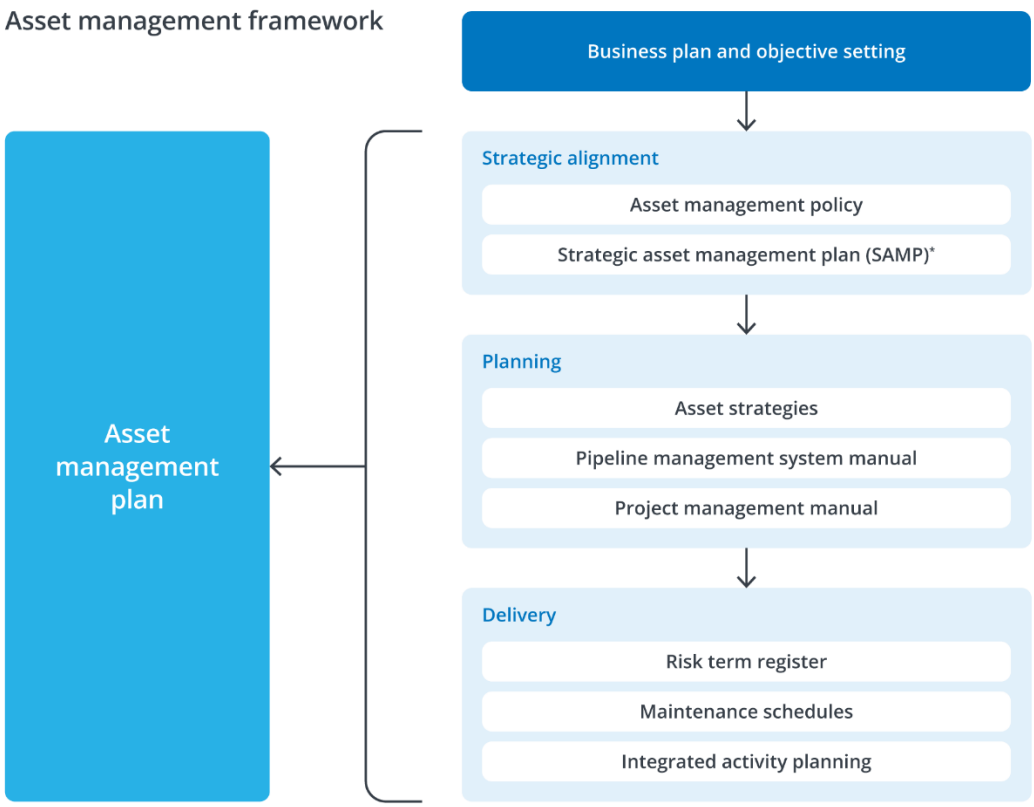
- **asset management framework:** establishes the structure and interaction of the asset management system components, ensuring alignment with organisational objectives and stakeholder requirements.
- **risk management:** embeds risk-based thinking into all asset-related decisions from network development planning, asset replacement through to operational decisions.
- **asset management support:** ensures adequate resources, competencies, and information systems are in place to support the asset management system.
- **performance measures:** establishes metrics to monitor and evaluate the effectiveness of the asset management system and its contribution to organisational objectives.
- **technical standards and legislation:** the technical and legal requirements governing our asset management.

C.1. Asset management framework

Our asset management framework (see Figure C.1) illustrates how we align our asset management activities with our organisational objectives and stakeholder expectations. It is a structured framework that connects our corporate objectives and stakeholder expectations with our asset management practices and defines our AMS.

Our asset management framework sets out principles and objectives that help us ensure our investments deliver safe, cost-effective services that meet the needs of our customers. It ensures that our decisions and activities are aligned, consistent, and capable of delivering value across the asset lifecycle. The framework is structured to align with ISO 55001, ensuring a clear and consistent approach to delivering value from our assets.

Figure C.1: Asset management framework



**Strategic Asset Management Plan under development.*

Corporate strategy

We begin by understanding the organisation's context and the needs and expectations of our stakeholders. This informs the scope of our AMS, which is designed to support the achievement of our organisational objectives.

Strategic alignment

Leading asset management standards (including ISO 55000) emphasise the importance of aligning an organisation's strategic plan with asset management objectives, asset management strategies, and asset management plans, right through to on-the-ground daily activities.

The concept of having clear 'line of sight' between stakeholder needs and daily activities is considered a key feature of effective asset management. This line of sight is illustrated in the key elements of our asset management system.

We are developing a strategic asset management plan (SAMP), and our asset management objectives are being updated based on the current uncertainties of reducing supply and demand of natural gas and our organisational plans and policies. These guide the development of our asset management plans for both gas transmission and distribution, ensuring that our activities are aligned with our long-term goals.

Planning

To implement our asset management plans effectively, we ensure that the necessary resources, competencies, and support systems are in place. We apply a structured decision-making framework that:

- defines the value we aim to derive from our assets.
- establishes criteria for asset-related decisions.
- considers risk, opportunity, and time horizons.
- supports governance and timely decision-making.

Delivery

Our delivery processes operationalise our strategy by translating our plans and objectives into lifecycle-based activities. They guide the planning, acquisition, operation, maintenance, and renewal of our gas distribution assets. Enablers include:

- clearly defined roles, responsibilities, and authorities.
- competency development and awareness programs.
- communication and information management systems.
- documented procedures and risk-based decision-making processes.
- integrated activity planning.

C.1.1. Asset management policy, strategy & objectives

These elements define our intent and direction for asset management. They ensure that our approach is aligned with our organisational objectives and that our asset management objectives reflect our commitment to safety, stakeholder needs, and effective risk management.

Asset management policy

Our asset management policy defines the overarching direction, principles, and commitments that guide how we manage our assets to deliver value and achieve our organisational objectives. It is a foundational element of our AMS and provides a basis for consistent decision-making across the asset lifecycle.

The policy is positioned within our asset management framework (see Figure C.1), linking our organisational context and stakeholder expectations to our strategic and operational asset management activities. It ensures alignment between our corporate objectives and the way we plan, operate, and improve our assets.

Specifically, the policy:

- **establishes a clear line of sight:** from stakeholder needs and organisational objectives through to asset-level implementation and performance evaluation.
- **provides a framework:** for setting asset management objectives and developing the SAMP and our annual AMP.
- **commits to compliance:** with applicable legal, regulatory, and stakeholder requirements.
- **promotes continual improvement:** of our AMS and the performance of our assets.
- **supports integration:** with other business systems and functions, including risk, finance, and operations.

The principles outlined in the policy are embedded throughout our processes and systems, ensuring that asset management decisions are consistent, transparent, and aligned with our long-term goals. The policy is reviewed periodically and communicated across the organisation and to relevant stakeholders to maintain shared understanding and accountability.

Strategic asset management plan

Our SAMP is being updated in response to the evolving energy landscape and the uncertainty surrounding the future of gas in New Zealand. We are actively redefining our asset management strategy to ensure it remains robust, adaptive, and aligned with our organisational objectives and stakeholder expectations.

Our strategy is grounded in the principles of ISO 55001, particularly the emphasis on value realisation, risk-based decision-making, and continual improvement. It is also embedded within our asset management framework, ensuring a clear line of sight from strategic planning through to operational execution and performance evaluation.

To support this, we are developing future scenarios based on an asset becoming stranded in the following decades, 2040, 2050 and 2060. These models explore a range of credible pathways for the gas networks as we manage reducing gas supply and demand as New Zealand transitions to a net-zero carbon economy. These scenarios are not forecasts, but structured narratives that help us understand potential futures, identify key uncertainties, and define trigger points for action.

The outcomes of this scenario development will:

- inform a dynamic roadmap for our asset management planning
- support the alignment of our asset strategies with a “least regrets” approach, prioritising flexibility and resilience while avoiding premature or irreversible decisions
- enable us to identify and monitor signals of change, ensuring timely and informed adjustments to our plans
- assessing long-term investment needs and implementing plans or considering substitution of short-term solutions for risk mitigation and remediation.

This is not a one-off exercise. We recognise that our strategy must be continuously reviewed and refined as new information emerges, technologies evolve, and policy directions become clearer. This iterative approach ensures that our asset management remains responsive, future-focused, and capable of delivering long-term value to our stakeholders.

Asset management objectives

Our asset management objectives are aligned with our asset management policy and support the achievement of our organisational goals while addressing stakeholder needs and expectations. Each objective is monitored and reviewed regularly to ensure continued relevance and effectiveness. They are also embedded within our asset management framework, ensuring a clear line of sight from strategic intent to operational execution.

Our asset management objective area include:

- **safety:** prioritise the integrity of assets to ensure the safety of the people and places affected by operations
- **security and reliability**: provide a reliable, resilient and secure service that meets customer needs

- **environment**: preserve the environment by operating in a manner that mitigates environmental risks
- **compliance**: address and meet all legislative requirements
- **communication:** communicate our investment plans to stakeholders, particularly the communities that host the assets
- **value**: operate in a manner that optimises the long-term financial outcomes for shareholders
- **decision-making:** balance the needs of competing objectives in a consistent and transparent manner.

Our SAMP will include an expanded suite of asset management objectives that guide our planning, decision-making, and performance evaluation.

C.1.2. Asset management plan

Our asset management plan (AMP) is a key document within our AMS that summarises how we manage our gas distribution assets to deliver value, meet stakeholder expectations, and comply with regulatory obligations. It provides a clear and structured overview of our asset management strategy, objectives, and practices, and serves as a communication tool for both internal and external stakeholders.

The AMP is developed in alignment with the Information Disclosure obligations under Part 4 of Commerce Act 1986. Specifically, the AMP:

- provides a 10-year forward-looking view of our asset lifecycle planning, including capital and operational expenditure forecasts, risk management strategies, and performance targets
- supports transparency and accountability by disclosing information required under Part 4 of the Commerce Act 1986, enabling stakeholders to assess whether our performance is consistent with that expected in a competitive market
- demonstrates how our asset management practices align with the principles of ISO 55001, including value realisation, risk-based decision-making, and continual improvement
- includes mandatory schedules and explanatory notes as required by Information Disclosure requirements, such as asset condition, forecast demand, and asset management maturity assessments.

The AMP is developed with oversight and input from our commercial and regulatory team, which ensures that the document meets all Information Disclosure and certification requirements. This team also supports alignment with our broader regulatory strategy and ensures that the AMP remains consistent with evolving regulatory expectations and industry best practice.

Key assumptions underpinning the AMP

This AMP is based on a set of foundational assumptions that reflect our understanding of the current and future operating environment. These assumptions underpin our long-term planning and investment decisions and are consistent with the strategic direction.

The key assumptions are:

- **role of gas distribution and industry structure:** gas distribution networks will continue to play a critical role in New Zealand's energy system during the planning period. We assume that the current industry structure will remain broadly stable

- **service delivery model:** works will continue to be delivered through a mix of insourced and outsourced activities. Outsourcing decisions will be based on capability, cost-effectiveness, and resource availability, ensuring resilience and flexibility in delivery
- **service provider availability:** we assume no major disruptions to the availability of key service providers, including contractors and suppliers critical to the delivery of maintenance and capital works.
- **demand and customer expectations:** while we aim to support continued delivery of gas distribution services, our demand forecasts are based on prudent assumptions that reflect depleting gas reserves, historical trends, and current policy settings. We assume that customer expectations around safety, reliability, and environmental performance will evolve gradually.
- **regulatory stability:** we assume that the regulatory framework that governs reliability and allowable expenditure will remain broadly stable.
- **asset performance and condition:** our assumptions about asset condition, performance, and remaining life are based on current inspection data, historical performance, and engineering judgement. For this AMP we have reviewed our asset condition scoring to ensure these fully reflect latest information, this has led to updated values compared with our 2024 AMP Update. These assumptions are reviewed regularly and updated as new information becomes available.

Where possible, these assumptions have been quantified and referenced in the relevant sections of this AMP. Assumptions based on third-party information are cited. We recognise that these assumptions may evolve, and we will review and update them as part of our regular AMP review cycles.

AMP approval process

Once the AMP and associated forecasts have been prepared, reviewed and challenged by our management team, it is then reviewed by the audit, risk, and regulation committee (a Board subcommittee). When feedback has been incorporated, the AMP is then submitted for formal certification, by two directors, prior to publication.

C.1.3. Performance evaluation and improvement

We continuously monitor and evaluate the performance of our assets, asset management activities, and the AMS itself. This includes:

- regular performance measurement and analysis
- internal audits and management reviews
- corrective and preventive actions
- proactive interventions actions to address future needs and opportunities.

This cycle of evaluation and improvement ensures that our asset management practices remain effective, efficient, and aligned with our evolving context and stakeholder expectations.

C.2. Risk management

This section outlines our approach to identifying, assessing, and managing risks across the network. It includes our methods for classifying risks and implementing appropriate mitigation actions, ensuring that risk-based thinking is embedded throughout our decision-making processes.

Clarus applies a comprehensive and integrated approach to risk management, aligned with ISO 31000:2018, to ensure that risks are identified, assessed, and managed consistently across all business units. This section outlines the governance structure, methodology, and operational practices that underpin risk management across the organisation, with a focus on the gas distribution business.

C.2.1. Risk management framework

The Clarus risk management framework is designed to support strategic and operational decision-making by embedding risk awareness into all levels of the business. It is governed by our risk management policy and coordinated through a risk management manual. The framework includes:

- a standardised methodology for risk assessment and treatment
- defined roles and responsibilities for governance and execution
- integration with asset management and business planning processes
- alignment with regulatory and industry standards (e.g. AS/NZS 4645, AS(/NZS) 2885, NZS 7901).

C.2.2. Risk management process

The risk management process follows a structured lifecycle:

- **context setting:** define objectives, scope, and influencing factors
- **risk identification:** use workshops, audits, and incident reviews to identify threats and opportunities
- **risk analysis:** assess likelihood and consequence using standard matrices
- **risk evaluation:** determine escalation and treatment needs based on severity
- **risk treatment:** develop specific, measurable, achievable, realistic and time-bound mitigation plans and assign owners.

C.2.3. Enterprise risk calibration

To ensure comparability across business units, risks are calibrated against a corporate risk matrix. This allows for consistent prioritisation and reporting to the Executive and Board. Calibration is overseen by the Manager Risk and Assurance and the risk governance committee chair.

C.2.4. Critical barriers and bow tie analysis

For its top enterprise risks, Clarus applies bow tie analysis to visualise threats, controls, and consequences. Critical barriers, which are essential to preventing or mitigating top events, are identified and managed with defined performance standards and testing protocols.

C.2.5. Reporting and continuous improvement

Risk reporting at Clarus is coordinated through the risk governance committee, with risk-type owners submitting updates when requested. These reports are proportionate to the severity of the risk and include details such as risk context, control status, mitigation progress, emerging trends, and overall management status.

The risk management framework is subject to formal review on an annual basis. This review incorporates lessons learned from incidents, feedback from risk owners and treatment owners, and

findings from operational assurance and internal audit. The objective is to ensure continuous improvement and alignment with Clarus' strategic goals and regulatory obligations.

Each business unit maintains a risk management plan that consolidates treatment plans for critical risks. These plans include the rationale for selected treatments, assigned responsibilities, performance measures, resource requirements, and monitoring protocols to ensure risks are managed to as low as reasonably practicable (ALARP) or so far as reasonably practicable (SFARP) standards.

C.2.6. Emergency and contingency planning

Asset risk management is a core component of our overall risk management framework, with a focus on managing asset-related risk, particularly safety.

Our embedded emergency management framework is based on the coordinated incident management system, commonly referred to as CIMS. Staff performing any function within the CIMS structure are trained and regularly tested with emergency exercises. We maintain emergency response and contingency plans to ensure the safe and reliable operation of the gas distribution network during abnormal conditions. These plans are designed to manage emergencies such as major pipeline failures, natural disasters, or other events that could disrupt service.

The emergency response framework includes:

- **emergency response plan**: this outlines procedures for training, responding to incidents, roles and responsibilities, communication protocols, and coordination with external agencies.
- **critical spares management**: we maintain an inventory of critical spares to enable rapid restoration of service following equipment failure or damage.
- **contingency planning**: the transmission network is designed with redundancy and flexibility, including alternative control options and bypass arrangements to maintain supply during outages.
- **civil defence and emergency management coordination**: as a lifeline utility, we participate in regional emergency planning and exercises to ensure preparedness and alignment with national resilience strategies.
- **annual exercises and reviews**: emergency procedures are tested through regular exercises and reviewed to incorporate lessons learned and improve response capabilities.

C.2.7. Ensuring safety

A key strategy is to ensure the safety of the public, employees and contractors always. This includes making sure inspection regimes effectively identify safety hazards. Protecting the integrity of the network and assets by monitoring and managing the activities of third parties, is also a focus.

There are several events or changes that may impact on the network and result in a change of the identified risk level. Any such changes in design or substantive change to the operating environment can lead to a review of network safety. Such changes can include:

- Third party incidents
- Findings from routine monitoring
- Network improvements
- Network modifications
- Inspections and audits

C.3. Asset management enablers

Our asset management is supported by a suite of enablers that ensure decisions are informed, consistent, and aligned with strategic objectives. These elements provide the necessary oversight, governance, and operational resource to support the development and execution of asset management activities. They also help ensure that resources are appropriately allocated.

These include the systems, processes, and governance mechanisms that support and regulate all other elements of the AMS. They ensure that our asset management activities are consistent, auditable, and continuously improving.

C.3.1. Asset management capability

This section discusses our approach to ensuring appropriate levels of asset management competency.

Asset management maturity assessment

We have undertaken an internal asset management maturity assessment for our gas transmission and distribution businesses. This assessment, conducted in May 2025, was aligned with the ISO 55001 standard and the Commerce Commission's (asset management maturity assessment tool) AMMAT disclosure requirements.

This marks a shift from previous assessments, which were based on the PAS 55 standard and a 0 to 4 scale. The latest assessment adopted the Institute of Asset Management's 0 to 5 maturity scale, which provides a more granular and internationally aligned assessment framework. Under this scale:

- scores of 0 to 2 reflect increasing levels of awareness and development
- a score of 3 represents "competent", indicating systematic and consistent achievement of ISO 55001 requirements
- scores of 4 and 5 represent "optimising" and "excellent" maturity, respectively.

The objectives of the assessment were to benchmark the current state of asset management maturity against ISO 55001 and to identify improvement opportunities and develop a roadmap to achieve full alignment with the standard.

> **AMMAT score**
>
> Our asset management maturity assessment produced an overall AMMAT score of 2.6.
>
> Further details on the basis for this result can be found in Schedule 13, included in Appendix B.

The assessment covered all clauses of ISO 55001 and produced an overall maturity score of 2.6, placing us in the "developing" category. This indicates that credible and resourced plans are in place, but further progress would be required to achieve consistent and systematic compliance. To support transparency and prioritisation of improvement actions, the assessment also evaluated the accuracy of maturity scores across key focus areas. The accuracy scale used was:

- **High**: comprehensive, consistent data and robust evidence available.
- **Medium**: partial or inconsistent data available; further validation may be needed.
- **Low**: limited data available, or information is based on assumptions; significant gaps or discrepancies exist.

The main observations are set out in the following tables.

Table C.1: Areas of greater maturity

Strength Area	Details	Score
Operational execution	Reliable lifecycle delivery and change control	3.1
Support functions - communication and documented information	Strong documentation and communication processes supported by the Nucleus system	3.0

Table C.2: Areas of improvement

Improvement Area	Reason	Score
Organisational context and planning	SAMP still being finalised	2.4
Knowledge management	Gaps in formal processes for acquiring and managing knowledge	2.7
Performance evaluation	Formal management review processes are not yet fully established	2.7

Table C.3: Improvement actions

Improvement Actions for 2026
Finalise and implement the SAMP
Develop a competence matrix and training programme for asset planners and middle managers
Establish formal management review processes
Improve data quality and scoring accuracy through enhanced evidence retention and validation
Ensure readiness for ISO 55001 certification by the end of calendar year 2025

The outcome of the assessment has informed our AMMAT disclosure in Appendix B.

Figure C.2: ISO 55001 Asset management maturity

Table C.4: ISO 55001:2024 Asset management maturity

FOCUS AREA	ISO 55001 CLAUSE	SCORE (CLAUSE)	SCORE (AREA)	LEVEL OF EVIDENCE
Leadership and strategic direction Commitment, policy, roles	5.1	2.6	2.8	Medium
	5.2	3.2		
	5.3	2.6		
Organisational context and planning Understanding context, stakeholder needs, scope, SAMP, objectives, risk & opportunity management	4.1	2.3	2.4	Medium
	4.2	2.6		
	4.3	2.0		
	4.4	2.0		
	4.5	2.3		
	6.1	3.2		
	6.2	2.0		
	6.3	2.7		
Support Functions – Part 1 Resources, competence, awareness	7.1	2.3	2.2	Low
	7.2	2.3		
	7.3	2.0		
Support Functions – Part 2 Documented information, communication	7.4	3.2	3.0	High
	7.5	2.9		
Support Functions – Part 3 Data and information, knowledge management	7.6	3.2	2.7	Medium
	7.7	2.1		
Operational execution Lifecycle delivery, outsourcing, control of change	8.1	3.3	3.1	High
	8.2	2.9		
	8.3	3.0		
Performance evaluation and improvement Monitoring, internal audit, management review, corrective & predictive actions	9.1	2.8	2.7	Medium
	9.2	2.4		
	9.3	2.0		
	10.1	3.0		
	10.2	3.0		
	10.3	3.0		

Asset management improvement plan

Following our recent internal asset management maturity assessment, we identified several areas where understanding of individual and team roles within the asset management system could be improved. Engineering and operations personnel demonstrated greater familiarity with their responsibilities. This gap highlighted the need to strengthen awareness and competence across all roles.

To address this, we have included a targeted action within our improvement plan to provide a tailored mix of formal and informal training focused on asset management-related roles. This approach aims to enhance understanding of the asset management system and overall competency, ensuring that every team member, regardless of role, can contribute effectively to our asset management objectives.

To further improve our asset management system, a priority activity is finalising critical asset management documentation, including a SAMP and associated frameworks. Completing these elements is essential to ensure that the various business units are coordinated and consistent in their approach to asset management.

Another key improvement area is the review and update of our service levels. The existing transmission environment has changed significantly since these service levels were originally developed. As a result, it is necessary to develop new service level frameworks that reflect current and potential future operational conditions and ensure the network is managed in alignment with today's requirements.

The table below outlines our improvement plan.

Table C.5: Asset management improvement areas

IMPROVEMENT AREA	ACTION
Asset management system	Finalise strategic asset management plan (SAMP) Establish asset management objectives Define asset management decision-making processes Develop asset management system scope and process document to integrate
Levels of service	Levels of service (KPIs) require development and promotion to the wider business Report on asset KPIs (e.g., critical contingency thresholds, compressor availability), with initial metrics Asset management system management review
Awareness	Awareness of the asset management system needs to be improved AKO Module - review onboarding requirements
Competence	Implement an asset management-specific training plan for specific roles in the organisation (e.g., asset management fundamentals)
Benchmark	Review performance against 2023 benchmark and external reviews Review and understand trends and changes between assessments.

Competency and training

Effective competency and training help ensure staff and external parties performing design, construction, operations or maintenance activities meet specified competency requirements. All personnel conducting these activities on the transmission network must meet competency requirements as specified by the training matrix.

Contractual agreements state that contracted personnel must meet the competency criteria for all work being performed. Internally, each staff role has a defined set of competency requirements within the position description that need to be met. Training requirements are aligned with established competencies in technical operation and maintenance. A training and development plan exists to ensure that personnel involved in the operation and maintenance of assets are appropriately trained.

C.3.2. Asset management governance

Effective expenditure governance provides the basis for investing at prudent and efficient levels to achieve our asset management objectives.

Governance

Asset management plans (AMPs), strategic asset management plan (SAMP), objectives, and decision-making criteria are reviewed by the operation's senior leadership team. After their input, proposed changes are submitted to the executive team for approval.

The audit, risk, and regulation committee are responsible for challenging and approving the asset management plans and the 10-year forecasts, ensuring alignment with the business objectives.

Capital and operational expenditure guides

The purpose of the capital and operational expenditure guides is to provide the basis for implementing a minimum standard to identify, prioritise, plan, budget, execute, control, and close-out capex projects and major opex. Key objectives include the following:

- evaluate capex projects and major opex according to the business plan, strategic planning, and asset management policy.
- ensure appropriate analysis has been conducted (e.g., lease versus buy, outsource versus in-house).
- leverage best practices used by us and the gas sector.
- evaluate the impact of not doing the capital or maintenance project.
- compare alternatives to determine the best solution (e.g. replacing vs repairing equipment, deferral).
- lower costs through consistent integration of business resources and reduce process duplication through integration of financial requirements.
- select the options to ensure the best investment of funds through consistent prioritisation of projects and transparency in decision-making.

Investment Principles

In addition to the expenditure guidelines, we use a set of investment principles to help inform the trade-offs associated with our expenditure decisions, these include the following.

- **Act prudently**: where safety is not compromised make small incremental investments and defer large investments if reasonably practical (e.g. replace components rather than an entire asset). The small investments must, however, conform to the long-term investment plan and not lead to future asset stranding.
- **Multiple planning timeframes**: produce plans based on near, medium and long-term views. The near-term plan is the most accurate and generally captures load growth for the next three years. This timeframe identifies short-term growth patterns, mainly leveraging off historical trends. It allows sufficient time for planning, approval and network construction to be implemented ahead of new system demand.
- **The medium-term plan looks out 10 years**: capturing regional development trends such as land rezoning, new transport routes and larger infrastructure projects. It also captures changes such as the adoption of new technologies or behavioural trends (e.g. consumers' response to issues such as climate change, increased energy conservation, etc.).
- **Review significant replacement projects**: for large system assets (e.g. compressors), rather than automatically replacing existing end-of-life assets with the modern equivalent, a review is carried out to confirm the continued need for the assets, as well as the optimal size and system configuration that will meet the needs for the next asset lifecycle.

- **Continuously review system performance**: to identify and apply actions in respect of where asset performance can be improved.

Financial authority

Each project within the AMP is approved based on a delegated financial authority (DFA) policy. Any changes to project scope requiring additional expenditure triggers further review and a new approval process is required to agree any changes. DFAs set out the limits to what managers are allowed to authorise expenditure. This is reviewed annually.

The following table sets out our DFA levels.

Table C.6: Delegated financial authority levels

GOVERNANCE LEVEL	AUTHORITY – CAPEX ($000)	AUTHORITY – OPEX ($000)
Chief executive officer	2,000	Budget
Chief operating officer	1,500	1,500
Chief technology and improvement officer	1,000	1,000
Business unit managers	250	250

Challenge processes

The material included within the AMP reflects the system development plans, lifecycle delivery plans, customer connections forecast, and maintenance strategies. These plans and associated forecasts are prepared in consultation with relevant staff members and engineers.

Reflecting its role as a key stakeholder document, the draft AMP is subjected to a thorough testing process prior to Board approval. As part of this process, proposed network expenditure plans are scrutinised and challenged to ensure alignment with the asset management policy and that the plans reflect efficient and effective approaches. Non-network expenditure is also subject to the same process of testing.

C.3.3. Business support

Our people play a central role in managing our assets. Ensuring enough people with the right competencies is essential to achieve asset management objectives. Asset management at Firstgas is supported by a range of enabling functions, systems, and capabilities that ensure the effective and efficient delivery of asset-related activities.

To support asset management teams, several corporate functions provide services that are integral to support asset management functions. These include customer management, finance, and information communication technology (ICT). These functions either directly or indirectly support the transmission side of the business as described in the examples below.

- **Commercial and regulatory**: supports strategic, commercial, and regulatory outcomes through strong customer relationships and industry engagement.
- **Finance**: manages financial operations, valuation, compliance, and systems to support performance and decision-making
- **Health and safety**: provides health and safety leadership, enabling safe, efficient, and high-quality work.

- **Legal, governance and risk**: provide pragmatic legal and governance advice, monitor and manage assurance plans, support directors to ensure our statutory obligations are met.
- **Marketing and communications**: shape brand and reputation through stakeholder engagement and communications support.
- **People and culture**: attract and retain capable people through managing HR, payroll, and internal communications to build a strong, inclusive workplace.
- **Technology and improvement**: responsible for ICT strategy, delivery, and operations to enable our business to meet strategic goals and maintain operational security using digital technologies.

These support elements are essential to the day-to-day operation of the AMS and contribute to the achievement of our strategic and operational objectives.

Business support allocation methodology

The allocation of business support costs to the transmission and distribution businesses is based on a combination of the following factors.

- The first is applied to expenditure that has a relationship with the assets (such as ICT systems) and is an allocation on a proportion of regulated asset base value.
- The second is related more to supporting the people in the business (such as building costs) and is proportioned based on the relative headcount working in each business.
- The third allocation applies to certain legal, consulting or one-off spend where allocation is specifically determined based on an estimate of the time spent.

C.3.4. Information communication technology

Information communication technology (ICT) enables Firstgas to meet strategic objectives of the AMS through business-optimised technology solutions. Our technology teams support, maintain, and improve the technology infrastructure, communications, systems, cyber security, data, and operational intelligence that enable our day-to-day business activities.

Technology is a key enabler for the AMS, providing data and tools to make informed decisions and to run the network safely, securely, and efficiently.

As the pace of technological change accelerates, long-term planning inevitably faces greater uncertainty. In response, the team's supporting ICT are actively delivering a range of strategic initiatives aimed at building our digital technology foundation through strengthening our cyber security posture, establishing foundational data platform capabilities, developing specialised business intelligence, and investing in our asset management system which is currently being re-implemented with a modern commercial off-the-shelf (COTS) solution.

This strategic effort continues to apply our 'cloud-first' architecture principle to our technology systems. The shift to subscription based, virtualised and cloud-based services has prompted a reallocation of ICT expenditures, moving from capex investments to primarily opex. Over the next five years we will progress the cloud transition across the majority of our on-premises and data centre hosted technology systems. This will require an initial step change increase in opex and is expected to stabilise licensing and maintenance costs, while also enabling the standardisation of system configuration and data structures, resulting in best practice commercial terms and support models.

In parallel, cyber security has led to a significant and recurring rise in opex as a step change, split between network and non-network technologies, with added costs for ongoing improvement projects

for identity management and monitoring tools. Baseline opex include software subscriptions, security operations roles, and secure network maintenance. This expenditure is necessary to maintain cyber defences, minimise service disruption risks, and enhance protection measures.

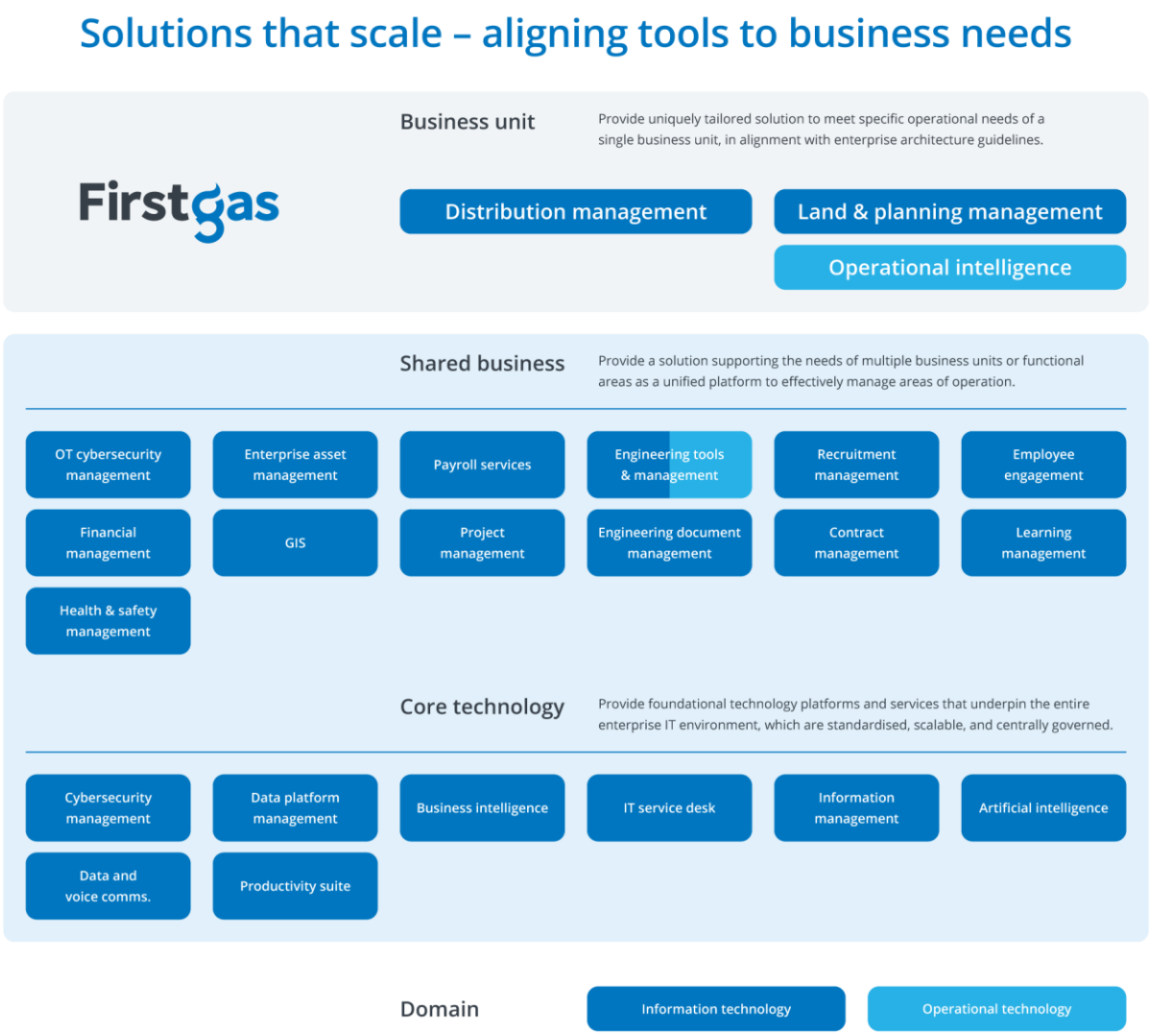
Our technology strategy is grounded in principles that ensure digital investments are aligned to business value, services are prioritised according to enterprise and network transformation needs, and vendor relationships are managed to reflect our appetite for cost and capability.

Solutions overview

To support business alignment and cost optimisation, our technology solutions are classified into three asset groups:

- **business unit**: provide a tailored solution to meet specific operational needs of a single business unit, in alignment with enterprise architecture guidelines.
- **shared business**: provide a solution or capability supporting the needs of multiple business units or functional areas as a unified platform to effectively manage areas of operation.
- **core technology**: provide foundational technology platforms and services that underpin the entire enterprise technology environment, which are standardised, scalable, and centrally governed to ensure resilience, interoperability, and cyber security.

Figure C.3: Firstgas distribution technology solution classification



Technology strategy

We are redefining the function of technology from a supportive element to a strategic driver of our business' future focused on strengthening our digital foundations and enabling smarter ways of working. We're shifting to be a digital business through modernising core platforms, embedding cloud-first architecture, and improving cyber security to address key risks and threats and data intelligence capabilities. Through digitising processes and simplifying tools, we support business agility, operational efficiency, and better customer outcomes.

Our technology strategy aims to shape a smarter energy future through five strategic priorities, as set out in the following table.

Table C.7: Technology strategic priorities

STRATEGIC PRIORITY	DESCRIPTION
Build our digital foundation	Establish a strong, scalable digital core to enable agility and growth. This priority focuses on simplifying and standardising technology platforms,

Strategic priority	Description
	leveraging cloud-first infrastructure, and fully utilising core systems to boost performance and business agility.
Embrace a culture of cyber confidence	Integrate cyber security into everything, fostering confidence and resilience. Aiming to embed robust cyber security practices into its DNA, meaning every employee and process plays a part in security.
Unlock the power of data for our people	Turn data into a strategic asset that empowers employees. This involves making data visible, accessible, and actionable in daily work.
Raise our operating grade	Elevate internal processes and skills to achieve operational excellence. Streamline and standardise with best-practice frameworks, invest in upskilling people, and implement metrics to track performance.
Enable the future	Harness emerging technologies and innovation to transform the ways we work and open new opportunities for our customers. This priority is about looking ahead and embracing game-changing technology such as artificial intelligence (AI) and automation, building on our cloud foundations.

Business unit solutions

The Firstgas distribution business unit solution classification supports monitoring network equipment, dispatching, fault management, and operational intelligence which focuses on real-time performance monitoring.

The following table provides a description of our business unit solutions.

Table C.8: Firstgas business unit solutions

Solution	Description	Improvement Programme
Distribution Management	**Customer relationship management**: Is used to manage all distribution related faults, fitters, and connections. It is integrated with our Enterprise Asset Management solution **Billing**: Our distribution billing platform is manually integrated with our corporate finance system.	Exploring improvements relating to maintenance and reactive work in RY26. More investigation is required before determining the scope and approach.
Land and planning management	Our land and planning solution manages landowner and easement permit data, support pipeline location responses, and integrate field data from permits.	Users of the system are currently reviewing the functionality and data quality. More investigation is required before determining the replacement or cloud transition approach which is expected to be defined in RY27.
Operational intelligence	Telemetry data from the Cello RTUs is ingested into our historian which is used as an on-premises operational technology platform to capture and store time-series data from SCADA and other control systems.	Improve support for operational intelligence through integration with the corporate network to enable signal analysis, and enhanced reporting across systems like our EAM solution and modern data platform. This is expected to be implemented in RY27-RY28.

Shared Business Solutions

Our shared business solutions provide unified platforms to support multiple business units or function areas to drive cost efficiency, consistency, and collaboration across the organisation while reducing duplications. We are running two multi-year strategic programmes of work, as set out below.

- **Operational technology cyber security programme**: to increase our cyber security posture across our network. Ongoing investment is critical to ensure we effectively manage our cyber security risks.

- **Enterprise asset management programme:** our existing solution was nearing end of support and the existing data structure made processes and integration complex. As part of our cloud transition, we are currently re-implementing with a modern commercial off the shelf (COTS) solution.

The following table provides a description of our shared business solutions.

Table C.9: Firstgas shared business solutions

SOLUTION	DESCRIPTION	IMPROVEMENT PROGRAMME
Operational technology cyber security management	Establish and develop comprehensive Operational technology cyber security resilience through secure physical and network architectures, implementation of preventative measures, detection and response capabilities, and improvements to our operational security management capabilities.	An ongoing operational technology cyber security programme will continue post SCADA implementation in RY27-RY29.
Financial management	Our Finance and Operations (FinOps) solution supports corporate finance and supply chain management and enables budgeting, forecasting, procurement, transmission billing, and financial reporting.	Subject to regular health checks, license optimisation, and maturity assessments to ensure performance and cost-efficiency.
Health & safety management	Incidents related to network assets and customer complaints (non-staff related) are recorded, managed, and reported via the Maximo EAM system. Workplace related incidents and injuries are managed via manual processes and registers.	Planning to complete a health and safety capability map in FY26 to enable the assessment of suitable tooling for recording, managing, and reporting workplace related incidents and injuries.
Enterprise asset management	Our enterprise asset management (EAM) platform supports lifecycle asset planning, maintenance execution, and service delivery. The tooling is integrated with distribution billing, corporate financials, and our data platform. Planned new solution enables accurate data capture at source, integrates with field mobility tools, and supports four core modules to improve operational efficiency, regulatory compliance, and decision-making.	We are currently reimplementing our EAM solution, correcting legacy data structure issues and configuration conflicts to be complete in RY25-RY26. Once the new cloud-based system is embedded we will continue to invest in the platform to gain better insights about our assets and introduce mobile field applications, process automation, predictive analytics, and leverage AI capabilities to support remote data-driven decisions over RY26-RY29.
Geographic information system (GIS)	GIS is the master spatial register for pipeline assets across the Firstgas networks. It integrates geospatial, technical, connectivity, and land management and asset data which cross references with the EAM solution. There is also growing need to meet compliance obligation inspecting assets via mobile applications which would be done in conjunction with our Enterprise Asset Management solution.	Server upgrades and additional storage for LiDAR and imagery (UAV and manned aircraft) planned for RY26. This will enable desktop analysis reducing the need for site visits and reduce health and safety risk. We are currently implementing the Utility Network framework over RY25-RY26, which will enable rule-based connectivity and attribute modelling improving data integrity. We are also migrating and updating our GIS SQL servers in our data centre. Upgrading our application development toolset in RY26 as an application lifecycle maintenance and improved user experience.

Solution	Description	Improvement Programme
		Ongoing planning for a cloud transition will progress RY27-RY29.
Payroll services	Our payroll processing system is a standalone modern cloud system and used to manage employee remuneration.	Integration between our payroll system and active directory is planned for RY26 to reduce manual keying errors and introduce user provisioning time savings.
Web content management	Our cloud-based web content management system (CMS) is used across Firstgas. It supports consistent branding, streamlined content updates, and integration with features such as GIS mapping, outage notifications, recruitment interfaces, and "Get Connected" services.	No planned improvements.
Project management	Our central project planning and scheduling tool is used to manage engineering and capital projects. It supports lifecycle tracking, resource allocation, and integrated activity planning across project phases.	System upgrade planned for RY26 due to end of life integration limitations. Further investigation to be completed in RY27-RY28 to determine if alternative tooling is required to improve resource management.
Engineering tools and management	There is a suite of engineering management systems to support asset design and modelling. Drafting design drawings, and schematics. Asset lifecycle tracking and data structure management, particularly for delivery points and station types. Simulation tools to enable analysis of network performance, operational scenarios, and system optimisation.	No planned improvements.
Engineering document management	Our engineering document management system, used to store and manage asset-related documentation including AutoCAD drawings, engineering plans, work orders, and equipment records.	No planned improvements.
Recruitment management	Recruitment and onboarding tooling to support the end-to-end hiring processes, including job posting, candidate tracking, and onboarding.	No planned improvements.
Contract management	Our enterprise contract management system and digital signing platform is used to manage contracts, confidentiality agreements, and governance records.	Lifecycle review scheduled for RY27.
Employee engagement	The employee engagement system is used to run structured campaigns on topics such as health and safety, technology adoption, risk awareness, and organisational culture.	Lifecycle review scheduled for RY27.
Learning management	The enterprise learning management system is used to deliver, track, and manage employee training and development. It supports compliance-based learning, onboarding, and professional development.	No planned improvements.

Core technology solutions

Our core technologies provide foundational platforms and services that underpin our entire environment including the infrastructure that hosts operational technology. We have two multi-year strategic programmes of work, as follows.

- **Cyber security programme**: continuously improve our corporate network cyber security posture moving towards zero-trust model while prioritising and addressing vulnerabilities and

improving controls. This will protect our asset investments and provide assurances that we are effectively managing our cyber security risks. This improvement requires non-network capex and opex.

- **Data programme**: unlocking data for our people by developing core business data products on our data platform to enable business and operational intelligence, data-driven decisions, and identify opportunities. The improved data analysis means we can allocate our expenditure more effectively and efficiently. This requires primarily non-network opex.

The following table sets out descriptions of core technology solutions.

Table C.10: Firstgas core technology solutions

SOLUTION	DESCRIPTION	IMPROVEMENT PROGRAMME
Cyber security management	Our cyber security approach and activities are structured to align with the NIST Cyber Security 2.0 Framework. It spans core network systems, supporting platforms, and cloud services, with structured controls for identity management, access permissions, vulnerability detection, and incident response.	The cyber security programme planned over RY26-30 will focus on incremental improvements towards zero trust model. We will also prioritise addressing vulnerabilities and improving controls based on cyber security risk assessments. Exploring options for information management and data classifications to keep our information secure.
Data and voice comms	The WAN services are provided with the corporate internet breakout via our primary data centre. Voice communications are managed via a session initiation protocol truck (including DDIs) into the primary data centre and delivered to users via MS Teams. This includes an IVR service for the control room.	We are and will continue to complete lifecycle reviews, improve, and replace data connectivity and communications.
Data platform management	We are operating both our legacy on-premises enterprise data warehouses and modern data platform. Our modern data platform is a cloud native scalable, integrated platform that collects, stores, processes, analyses, and governs data efficiently. It will enable the ability to support real-time insights, AI, and advanced analytics. We have designed a comprehensive data governance framework, completed a modern data platform proof of value	We have begun a multi-year data programme to implement our modern data platform, replacing the legacy enterprise data warehouses with a cloud native solution. The process to ingest, transform, and promote data products for improved business insights with our data governance framework will continue to progress RY26-RY29. Investment in data quality, governance, and democratization is a strategic factor required for the efficient and effective management of the AMP.
Integration management	Our centralised integration system streamlines data flow between applications for consistent observability, monitoring, and alerting.	System improvements requiring integration will use our centralized integration tool in alignment with our architecture principles.
Productivity suite	A collection of software tools designed to help individuals and teams perform common work tasks more efficiently. **Intranet**: to securely share information, resources, and tools among our employees. **Microsoft 365**: document creation, communication, file storage, task management, and workflow automation. **Business process management**: to support mapping, managing, and improving internal processes.	We are currently considering moving away from our business process management system in RY26, considering cost and business value outcomes.

Solution	Description	Improvement programme
Business intelligence	The business intelligence platform brings data to life with interactive dashboard reporting. A data governance framework and data and analytics community of practice have been established as part of a broader strategy to enhance data literacy and accuracy.	The implementation of a modern data platform and governance structure is intended to increase the reliability of reporting, support changes in governance practices, and facilitate the curation and delivery of data for decision making through automated reports, self-service reporting, and AI-driven analytics over RY26-RY29.
IT service desk	Our central support platform that manages and resolves IT issues, service requests, and user onboarding through a ticketing system.	Our current IT Service Desk tooling is an ageing on premise solution due for a lifecycle replacement. We will be exploring cloud-hosted solutions that enable self-service and generative AI connectors.
Information management	Information Management supports the ability to store, access, and protect critical documents and data. With the introduction of Generative AI tools, we require the need to invest in our information management governance.	Over RY26-RY27 we will consider document storage optionality, additional information governance controls, and cyber security classification to protect against unauthorised access. This will allow us to be more confident in our generative AI interactions and have privacy assurances for interacting with sensitive information.
Artificial intelligence	We are integrating AI into our enterprise ecosystem through embedded systems, advanced analytics, and standalone tooling.	We are rolling out generative AI capabilities across our organisation. In the future we will leverage the information products in our modern data platform to apply advanced modelling and AI tools that will improve insights and decision-making across our assets.

Minor fixed assets

All employees are provided with a standard workstation setup that includes a desk, chair, storage, PC and communication equipment. Minor fixed assets are classified as the following:

- Desktop and laptop hardware
- Monitors and screens
- Mobile phones
- Video conferencing equipment
- Other peripherals (e.g. printers and scanners).

Expenditure is driven by the need to provide staff with the tools necessary to carry out their roles efficiently and to leverage business improvements (such as new ICT systems) and increase staff mobility and collaboration.

C.3.5. Other non-network assets

Non-network assets play an important role in supporting the AMS. This includes both physical infrastructure (e.g. buildings and facilities) and vehicles. Non-network capex is allocated between the transmission and distribution businesses based on factors such as size of asset base and staff headcount.

Plant tools and equipment

We maintain, operate and renew plant, equipment and tools essential for the operation and maintenance of the network.

Offices and Facilities

We maintain a mix of owned and leased facilities, including office buildings and storage sites. Our main offices are in Hamilton and Wellington, while our head office in New Plymouth is company-owned.

Our facilities management programme aims to ensure that our offices and stores are safe and secure for our employees and contractors, functional and fit for purpose, support improved productivity and efficiency, and are cost effective to procure and operate. These facilities must also be appropriately sized to support future staff growth and materials storage requirements.

Our facilities management ensures buildings remain effective and productive through regular maintenance, upgrades, and compliance with safety standards, supporting operational needs and adapting to workplace changes.

Vehicles

We prefer to purchase our vehicle fleet as it makes better strategic sense to own a vehicle directly where certain towing abilities or specific plant equipment are required.

Renewals

The forecast for other non-network capital expenditure is expected to remain relatively stable with ongoing expenditure to manage lifecycle replacements of vehicles, tools and equipment and property.

C.4. Performance measures

Our performance measures reflect operational, equipment reliability and other compliance measures. A key premise for our AMP-related planning is that existing reliability and supply quality levels will be maintained. Accordingly, these targets are presently set at a constant value for the current AMP planning period. Performance against these targets is also discussed.

Where appropriate the measures have been developed to align with the definitions developed by the Commerce Commission for Information Disclosure.

C.4.1. Safety

We monitor HSE performance (internally and externally) and the HSE performance of core contractors. We have a strong safety culture where all incidents are reported and reviewed weekly to ensure the appropriate level of incident investigation and ownership follows.

We continue to increase our focus on critical risks, particularly those that can result in serious injury or fatality. Safety initiatives include the following.

- **Collaboration**: we work collaboratively with all partner service providers to create an environment where staff and service providers can operate more safely. We are working with service providers to develop better policies, work practices and reporting disciplines.
- **Asset management improvements**: to drive safe outcomes, including safety-in-design principles have been implemented and applied to design, construction contracting and management and disposal of assets.

- **Safety systems**: providing service specifications and policies to service providers ensures best practice understanding, reviewing work management policies and providing an improved and transparent public safety management system.

Lost time Injury Target

Our lost time injury target is zero.

In FY24, we reported one LTI involving a contractor injury.

C.4.2. Security and reliability

Below we discuss performance against our security and reliability measures.

Response time to emergencies

We take the safety of the public and our workforce very seriously and aim to attend to emergencies occurring on the distribution system as soon as practical to prevent any damage or harm to the public, employees, contractors and property.

Response time to emergencies (RTE) within one hour has varied between 80% and 94% historically. We endeavour to maintain RTE within the upper half of this band over time. Our RTE target and definitions are aligned to the quality standard. Our RTE targets are as follows:

- Proportion of RTE within one hour: 80%
- Proportion of RTE within three hours: 100%

Table C.11: RTE - historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Proportion of RTE within one hour	88%	90%	89.9%	93.1%	86.7%
Proportion of RTE within three hours	100%	100%	100%	100%	100%

Customer complaints

Although we seek to provide a high standard of service and a safe and reliable gas supply, there may be times when customers have concerns with their service. Historically, there has been a relatively low number of complaints. We endeavour to maintain the level reached as the customer management systems are stabilised.

Table C.12: Complaints per customer – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Number of complaints per customer	0.0001	0.0003	0.0003	0.0001	0.0002

Outage timeframes

System average interruption duration index (SAIDI) measures the total time, on average, that a customer could expect to be without gas over the reporting period. It is a measure of interruptions, including third party damage, excluding gas transmission events. SAIDI is calculated by adding up all the minutes customers were without service, then dividing by the total number of customers, and multiplying by 1,000.

The significant increase in FY22 SAIDI was the result of a single third-party event on Kawerau in November 2021. A gas main was damaged due to a contractor drilling.

Table C.13: SAIDI – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
SAIDI (minutes per 1,000 customers)	1,054.8	1,426.0	3,583.9	432.7	569.6

Outage frequency

System average interruption frequency index (SAIFI) measures the average number of interruptions that a customer could expect over the reporting period, including those due to third party damage, excluding gas transmission events. SAIFI is calculated by dividing the total number of interruptions on the network in the relevant year by the total number of customers connected to the network and multiplying by 1,000.

We focus on reliability to keep the numbers low. However, current levels are expected to remain because the pre-1985 PE pipe replacement programme is ongoing. We will continue efforts to educate developers and contractors on the need to check the area before they commence works. We are also members of the “before u dig” service and will actively promote its use and provide industry leadership in promoting the service to all industry stakeholders.

Table C.14: SAIFI – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
SAIFI (interruptions per 1000 customers)	10.0	8.4	9.0	5.5	5.6

Outage duration

Customer average interruption duration index (CAIDI) measures the average outage duration of an interruption of supply per customer who experienced an interruption in the reporting period. CAIDI is the sum of the duration of each interruption, divided by the total number of interruptions.

The significant increase in the FY22 CAIDI metric was the result of a single third-party event on Kawerau in November 2021. A gas main was damaged due to a contractor drilling.

Table C.15: CAIDI – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
CAIDI (minutes per interruption)	105.2	168.9	398.2	78.9	101.0

Publicly reported gas escapes

Public reported escapes (PRE) measure is used as the primary technical service quality measure for operational purposes. It is an important safety measure and a reliable indicator of the condition of the network. This measure is impacted by a number of factors, including the effectiveness of renewal strategies, the condition and composition of assets, the level of odorant added (which increases the likelihood of PREs), and the extent and effectiveness of leakage surveys.

PRE is calculated by dividing the total number of confirmed public reported escapes of gas on the network (including mains, service pipes, valves, and pressure stations) by the total length of network (mains and services) and multiplying by 1,000.

Table C.16: PRE – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
PRE events per 1000km	30	30	27.9	27.8	28.8

Leakage surveys

Leakage surveys are a proactive inspection strategy that attempts to locate gas leaks in the network. Leaks detected by these surveys are an indicator of the condition of the network and the effectiveness of asset management strategies. Renewal strategies play an important role in improving the condition of the gas distribution network and reducing the number of leaks.

Leak survey is calculated by adding up the number of leaks detected by routine survey and dividing this number by the total length of pipeline and further multiplying by 1,000.

We now complete leakage surveys every six months, a change since FY23. We use a street evaluating laser methane assessment (SELMA) that is mounted on a vehicle for the leak detection survey.

The increased number in FY24 is associated with the increase in surveillance.

Table C.17: Leakage surveys – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Leakage surveys (events per 1000km)	10	11	5.8	6.4	10.4

Poor pressure

Poor pressure metric is defined as the number of unplanned incidents where delivery pressure drops below contracted delivery requirements. These events can be reported through customers or through our monitoring equipment.

Table C.18: Poor pressure – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Poor pressure due to network causes	8	8	18	10	5

Odorisation

The purpose of this measure is to ensure the odorant levels of gas conveyed through the gas networks are maintained in accordance with the requirements of the Gas Regulations 1993 and the New Zealand standard NZS 5263 Gas Detection and Odorisation.

Monitoring the number of non-compliant odour tests enables the level of odour in the gas to be monitored and identify if corrective action is required. A non-compliant odour test means the odour test result is above 0.9% gas-in-air or the odorant concentration test result is less than 3 mg/m3.

The recent increase in non-compliant odour tests as shown in the below table is primarily due to new subdivisions and other areas with low gas flow not pulling odorant through. The total FY24 non-compliant tests represents less than one percent of all testing on the network and is within acceptable tolerances.

Table C.19: Non-compliant odour tests – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Number of non-compliant odour tests	2	3	0	4	11

Third party damage

Third party damage events are a significant cause of gas escapes and customer supply interruptions. The levels of third-party interference damage provide some indication of our level of success in communicating awareness to those engaged in activities that put gas networks at risk.

Table C.20: Third party damage – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Third party damage (events per 1,000km)	32	38	34.7	32.8	29.2

C.4.3. Compliance

Environmental

Our purpose is to provide a safe and reliable gas supply to all customers in a safe and reliable manner that minimises any adverse impact on the environment. We will comply with all legislative requirements and where possible exceed these.

Our target is to maintain full compliance with all requirements from local and regional councils and to have no prosecutions based on breaches, environmental regulations or requirements.

Table C.21: Environmental compliance – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Impact on the environment	0	0	0	0	0

Public safety audit

We are subject to an annual Public Safety Management System audit, assessing compliance with NZS7901. Our target is zero non-compliances, with any non-conformance requiring a rectification plan and closure within three months. The table below summarises the number of non-conformances identified in each annual audit, as reported in the official assessment documents.

The number of non-conformances has generally declined from FY20 to FY23, with a slight increase in FY24 reflecting systemic findings around audit sufficiency, project handover/inspection, and minor field defects (lids/risers/marking). All FY2024 non-conformances were classified as “Minor – Moderate risk”, with certification continuing and action plans requested.

Table C.22: Public safety compliance – historical performance

DESCRIPTION	FY20	FY21	FY22	FY23	FY24
Number of non-compliances	8	5	3	2	3

C.5. Technical standards and legislation

The distribution network is designed to meet the relevant standards and comply with relevant legislation. Equipment is purchased and installed in accordance with relevant gas standards to ensure optimal asset life and performance. Where possible, certain asset components (e.g. isolation valves) may conform to pre-specified standards for specific applications. This is to ensure, wherever possible, that design, procurement, installation and maintenance consistencies and efficiencies are made.

C.5.1. Engineering principles

Our engineering principles ensure a consistent and effective approach to lifecycle delivery. These include:

- Compliance with standards and regulations (e.g., AS/NZS 2885, ISO 55001).
- Integration of safety, environmental, and risk management principles.
- Alignment with our corporate mission and values.
- Commitment to continuous improvement and stakeholder engagement.
- Efficient capital and operational expenditure planning.

Safety in design

We are committed to ensuring that operations do not put employees, contractors or the public at risk. This extends to safety being a key focus of the design phase of the work done. It is at the design stage of creating assets that the greatest opportunity exists to build in safe operability for the whole lifecycle of the asset.

Safety-in-design is about eliminating or controlling risks to health and safety as early as possible in the planning and design stage, so that whatever is designed will be safe to construct, repair and maintain and ultimately, safe to decommission and dispose of at the end of its lifecycle. This concept is implicit in all work practices.

C.5.2. Legislation and standards

Below is a collection of some of the regulations and standards that guide our approach to maintaining, operating, and constructing the gas distribution network.

- Health and Safety in Employment (Pipelines) Regulations 1999
- Health and Safety at Work Act
- Gas (Safety and Measurement) Regulations
- Civil Defence and Emergency Management Act
- Hazardous Substances and New Organisms Act
- The Electricity Act 1992
- Electricity (Safety) Regulations 2010
- AS(/NZS) 2885 Pipelines - Gas and liquid petroleum
- ASME Codes and Standards
- NZS 5259 Gas Measurement Standard
- NZS 5442 Gas Specification for Reticulated Natural Gas
- NZS 7901 Electricity and Gas Industries - Safety Management Systems for Public Safety

- AS 2832.1 Cathodic Protection of Metals
- AS 2312.1 Guide to the protection of structural steel against atmospheric corrosion using protective coatings
- NZS 4853 Electrical Hazards on Metallic pipelines
- NZS 5263 Gas Detection and Odorization
- AS/NZS3000 Electrical installations
- AS/NZS60079 Design, selection and installation of electrical equipment in hazardous areas.
- AS/NZS4645 Gas distribution networks

Appendix D. LIFECYCLE MANAGEMENT

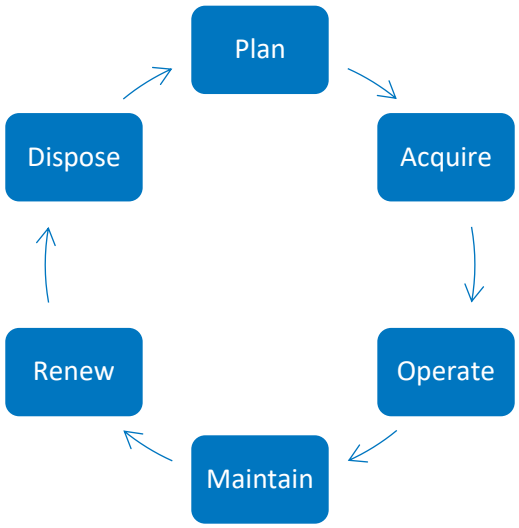
Our approach to lifecycle management mirrors leading practice found in many asset management frameworks aligned with ISO 55001. Our process is systematic and reflects the inherent lifecycle of assets that we plan, acquire, operate, maintain, renew, and ultimately dispose of assets.

In the context of New Zealand's reduced gas supply and price changes, our approach is evolving. External pressures are shaping our current asset strategies and decision-making processes, influencing our approach to renewal investment. Distribution assets, by their nature, are capital-intensive and long-lived. Traditionally, our strategies favoured investments with decades-long periods to recover our capital. Yet with the ongoing risk of asset stranding, especially as the gas landscape grows increasingly uncertain, we are now re-examining whether the long-term horizon remains optimal for every asset class.

Where previously we would not have endorsed short-term remediation to address asset issues, today such options are increasingly becoming part of our strategic approach. This flexibility allows us to strike an appropriate balance between maintaining the safety and resiliency of our network while minimising long term costs to customers and the risk of over investment and subsequent asset stranding.

We utilise a lifecycle based approach to asset management as depicted below.

Figure D.1: Lifecycle management phases.



A description of the main activities we undertake across each lifecycle phase are set out below.

- **Plan:** identify future needs using demand forecasts, risk assessments, and stakeholder input, guided by long-term investment models and asset strategies.
- **Acquire:** invest in new or upgraded assets to maintain service and security standards, with safety-in-design.
- **Operate:** manage the network safely and efficiently with real-time monitoring and structured event response.
- **Maintain:** apply risk based preventive and corrective maintenance to preserve asset performance.
- **Renew:** replace or refurbish assets based on condition, performance, and risk triggers, with decisions supported by lifecycle cost analysis.

- **Dispose**: remove assets that no longer add value or pose increased risk, considering environmental impacts, costs, and reuse opportunities

We constantly monitor and intervene on our network to keep it safe and reliable for our staff, contractors, gas users, and the public. When making decisions about when to fix or upgrade our equipment, we look at things like how well it's working, how safe it is, and what it costs to keep running.

There is growing uncertainty about the long-term future of natural gas in New Zealand. Because of this, we're carefully considering our investments, avoiding long-term capital investment that could leave us with stranded assets if demand reduces or regulations change. We're increasingly focusing on flexible, short-term solutions that let us adapt quickly as we continue delivering safe and reliable services.

D.1. Asset interventions

This section sets out the main asset interventions undertaken on the gas distribution network.

D.1.1. Asset renewal

Asset renewal is often required to address asset deterioration and to ensure the network remains in a serviceable and safe condition. As the level of deterioration increases, the asset reaches a state where ongoing maintenance becomes ineffective or excessively costly. Once assets reach this stage renewal is considered, which typically includes one of the following:

- **replacement capex:** to replace assets with like-for-like or new modern equivalents, or
- **refurbishment capex:** that extends an asset's useful life or increases its functionality.

If an asset is identified for renewal the original design basis is reviewed for validity prior to confirming replacement. During this review, other alternatives are assessed, such as decommissioning. The availability and feasibility of renewal options depend on a range of factors. These investments are generally managed as a series of programmes focused on a particular asset fleet.

There are several factors considered when assessing assets for replacement or renewal including safety risks, asset condition, legislative and standards, and overall lifecycle cost. In some cases, it may be more efficient to extend the life of an asset beyond normal predicted life by refurbishing the asset.

Efficiencies can often result from solutions that allow conventional network investment to be deferred without compromising performance or safety. In evaluating possible solutions, the following factors are considered:

- maintenance costs over the remaining life of the asset relative to cost of replacement
- potential for maintenance or operational changes to alleviate the identified issue
- use of non-network solutions and demand management techniques
- scope to leverage off other projects (e.g. growth projects) to gain synergies.

We assess the likelihood and consequences of asset failures, prioritising investments where the potential risks to safety, reliability, or compliance are greatest. This ensures our resources are directed towards the areas of highest impact, allowing us to proactively manage potential threats before they materialise.

Once an asset is identified for replacement or renewal, the prioritisation methodology is applied to determine the ranking of replacement projects. This methodology is based on assessing the criteria

giving rise to the need for replacement. The final project prioritisation list, along with cost estimates, forms the basis of the annual renewal budgets for each fiscal year.

The asset replacement and renewal investment decisions are made within the context of the wider asset management activities (e.g. network development), that ensures investments are optimised across all business objectives and constraints.

D.1.2. Maintenance

Our maintenance regime is designed to ensure that assets safely achieve their expected life and meet required performance levels. Information obtained during maintenance work is used to guide future maintenance programmes and inform renewal decisions. The overarching aim is to maintain all assets to ensure a safe, efficient, reliable, and compliant network.

A suite of asset maintenance standards exists that describe the approach to maintaining our asset fleets. While approaches differ across assets, the standards generally specify:

- required asset inspection frequency
- routine and special maintenance activities to be carried out during these inspections
- condition testing that needs to be carried out and the required response to the test results
- for certain asset classes, maintenance is primarily driven by compliance with regulations and codes
- maintenance of proprietary items follows vendor manuals and internal specifications.

Inspection intervals are subject to review based on inspection outcomes and regulatory limits.

Maintenance objective

The overarching maintenance philosophy adopted is to deliver timely, quality and cost-effective maintenance to ensure that assets are maintained to support the required level of safety, reliability, availability, output capacity, and service quality.

During the planning period, the main strategies to achieve this objective include the following:

- regularly review the effectiveness of routine maintenance and update standards and activities, as required
- review the effectiveness of monitoring programmes to identify components that may require more intrusive inspection or could have less frequent inspections
- ensure that staff and service providers are vigilant in identifying the activities of third parties working near our assets and take appropriate action to ensure the integrity of the network is not compromised
- educate the public, landowners and customers through regular communication about the dangers of working near the network.

Maintenance activity drivers

The approach to maintenance is influenced by several factors. These include the number, type and diversity of the asset fleets, their condition and age, and external factors such as legislative requirements, environmental factors and third-party activity. Several considerations are accounted for when setting maintenance requirements.

- **Public safety:** ensuring we maintain and operate our network to prevent harm to the public and meet relevant standards.

- **Industry practice**: maintenance practices have evolved, with good industry practice set out in various New Zealand, Australian and international standards and codes.
- **Fault analysis:** root cause analysis is undertaken when significant defects occur. This is supplemented by fault trend analysis. If performance issues with a particular type of asset are identified, and if the risk exposure warrants it, a project will be developed to carry out appropriate remedial actions. Findings from root cause analysis and fault trend analysis inform maintenance strategy reviews.
- **Asset availability**: assets are maintained to a level that maximises the availability of the equipment.

Maintenance standards

Reflecting the above drivers, overarching maintenance programmes have been developed. These are set out in our following documents.

- Maintenance of gate and district regulating stations
- Valve maintenance procedure
- Maintenance to above ground protection systems procedure
- Maintenance to below ground protection systems procedure
- Defect repair procedure
- Damage prevention and public education procedure
- Leakage survey procedure
- Patrolling procedure
- Decommissioning of facilities procedure
- System pressure monitoring procedure
- Pressure uprating without decommissioning procedure
- Gas leak investigation procedure
- Investigation of failures procedure
- Paint and wrapping systems procedure
- Odourisation system maintenance procedure
- Meter maintenance procedure
- Service regulator maintenance procedure
- Maintenance of critical spares and equipment procedure

These documents outline what is necessary to maintain the asset at the required levels of service. They define the required frequency of inspection and maintenance for each asset class based on statutory requirements, operating context, knowledge of equipment performance and manufacturers' recommendations.

This approach is reviewed and updated based on any new information. The field service provider team contributes to, and forms an integral part of, this continuous improvement process. Anomalies identified during asset maintenance and inspections are recorded and prioritised based on risk assessment for remedial works. Maintenance priorities are based on risk and safety criteria.

Below we describe the main maintenance expenditure categories.

Routine and corrective maintenance and inspection (RCMI)

After new assets are commissioned RCMI activities begin. As an asset ages and its condition declines, the cost of corrective repairs to maintain fitness for purpose will escalate until it becomes more cost-effective to decommission or replace it. Ongoing condition monitoring is used throughout the asset's life to identify when the asset should be decommissioned.

Maintenance strategies and plans are developed. These determine maintenance activities and frequencies. The frequencies defined in the maintenance plans provide schedules and intervention guidelines for maintenance on the assets.

New assessment technologies are being used more frequently. The advantage of these technologies is that condition assessment can be undertaken without disturbing normal operation. Technologies typically employed are vibration analysis, thermography, tribology, ultrasonics, metrology, oil analysis, water bath heater water sampling or computerised calibrations. New technologies will be evaluated for use within maintenance routines as they become proven across various industries.

Service interruptions, incidents and emergencies (SIE)

Incidents on the network result in the need to carry out activities to understand the nature of the incident and rectify asset failure or damage to assets caused by unplanned or unforeseen circumstances. This may include the following activities:

- safety response and repair (or replacement) of any part of the asset damaged due to environmental factors or third-party interference
- response to fault where safety or supply integrity could be compromised
- remediation or isolation of unsafe network situations.

Every reasonably practical precaution is taken to prevent third party interference with pipelines including thorough rigorous surveillance practices. However, experience and history has shown that emergency situations arise from time to time. In most circumstances pipeline integrity breaches do not result in catastrophic failure or rupture of the pipeline and suitable repair methodology and techniques can be applied. In more serious cases pipelines may have to be isolated and sections of pipeline replaced.

Maintenance forecast expenditure

The table below sets out our overarching RCMI forecast across our main asset classes.

Table D.1: RCMI maintenance forecast expenditure (RY25$ 000s)

ASSET CATEGORY	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35
Pipes	3,422	3,842	3,842	4,052	4,262	4,262	4,262	4,262	4,262	4,262
Stations	122	137	137	144	152	152	152	152	152	152
Valves	244	274	274	289	304	304	304	304	304	304
Special crossings	82	92	92	97	102	102	102	102	102	102
Monitoring and control systems	40	45	45	47	50	50	50	50	50	50
CP systems	163	183	183	193	203	203	203	203	203	203

D.1.3. Asset relocations

Existing assets are relocated when required because of the activities of other utilities, authorities or customers. For example, the installation of new infrastructure such as water pipes and roads. Relocations are identified following third party works notifications. Typically, asset relocation projects are predominantly funded through capital contributions by the third parties requesting the relocation.

D.1.4. Delivery model

Field maintenance and capex delivery are outsourced activities. Our main service provider is responsible for delivering issued capex projects, site emergency response, preventive, corrective and reactive maintenance activities on the gas distribution network.

We work with service providers to continuously improve the coordination of delivery of the capital and maintenance activities. This helps improve resource scheduling, enhances project delivery efficiency, and supports improved customer outcomes. This includes working on the following aspects:

- improved risk management
- clear understanding and development of project scope and delivery sequence
- early constructability input and reviews
- earlier operational acceptance
- cost certainty and improved project management
- refinement of capex delivery process to better define accountabilities
- field worker competency, succession planning and ensuring sufficient skilled resources are available.

D.1.5. Standardised equipment and designs

Standardised equipment and designs are used throughout the network. Standardisation has been applied to pipes, DRS equipment, and installation practices. Differing architectural treatments may be applied to DRS to better align with local architecture; however, construction techniques, materials and fit outs align with well-established standards.

Typically, standard designs are introduced to avoid producing bespoke solutions for similar network installations. When a design is repeatedly used on the network, a standard design will be developed. Subsequently, as design improvements are identified standard designs are amended and updated.

Standardised design provides the following advantages:

- ensures a rigorous equipment selection process to select fit-for-purpose units while ensuring appropriate equipment performance over the life of the equipment
- delivers cost savings in design
- lowers project costs through competitive bulk materials supply agreements
- simplified procurement and reduced stockholding
- standardised maintenance practices
- reduced rework during construction
- safer outcomes and improved mechanism for capturing incremental improvements

Table D.2 below identifies some of the key design standards used in the development of the distribution network.

Table D.2: Key internal design standards

ASSET	FIRSTGAS DOCUMENT NUMBER	DESCRIPTION
District regulating stations	00001	Design of district regulating stations
Pipes	00002	Piping system design
Paint and wrapping systems	00003	Design of above ground corrosion protection systems
Corrosion protection systems	00004	Design of below ground corrosion protection systems

D.1.6. Decommissioning

The lifecycle management of assets includes decommissioning unused assets. Evaluations are conducted on decommissioned equipment to determine its suitability to be reused on alternative sites, removed, or ongoing costs to maintain in a suspended safe condition.

Decommissioning

Consistent with the standards under which we operate, the following definition applies to our use of the term decommissioning.

- decommissioning refers to the process of safely removing a pipeline or station from active service permanently and assets remain in situ.

Decommissioning is managed through an internal procedure.

D.2. Asset overview

Gas distribution networks are made up of several distinct asset types. We have categorised these into several asset classes with related asset fleets. These are broadly aligned with information disclosure reporting categories.

D.2.1. Asset hierarchy

Gas distribution networks are made up of several distinct asset types. Categories are used to organise the asset base, and these have been aligned with expenditure reporting categories.

Table D.3: Asset hierarchy

ASSET CLASS	ASSET FLEET
Pipes	Main pipes Service pipes Special crossings
Line valves	Line valves
Stations	District regulator stations
Cathodic protection systems	Cathodic protection systems
Monitoring and control system	Pressure monitoring systems

D.2.2. Asset population

The following table sets out asset populations for our main asset categories (classes) and related fleets.

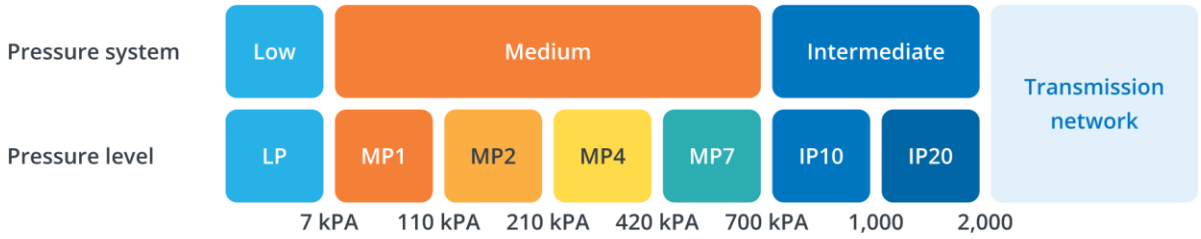
Table D.4: Asset populations (as at 22 September 2025)

Asset class	Asset fleet	Units	Quantity
Pipes	Main pipes	km	3583
Pipes	Service pipes	km	1442
Pipes	Special crossings	No.	149
Line valves	Line valves	No.	1938
Stations	District regulator stations	No.	122
Cathodic protection systems	Cathodic protection systems	No.	75
Monitoring systems	Cello remote monitoring unit	No.	127

D.2.3. Distribution pressure hierarchy

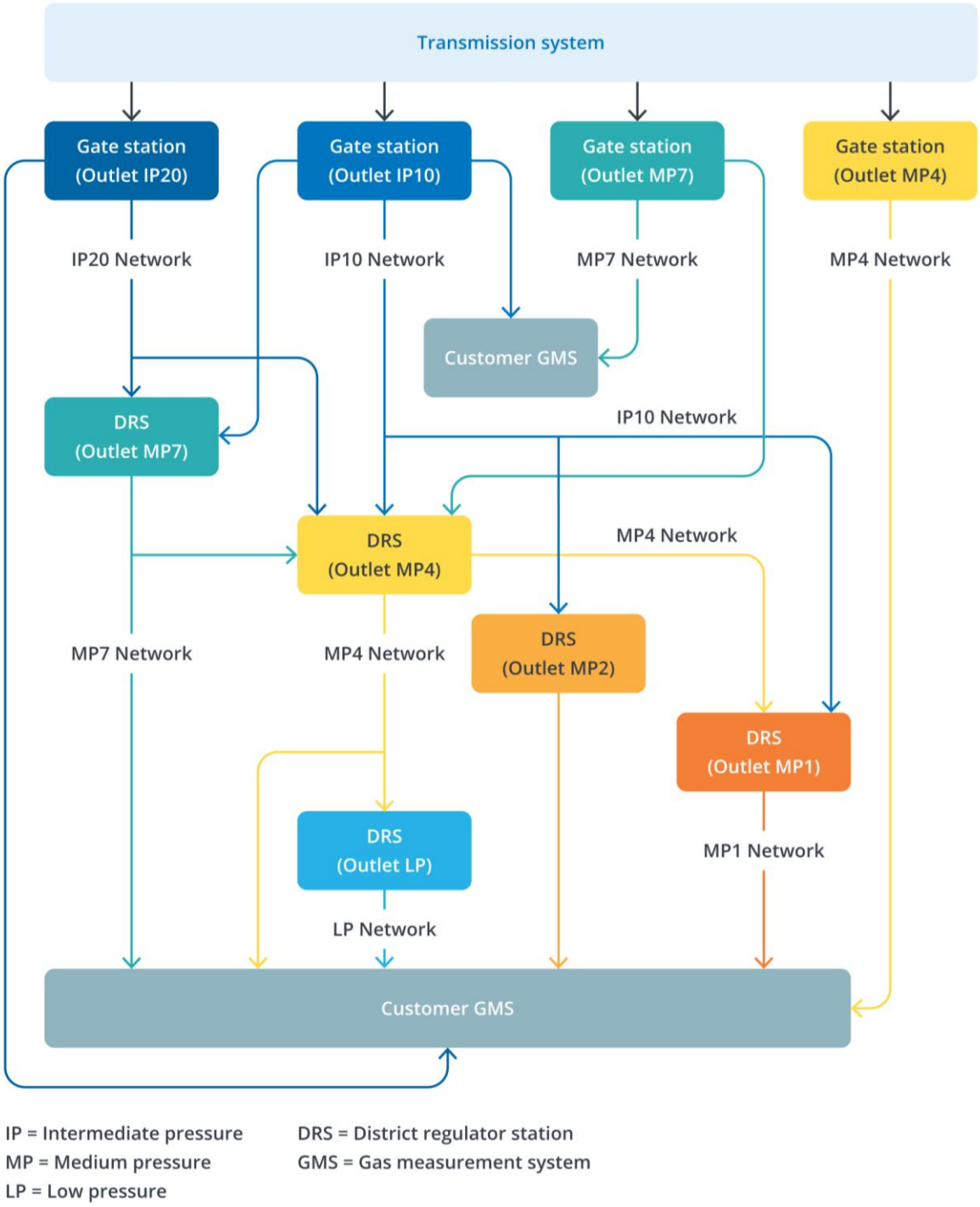
The distribution network operates at pressures up to 2,000 kPa, and is categorised into low, medium and intermediate pressure networks, as defined by relevant standards. These operating pressures are further categorised into seven pressure levels as shown below.

Figure D.2: Distribution pressure networks



A simplified depiction of the distribution network (Figure D.3) is presented on the next page showing the interconnection between various pressure levels.

Figure D.3: Schematic of the distribution network operation.



Our gas transmission network delivers gas, to our intermediate pressure (IP) and medium pressure (MP) distribution networks. IP and MP7 networks tend to be radial in design, whereas the design of the majority of MP and low pressure (LP) networks tends to be mesh-based, providing back-feed security to residential and commercial loads. MP and LP networks are often supplied from multiple district regulator stations (DRS), thereby further increasing the security of supply.

D.3. Pipes

D.3.1. Mains and service pipes

Asset overview

Gas distribution pipes are categorised into two asset fleets:

- **Mains:** pipes used to transport gas for further distribution and use.
- **Service:** pipes used to transport gas from a main to a gas measurement system typically installed on the consumer's property.

Mains

The IP networks generally form the 'backbone' of our distribution network with laterals diverging from pipes to supply adjacent areas. These pipes are operated in the intermediate pressure range of 700 to 2,000kPa. The selection of these pressures is based on balancing gas volumes, distribution distances, and delivery pressures. The IP pipes were designed and built in accordance with the codes and standards applicable at the time of installation. They are protected against corrosion using either sacrificial anodes or an impressed current system to prevent corrosion.

The MP network makes up most of our distribution assets. The pipes in the MP network generally form the greater mesh network and are used to directly supply consumers. These mains are constructed mostly of polyethylene (PE) and as such require no corrosion protection.

Service

Service connections link the gas mains in the street to the customer's gas meter. They comprise of a service pipe, riser and a riser valve. The outlet connection of the riser valve designates the end of the distribution network. A service regulator is normally fitted downstream of the riser valve to regulate the gas pressure to the consumer meter-set and to downstream appliances. The composition of the gas distribution network is set out in the following table.

Table D.5: Fleet overview (as of 22 Sep 2025)

Pipe Type	Asset Material	Length (km)	% by Category
Mains	PE	3284	65.35%
Mains	Steel	299	5.95%
Service	PE	1430	28.46%
Service	Steel	12	0.24%

Age profile

The average age of PE pipes is approximately 27 years. The expected design life of PE pipes manufactured prior to 1985 is 40 years, and the expected design life for modern PE (post 1985) is 50 years. The expected life for steel pipes operating on a medium pressure network is generally considered to be 60 years, and for those on an IP network 70 years. The age profiles for mains and service pipes are shown in the following charts.

Figure D.4: PE mains pipe age profile

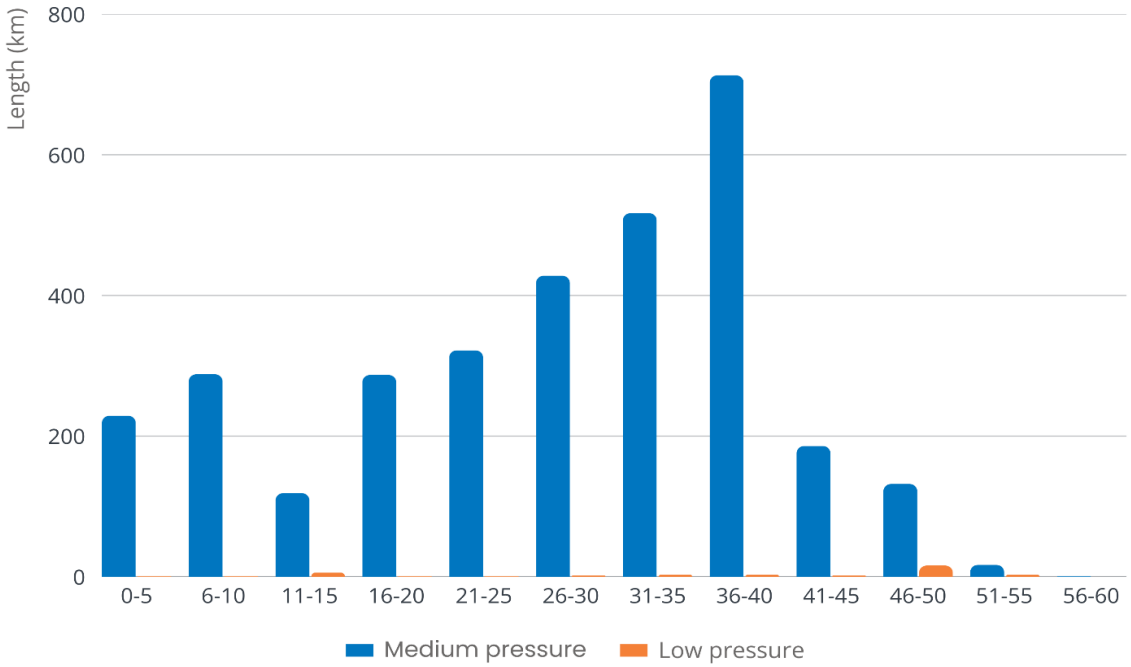


Figure D.5: Steel mains pipe age profile

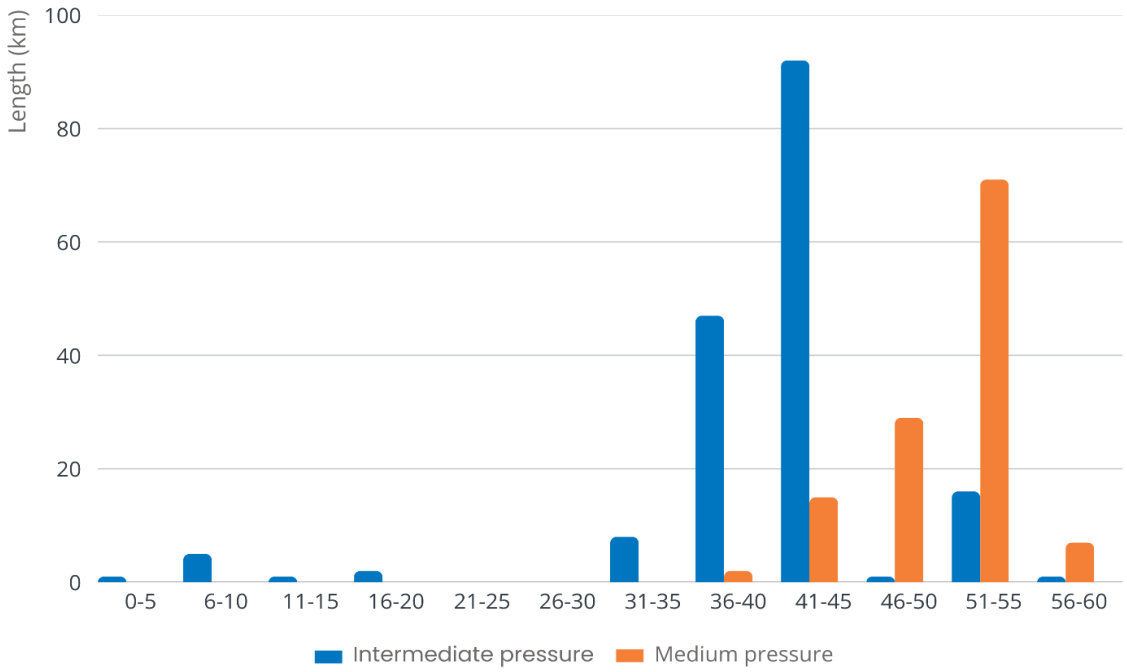


Figure D.6: PE service pipe age profile

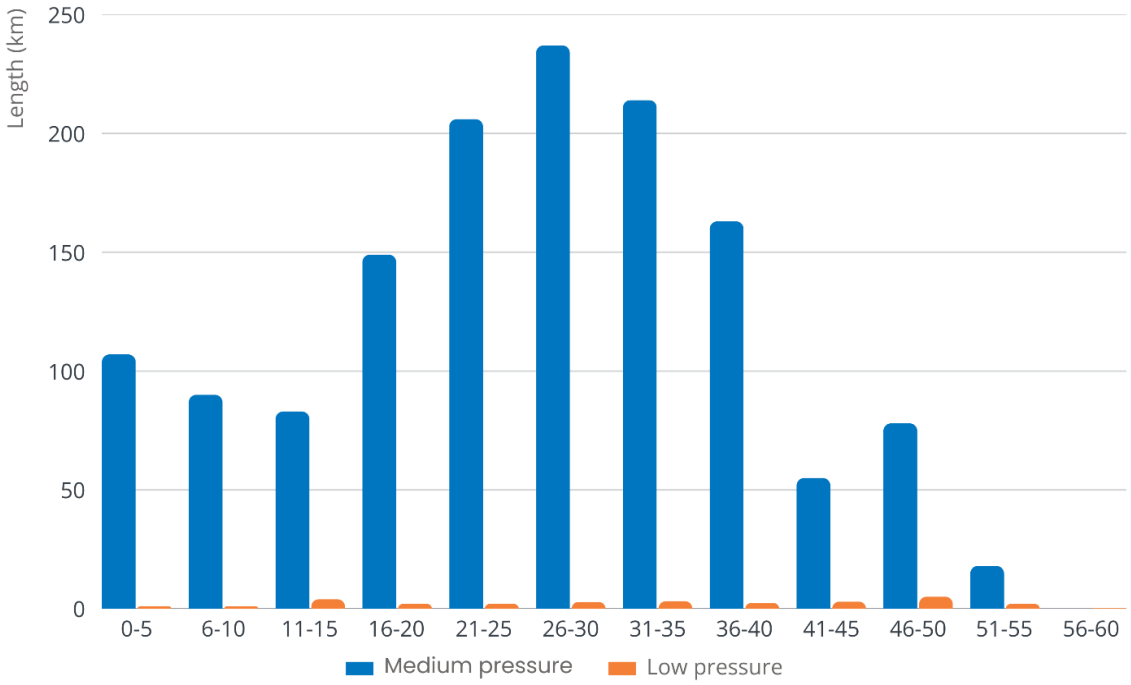
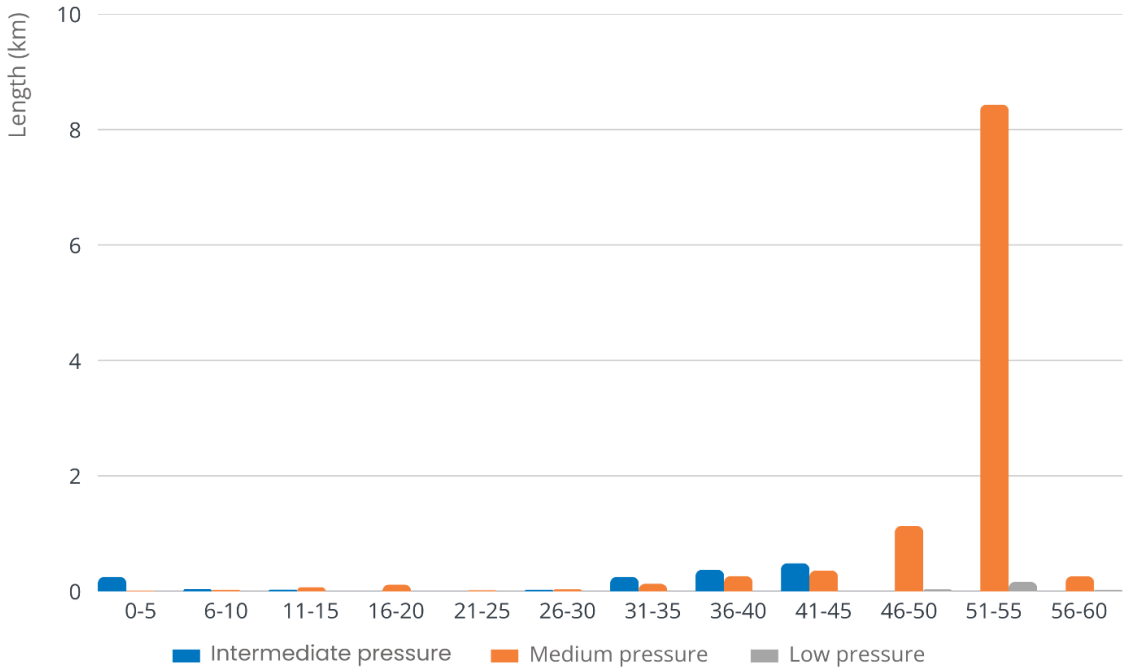


Figure D.7: Steel service pipe age profile



Condition and performance

Steel pipes

Based on condition monitoring, the overall condition of the pipes is good. No proactive replacement of these pipes is envisaged within the standard life of the asset.

During recent years, the network has undergone a programme to ensure steel pipe networks have adequate cathodic protection in accordance with the requirements of NZS 5258 and AS/NZS 4645. The replacement of underground steel pipes is expected to continue to be of a corrective nature,

targeting specific locations and addressing localised issues rather than a large-scale replacement programme.

Polyethylene pipes

PE pipes were first used in the distribution network in the 1970s. Early PE materials (i.e. pre-1985) have been known to exhibit premature brittle-like issues. Based on this, a heightened monitoring programme and risk assessment process was commenced. Further information on this issue, and the attitude to the mitigation of this risk, can be found below. However, this issue was resolved in PE materials manufactured post 1985, and pipes produced from this material have been found to be very durable.

PE mains pipes are our largest asset fleet and predominantly consists of PE80 material with PE100 pipes being installed from the late 1990s onwards to accommodate higher operating pressures. Pre-1985 PE pipes are prone to leaks due to previous isolation methods deployed, using clamps to stop flow. Our current pre-1985 PE pipes, consist of 24 km of pre-1975 and 347 km of pre-1985 mains in our network.

Isolated problems have been found with certain PE butt and saddle tee joints, due to poor quality control and jointing techniques used in earlier PE networks. These defects relate to pre-1985 PE pipe and are addressed as part of the pre-85 strategy programme.

Risks and issues

Mains and service pipes are vulnerable to number of material and construction-related issues. Legacy practices such as mechanical joints and older welding methods, introduce reliability and safety challenges. Ageing steel and pre-1985 PE pipes present higher failure rates and corrosion concerns. These risks are actively managed through targeted remediation programmes, upgraded joining techniques, and investment in improved equipment and testing.

Table D.6: Risk and issues

Risk or issue	Consequence	Controls
Mechanical joints on Hamilton MP4 Steel Network.	Increased risk of gas leaks, joint failure, reduced asset life and accelerated pipe corrosion due to reduced CP protection.	Regular leak surveys. Replace leaking joints.
Small diameter (≤25mm) steel pipes installed without isolation valves	Complex and time-consuming procedures to isolate sections during maintenance, increased safety risks for operators, and more complex emergency response efforts.	Incident response plans and specialist equipment to safely isolate gas flow efficiently.
Steel pipe corrosion	Gas leaks, pipe integrity failures, flammable atmosphere.	Leak surveys, cathodic protection, above ground CP surveys using specialist equipment (DCVG).
Pre-1985 PE pipes	Prone to premature brittle-like failure due to age, poor material quality, and stress intensification from outdated isolation methods such as squeeze-offs and pressure cycling. Failures result in gas leaks.	Leak surveys. Risk based pre-85 camera inspection, repair and replacement strategy.
PE pipes - hot plate weld quality	Gas leaks, joint separation, or pipe failure. Service interruptions, higher maintenance and emergency response costs.	Leak surveys, repair and replacement. Utilise electrofusion.

Lifecycle management

Maintenance

Pipes inspection and preventive maintenance activities vary depending on whether assets are underground or above ground. Direct inspection is limited for buried pipes; leakage surveys provide the primary indication of condition. Above ground steel pipework presents some different failure modes but can be directly inspected to give a better understanding of condition. An overview of these maintenance activities is provided in the following table.

Table D.7: Pipe maintenance and inspection activities

ASSET CATEGORY	INTERVAL	PREVENTIVE MAINTENANCE DESCRIPTION
Leakage survey	6 months	All mains
	5 years	Major service pipes.
Above ground steel pipework	1 yearly	Above ground corrosion inspection.

Renewal

Pipe renewal activities focus on replacing or remediating assets where condition, material or compliance issues present elevated risk. Priority programmes include risk based inspection, repair and remediation of pre-1985 PE pipes and response to Class 3 steel pipe leaks.

The following table provides an overview of projects and programmes for the planning period.

Table D.8: Forecast projects for planning period

PROJECT NAME	PROJECT DESCRIPTION	COMPLETION PERIOD
Pre-85 PE remediation programme	This project involves the systematic assessment and remediation of pre-1985 PE pipes. Risk is used to prioritise inspection locations, with high-risk zones already completed and current efforts focused on intermediate-risk zones. – inline camera inspections and oxidation induction time testing are used to accurately assess the condition of PE pipe. – reinforcement strategies and advanced isolation technologies are applied to minimise stress on older PE materials.	10 years
Emergent class 3 leaks	Remediation of class 3 leaks on steel pipes due to corrosion.	10 years
Emergent works	Periodically, sections of mains and service pipe may need to be replaced due to safety or compliance issues. Examples include pipes located under buildings or pipes of non-compliant material specification.	10 years

D.3.2. Special crossings

Asset overview

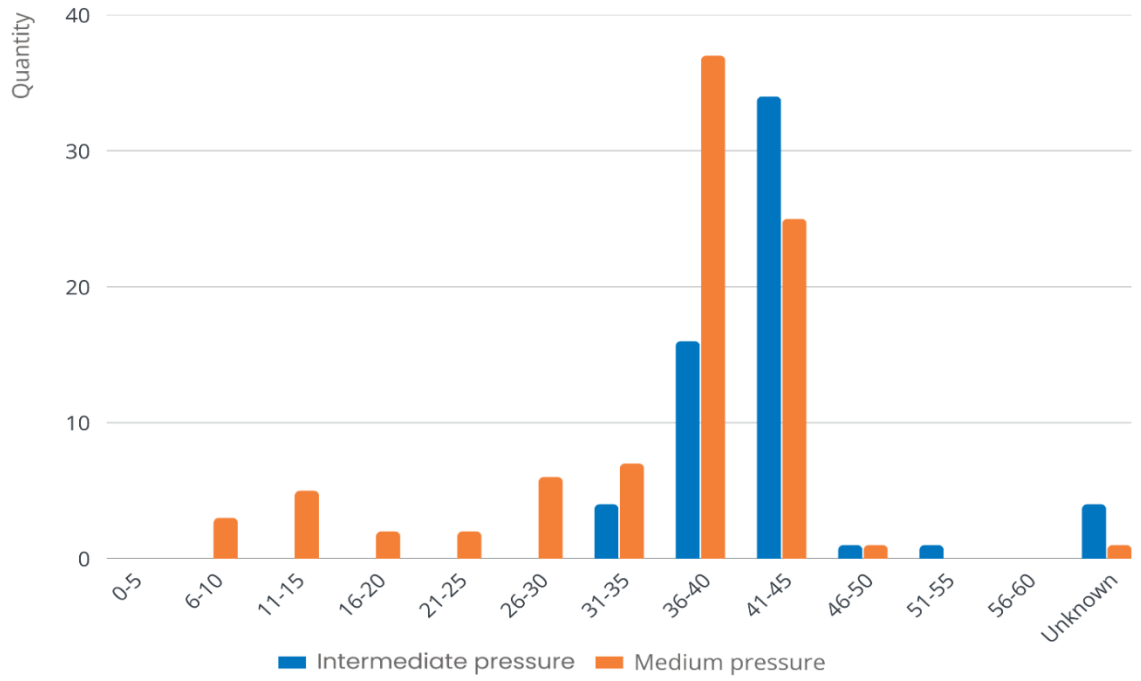
Special crossings are engineered structures that allow pipes to traverse obstacles that cannot be crossed by conventional underground installation. These obstacles include rivers, deep gullies, roads, railway lines, and fault zones. Our special crossings are mostly attached to existing bridges and the remaining attached to dedicated pipe bridges. Special crossings pipes are either steel or PE. When we install PE pipes, we encase them in either a steel or plastic duct to provide mechanical and

ultraviolet light protection. When we install steel special crossing pipe, it is either painted or wrapped to provide corrosion protection.

Age profile

The network currently has 149 special crossings, the majority of which were installed in the 1980s. Figure D.8 below shows the age profile of the special crossings.

Figure D.8: Special crossings age profile



Condition and performance

The current condition of the fleet has deteriorated, with our inspections identifying required remediations. While pipe integrity is sufficient, supporting infrastructure, coatings, protection and ground to air interfaces require repair or replacement.

Risks and issues

Special crossings are exposed to environmental conditions that can accelerate deterioration of pipe coatings and supports. These risks are managed through regular inspection and maintenance to protect pipe integrity. Ensuring adequate access to carry out inspections is an ongoing challenge at some locations. This can be due to the physical design of the bridge structure (e.g. pipe is encased within the structure), or the need to obtain approval (i.e. from the structure owner or operator) to gain access.

The table below outlines the key risk and controls.

Table D.9: Risk and issues

Risk or issue	Consequence	Controls
Environmental exposure	Damage and corrosion to pipe coatings and supports.	Regular inspections. Maintenance or renewal.
Access	Unable to inspect.	Stakeholder engagement with bridge owners.

Lifecycle management

Maintenance

Special crossings leak survey and inspection frequency is determined by their proximity to high density populations, high traffic community use and operating pressure. Periodic detailed inspections are performed on all crossings to inform maintenance and renewal activities. The table below outlines the maintenance activities.

Table D.10: Special crossings maintenance and inspection activities

ASSET CATEGORY	INTERVAL	PREVENTIVE MAINTENANCE DESCRIPTION
Special crossings	3 months	Leak survey and visual inspection of IP crossings in high density community use locations.
	6 months	Leak survey and visual inspection of other IP crossings.
	12 months	Leak survey and visual inspection of other crossings.
	5 years	Detailed inspection

Renewal

Renewals are triggered when inspections identify special crossings that require remediation to maintain pipe integrity, such as repairing corrosion, coatings or replacing supporting infrastructure. The table below outlines planned renewal projects.

Table D.11: Forecast projects for planning period

PROJECT NAME	PROJECT DESCRIPTION	COMPLETION PERIOD.
Special crossing refurbishments	Huntly bridge crossing, Huntly	12 months
	Gladstone road, Gisborne	
	Peel road, Gisborne	
Emergent work	Special crossing remediation.	4 years

D.4. Line valves

Asset overview

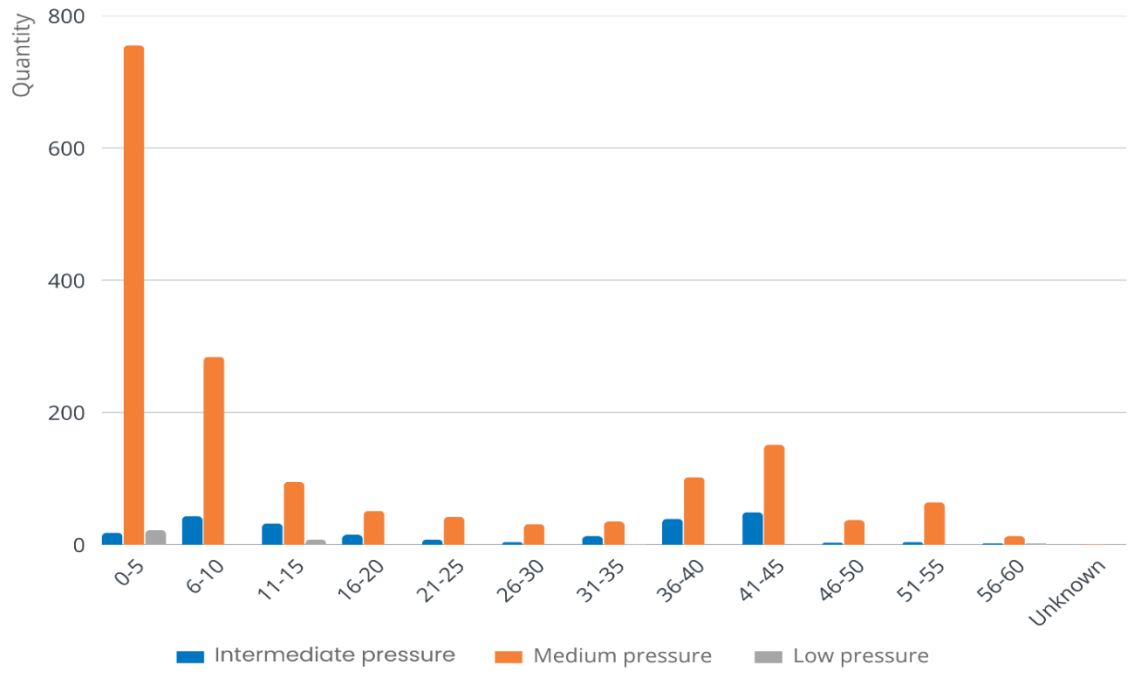
Line valves are manually operated valves used within the distribution network, with two main categories: in-line mains and service valves, which isolate gas flow as needed, and blow-down valves that vent or depressurise sections of the network. Valves are strategically located to isolate consumers and high-risk areas, such as central business districts, bridges, and rail crossings, and may include automatic shut-off valves.

Mains and service valves are typically installed below ground. The majority are direct-buried and access to the valve provided via a valve sleeve. In some cases, (e.g. on larger diameter mains) valves are installed in pits or above ground. Below ground valves are generally operated by a purpose-made valve key, whereas above-ground valves are typically operated by a hand wheel and gearbox mechanism.

Age profile

The age profile for line valves on the network is shown below. Ball valves have been used since the mid-1980s, replacing plug valves, as they are considered more reliable and relatively maintenance-free. The increase in line valve installations in the last five years is reflective of the growth of our network and our requirements to install additional isolation points.

Figure D.9: Line valve age profile



Condition and performance

Ball valves are typically in good condition and operate adequately. Some valve sites are susceptible to the access sleeve filling up with debris requiring ongoing cleaning to inspect and maintain. Plug valve condition deteriorates over time due to repetitive greasing to address seizing, grease drying out, or grease contaminating downstream facilities.

Risks and issues

Line valve risks relate to operability, construction data quality and lack of condition data. An overview of these risks is provided in the following table.

Table D.12: Risk and issues

Risk or issue	Consequence	Controls
Plug valves are prone to seizing and require ongoing maintenance and greasing to operate.	Contamination due to grease, passing valves and poor isolation, inefficient maintenance.	Regular inspection, operation and maintenance. Replacement of faulty valves with ball valves.
Service risers plug valves condition and risk of leaking.	Risk of gas leaks due to condition, corrosion and poor isolation.	Leak detection surveys. Replacement of faulty valves with ball valves

Risk or issue	Consequence	Controls
Construction records for the installation of valve types and location are inaccurate.	Inspections and maintenance cannot be scheduled. Valves can't be located or unknowingly built over, valve leaks. Incomplete asset register and valve type.	A review of available valve data will be undertaken and records updated.

Lifecycle management

Maintenance

Regular inspection and operation of line valves is needed to ensure reliability. The table below summarises maintenance activities. Due to the large number of valves in the fleet the maintenance programme focuses on critical locations and functions.

Table D.13: Line valves maintenance and inspection activities

Asset category	Interval	Preventive maintenance description
Valves	12 months	Critical valves, DRS Isolation valves.
	5 years	All other valves.

Renewal

Valve renewal is needed when the valve is either excessively leaking or no longer isolates and presents an elevated level of risk. The table below outlines the renewal activities scheduled in the planning period.

Table D.14: Forecast projects for planning period

Project name	Project description	completion period.
Emergent faults	Replacement of high risk valves as they are identified.	10 years
Riser valve replacement	Replacing leaking and poor-condition riser valves during smart meter replacement program by the meter owner.	10 years

D.5. Stations

D.5.1. District regulator stations

Asset overview

District regulator stations (DRS) are mostly built above ground with some of our installations being purpose-built below ground. DRS consist of isolation valves, pressure regulators and over pressure protection and are used to reduce pressure between networks that operate at different pressures or between PE pipes that have a lower maximum allowable operating pressure.

There are economic and safety benefits reducing pressure from high-volume mains, (i.e. MP7 and above), down to more economic pressure levels, such as 400kPa networks. Equipment pressure ratings are lower and generally this means lower cost e.g. PE pipe, while lower pressure networks are easier to isolate and lower volumes of gas are released when a loss of containment or minor leak occurs.

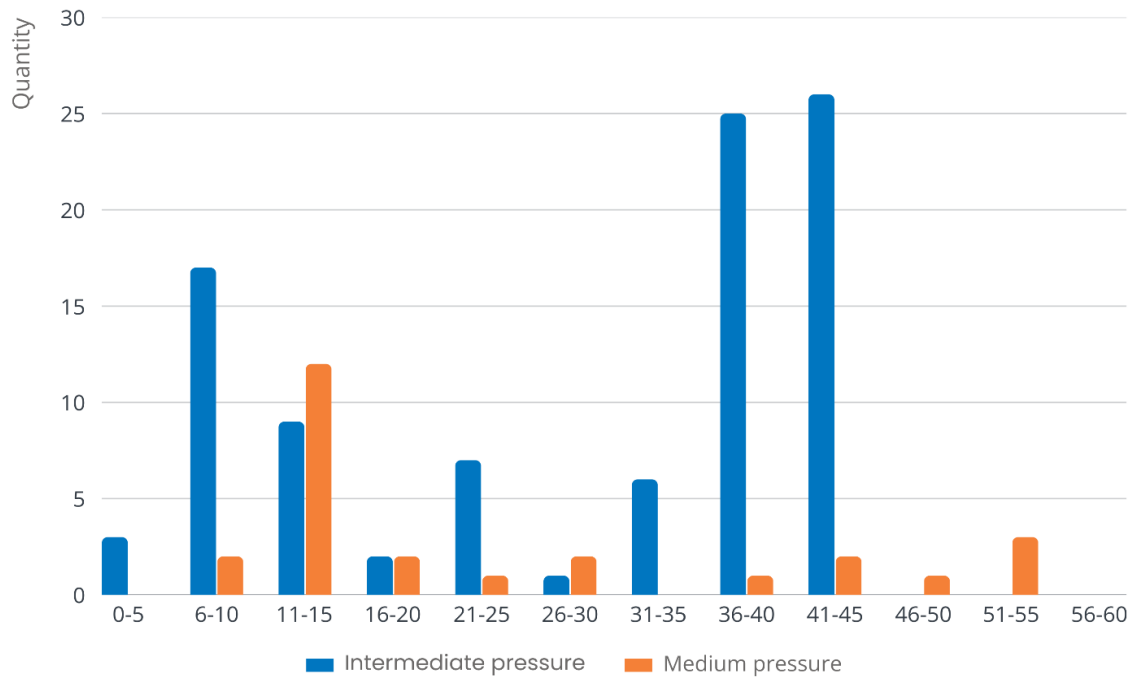
As these are the source of supply to a significant number of consumers, they are critical components in the network. Because of this, DRS installations are often duplicated to ensure a reasonable level

of security of supply. This redundancy also enables maintenance to take place without a loss of supply to customers.

Age profile

The age profile for all stations on the network is shown below. Many of the facilities were installed in the 1980s aligned with network growth. Components of the stations have been replaced since original installation to extend operating life.

Figure D.10: Stations age profile



Condition and performance

Aboveground equipment continues to face challenges due to the diminishing availability of spare parts. This is particularly critical for underground regulators. Production of the Cocon underground regulator has been discontinued by the manufacturer and soft spare parts will remain available for the next 10 years. As long-term maintenance is not feasible, full replacement of these will be required for specific areas of the network, with older units stored as spares.

Risks and issues

Key issues we observe on DRS sites include equipment obsolescence, inadequate vehicle impact barriers, and a small number of sites without isolation valves.

Table D.15: Risk and issues

Risk or issue	Consequence	Controls
Limited vehicle impact protection to the DRS	Vehicle impact leading to loss of containment.	Barrier protection, site relocation.
Obsolescence of DRS equipment	Equipment failure, extended service outages affecting multiple customers, increased safety risks and higher maintenance costs.	N-1 configuration, network rationalisation strategy. Critical replacements and inventory management.

Risk or issue	Consequence	Controls
Lack of isolation valves installed on DRS stations.	Affecting immediate isolation during an emergency or maintenance.	Program nearing completion to install additional valves. Main line valves are available to isolate the DRS in an emergency

Lifecycle management

Maintenance

Inspection and maintenance of DRS focus on ensuring reliable operation of the pressure regulators and safety shut off or relief valves. Activities include inspections, functional checks, and odorant level testing.

The table below outlines the inspection and preventive maintenance activities for pressure reduction systems.

Table D.16: Pressure reduction maintenance and inspection activities

Asset category	Interval	Preventive maintenance description
DRS station, pressure regulators and over pressure protection	12 months	Visual and functional check.
	3 years	Equipment maintenance and overhaul, including inspection and confirmation of settings and function.
Odorant checks	12 months	Station odorant level and odorant concentration tests.
	3 months	Extremity point ICP odorant level and odorant concentration tests.
Service regulators	12 months	Visual inspection of above ground installations.

Renewal

A risk-based approach determines DRS replacement priority and whether the possibility of external interference such as vehicle impacts is present, requiring protection to the assets. Each individual element of DRS is risk assessed, and a risk score assigned to the relevant element to determine the overall risk of failure, obsolescence, criticality and risk of external interference for the DRS location.

Table D.17: Forecast projects for planning period

Project name	Project description	completion period.
DRS safety upgrades	This project upgrades existing DRS by adding safety isolation valves	10 years
Regulator replacement programme	This project replaces obsolete or end-of-life regulators (or any other obsolete equipment) within DRS sites.	10 years
Cocon replacement	Replacement of critical Cocon DRS	10 years

D.6. Cathodic protection systems

Asset overview

Steel or metallic pipes and equipment installed in the distribution network (either above or below ground) are susceptible to corrosion. Coatings or cathodic protection systems are our primary methods to ensure corrosion is prevented and the integrity of our assets is maintained.

Above ground pipe and equipment is protected against corrosion through painting or other protective coatings e.g. wrapping. Periodic inspections are carried out to monitor the condition of these coatings.

Below ground steel pipes and equipment are protected against corrosion through protective coatings (e.g. high-density polyethylene or epoxy coating) and the application of impressed current or sacrificial anode cathodic protection systems. Protective coatings are inspected whenever underground pipe or equipment is exposed. Cathodic protection is routinely monitored to ensure that the levels of protection being provided to the underground pipes are kept within required levels.

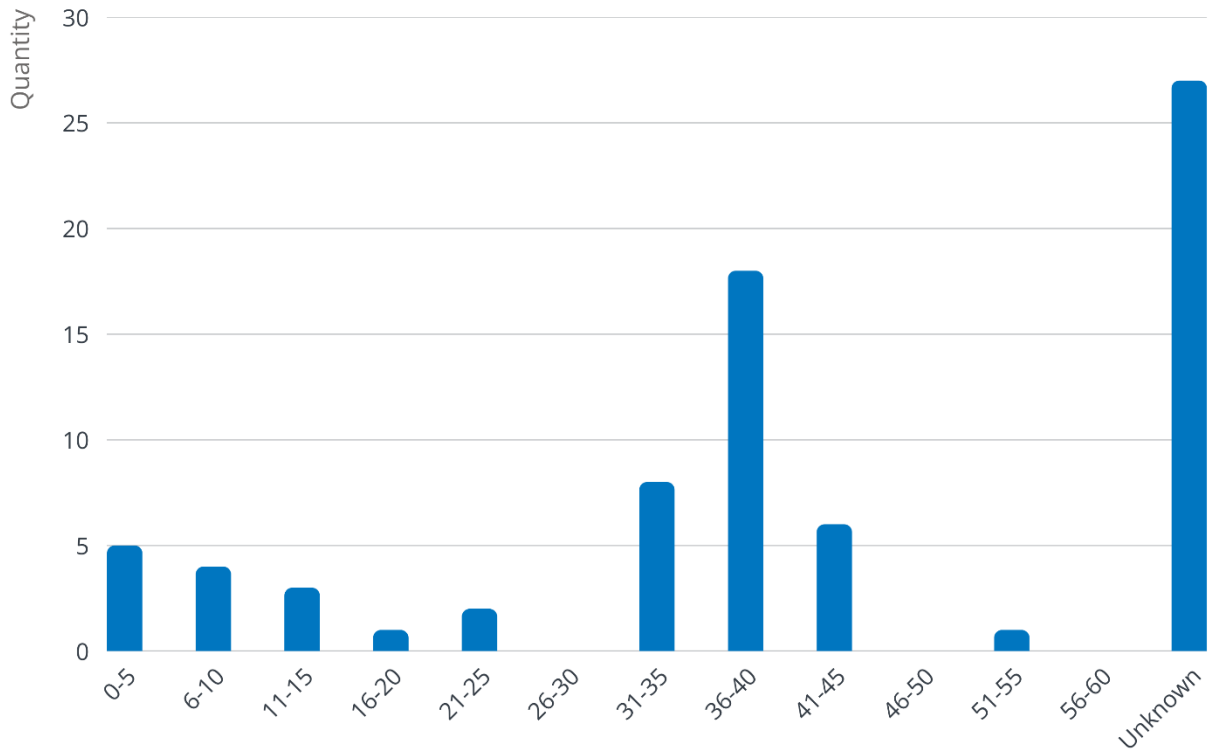
Our network includes the following cathodic protection systems:

- impressed current systems
- sacrificial anode systems
- individual anodes installed to protect small sections of steel pipes.

Age profile

As can be seen in the following age profile, many of these systems were installed around 40 years ago with the IP and MP steel mains networks. The unknown portion is due to construction data not being populated in the asset information system, which we are currently rectifying.

Figure D.11: Cathodic protection age profile



Condition and performance

The condition of the cathodic protection systems is considered adequate with routine monitoring evaluating performance of impressed current systems, anode remaining life and determining replacement age.

Risks and issues

The table below outlines current risks and issues with cathodic protection systems.

Table D.18: Risk and issues

Risk or issue	Consequence	Controls
Sections of steel mains and services pipes are installed without cathodic protection systems	Accelerated corrosion when coatings are compromised.	Project scopes are under development to determine the appropriate solution of either installing anodes, impressed current system or replacing the steel pipe with PE pipe
Some systems require additional test points to meet required spacing intervals	Inadequate monitoring of performance and faults	Installation of additional test points
Short circuits caused by faulty insulation joints can take months/years to locate on riser valves at customers meter locations	Excessive current drain, inadequate protection, accelerated corrosion	Tags indicating an insulation joint is required at the meter location has been developed and will be installed to clearly indicate the requirement for insulating joints
Unable to perform instant-off measurements on sacrificial anode CP systems create uncertainty regarding the effectiveness of protection	Poor performance and reduced protection, accelerated corrosion	Upgrading sacrificial anode systems through the installation of coupons to enable instant-off measurements
The ingress of water or other conductive materials into cased crossings can result in corrosion of both steel pipes and casings due to the lack of effective cathodic protection	Poor performance and reduced protection, accelerated corrosion	Regular monitoring of voltage differences between casing and pipe, conducting instant on/off potential surveys to ensure no contact between casing and pipe.

Lifecycle management

Maintenance

Cathodic protection systems require frequent inspection and testing to confirm performance and ensuring protection of buried steel assets. Activities include regular checks of rectifier sites, pipe-to-soil potential testing, and verification of galvanic anode performance and electrical isolation. These measures ensure system integrity and compliance with corrosion protection standards. A breakdown of these maintenance activities is outlined in the table below.

Table D.19: Corrosion protection maintenance and inspection activities

Asset category	Interval	Preventive maintenance description
CP maintenance	2 months	Inspect impressed current transformer /rectifier sites. Inspection of drainage bonds.
	3 / 6 / 12 months	Inspect and test on and instant-off pipe/soil potential in major urban, urban and rural areas. Electrical test of galvanic anodes in major urban, urban and rural areas. Test electrical isolation at casing test points in major urban, urban and rural areas.
	3 / 6 months	Inspect and test “On” pipe/soil potential in rural and urban areas.

Renewal

We renew CP systems when they no longer protect the pipeline from corrosion, enclosures are damaged or corroded, or individual components fail. Anodes are monitored and replaced when test results suggest the anode is approaching end of life.

Table D.20: Forecast projects for planning period

PROJECT NAME	PROJECT DESCRIPTION	COMPLETION PERIOD
Emergent replacements	Lifecycle replacement of sacrificial anodes and impressed current systems as testing determines poor performance.	10 years

D.7. Monitoring and control systems

D.7.1. Pressure monitoring systems

Asset overview

Cello pressure monitoring systems are installed through the network to transmit data via cellular networks providing access to network and DRS pressure information and alarms, enabling prompt response to events. We utilise this data to inform network modelling, forecasting, and ensuring compliance with gas security standards.

Cello systems are either installed permanently in a set network location with telemetry installed for constant monitoring or installed in temporary locations for recording peak demand or to obtain customer load profile.

Condition and performance

The average age of permanently installed Cello units is approximately four years with an expected battery life of five years. The current fleet is in good condition; however, our Cello system communicates utilising 2/3G cellular technology, which is in the process of being decommissioned, prompting the need to replace the fleet.

Risks and issues

Monitoring systems face emerging risks from constant technology change and cellular network dependency. Requiring system replacement to maintain communications as cellular networks develop and older networks are decommissioned. The table below outlines the key risk and associated controls.

Table D.21: Risk and issues

RISK OR ISSUE	CONSEQUENCE	CONTROLS
Cellular communication development and decommissioning	Systems unable to communicate and provide live data and alarms, delaying response time	Replacement programmes, monitoring advancements in technology

Lifecycle management

Maintenance

Cello systems are exchanged when the battery runs flat, while the battery is being changed the pressure transmitter is checked for accuracy and ready for another exchange. Otherwise, Cello systems require little maintenance and a fix on failure approach is taken with this equipment.

Renewal

Renewals are triggered when existing cellular communications systems are decommissioned or when an electronic component fails and cannot be replaced. We are replacing our Cello fleet due to the pending decommissioned 2G cellular network, as seen in the following table.

Table D.22: Forecast projects for planning period

PROJECT NAME	PROJECT DESCRIPTION	COMPLETION PERIOD
Cello replacement	Cello units are being replaced due to decommissioning of the 2G network.	12 months

Appendix E. NETWORK DEVELOPMENT

This section introduces the approach to developing the gas distribution network. It explains what is meant by network development and approach to planning investments. It describes the capacity modelling and demand forecasting approaches and sets out development plans for each network.

E.1. Design

In general, the gas distribution network assets are relatively young, with many assets being built from the late 1980s onwards and predominantly constructed of steel and polyethylene materials.

Our distribution network is made up of several legacy networks that were developed independently by various network developers that are now owned and operated by us. Each of these networks was designed and operated to the standards applied by each of the original owners. As a result, the defined standard operating pressures of similar sections of the network may vary. Any such design and operating conditions that do not conform to our standards are defined in the quality of supply standard. Over time, the intention is to rationalise and standardise the design and operating pressure ranges to simplify network operations.

E.2. Network development planning

The term 'network development' is used to describe capital investments that increase the capacity, functionality, or size of the network. These include the following main types of investments.

- **Growth**: investments that change the capacity and/or configuration of the network to ensure demand can be met at appropriate supply security levels. Typically, these investments extend the network to developing areas or increase capacity or supply levels to cater for general demand growth.
- **Customer connections**: expenditure to facilitate the connection of new customers to the network that may be, at least partly, funded by the connecting third party (customer contributions).

E.2.1. Planning objectives

The primary objectives in network development planning are to identify and prevent foreseeable network related security, capacity and quality (network pressure) problems in a safe, prudent and cost-effective manner. The planning process considers:

- design and operation of the network and any potential safety risks to staff, contractors or the public
- supply quality, security or capacity issues that may prevent delivering to target service levels
- adequacy of supply to new developments or areas requiring gas connections
- reasonable gas supply requirements to customers, inclusive of a prudent capacity margin to cater for foreseeable medium-term load growth
- statutory requirements imposed on the network design, including acceptable pressure levels
- potential supply quality problems identified from sources such as network measurement and monitoring (network pressure), gas flow modelling and customer complaint databases.

E.2.2. Investment drivers

Network development planning is concerned with delivering appropriate performance based on the availability of reserve capacity in the network to a level acceptable to the business, or as agreed with customers. The following key policies, standards and guidelines underpin the network development planning approach.

- **Quality of supply:** the quality of supply standard specifies the minimum levels of network pressure (including levels of redundancy) to ensure an appropriate level of supply service.
- **Network parameters**: including acceptable operating pressure levels, pipe sizes, flow rates providing an appropriate operating framework for the network. These will generally be aligned with industry norms.
- **Service levels**: established as part of the use of network agreements with retailers and customers.
- **Technical standards**: ensure that capital cost, asset ratings, maintenance costs and expected life are balanced to achieve lowest overall cost. Standardisation also reduces design costs and minimises spare equipment holding costs, leading to lower overall project costs.

Quality of supply

The importance of supply quality to all customers is acknowledged and the networks are designed to a quality level that ensures most modern gas-driven equipment operates effectively. Strategies have been adopted to monitor and manage the impact of quality on the network. These include installation of pressure and flow monitoring equipment at gate stations, district pressure stations and customer sites, and the application of modelling software and tools to predict the impact of supply quality on customers.

Meshed distribution networks work under the same basic principle. As the network expands and demand grows, certain parts can become constrained resulting in lower downstream pressures. The capacity of an individual pipeline is determined by the operating pressure, the diameter of the pipe and the allowable pressure difference between inlet and outlet. Regular network pressure monitoring surveys and modelling to identify constraints and subsequent upgrades are carried out before pressures become insufficient.

Several factors are considered in determining the quality of supply of the gas distribution network. These include the degree of redundancy under different circumstances and supply pressure criteria. Under normal network operating conditions, the standard stipulates that the pressure at any point on the network shall be no less than 50% of its nominal pressure (NOP), and no higher than its maximum allowable operating pressure. In some cases, non-standard minimum network pressures are used because of network configuration or special agreements with customers.

The standard also defines the minimum network pressures to be maintained using contingency provisions upon loss of a critical element in the supply chain.

- Intermediate pressure (IP) networks shall operate at no less than 40% of NOP.
- Medium pressure (MP) networks shall operate at no less than 30% of NOP.
- Low pressure (LP) networks shall operate at no less than 2kPa.

During contingency conditions, network pressures may drop below those experienced during standard and non-standard operating conditions.[1] In these situations, maintaining network pressure

[1] Under contingency situations, networks are isolated to maintain safety to customers and the public.

depends on the type of fault and the network configuration. Contingency provisions such as customer load shedding are used to maintain network pressure to end users.

E.2.3. Managing uncertainty

Several precautions are taken to mitigate the risks of making long-term investments in an uncertain environment. Apart from normal risk avoidance measures, specific actions taken to mitigate the risks associated with network investments include:

- **Act prudently**: prioritise small incremental investments and defer large investments for as long as reasonably practicable. The small investments must, however, conform to long-term investment plans and not lead to asset stranding.
- **Optimise with replacement projects**: for large network assets, rather than replace existing end-of-life assets with the modern equivalent, a review is carried out to confirm the continued need for the assets, as well as the optimal size and network configuration that will meet the needs for the next asset lifecycle.

Planning Timeframes

Plans are produced based on near, medium and long-term timeframes. This helps to address the differing levels of uncertainty that apply over different time periods.

- **Near-term plan**: is the most accurate and generally captures load growth for the next three years. This identifies short-term growth patterns, mainly leveraging off historical trends. It generally allows sufficient time for planning, approval and network construction to be implemented ahead of changing network demand.
- **Medium-term plan**: covers the next 10 years, and anticipates regional development trends such as land rezoning, new transport routes and larger infrastructure projects. The medium-term plan aims to capture changes such as the adoption of new technologies or the impact of climate change on consumer behaviour.
- **Long-term plan**: looks at growth patterns aligned with current asset lifecycle, around 40 years out. A top-down approach is used to predict probable network loads within the region, from which the requirement for pressure network upgrades or new gate stations and DRS are identified. The objective of this is less about developing accurate load forecasts and more about informing a long-term development plan, identifying likely future network requirements.

E.2.4. Planning Methodology

Planning for growth investments requires anticipating shortfalls in capacity under forecast demand conditions. We plan for efficient and timely investment in additional capacity and security before reliability is adversely affected.

Demand forecasts and network modelling provide an accurate picture of future demand growth (or decline), so investment decisions can be made with confidence. When used in conjunction with equipment ratings, it is possible to plan for the required quality of supply margins within the network relative to the quality of supply standard and required service levels.

These developments need to fit within the context of wider asset management activities (e.g. renewal plans), such that investments are optimised across all business objectives and constraints. As discussed in Appendix D, assets are managed using an asset lifecycle approach, which helps ensure these activities are integrated.

The development planning process involves the following steps:

1. Needs identification
2. Options analysis
3. Solution definition
4. Project prioritisation

Needs identification

The need for a growth investment may arise following the identification of upcoming supply quality, security or capacity issues that may prevent us from delivering target service levels. This can also be triggered by the adequacy of supply to new developments or areas requiring gas connections.

Effective design requires consideration of the forecast demand, the capacity of the network[2] and the impact of the environment in which the equipment will operate. Using this information ensures monitoring of network capacity relative to the quality of supply standards, and thus identify any potential shortfalls between available capacity and expected demand. If these capacity breaches are deemed to require an investment solution or modification to the network, a project will be considered.

Options analysis

Once a modification to the network has been identified as necessary, several possible options are developed that meet the modification objectives. These options may be asset or non-asset based, and the optimal solution may not necessarily result in network augmentation. Additionally, there are significant efficiencies that can result from a solution that allows conventional network investment to be deferred without compromising capacity or supply pressure.

In developing options, consideration is given to the following factors to ensure the investment decision is prudent and efficient.

- Currency and accuracy of network capacity rating.
- Validation of models by collecting actual network pressure data through pressure data loggers.
- Load diversity opportunities (e.g. transfer to alternative pipelines or DRS).
- Leverage of other projects to gain synergies, e.g. asset replacement, road re-alignment or new construction activities.
- Use of assessment criteria to ascertain risk tolerance, and to test that:
    - the solution cost is not disproportionate to the benefits obtained
    - that recommended solutions are commercially sustainable
    - loss of supply to customers is minimised
    - the options considered are summarised in a business case that is submitted for project solution evaluation.

Solution evaluation

Once developed, the options are evaluated (both financially and on a risk basis) to identify the optimum investment decision that meets both the project requirements and maintains the current service level to existing consumers.

Non-asset solutions are considered along with deferring network expenditures. If asset solutions are required, smaller projects are prioritised over larger projects to reduce the risk of stranded assets.

[2] Including the capacity of all installed equipment.

Early investment is avoided unless there are good reasons to do otherwise (e.g., to take advantage of the synergy of implementing in conjunction with other projects).

Project prioritisation

Once preferred project solutions are identified, a list of development projects is compiled, including other areas of network investment (e.g. asset replacement), along with their proposed schedule and initial budgets, and commence project prioritisation. Projects are prioritised based on corporate investment drivers, as per the governance processes outlined in Appendix C.

E.3. Network and asset capacity

To enable the capacity of the delivery points (and subsequent pressure networks) to be assessed, it is necessary to have a reliable assessment of the capacities of the major components within the network. The major components within the distribution network include pipelines and district regulating stations.

Determining the capacities of these network components requires a detailed assessment of each sub-component. For example, in assessing the capacity of a DRS, the performance ratings of the filter, meter, regulator and other accessories need to be assessed to ensure the subcomponent with the lowest rating is identified. Therefore, the minimum rated subcomponent determines the overall asset rating.

The following subsections describe how the capacities of the major network components are assessed. In all cases, maximum operating capabilities are used to determine the asset capacities.

E.3.1. Pipelines

Due to the various pipeline types, network configurations, and varying consumer loads the analysis of pipeline capacity is complex. Pipeline capacity is determined by examining the relationship between network pressures, pipe diameter and the allowable minimum operating pressure. This is achieved using a network modelling tool called Synergi[3] that can determine minimum pressures a pipeline network can sustain under load conditions.

E.3.2. District regulating stations

DRS are designed with sufficient capacity to supply the 10-year forecast load. The network is designed based on minimum design inlet and outlet pressures, and current load projections for heavily utilised pipelines in the network region. These design pressures are based on the quality of supply Standards to ensure adequate supply pressure and capacity across the network.

E.4. Demand forecasting

E.4.1. Demand on the network

The capacity of the network is determined by the operating pressure, the size of the pipe and the allowable pressure loss between inlet and outlet. Meshed distribution networks are sized on the same principle, the difference being, that pipes are interconnected at several points and can be fed to multiple points, rather than running from point to point.

[3] Synergi Gas is a proprietary gas network modelling software package developed by DNV.

As the distribution network expands and demand grows, the pressure in downstream parts of the network can drop significantly. This has the potential to limit network capacity, and consequently the delivery of gas to downstream consumers.

Under normal network operating conditions, the standard 00074 Gas Distribution Quality of Supply Criteria stipulates that the pressure at any point on the network shall be no less than 50% of its nominal pressure. To prevent departures from standards, we undertake pressure monitoring surveys and carry out network analysis to identify any areas that are at risk of not meeting supply standards. This allows proactive reinforcement of networks and ensures operating pressures do not become insufficient.

The distribution network is broken down into discrete pressure networks. Regulator stations are positioned strategically around the network to control the pressure of gas entering each discrete pressure network (i.e. intermediate pressure, medium pressure, low pressure networks). The demand, and subsequent pressure drops, on each of these networks needs to be considered independently. This is due to the meshed nature of the network, and the mix of residential, commercial and industrial consumers.

Demand on the network comes from a combination of consumer types, each with their own requirements and demand profiles:

- **Residential**: consumers typically have peak demand in the morning and evening, bookending the standard workday, during which consumption is low. Residential consumers typically use gas for hot water, heating or cooking, and use around 15 to 25 GJ of gas per year.
- **Commercial and industrial**: loads are typically consistent for the whole day. These users can range from small restaurants and office buildings to large scale industries, such as dairy processing. These users can consume anywhere from 30 GJ to over 50 TJ per year.

With commercial and industrial customers providing a consistent load demand in between the residential peaks, the network can achieve a measure of load-levelling. The pressure data collected as part of the monitoring programme is used to identify the load characteristics of the networks. This provides the ability to model the load profile for different consumer types.

E.4.2. Gas demand trends and influencing factors

Long-term gas demand is primarily shaped by factors such as local economic activity, population and household growth, fuel substitution (e.g. electricity, fuel oil), and investment decisions by large industrial and commercial users. Short-term fluctuations in demand are more sensitive to external conditions, particularly weather. For example, colder periods can temporarily increase residential and commercial heating demand, while warmer seasons may reduce it. However, these variations typically impact only a small number of hours in the year.

After adjusting for year-on-year variability, historical data indicates a relatively stable overall demand trend. The graphs below illustrate two distinct aspects of network usage.

- Peak coincident demand shows the highest coincident flow rate recorded across all gate stations in each year (see Figure E.1).
- Gas conveyed represents the total annual volume of gas delivered through the distribution network (see Figure E.2).

These two metrics do not necessarily follow the same trend. Peak demand can be influenced by short-duration events such as weather extremes or operational changes at large industrial sites, while total gas conveyed reflects broader consumption patterns over the full year.

The distribution network serves several high-demand commercial and industrial consumers whose usage profiles can significantly impact both peak demand and asset planning. Locations of consumers with individual annual demand exceeding 15 TJ are shown in Section E.10. Individual gate station forecasts are provided in Section E.9.

Figure E.1: Peak demand

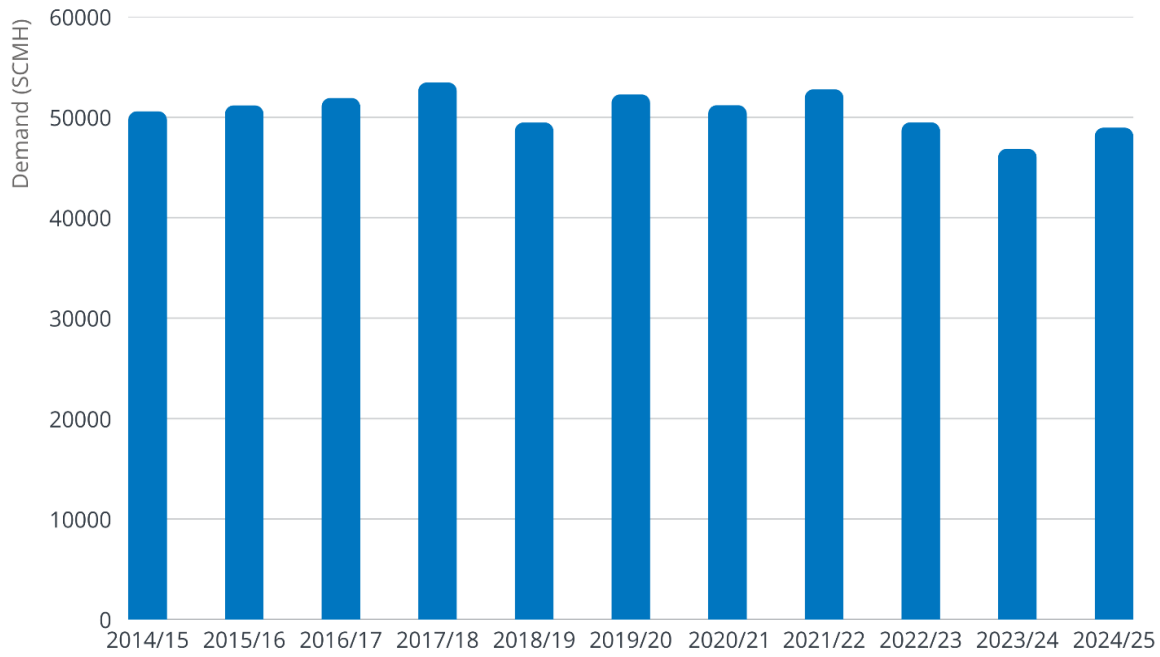
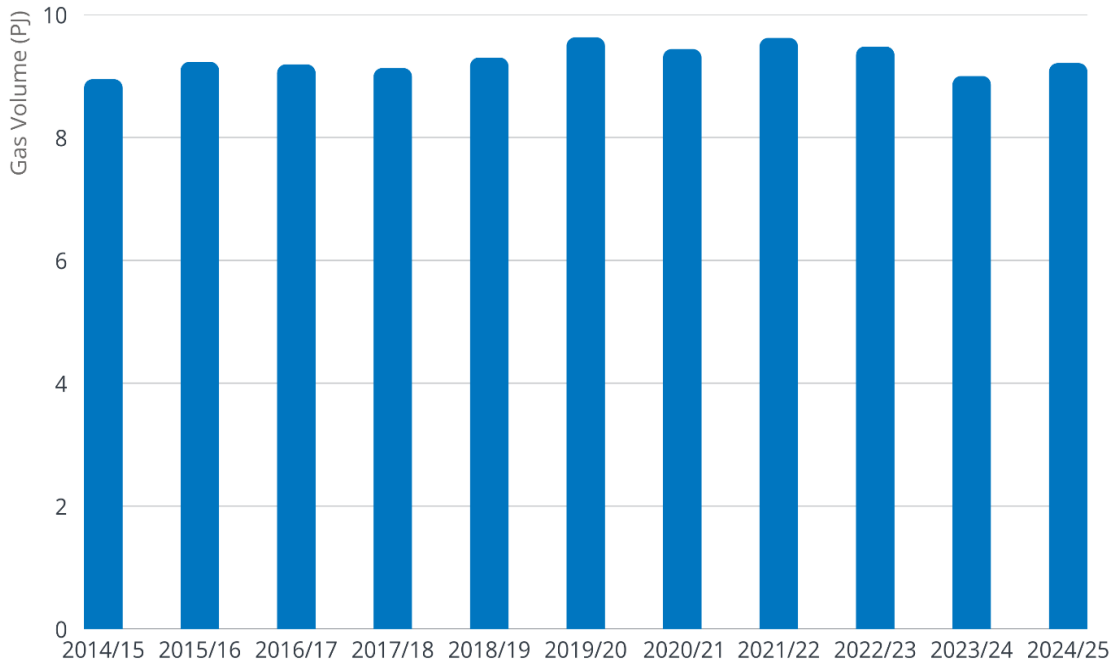


Figure E.2: Gas conveyed



E.4.3. Demand forecast methodology

Gas demand forecasts are developed using historical peak flow data at each gate station. The primary objective is to project winter (annual peak) demand over a 10-year horizon, using observed trends in historical data. Historical flow data is used to identify annual peak flows.

For most networks, forecasting is performed using Excel's built-in forecast functions, with data from 2017 onward. This period reflects an overall trend of declining peak flows, making it a more reliable basis for future projections than earlier data. In cases where peak demand has been influenced by a one-off step change (e.g., a large customer connection or disconnection), forecasts may be flat-lined using the average of the last five years' peak flows to avoid unrealistic growth assumptions.

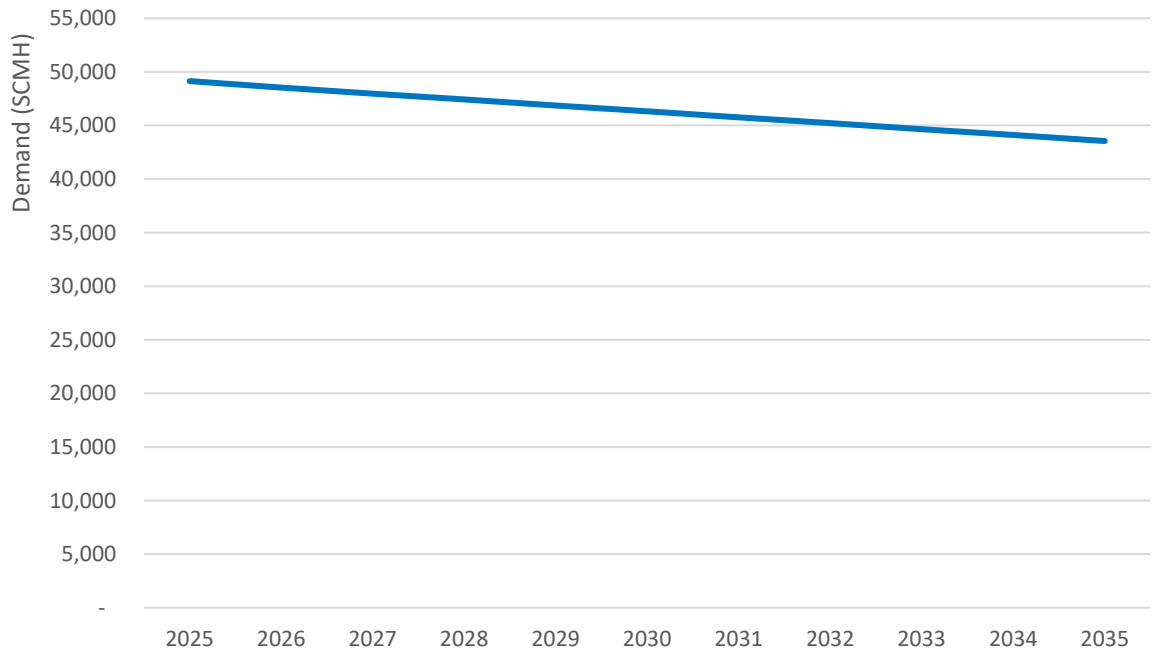
Future customer connections are no longer manually added to the demand forecast. No decomposition or seasonal adjustment techniques are applied; instead, a straightforward trend analysis is used to extrapolate future demand.

E.4.4. Demand forecast

The forecast indicates a modest decline or flatlining of peak demand across most networks, reflecting recent trends and the impact of large customer step changes. While some regions may still experience growth, this is not expected to be uniform.

The Waikato region has historically contributed the most to ICP and demand growth. Although new connection rates are expected to slow, the regional distribution of connections is anticipated to remain broadly consistent. Exceptions may arise in areas targeted for network optimisation, where non-economic networks may be considered for decommissioning. In such cases, connection freezes may be implemented to avoid inefficient capital investment and mitigate appliance stranding risks.

Figure E.3: Demand forecast for the next 10 years



E.5. Network monitoring

Pressures throughout the network are monitored as part of ongoing surveys. These are designed to provide the necessary network performance data to facilitate network modelling.

Multiple methods are employed to collect the required network performance data, including:

- manually or remotely downloaded portable electronic data loggers (e.g. Cello)
- consumer time-of-use data obtained directly or indirectly from retailer measurement systems or meters
- gas distribution SCADA system data
- isolated readings obtained during peak loading conditions.

Appendix D provides functional and physical descriptions of these systems.

E.6. Network modelling

Synergi is designed to model gas network flow, pressure profiles and capacity margins. This software is used for the following functions:

- determine the minimum pressure a pipe network can sustain under load conditions
- scenario analysis when considering options and assessing forecast demand
- assess the impact of changes to network operating parameters (such as increasing or reducing operating pressure in parts of the network) and to assess network risk.

Most of the network planning models have been developed from data extracted from GIS and billing systems and adapted for use using the network modelling software. These models are validated by comparing model performance to actual performance of the gas distribution network, recorded as part of network monitoring. Where the model and actual network performance differ, the model is updated to reflect actual conditions.

The total network flow for each network model is then scaled to align with the actual peak flow. This alignment is applied evenly across the network by adjusting the existing loads in the model. This becomes the base load model for the network or pressure network. The network models on high growth areas are updated on a 3-yearly cycle.

E.7. Customer connections

We continue an open access policy for new network connections but have an increasing focus on cost-contributing connections across the residential, commercial and industrial markets. These connections will, via a tightening capital contribution policy be requested to contribute an increasing proportion of capital costs associated with their connection, offset our spend and mitigating asset stranding risk.

E.7.1. Connecting to the network

Residential

Consumers interested in making a connection to the network or wishing to check network coverage can:

- call our connections number 0800 NEW GAS (0800 639 427)

- email connections@firstgas.co.nz
- visit our website (www.firstgas.co.nz) to make an online enquiry.

The connection process takes around four weeks from an acceptance letter from the customer to connection. All the necessary plans and approvals are obtained from council and utility companies and liaised with the chosen retailer and metering company to deliver the connection. Once these are in place, a connection time dependent on customers' demand is scheduled, as well as weather and schedule restrictions.

All connection fees are fully disclosed, reflect construction conditions and are guided by the Capital Contribution Policy that is published and available for reference.

Business and commercial

Enquiries for business or commercial connections can:

- call 0800 NEW GAS (0800 639 427)
- email connections@firstgas.co.nz
- visit our website (www.firstgas.co.nz) to make an online enquiry.

Due to the individual and varying nature of gas needs across business and commercial connections, we may require detailed load information to determine best supply and pricing options. For connections that reach a specific load threshold, detailed engineering analysis and design could be required, and as a result, customer conversations and timelines will be unique to these circumstances.

Subdivision development

For enquiries regarding subdivision development:

- call 0800 NEW GAS (0800 639 427)
- email connections@firstgas.co.nz
- visit our website (www.firstgas.co.nz) to make an online enquiry.

We work with developers to install pipes into new subdivisions, and to promote natural gas to end consumers. Investment into new subdivisions is guided by the capital contributions policy and pricing offered to developers is determined by capital costs associated with extending the network and the future load opportunities within the network extension.

Parties planning an excavation or renovations on land where underground services may be present (e.g. gas pipes, electricity or other services), need to ensure safety is maintained while work is being carried out.

They should contact BeforeUDig by phoning 0800 248 344 or submit an enquiry form at www.beforeudig.co.nz before carrying out any activities that may disturb underground services. Here they will also find network maps, close approach consents and permits to work.

E.7.2. Forecasting customer connections

The ICP connections forecast, combined with known and forecast subdivision, commercial and industrial connections, informs the forecast capex spend on customer connections.

Larger commercial and industrial consumer connection rates are more difficult to predict than residential and subdivisions trends. As such, a more reactive approach is used to forecasting these loads, incorporating connections into the forecast models as requests arise.

E.8. Network development programme

This section outlines our long-term development plans for the larger gas distribution networks.

Table E.1: long-term development plans

NETWORK	DESCRIPTION	PLANNED DEVELOPMENT
Whangarei Network	The Whangarei network is supplied from the gas distribution network at one gate station, located in South Whangarei. The Whangarei network consists of one IP pressure network, five MP4 pressure network and 10 DRS.	There is no plan to develop this network
Marsden Point Network	The Marsden Point network is supplied from the distribution network at one gate station, located in Mair Road. This network consists of one MP7 pressure network and is supplying gas to one industrial consumer. No DRS are installed in the Marsden Point network.	There are no plans to develop this network
Huntly Network	The Huntly network is supplied from the distribution network at one gate station located in Hetherington Road. This network comprises one MP7 pressure network, three MP4 pressure networks and three DRS.	There are no plans to develop this network
Ngaruawahia Network	The Ngaruawahia network is supplied from the distribution network from one gate station located in Brownlee Avenue. This network comprises one MP7 pressure network, one MP2 pressure network and one DRS.	There are no plans to develop this network
Horotiu Network	The Horotiu network is supplied from the distribution network at one gate station located in Horotiu Bridge Road. This network comprises one IP10 pressure network, one MP4 pressure network and a DRS.	There are no plans to develop this network
Hamilton Network	The Hamilton network is supplied from the distribution network at two gate stations, located at Te Kowhai in the Northwest and Temple View in the Southwest of Hamilton. The Hamilton network comprises one IP10 pressure network, one MP7 pressure network, three MP4 pressure networks, one MP2 pressure network, three MP1 pressure networks, five LP pressure networks and 37 DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Matangi Network	The Matangi network is supplied from the distribution network from one gate station located in Tauwhare Road. This network comprises one MP4 pressure network. No DRS is installed in the Matangi network.	There are no plans to develop this network

Network	Description	Planned development
Morrinsville Network	The Morrinsville network is supplied from the distribution network from one gate station located in the south of Morrinsville. This network consists of one IP10 pressure network, one MP4 pressure network and two DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Kiwitahi Network	The Kiwitahi network is supplied from the distribution network from one gate station located in Morrinsville-Walton Road. This network comprises one MP4 pressure network and one DRS. The Kiwitahi network supplies one large commercial consumer and one large industrial gas user.	There are no plans to develop this network
Waitoa Network	The Waitoa network is supplied from the distribution network from one gate station located in Wood Road. This network consists of one IP20 pressure network, one MP7 pressure network, one MP4 pressure network and three DRS.	There are no plans to develop this network
Cambridge Network	The Cambridge network is supplied from the distribution network from one gate station and consists of one IP20 pressure network, two MP4 pressure networks and three DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Te Awamutu Network	The Te Awamutu network is supplied from the distribution network from two gate stations, located at Te Awamutu and Kihikihi. The Te Awamutu network consists of one IP10 pressure network, two MP4 pressure networks and two DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Waikeria Network	The Waikeria network is supplied from the distribution network from one gate station located in Higham Road. This network comprises one IP20 pressure network currently supplying gas to one large customer at the end of the network.	There are no plans to develop this network
Pirongia Network	The Pirongia network is supplied from the distribution network from one gate station located in Pirongia Road. This network comprises one MP4 pressure network.	There are no plans to develop this network
Otorohanga Network	The Otorohanga network is supplied from the distribution network from one gate station located in Waitomo Valley Road. This network comprises one MP4 pressure network.	There are no plans to develop this network

Network	Description	Planned development
Te Kuiti North Network	The Te Kuiti North network is supplied from the distribution network from one gate station located in the northwest of Te Kuiti. This network consists of one IP10 pressure network, three MP4 pressure networks and three DRS.	There are no plans to develop this network
Te Kuiti South Network	The Te Kuiti South network is supplied from the distribution network from one gate station located in SH30 near Beros Road. This network consists of one MP4 pressure network. There is an industrial consumer located adjacent to the Te Kuiti South gate station from which gas is directly fed to this factory. The gas flow into Te Kuiti South pressure network is the difference between the flows recorded at the gate station meter and the industrial consumer's gas meter.	There are no plans to develop this network
Okoroire Network	The Okoroire network is supplied from the distribution network from one gate station located in Somerville Road. This network comprises one MP4 pressure network. Flow data for the Okoroire gate station is not currently available. As the network is considered low risk of breaching quality of supply, it is not intended to collect this information going forward.	There are no plans to develop this network
Tirau Network	The Tirau network is supplied from the distribution network from one gate station located in Okoroire Road. This network consists of one IP10 pressure network, one MP4 pressure network and two DRS.	There are no plans to develop this network
Putaruru Network	The Putaruru network is supplied from the distribution network from one gate station located in Bridge Street. This network consists of one IP10 pressure network, one MP4 pressure network and two DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Kinleith Network	The Kinleith network is supplied from the distribution network from one gate station located near the junction of Old Taupo Road and Kinleith Road. The gate station supplying the Kinleith MP4 is in the same site as the supply to Kinleith Mills. This network consists of one MP4 pressure network.	There are no plans to develop this network
Tokoroa Network	The Tokoroa network is supplied from the distribution network from one gate station located in Baird Road near Old Taupo Road. This network consists of one IP20 pressure network, one MP4 pressure network and three DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply

Network	Description	Planned development
Rotorua Network	The Rotorua network is supplied from the distribution network from one gate station located in the south of Rotorua in SH5. This network consists of one IP20 pressure network, four MP4 pressure networks and 9 DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Reporoa Network	The Reporoa network is supplied from the distribution network from one gate station located in Parekarangi. This network consists of one IP20 pressure network, one MP4 pressure network and one DRS. The major industrial consumer is supplied directly from the Reporoa gate station, i.e. not connected to the IP20 network.	There are no plans to develop this network
Taupo Network	The Taupo network is supplied from the distribution network from one gate station located in Rakaunui Road. This network consists of one IP20 pressure network, one MP4 pressure network and two DRS. The Taupo network has two DRS which supply gas to the Taupo MP4 pressure networks.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Tauranga Network	The Tauranga network is supplied from the distribution network from two gate stations, located at Te Reti in the central Tauranga and Pyes Pa in the Southwest. The Tauranga network consists of one IP20 pressure network, currently operating as an IP10 pressure network, one MP4 pressure network and five DRS. The gas distribution network takes an IP10 supply from Tauranga gate station at a NOP of 1,000kPa and an MP4 supply from Pyes Pa gate station at a NOP of 400kPa.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Mt Maunganui Network	The Mt Maunganui network is supplied from the distribution network from two gate stations, Mt Maunganui gate station and Papamoa gate station. The Maunganui network consists of two IP20 pressure networks, two MP4 pressure networks and seven DRS. Major industrial and commercial activities are in the northern part of Mt Maunganui and Tauriko areas. Ongoing residential developments in Papamoa East continue to present opportunities for network expansion and increased service coverage.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Te Puke Network	The Te Puke network is supplied from the distribution network from one gate station located in Washer Road. This network consists of one IP10 pressure network, two MP4 pressure networks and three DRS.	There are no plans to develop this network

Network	Description	Planned development
Kawerau Network	The Kawerau network is supplied from the distribution network from one gate station located in East Bank Road. This network consists of one IP10 pressure network, two MP4 pressure networks and two DRS. The Kawerau IP10 pressure network operates at a NOP of 1,000kPa and is fed from the Kawerau gate station which comprises three steel pipeline laterals. One lateral distributes gas to the Paora St MP4 and Kawerau MP4, while the other two supply gas to two large industrial consumers.	There are no plans to develop this network
Te Teko Network	The Te Teko network is supplied from the distribution network from one gate station located in Tahuna Road. This network consists of one IP10 pressure network, one MP4 pressure network and one DRS.	There are no plans to develop this network
Edgecumbe Network	The Edgecumbe network is supplied from the distribution network from one gate station located in Awakeri Road. This network consists of one IP20 pressure network and one MP4 pressure network. The Edgecumbe IP20 and the Edgecumbe MP4 pressure networks are metered separately inside the gate station.	There are no plans to develop this network
Whakatane Network	The Whakatane network is supplied from the distribution network by one gate station located in Mill Road. This network comprises one IP20 pressure network, two MP4 pressure networks and three DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Opotiki Network	The Opotiki network is supplied from the distribution network by one gate station located in Factory Road. This network consists of one IP10 pressure network, two MP4 pressure networks and two DRS. There is an industrial consumer supplied directly from the Opotiki gate station, i.e. not connected to the IP20 network.	There are no plans to develop this network
Gisborne Network	The Gisborne network is supplied from the distribution network from one gate station and consists of one IP20 network and one MP4 network and 8 DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Kuku Network	The Kuku network is supplied from the distribution network from one gate station located in Kuku Beach Road. This network consists of one MP2 pressure network. Flow data for the Kuku gate station is not currently available. As the network is considered low risk of breaching quality of supply, it is not intended to collect this information now.	There are no plans to develop this network

Network	Description	Planned development
Otaki Network	The Otaki network is supplied from the distribution network from one gate station located in the southwest of Otaki. This network consists of one MP4 pressure network.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Te Horo Network	The Te Horo network is supplied from the distribution network from one gate station located in Te Horo Beach Road near Pukenamu Road. This network consists of one MP4 pressure network. Flow data for the Te Horo gate station is not currently available. As the network is considered low risk of breaching quality of supply, it is not intended to collect this information now.	There are no plans to develop this network
Greater Kapiti Network (Waikanae and Paraparaumu Network Networks)	The Waikanae network is supplied from the distribution network from one gate station located in the west of Waikanae. This network consists of MP4, MP7 and IP20 pressure networks and two DRS. One of the Waikanae DRS supplies the MP7 pressure network which carries gas from the Waikanae network a single DRS to supplement supply of gas to Paraparaumu MP4 network. The Paraparaumu network is supplied from the Paraparaumu gate station located in Valley Road. The Paraparaumu network consists of one IP20 pressure network, and one MP4 pressure network and three DRS.	Development of this network will depend on the growth of the domestic housing market, as new subdivisions are created and contracts can be secured with developers, gas will be installed to provide opportunity for new gas connections to the gas network, there are currently no plans to reinforce the network to increase capacity of supply
Tauriko Network	The Tauriko network is supplied from the distribution network at one gate station, located in Kawerau Dr. This network consists of one IP20 pressure network and is supplying gas to one industrial consumer. No DRS are installed in the Tauriko network.	There are no plans to develop this network

E.9. Load forecasts

This section sets out the projected annual and total growth rates at each of the existing gate stations, as are applied in the network models. Load is provided in SCMH.

Firstgas

Table E.2: Gate station forecast

Region	Network	Gate station / Network	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Annual Growth	Total growth
Bay of Plenty	Edgecumbe	Edgecumbe MP4 Pressure Network	28	28	28	28	28	28	28	28	28	28	28	0.0%	0%
Bay of Plenty	Edgecumbe	Edgecumbe IP20 Pressure Network	4,949	4,868	4,787	4,706	4,625	4,545	4,464	4,383	4,302	4,221	4,141	-1.8%	-16%
Bay of Plenty	Edgecumbe	Edgecumbe Gate Station (non-co-incident)	6,305	6,405	6,506	6,606	6,706	6,807	6,907	7,007	7,107	7,208	7,308	1.5%	16%
Bay of Plenty	Edgecumbe	Edgecumbe Gate Station (co-incident)	4,954	4,873	4,793	4,712	4,631	4,551	4,470	4,390	4,309	4,229	4,148	-1.8%	-16%
Bay of Plenty	Kawerau	Kawerau Network (excl. loads of ex-Caxton & ex-Tasman)	115	115	115	115	115	115	115	115	115	115	115	0.0%	0%
Bay of Plenty	Kawerau	Kawerau (ex-Caxton) (20TJ site in IP network)	906	915	925	935	944	954	964	973	983	993	1,002	1.0%	11%
Bay of Plenty	Kawerau	Kawerau (ex-Tasman) (20TJ site in IP network)	2,122	2,119	2,115	2,112	2,109	2,105	2,102	2,098	2,095	2,091	2,088	-0.2%	-2%
Bay of Plenty	Kawerau	Kawerau Gate Station (non-co-incident)	3,385	3,423	3,460	3,498	3,535	3,573	3,611	3,648	3,686	3,723	3,761	1.1%	11%
Bay of Plenty	Kawerau	Kawerau Gate Station (co-incident)	2,930	2,933	2,935	2,938	2,940	2,942	2,945	2,947	2,950	2,952	2,955	0.1%	1%

Region	Network	Gate station / Network	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Annual Growth	Total growth
Bay of Plenty	Mt Maunganui	Mt Maunganui Gate Station	3,026	2,991	2,956	2,921	2,886	2,850	2,815	2,780	2,745	2,710	2,675	-1.2%	-12%
Bay of Plenty	Mt Maunganui	Papamoa Gate Station	995	1,002	1,009	1,016	1,023	1,030	1,037	1,045	1,052	1,059	1,066	0.7%	7%
Bay of Plenty	Mt Maunganui	Papamoa No.2 Gate Station	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Bay of Plenty	Mt Maunganui	Mt Maunganui Network (non co-incident)	4,098	4,038	3,979	3,920	3,860	3,801	3,741	3,682	3,623	3,563	3,504	-1.6%	-14%
Bay of Plenty	Mt Maunganui	Mt Maunganui Network (co-incident)	3,751	3,713	3,676	3,639	3,602	3,565	3,528	3,491	3,454	3,416	3,379	-1.0%	-10%
Bay of Plenty	Opotiki	Opotiki Gate Station	151	148	145	142	140	137	134	131	128	125	122	-2.1%	-19%
Bay of Plenty	Tauranga	Tauranga Station	1,412	1,352	1,292	1,232	1,172	1,112	1,052	992	932	872	811	-5.4%	-43%
Bay of Plenty	Tauranga	Pyes Pa Station	1,097	1,146	1,194	1,243	1,292	1,341	1,390	1,439	1,487	1,536	1,585	3.7%	44%
Bay of Plenty	Tauranga	Tauranga Network (non co-incident)	2,657	2,648	2,639	2,630	2,621	2,612	2,604	2,595	2,586	2,577	2,568	-0.3%	-3%
Bay of Plenty	Tauranga	Tauranga Network (co-incident)	2,649	2,645	2,641	2,638	2,634	2,630	2,626	2,623	2,619	2,615	2,611	-0.1%	-1%
Bay of Plenty	Tauriko	Tauriko	2,889	2,889	2,889	2,890	2,890	2,890	2,890	2,891	2,891	2,891	2,891	0.0%	0%
Bay of Plenty	Te Puke	Te Puke Gate Station	565	581	596	612	627	643	658	674	689	705	720	2.5%	27%
Bay of Plenty	Te Teko	Te Teko Gate Station	-	-	-	-	-	-	-	-	-	-	-		

Region	Network	Gate station / Network	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Annual Growth	Total growth
Bay of Plenty	Whakatane	Whakatane Gate Station	525	505	486	467	448	428	409	390	371	352	332	-4.5%	-37%
Bay of Plenty	Mt Maunganui	Papamoa Gate Station	995	1,002	1,009	1,016	1,023	1,030	1,037	1,045	1,052	1,059	1,066	0.7%	7%
Central Plateau	Rotorua	Rotorua Gate Station	2,757	2,660	2,564	2,468	2,372	2,275	2,179	2,083	1,987	1,891	1,794	-4.2%	-35%
Central Plateau	Taupo	Taupo Gate Station	1,454	1,485	1,516	1,547	1,578	1,608	1,639	1,670	1,701	1,732	1,763	1.9%	21%
Central Plateau	Kinleith	Kinleith Gate Station	308	308	308	308	308	308	308	308	308	308	308	0.0%	0%
Central Plateau	Okoroire Springs	Okoroire Springs Gate Station	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	0%
Central Plateau	Putaruru	Putaruru Gate Station	66	14	-	-	-	-	-	-	-	-	-	-100.0%	-100%
Central Plateau	Tirau	Tirau Gate Station	58	59	59	60	60	61	61	61	62	62	63	0.8%	9%
Central Plateau	Tokoroa	Tokoroa Gate Station	1,327	1,330	1,334	1,337	1,341	1,345	1,348	1,352	1,355	1,359	1,362	0.3%	3%
Central Plateau	Reporoa	Reporoa Gate Station	3,587	3,565	3,542	3,519	3,497	3,474	3,452	3,429	3,407	3,384	3,361	-0.6%	-6%
Gisborne	Gisborne	Gisborne Gate Station	2,188	2,094	1,999	1,905	1,810	1,715	1,621	1,526	1,432	1,337	1,243	-5.5%	-43%
Kapiti	Kuku	Kuku Gate Station	-	-	-	-	-	-	-	-	-	-	-		
Kapiti	Otaki	Otaki Gate Station	173	171	168	166	163	161	158	156	153	151	148	-1.5%	-14%
Kapiti	Paraparaumu	Paraparaumu Gate Station	879	824	768	713	658	603	547	492	437	382	326	-9.4%	-63%

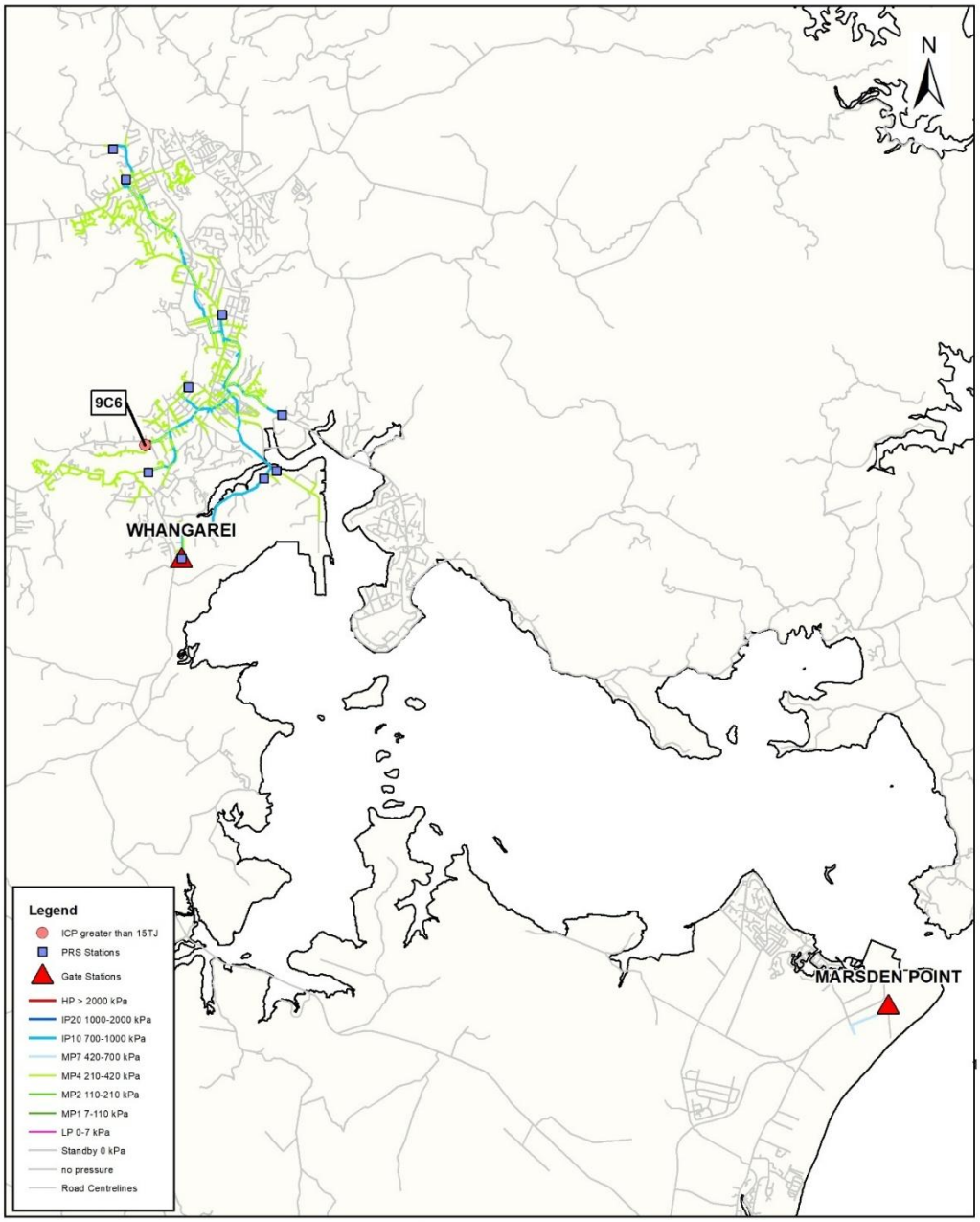
Region	Network	Gate station / Network	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Annual Growth	Total growth
Kapiti	Te Horo	Te Horo Gate Station	12	11	11	10	9	8	7	6	6	5	4	-10.4%	-67%
Kapiti	Waikanae	Waikanae Gate Station	1,042	1,014	986	957	929	901	872	844	816	787	759	-3.1%	-27%
Northland	Marsden Point	Marsden 2 Point Gate Station	218	218	218	218	218	218	218	218	218	218	218	0.0%	0%
Northland	Whangarei	Whangarei Gate Station	1,174	1,189	1,203	1,218	1,233	1,247	1,262	1,276	1,291	1,305	1,320	1.2%	12%
Waikato	Cambridge	Cambridge Network (excl. load of Hautapu DF)	985	972	960	948	935	923	911	898	886	874	861	-1.3%	-13%
Waikato	Cambridge	Cambridge (Hautapu DF)	2,845	2,845	2,845	2,845	2,845	2,845	2,845	2,845	2,845	2,845	2,845	0.0%	0%
Waikato	Cambridge	Cambridge Gate Station (non co-incident)	3,807	3,807	3,807	3,807	3,807	3,807	3,807	3,807	3,807	3,807	3,807	0.0%	0%
Waikato	Cambridge	Cambridge Gate Station (co-incident)	3,399	3,399	3,399	3,399	3,399	3,399	3,399	3,399	3,399	3,399	3,399	0.0%	0%
Waikato	Hamilton	Hamilton - Te Kowhai Gate Station	5,085	5,069	5,053	5,037	5,021	5,005	4,989	4,973	4,957	4,941	4,925	-0.3%	-3%
Waikato	Hamilton	Hamilton - Temple View Gate Station	7,803	7,551	7,299	7,046	6,794	6,542	6,289	6,037	5,785	5,533	5,280	-3.8%	-32%
Waikato	Hamilton	Hamilton Network (non co-incident)	12,973	12,704	12,436	12,167	11,898	11,630	11,361	11,092	10,823	10,555	10,286	-2.3%	-21%
Waikato	Hamilton	Hamilton Network (co-incident)	13,027	12,831	12,636	12,440	12,245	12,049	11,854	11,658	11,463	11,267	11,072	-1.6%	-15%

Region	Network	Gate station / Network	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Annual Growth	Total growth
Waikato	Horotiu	Horotiu Gate Station	2,757	2,757	2,757	2,757	2,757	2,757	2,757	2,757	2,757	2,757	2,757	0.0%	0%
Waikato	Huntly	Huntly Gate Station	326	327	327	327	328	328	329	329	329	330	330	0.1%	1%
Waikato	Kiwitahi	Kiwitahi Gate Station	176	178	179	181	182	184	186	187	189	191	192	0.9%	9%
Waikato	Matangi	Matangi Gate Station	16	15	15	15	14	14	14	13	13	12	12	-2.8%	-25%
Waikato	Morrinsville	Morrinsville Gate Station	470	473	476	479	482	485	488	491	494	497	500	0.6%	6%
Waikato	Ngaruawahia	Ngaruawahia Gate Station	81	84	86	88	91	93	95	98	100	102	105	2.6%	30%
Waikato	Otorohanga	Otorohanga Gate Station	111	106	102	98	94	89	85	81	76	72	68	-4.8%	-39%
Waikato	Pirongia	Pirongia Gate Station	22	21	21	20	19	19	18	18	17	16	16	-3.1%	-27%
Waikato	Te Awamutu	Te Awamutu North - No.2 Gate Station	223	181	140	98	56	15	-	-	-	-	-	-100.0%	-100%
Waikato	Te Awamutu	Kihikihi Gate Station	740	741	743	744	746	748	749	751	752	754	756	0.2%	2%
Waikato	Te Awamutu	Te Awamutu Network (non co-incident)	962	922	882	843	803	763	723	683	643	603	563	-5.2%	-41%
Waikato	Te Awamutu	Te Awamutu Network (co-incident)	868	828	788	748	708	668	627	587	547	507	467	-6.0%	-46%
Waikato	Te Kuiti North	Te Kuiti North Gate Station	387	387	387	387	387	387	387	387	387	387	387	0.0%	0%
Waikato	Te Kuiti South	Te Kuiti South Gate Station	931	921	911	902	892	882	873	863	854	844	834	-1.1%	-10%

Region	Network	Gate station / Network	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	Annual Growth	Total growth
Waikato	Te Rapa	Te Rapa (Inactive distribution network)	10,152	10,156	10,161	10,165	10,170	10,174	10,179	10,183	10,188	10,192	10,197	0.0%	0%
Waikato	Waikeria	Waikeria Gate Station	335	335	335	335	335	335	335	335	335	335	335	0.0%	0%
Waikato	Waitoa	Waitoa Gate Station	2,766	2,766	2,766	2,766	2,766	2,766	2,766	2,766	2,766	2,766	2,766	0.0%	0%

E.10. Network maps

This section provides outlines of our distribution network, including location of mains pipes, gate and pressure regulation stations. The maps also show ICPs with an individual energy demand above 15TJ and hence have a significant impact on network operations and asset management.



GAS DISTRIBUTION MAPS
NORTHLAND REGION

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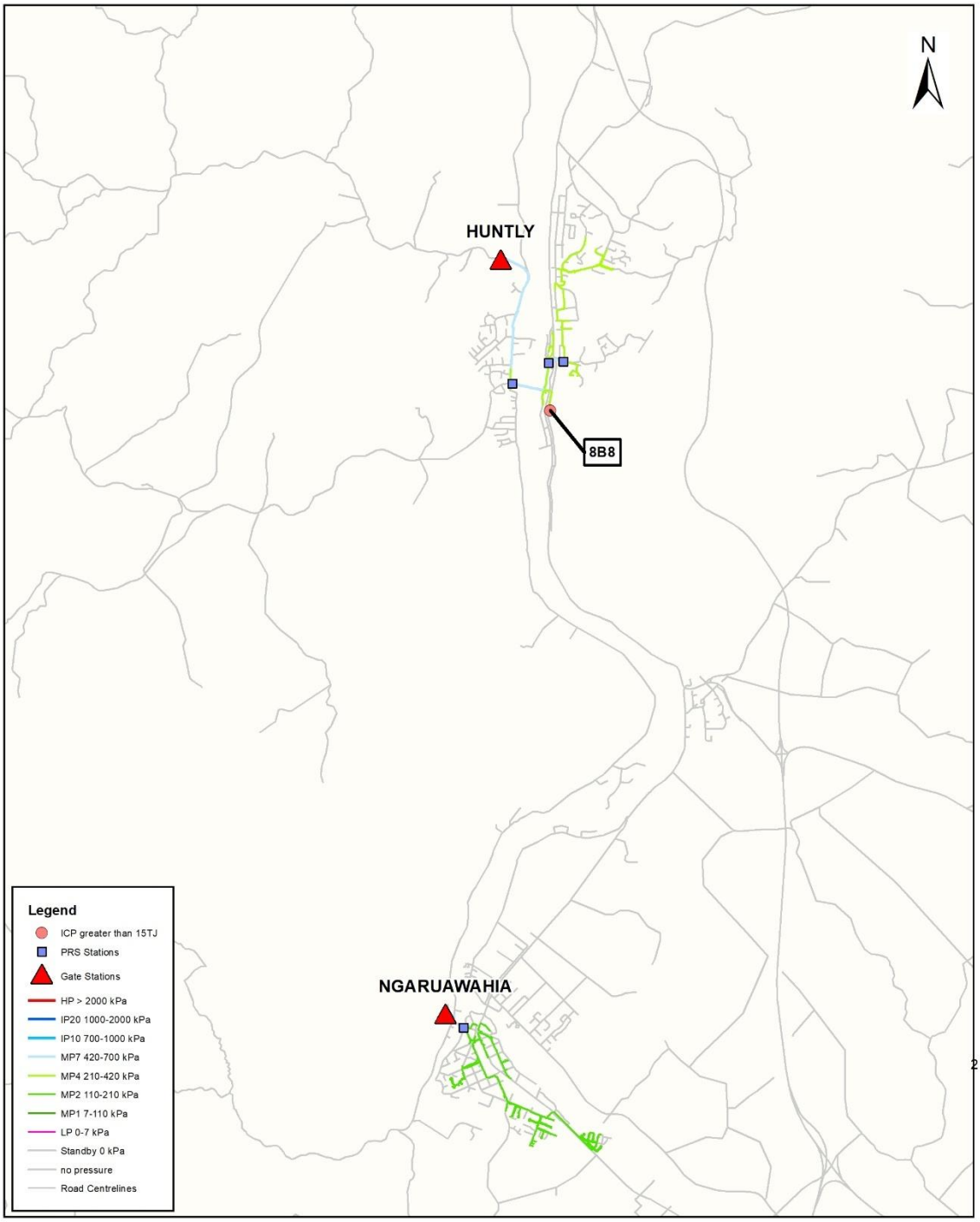

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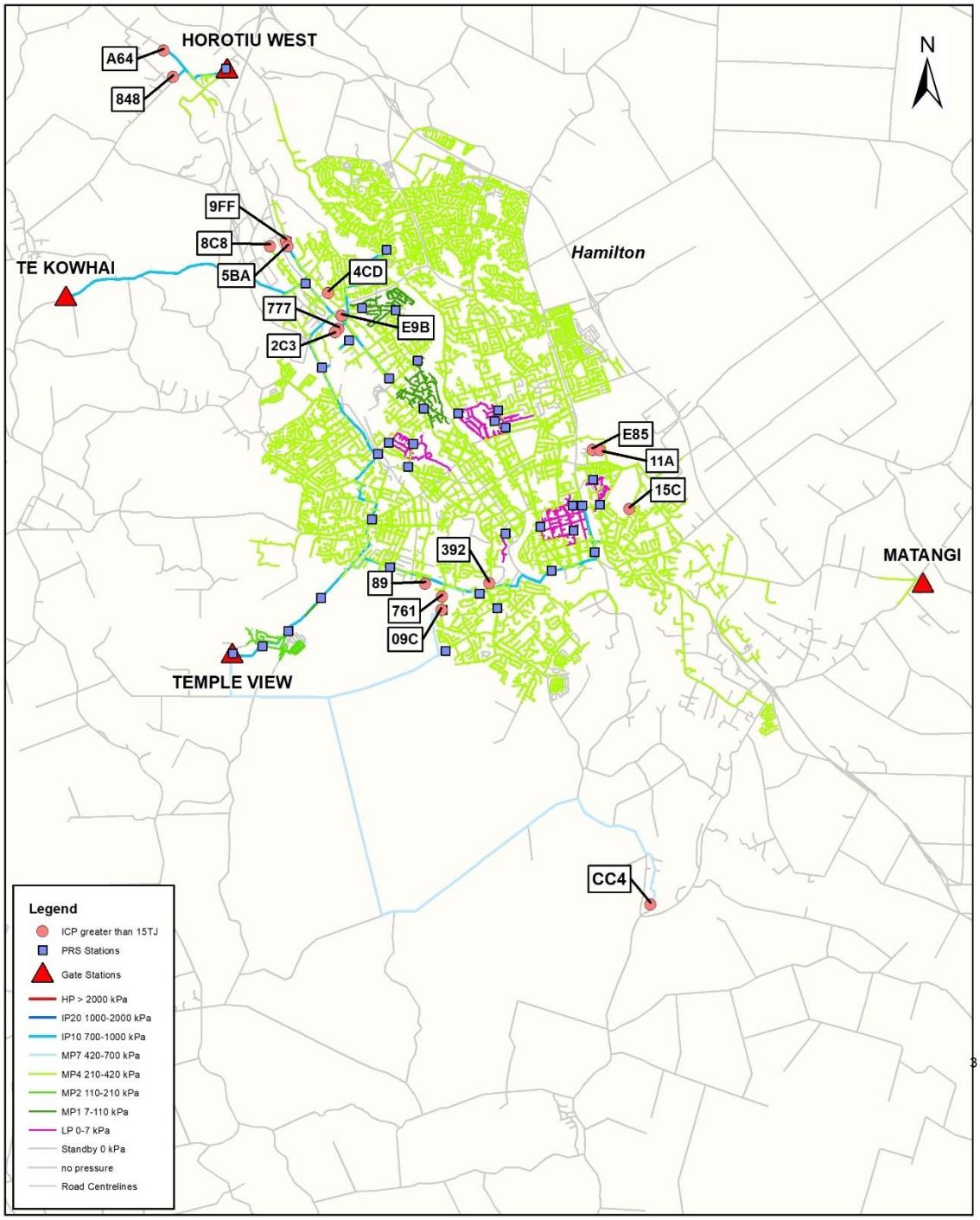

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WAIKATO REGION

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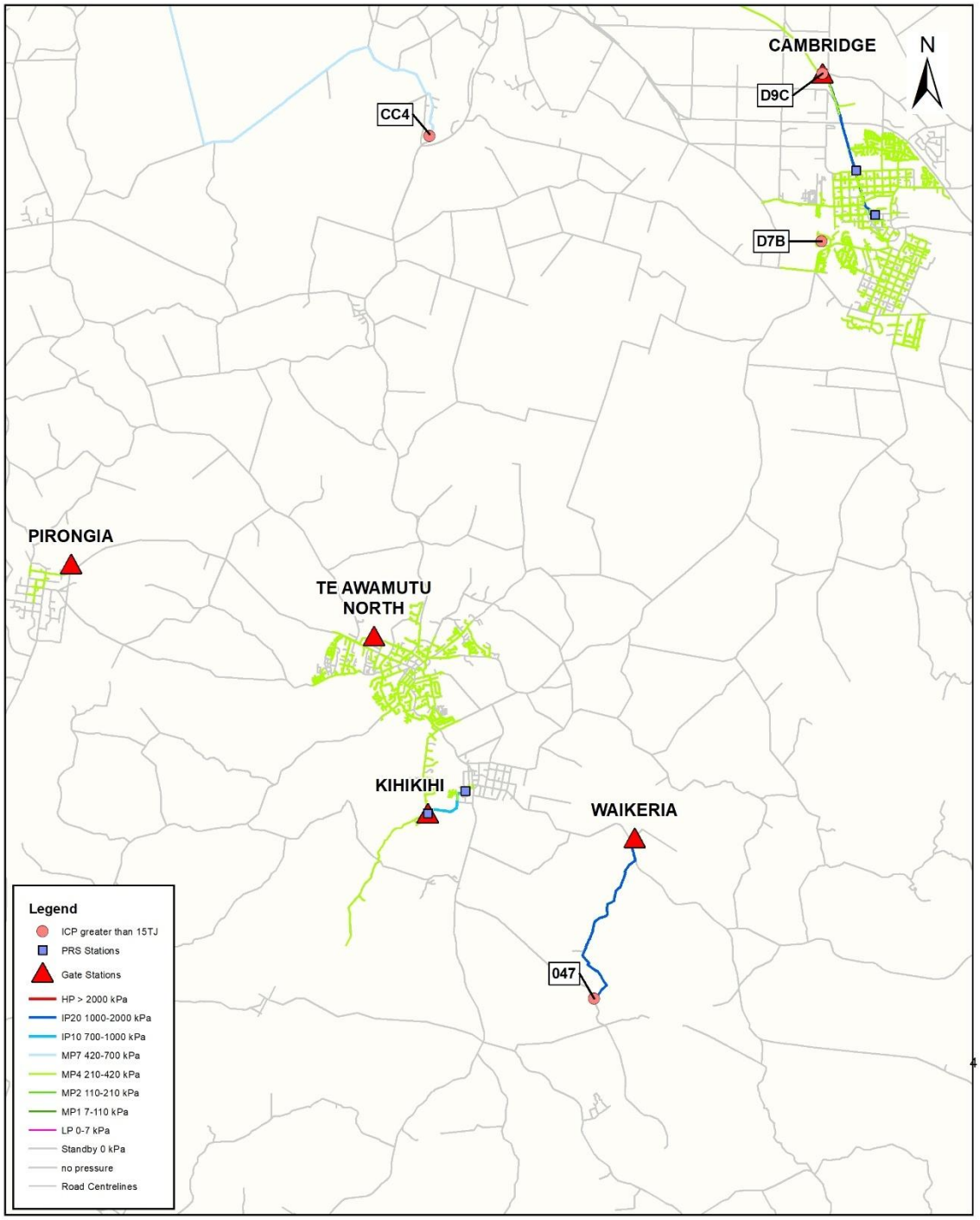

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WAIKATO REGION

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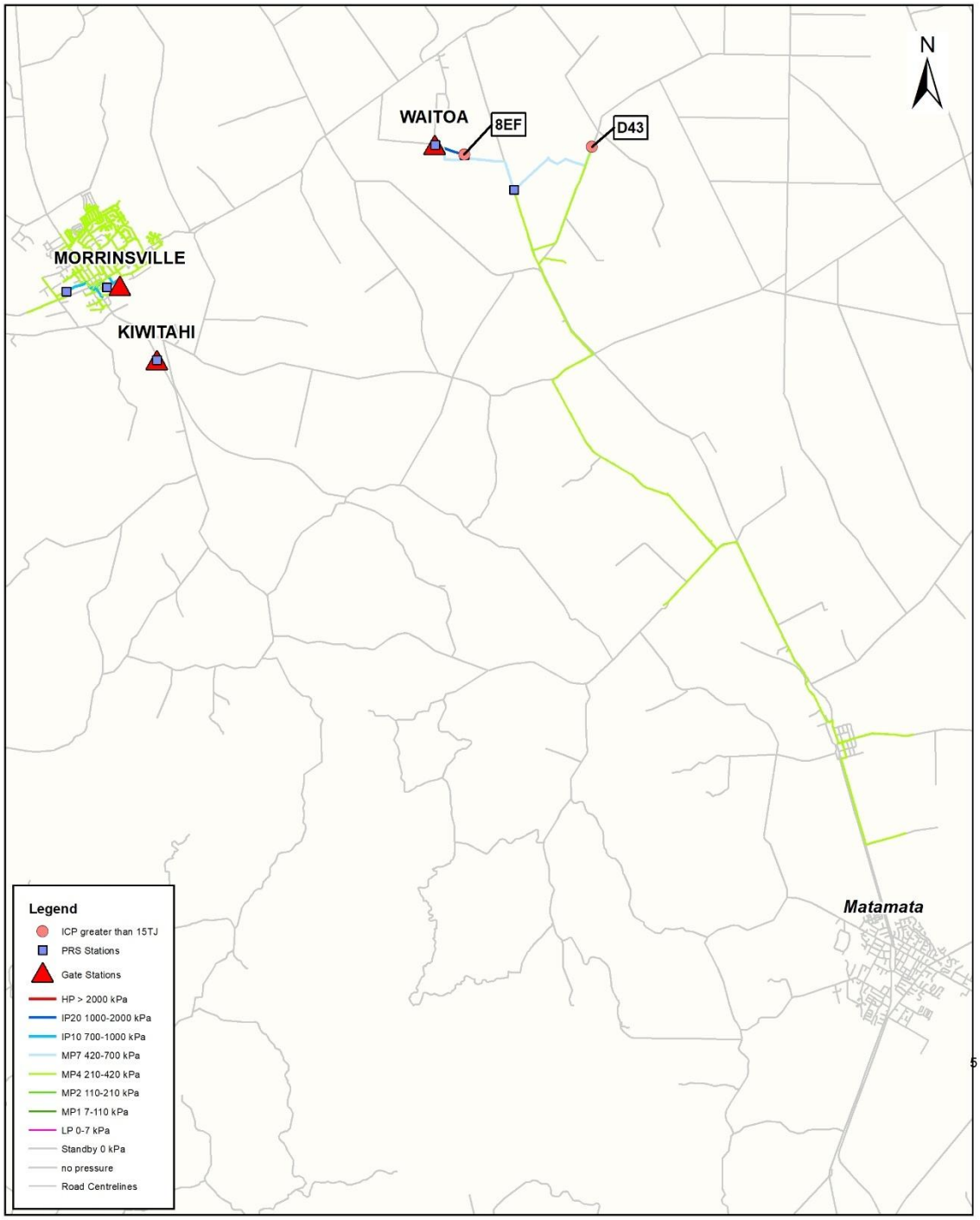

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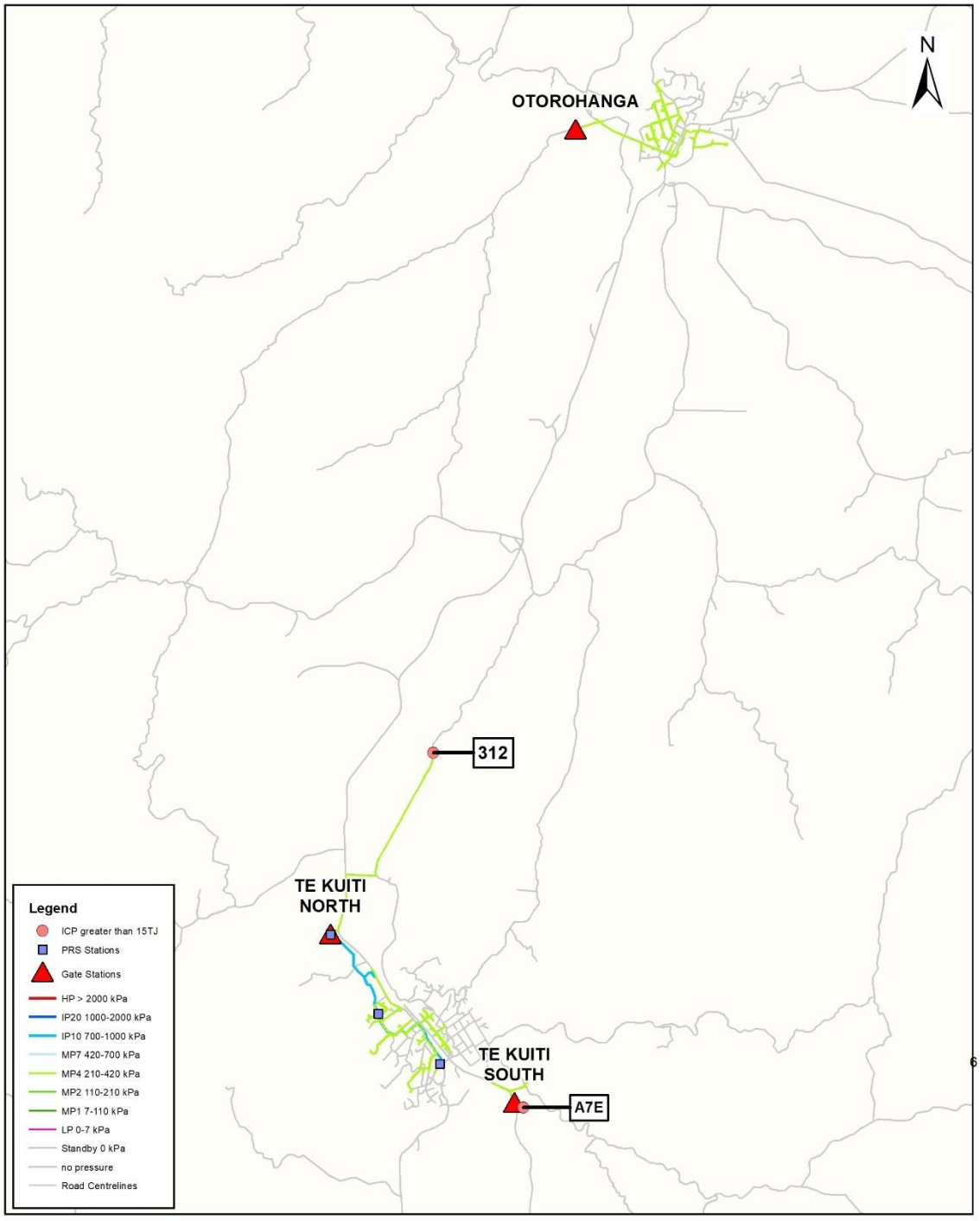

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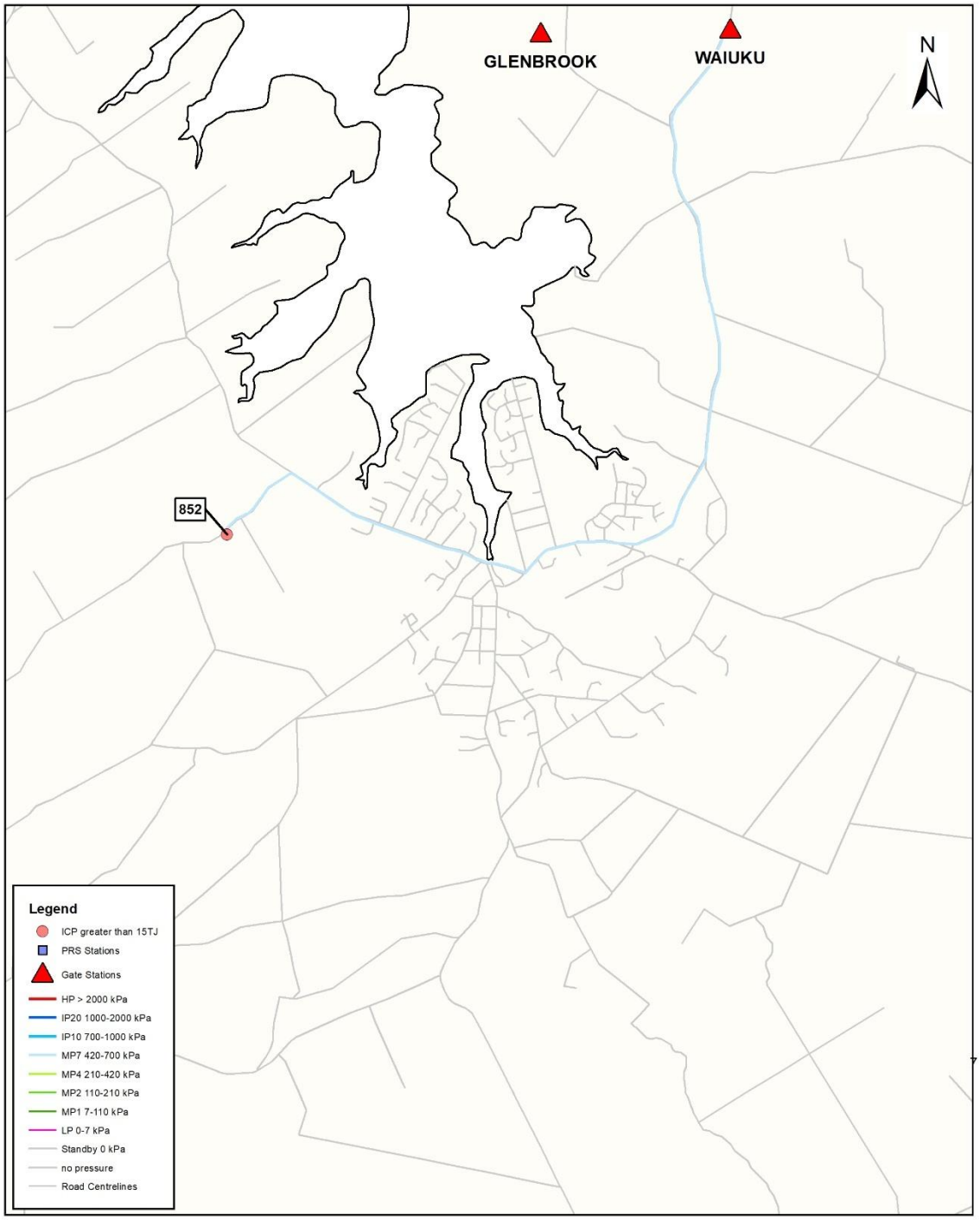

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WAIKATO REGION

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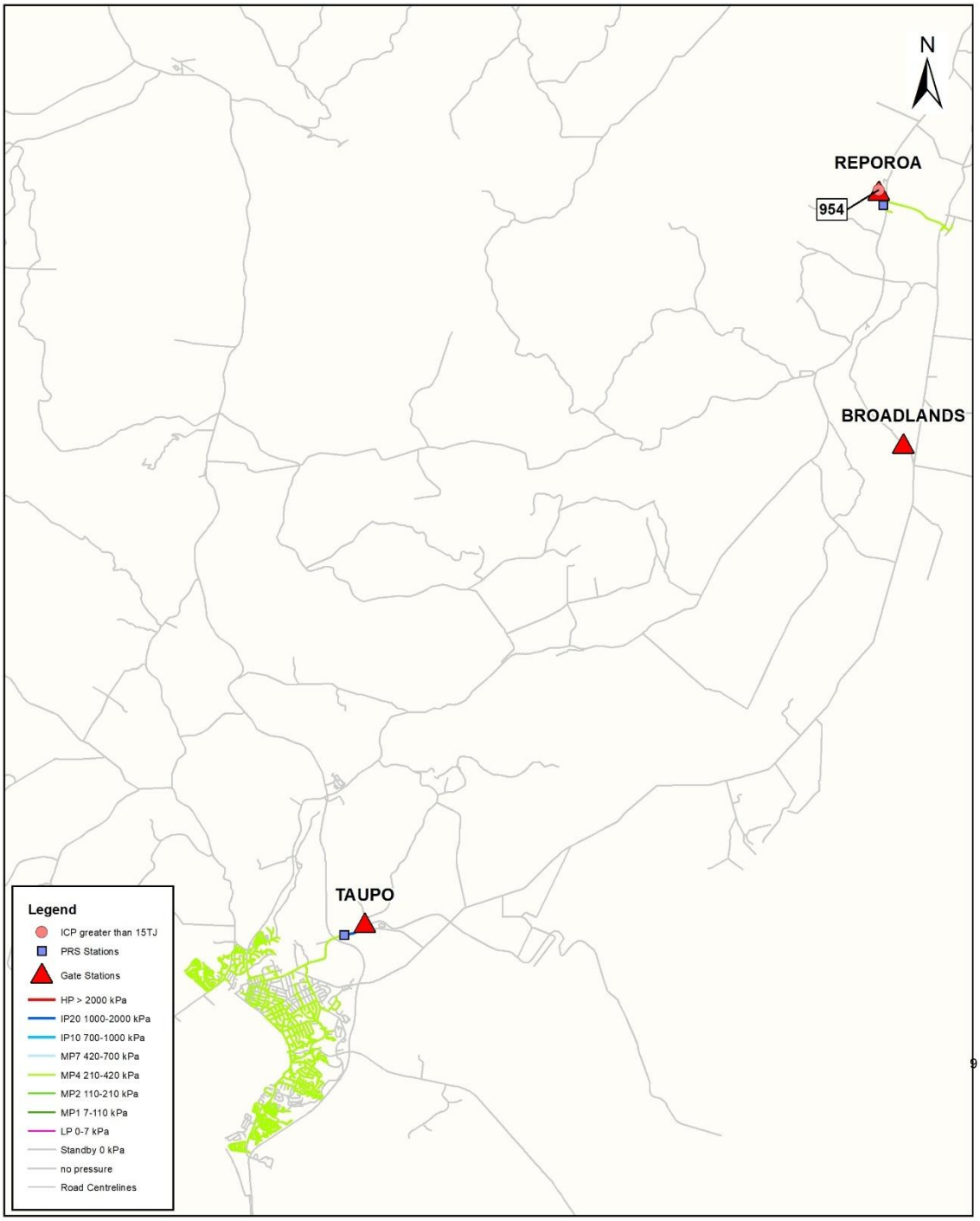

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CENTRAL PLATEAU REGION

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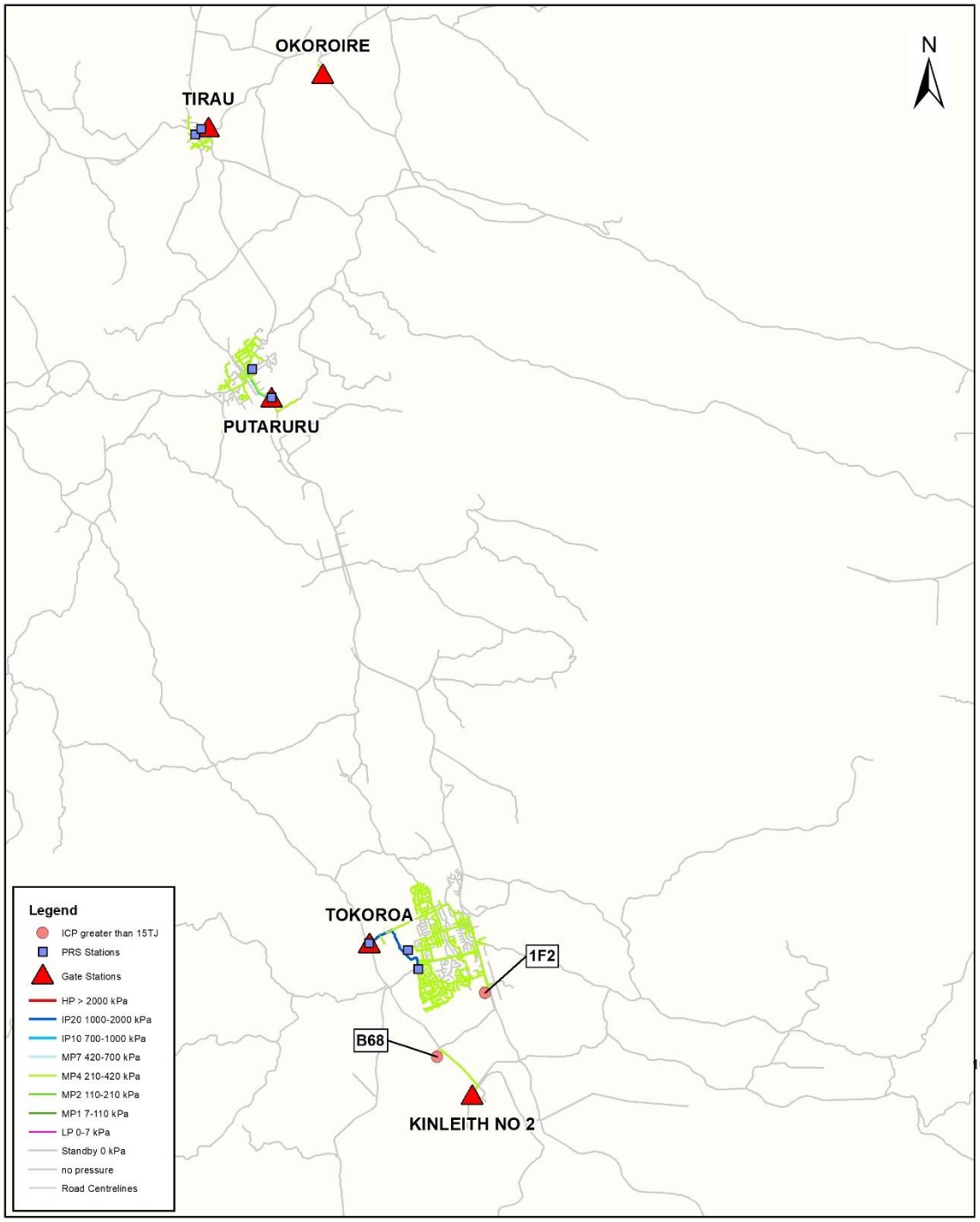

GAS DISTRIBUTION MAPS
CENTRAL PLATEAU REGION

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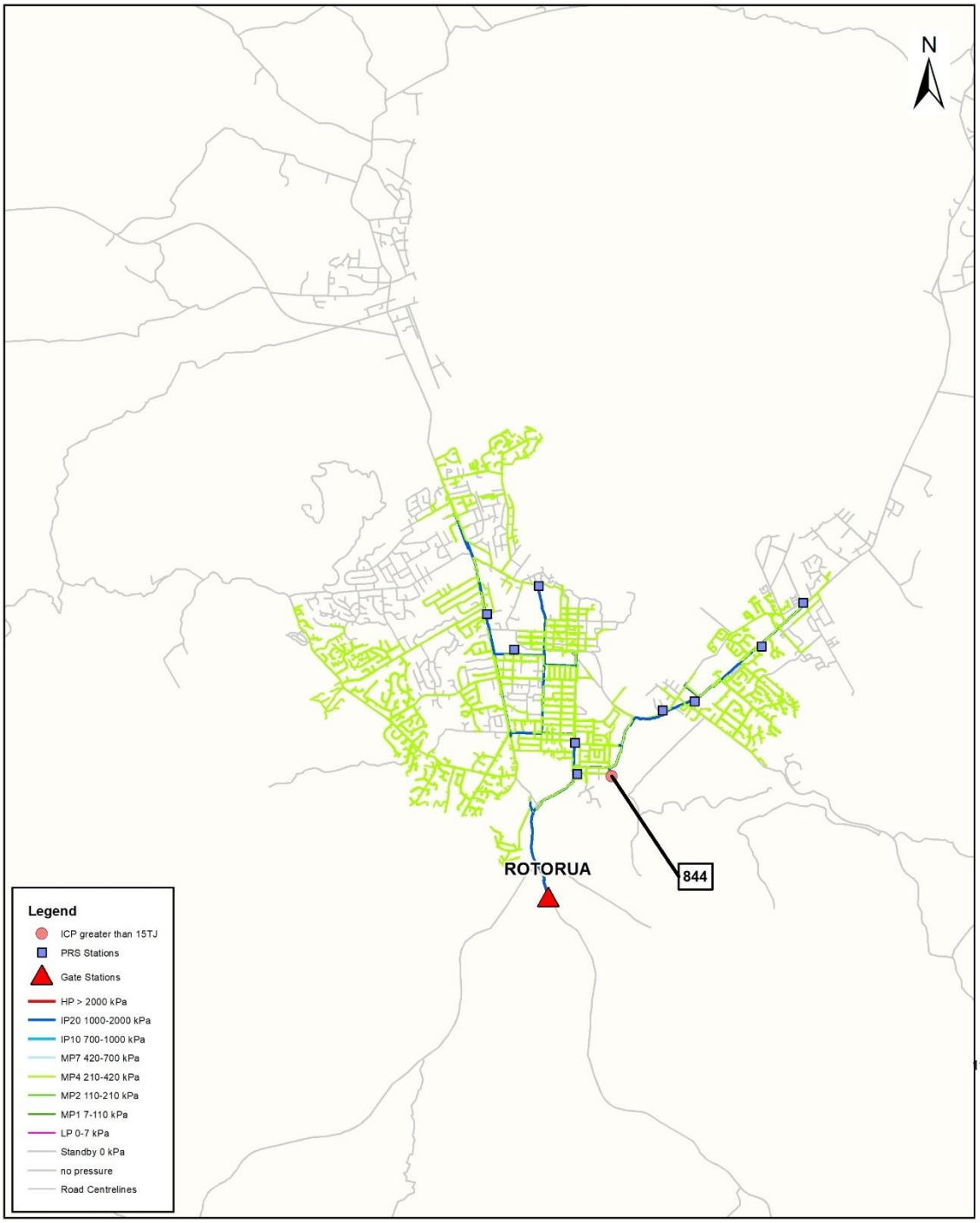

GAS DISTRIBUTION MAPS
CENTRAL PLATEAU REGION

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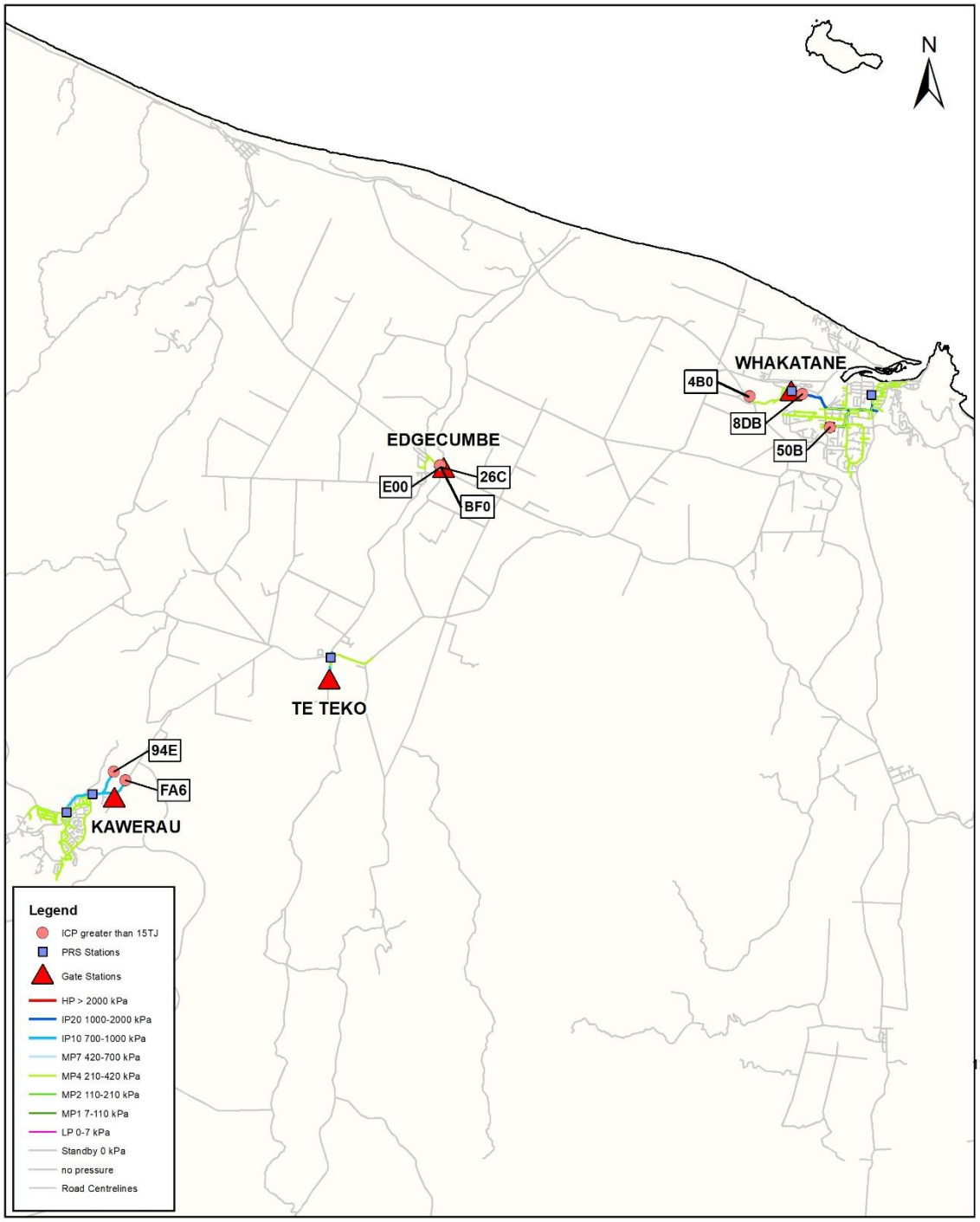

GAS DISTRIBUTION MAPS
BAY OF PLENTY REGION

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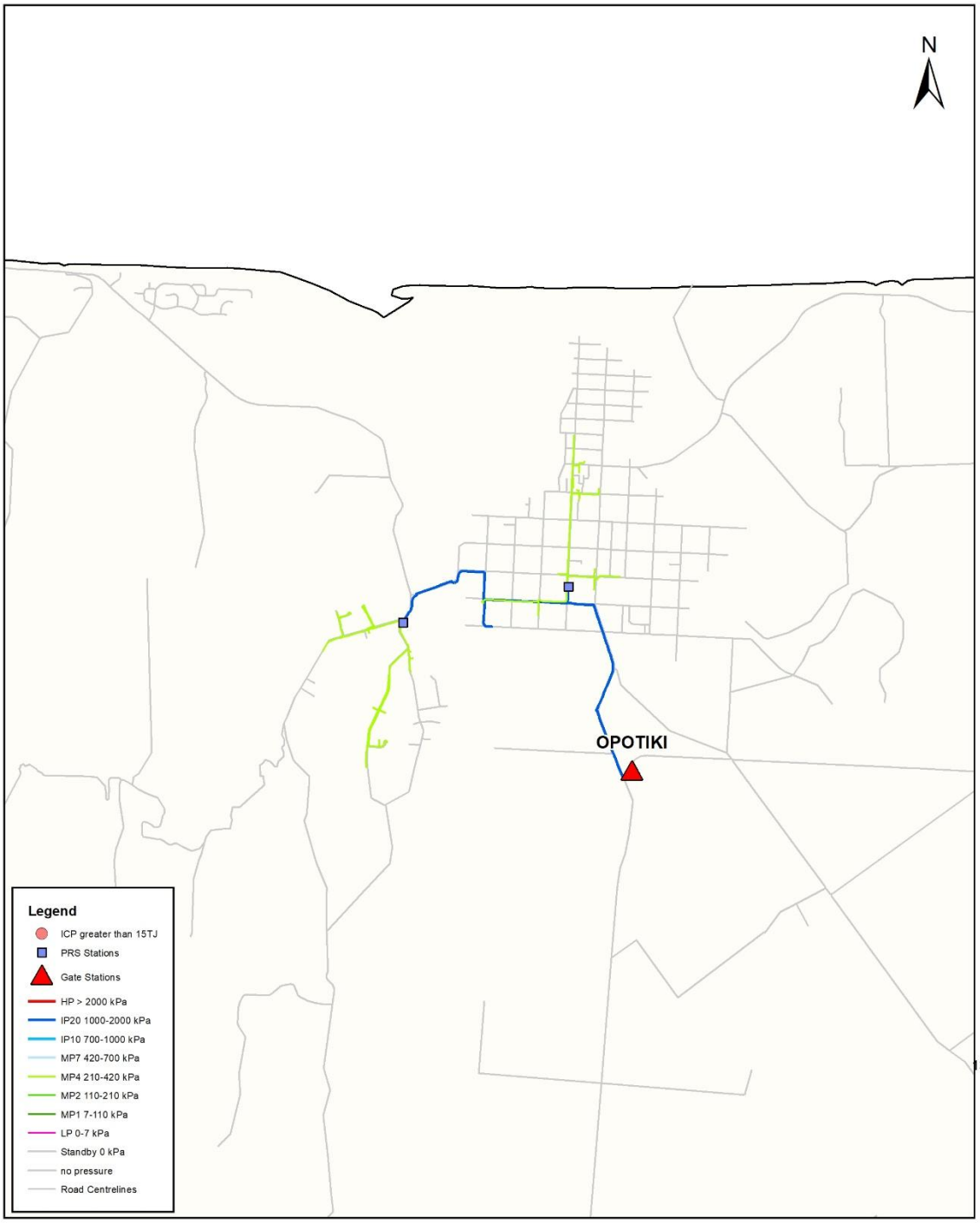

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BAY OF PLENTY REGION

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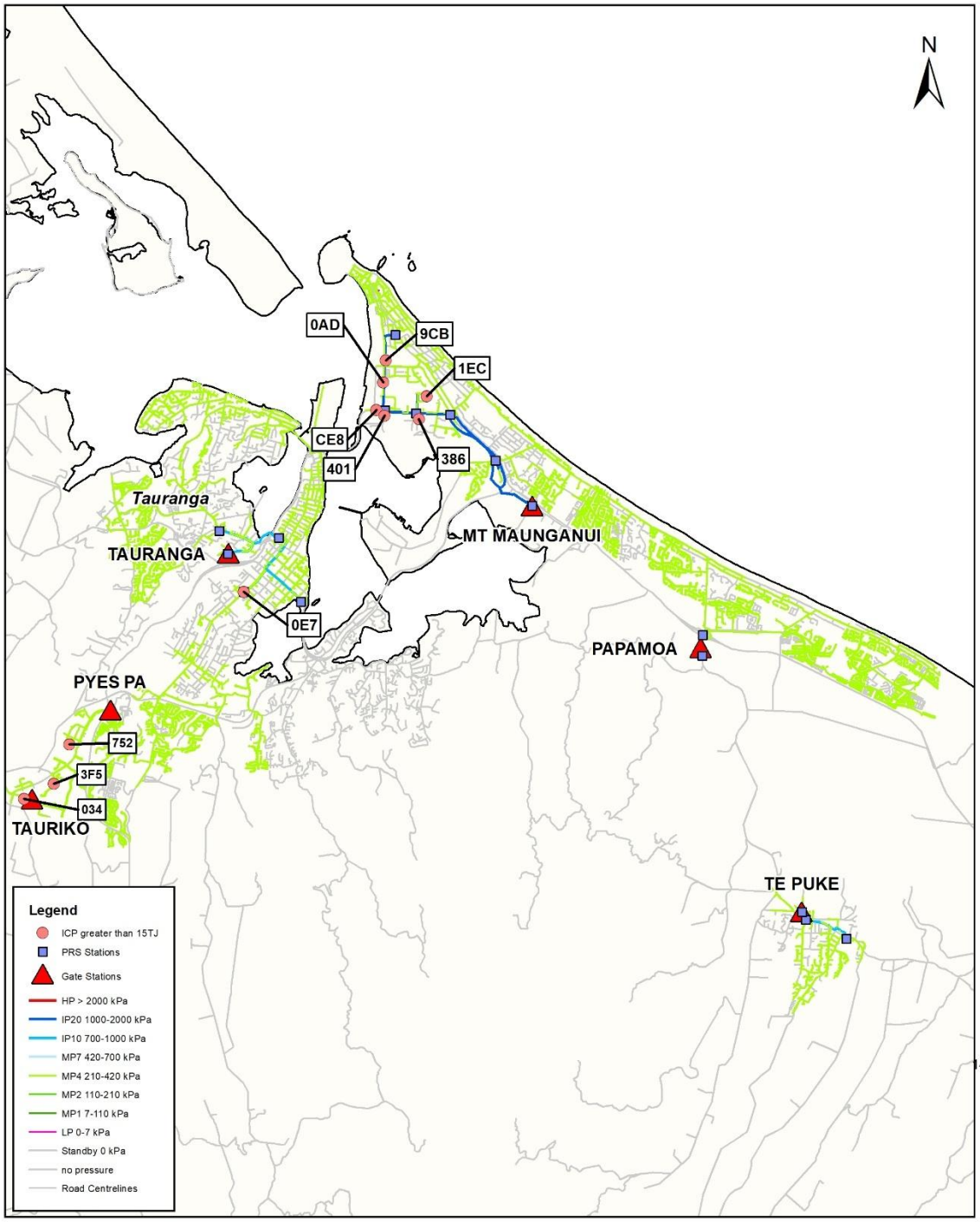

GAS DISTRIBUTION MAPS
BAY OF PLENTY REGION

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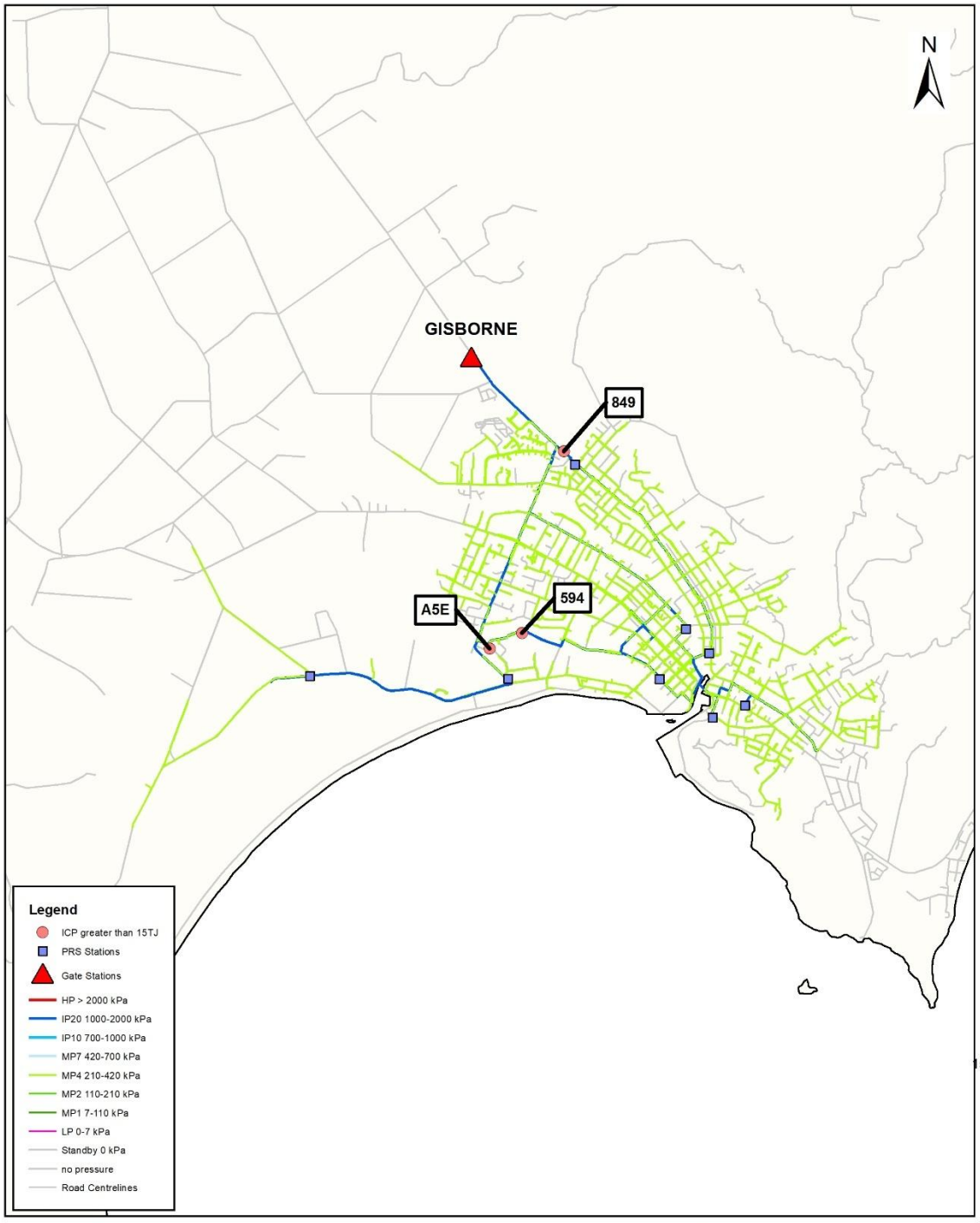

GAS DISTRIBUTION MAPS
GISBORNE REGION

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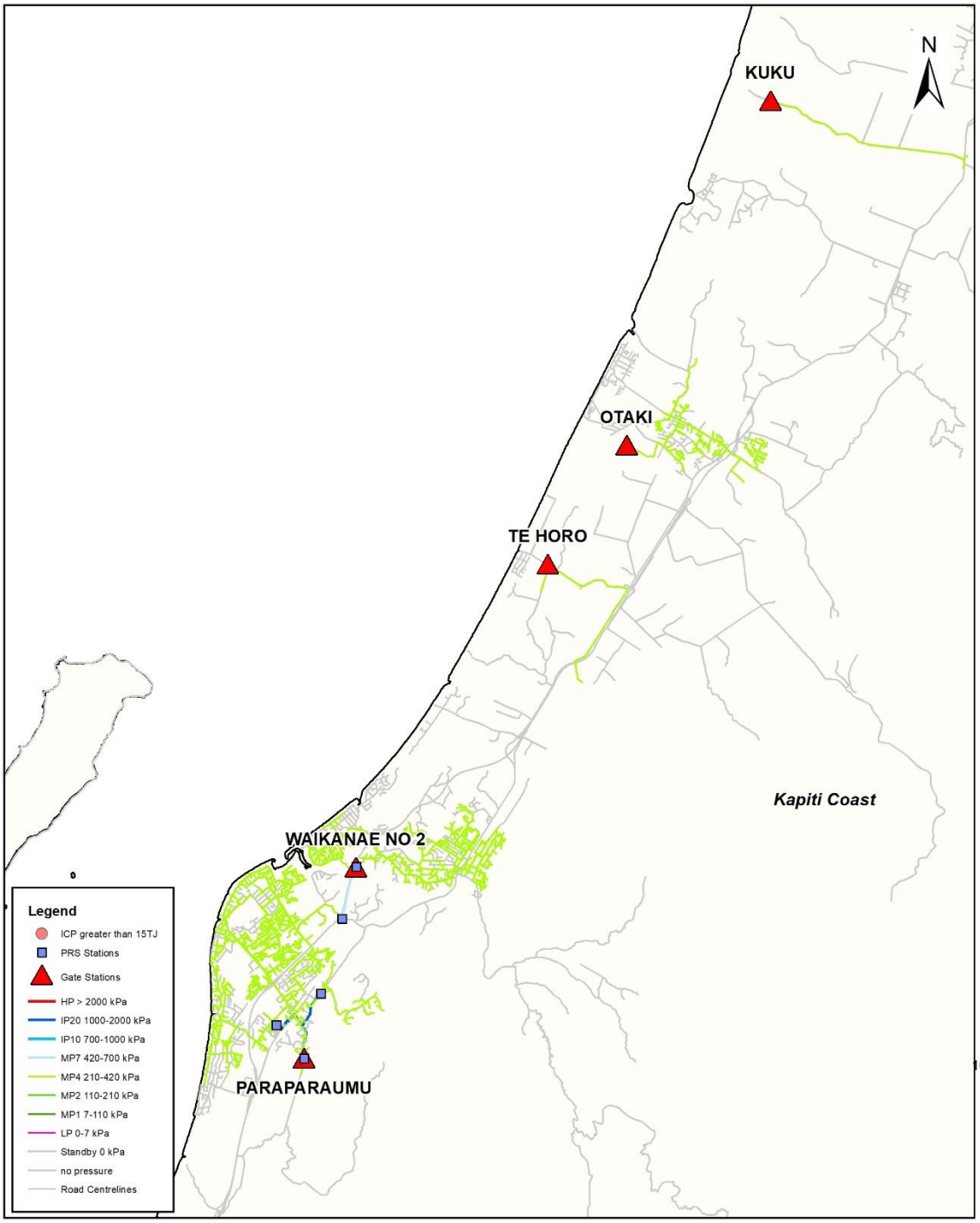

GAS DISTRIBUTION MAPS
KAPITI REGION

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Drawing Reference: GIS-G0215-007-01-F

Appendix F. COMPLIANCE SCHEDULE

This table provides a look-up reference for each of the information disclosure requirements described in the Gas Distribution Information Disclosure (amendments related to IM Review 2023) Amendment Determination 2024 including attachments and schedules.

REGULATORY REQUIREMENTS		AMP REFERENCE
2.6	ASSET MANAGEMENT PLANS AND FORECAST INFORMATION	AMP Section identifies where compliance addressed
2.6.1	Subject to clauses 2.6.3, before the start of each disclosure year, every GDB must: (1) Complete an AMP that: (a) relates to the gas distribution services supplied by the GDB (b) meets the purposes of AMP disclosure set out in clause 2.6.2 (c) has been prepared in accordance with Attachment A to this Gas Distribution Information Disclosure Determination document. (d) contains the information set out in the schedules described in clause 2.6.6 (e) contains the Report on Asset Management Maturity as described in Schedule 13	An AMP has been completed, such that: (a) The AMP Summary Document describes the purpose of the AMP and how the AMP relates to the Firstgas gas distribution system network. (b), (c) Compliance with Clause 2.6.2 and Attachment A is summarised in this table. (d) The schedules required in clause 2.6.6 are included in Appendix B. (e) AMMAT report (Schedule 13) is included in Appendix B.
	(2) Complete the Report on Asset Management Maturity in accordance with the requirements specified in Schedule 13.	The AMMAT report (Schedule 13) is included in Appendix B.
	(3) Publicly disclose the AMP.	The AMP is publicly available on the Firstgas website www.firstgas.co.nz
2.6.2	The purposes of AMP disclosure referred to in subclause 2.6.1(1)(b) are that the AMP: (1) Must provide sufficient information for interested persons to assess whether- (a) assets are being managed for the long term. (b) the required level of performance is being delivered. (c) costs are efficient and performance efficiencies are being achieved.	(1) (a) to (c): • the AMP, including Appendix D, explains how assets are being managed over their lifecycle for the long-term • performance measures and targets are included in Appendix C • expenditure governance and cost management are discussed in Appendix C.
	(2) Must be capable of being understood by interested persons with a reasonable understanding of the management of infrastructure assets	The AMP has been structured and presented in a way that is intended to be easily understood by interested persons. This includes: • technical details are located in appendices leaving the AMP Summary document to deliver core messages • inclusion of a glossary in Appendix A • clear description of expenditure forecasts presented in the AMP.

REGULATORY REQUIREMENTS		AMP REFERENCE
	(3) Should provide a sound basis for the ongoing assessment of asset-related risks, particularly high impact asset-related risks.	Risk management policy and framework are discussed in Appendix C. Asset-related risks are discussed in Appendix D.
2.6.3	2.6.3 Subject to clause 2.6.4, a GDB may elect to complete and publicly disclose an AMP update, as described in clause 2.6.5, before the start of a disclosure year, instead of an AMP, as described in clause 2.6.1(1), unless the start of that disclosure year is- (1) For a five-year regulatory period: (a) between 6 (inclusive) and 18 months after the start of the DPP regulatory period; or (b) between 18 (inclusive) and 30 months before the start of the next DPP regulatory period. (2) For a four-year regulatory period: (a) between 6 (inclusive) and 18 months after the start of the DPP regulatory period; or (b) between 6 (inclusive) and 18 months before the start of the next DPP regulatory period.	Firstgas has published a full AMP for RY25.
2.6.4	A GDB must not complete and publicly disclose an AMP update instead of an AMP if it has not previously publicly disclosed an AMP under clause 2.6.1.	Firstgas has published a full AMP for RY25.
2.6.5	For the purpose of clause 2.6.3, the AMP update must: Relate to the gas distribution services supplied by the GDB; (1) Identify any material changes to the network development plans disclosed in the last AMP under clause 12 of Attachment A or in the last AMP update disclosed under this clause; (2) Identify any material changes to the lifecycle asset management (maintenance and renewal) plans disclosed in the last AMP pursuant to clause 13 of Attachment A or in the last AMP update disclosed under this clause; (3) Provide the reasons for any material changes to the previous disclosures in the Report on Forecast Capital Expenditure set out in Schedule 11a and Report on Forecast Operational Expenditure set out in Schedule 11b; (4) Identify any changes to the asset management practices of the GDB that would affect a Schedule 13 Report on Asset Management Maturity disclosure; and (5) Contain the information set out in the schedules described in clause 2.6.6.	Firstgas has published a full AMP for RY25.
2.6.6	Before the start of each disclosure year, each GDB must complete and publicly disclose each of the following reports by inserting all information relating to the gas distribution	These reports are included in Appendix B.

REGULATORY REQUIREMENTS		AMP REFERENCE
	services supplied by the GDB for the disclosure years provided for in the following reports: (1) the Report on Forecast Capital Expenditure in Schedule 11a. (2) the Report on Forecast Operational Expenditure in Schedule 11b. (3) the Report on Asset Condition in Schedule 12a. (4) the Report on Forecast Utilisation in Schedule 12b (5) the Report on Forecast Demand in Schedule 12c.	

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
This attachment sets out the mandatory disclosure requirements with respect to AMPs. The text in italics provides a commentary on those requirements. The purpose of the commentary is to provide guidance on the expected content of disclosed AMPs. The commentary has been prepared on the basis that GDBs will implement best practice asset management processes.		
AMP Design		
1	The core elements of asset management: 1.1 A focus on measuring network performance and managing the assets to achieve performance targets.	Section C.4 sets out performance measures / targets
	1.2 Monitoring and continuously improving asset management practices.	Section C.3.1 discusses this
	1.3 Close alignment with corporate vision and strategy.	Alignment with corporate vision and strategy is explained in Appendix C
	1.4 That asset management is driven by clearly defined strategies, business objectives and service level targets.	Section C.4.
	1.5 That responsibilities and accountabilities for asset management are clearly assigned.	Section C.3.2 discusses this
	1.6 An emphasis on knowledge of what assets is owned and why, the location of the assets and the condition of the assets.	Appendices D and E reflect this
	1.7 An emphasis on optimising asset utilisation and performance.	Appendix E discusses this
	1.8 That a total life cycle approach should be taken to asset management.	Appendix D.
	1.9 That the use of 'non-network' solutions and demand management techniques as alternatives to asset acquisition is considered.	As relevant, these are discussed in planned solutions in Appendix D
2	The disclosure requirements are designed to produce AMPs that: 2.1 Are based on, but are not limited to, the core elements of asset management identified in clause 1.	The elements identified in clause 1 are described above.
	2.2 Are clearly documented and made available to all stakeholders.	AMP is distributed to major stakeholders and available on the Firstgas website www.firstgas.co.nz The AMP is formatted for stakeholders to focus on the level of detail that is useful to them (e.g. the AMP Summary Document or the more detailed appendices).
	2.3 Contain sufficient information to allow interested persons to make an informed judgement about the extent to which the GDB's asset management processes meet best practice criteria and outcomes are consistent with outcomes produced in competitive markets.	Asset management practices and assessment against ISO 55000 principles are described in Appendix C
	2.4 Specifically support the achievement of disclosed service level targets.	Performance measures and target levels are defined in Section C.4

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
	2.5 Emphasise knowledge of the performance and risks of assets and identify opportunities to improve performance and provide a sound basis for ongoing risk assessment.	Our approach to risk management is discussed in Appendix C. Appendix D considers asset risk more specifically.
	2.6 Consider the mechanics of delivery including resourcing.	The delivery model, including resourcing, is included in Appendix C.
	2.7 Consider the organisational structure and capability necessary to deliver the AMP.	The organisational structure is set out in the AMP Summary.
	2.8 Consider the organisational and contractor competencies and any training requirements.	Section C.3 outlines competency and training requirements.
	2.9 Consider the systems, integration and information management necessary to deliver the plans.	Asset management systems, integration and information management are outlined in Section C.3.4.
	2.10 To the extent practical, use unambiguous and consistent definitions of asset management processes and terminology consistent with the terms used in this attachment to enhance comparability of asset management practices over time and between GDBs.	Throughout the AMP terminology and definitions have been used that are consistent with those used in the glossary (Attachment A).
	2.11 Promote continual improvements to asset management practices. *Disclosing an AMP does not constrain a GDB from managing its assets in a way that differs from the AMP if its circumstances change after preparing the plan or if the GDB adopts improved asset management practices*	Section C.3 discusses asset management competency.
Contents of the AMP		
	The AMP must include the following: 3.1 A summary that provides a brief overview of the contents and highlights information that the GDB considers significant.	The AMP Summary document provides an overview of the scope and structure of the AMP including the document appendices
	3.2 Details of the background and objectives of the GDB's asset management and planning processes; and.	The asset management framework and policy are described in Appendix C. This includes asset management strategy, objectives and planning processes.
3	A purpose statement which: 3.3.1. makes clear the purpose and status of the AMP in the GDB's asset management practices. The purpose statement must also include a statement of the objectives of the asset management and planning processes. 3.3.2. states the corporate mission or vision as it relates to asset management. 3.3.3. identifies the documented plans produced as outputs of the annual business planning process adopted by the GDB.	3.3.1 The purpose of the AMP is set out in Chapter 1 3.3.2 our corporate mission or vision is set out in the AMP summary document 3.3.3 the outputs of the business planning process are discussed in Appendix C 3.3.4 the asset management document hierarchy is included in Appendix C 3.3.5 line-of-sight between the objectives of the AMP and other corporate goals is included in Appendix C

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
	3.3.4. states how the different documented plans relate to one another, with particular reference to any plans specifically dealing with asset management. 3.3.5. includes a description of the interaction between the objectives of the AMP and other corporate goals, business planning processes, and plans. The purpose statement should be consistent with the GDB's vision and mission statements and show a clear recognition of stakeholder interest.	
	3.4 Details of the AMP planning period, which must cover at least a projected period of 10 years commencing with the disclosure year following the date on which the AMP is disclosed.	The executive summary outlines our corporate mission and vision within the context of asset management. Section 1.3 of the AMP Summary document identifies the 10-year period covered by the AMP. This is defined as the "planning period".
	3.5 The date that it was approved by the directors.	The AMP approval date by Directors is provided in Section 1 of the AMP Summary Document and in the Director's certificate in Appendix G.
	3.6 A description of each of the legislative requirements directly affecting management of the assets, and details of: (a) how the GDB meets the requirements; and (b) the impact on asset management.	Section C.5.2 sets out key legislation, regulations, and industry codes affecting asset management. Appendix D explains how they impact our asset management.
	3.7 A description of stakeholder interests (owners, consumers, etc.) which identifies important stakeholders and indicates: (a) how the interests of stakeholders are identified (b) what these interests are (c) how these interests are accommodated in asset management practices; and (d) how conflicting interests are managed.	The AMP Summary document describes how the needs and interests of all stakeholders are identified, and how conflicting interests are managed. Other sections discuss stakeholders as relevant.
	3.8 A description of the accountabilities and responsibilities for asset management on at least 3 levels, including- (a) governance - a description of the extent of director approval required for key asset management decisions and the extent to which asset management outcomes are regularly reported to directors. (b) executive - an indication of how the in-house asset management and planning organisation is structured. (c) field operations - an overview of how field operations are managed, including a description of the extent to which field work is undertaken in-house and the areas where outsourced contractors are used.	Section C.3.2 describes our approach to asset management governance and the respective roles within the business.

ATTACHMENT A: ASSET MANAGEMENT PLANS	AMP REFERENCE
3.9 All significant assumptions- (a) quantified where possible (b) clearly identified in a manner that makes their significance understandable to interested persons, including- (c) a description of changes proposed where the information is not based on the GDB's existing business. (d) the sources of uncertainty and the potential effect of the uncertainty on the prospective information; and (e) the price inflator assumptions used to prepare the financial information disclosed in nominal New Zealand dollars in the Report on Forecast Capital Expenditure set out in Schedule 11a and the Report on Forecast Operational Expenditure set out in Schedule 11b.	Key assumptions for the development of the AMP are outlined in Section C.1.2. Expenditure assumptions are outlined in Section 4 of the AMP summary document. • Assumptions around escalation are included in Schedule 14a
3.10 A description of the factors that may lead to a material difference between the prospective information disclosed and the corresponding actual information recorded in future disclosures.	Section 3 of the AMP summary document addresses factors that may lead to material differences between the prospective information and the actual outcomes reported in future disclosures.
3.11 An overview of asset management strategy and delivery. *To support the Report on Asset Management Maturity disclosure and assist interested persons to assess the maturity of asset management strategy and delivery, the AMP should identify –* (a) how the asset management strategy is consistent with the GDB's other strategy and policies. (b) how the asset strategy considers the life cycle of the assets. (c) the link between the asset management strategy and the AMP; and (d) processes that ensure costs, risks and system performance will be effectively controlled when the AMP is implemented.	Appendix C explains Firstgas's approach to asset management, including how the framework relates to corporate objectives through the asset management policy and our KPIs. Appendix D explains our approach to asset lifecycle management.
3.12 An overview of systems and information management data. *To support the Report on Asset Management Maturity disclosure and assist interested persons to assess the maturity of systems and information management, the AMP should describe:* (a) the processes used to identify asset management data requirements that cover the whole of life cycle of the assets (b) the systems used to manage asset data and where the data is used, including an overview of the systems to record asset conditions and operation capacity and to monitor the performance of assets (c) the systems and controls to ensure the quality and accuracy of asset management information; and	Section C.3.4 provides an overview of system and information data, including relationships of asset management data, and the systems used to manage it and the degree of system integration.

ATTACHMENT A: ASSET MANAGEMENT PLANS	AMP REFERENCE
(d) the extent to which these systems, processes and controls are integrated.	
3.13 A statement covering any limitations in the availability or completeness of asset management data and disclose any initiatives intended to improve the quality of this data. *Discussion of the limitations of asset management data is intended to enhance the transparency of the AMP and identify gaps in the asset management system.*	Section C.3.1 describes the asset management improvement programme. Section C.3.4 identifies data limitations and details the initiatives underway to improve data quality.
3.14 A description of the processes used within the GDB for: (a) managing routine asset inspections and network maintenance. (b) planning and implementing network development projects. (c) measuring network performance.	Our approach to maintenance is discussed in Section D.1.2, with asset specific information in relevant sections. Our approach to planning and implementing network development projects is discussed in Appendix E. Section C.4 sets out details on performance measures and related processes.
3.15 An overview of asset management documentation, controls and review processes. *To support the Report on Asset Management Maturity disclosure and assist interested persons to assess the maturity of asset management documentation, controls and review processes, the AMP should:* *(a) identify the documentation that describes the key components of the asset management system and the links between the key components* *(b) describe the processes developed around documentation, control and review of key components of the asset management system* *(c) where the GDB outsources components of the asset management system, the processes and controls that the GDB uses to ensure efficient and cost-effective delivery of its asset management strategy.* *(d) where the GDB outsources components of the asset management system, the systems it uses to retain core asset knowledge in-house.* (e) *audit or review procedures undertaken in respect of the asset management system.*	Documentation, controls, and review processes are outlined in Appendix C, with examples of relevant material in other sections. In particular: • Section C.1 discusses our asset management documentation and related linkages. • Section D.1.4. explains our delivery model • Section C.1.3 discusses reviews of our asset management system
3.16 An overview of communication and participation processes. *To support the Report on Asset Management Maturity disclosure and assist interested persons to assess the maturity of asset management documentation, controls and review processes, the AMP should:* (a) communicate asset management strategies, objectives, policies and plans to stakeholders involved in the delivery of the asset management requirements, including contractors and consultants.	Section 2.4 of the AMP summary document provides an overview of how asset management strategies and plans are communicated to key stakeholders. Appendices C and D provide further details on communication processes with internal and external stakeholders, including contractors and consultants. Staff engagement in the development and delivery of the AMP is referenced throughout the document.

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
	(b) demonstrate staff engagement in the efficient and cost-effective delivery of the asset management requirements.	
	3.17 The AMP must present all financial values in constant price New Zealand dollars except where specified otherwise.	All expenditure figures are presented in constant FY25 New Zealand dollars, as confirmed in Section 4 of the AMP summary document.
	3.18 The AMP must be structured and presented in a way that the GDB considers will support the purposes of AMP disclosure set out in clause 2.6.2 of the determination	The AMP has been structured and presented in a manner intended to simplify the presentation of information relevant to the disclosure. The AMP Summary document can be read as a standalone document to provide a summarised view. The appendices provide greater detail on the plans at an asset fleet level and our approach to asset management.
ASSETS COVERED		**AMP REFERENCE**
4	The AMP must provide details of the assets covered, including- 4.1 A map and high-level description of the areas covered by the GDB, including the region(s) covered.	A map of the gas distribution areas in the North Island is provided in Section D.1 – Network overview, with high-level regional maps included in Section E.9 – Network maps.
	4.2 A description of the network configuration, including- *if sub-networks exist, the network configuration information should be disclosed for each sub-network.* (a) A map or maps, with any cross-referenced information contained in an accompanying schedule, showing the physical location of: i. All main pipes, distinguished by operating pressure ii. All ICPs that have a significant impact on network operations or asset management priorities, and a description of that impact iii. All gate stations. iv. All pressure regulation stations (b) if applicable, the locations where a significant change has occurred since the previous disclosure of the information referred to in subclause 4.2(a), including- i. a description of the parts of the network that are affected by the change ii. a description of the nature of the change	We do not have any sub-networks as defined in the Information disclosure determination. (a) Section E.9 – Network maps illustrate the following: i. All Mains pipes colour-coded by operating pressure. ii. All ICPs greater than 15TJ iii. All gate stations feeding the distribution network. iv. All pressure regulation stations (b) There have been no significant changes to the network since the previous disclosure.
Network Assets by Category		**AMP Reference**
5	The AMP must describe the network assets by providing the following information for each asset category-	Appendix D addresses these requirements

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
	5.1 pressure 5.2 description and quantity of assets 5.3 age profiles. 5.4 a discussion of the results of formal risk assessments of the assets, further broken down by subcategory as appropriate. Systemic issues leading to the premature replacement of assets or parts of assets should be discussed.	
6	The asset categories discussed in clause 5 above should include at least the following: 6.1 the categories listed in the Report on Forecast Capital Expenditure in Schedule 11a(iii). 6.2 assets owned by the GDB but installed at gate stations owned by others.	The asset categories in Appendix D include those categories listed in the Report on Forecast Capital Expenditure in schedule 11a.
SERVICE LEVELS		**AMP REFERENCE**
7	The AMP must clearly identify or define a set of performance indicators for which annual performance targets have been defined. The annual performance targets must be consistent with business strategies and asset management objectives and be provided for each year of the AMP planning period. The targets should reflect what is practically achievable given the current network configuration, condition and planned expenditure levels. The targets should be disclosed for each year of the AMP planning period.	The AMP summary document describes key performance indicators, results for 2024 and targets for coming year. Section C.4 provides detail and information on the full suite of performance measures and quantified targets and how they are consistent with the asset management objectives.
8	Performance indicators for which targets have been defined in Clause 7 must include- 8.1 the DPP requirements required under the price quality path determination applying to the regulatory assessment period in which the next disclosure year falls. 8.2 consumer oriented indicators that preferably differentiate between different consumer types. 8.3 indicators of asset performance, asset efficiency and effectiveness, and service efficiency, such as technical and financial performance indicators related to the efficiency of asset utilisation and operation. 8.4 the performance indicators disclosed in Schedule 10b of the determination	Performance measures are defined in Appendix C – Asset management approach, and include: 8.1 Targets aligned with DPP quality standard requirements under the applicable price-quality path determination. 8.2 Consumer-oriented performance measure with differentiation between consumer types. 8.3 Indicators of asset performance, efficiency and service effectiveness, including technical and financial metrics. 8.4 The performance measures disclosed in Schedule 10b of the determination
9	The AMP must describe the basis on which the target level for each performance indicator was determined. Justification for target levels of service includes consumer expectations or demands, legislative, regulatory, and other stakeholders' requirements or considerations. The AMP should demonstrate how stakeholder needs were ascertained and translated into service level targets.	Appendix C – Asset management approach describes the performance targets, which are based on historical trends, regulatory requirements, consumer expectations, and network capability.
10	Targets should be compared to historic values where available to provide context and scale to the reader.	Historical performance values are provided in Section C.4 – Performance Measures, allowing comparison against targets to give context and scale.

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
11	Where forecast expenditure is expected to materially affect performance against a target defined in clause 7, the target should be consistent with the expected change in the level of performance. *Performance against target must be monitored for disclosure in the Evaluation of Performance Section of each subsequent AMP.*	Forecast expenditure is not expected to materially affect performance against any performance targets.

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
NETWORK DEVELOPMENT PLANNING		
12	AMPs must provide a detailed description of network development plans, including- 12.1 A description of the planning criteria and assumptions for network development.	Network development plans are outlined in Appendix E – Network development and further detailed in Section E.7 – Network development programme. 12.1 described in section E.1 Network development planning
	12.2 Planning criteria for network developments should be described logically and succinctly. Where probabilistic or scenario-based planning techniques are used, this should be indicated, and the methodology briefly described.	12.2 described in section E.1 Network development planning
	12.3 The use of standardised designs may lead to improved cost efficiencies. This section should discuss: the categories of assets and designs that are standardised; and the approach used to identify standard designs.	12.3 described in section C.3.4 Standardised equipment and designs, specifically Table 14 Key design standards by asset
	12.4 A description of the criteria used to determine the capacity of new equipment for different types of assets or different parts of the network. *The criteria described should relate to the GDB's philosophy in managing planning risks*.	12.4 described in section E.1 Network development planning, E.2 Network and asset capacity, E.3 Demand forecasting
	12.5 A description of the process and criteria used to prioritise network development projects and how these processes and criteria align with the overall corporate goals and vision.	12.5 The process for prioritising network projects and investments is explained in Appendix C – Asset management approach under Asset management enablers.
	12.6 Details of demand forecasts, the basis on which they are derived, and the specific network locations where constraints are expected due to forecast increases in demand. (a) Explain the load forecasting methodology and indicate all the factors used in preparing the load estimates. (b) Provide separate forecasts to at least off-take points covering at least a minimum 5-year forecast period. Discuss how uncertain but substantial individual projects/developments that affect load are considered in the forecasts, making clear the extent to which these uncertain increases in demand are reflected in the forecasts. (c) Identify any network or equipment constraints that may arise due to the anticipated growth in demand during the AMP planning period. *The AMP should include a description of the methodology and assumptions used to produce the utilisation and capacity forecasts and a discussion of the limitations of the forecasts, methodology and assumptions. The AMP should also discuss any capacity limitations identified or resolved in years during which an AMP was not disclosed.*	12.6 described in section (a) The load forecasting methodology is described in Appendix E – Network development, it is primarily based on historical load data, demand growth rates, and climate-related demand factors. (b) Load forecasts for each gate station are provided in Section E.8 for the next ten years, and Section E.7 outlines the long-term development plans for the larger gas distribution systems. (c) Section E.7 – Network development programme describes the network and equipment constraints expected from growth during the planning period.

Attachment A: Asset Management Plans		AMP Reference
Network Development Planning		
	12.7 Analysis of the significant network level development options identified, and details of the decisions made to satisfy and meet target levels of service, including- (a) the reasons for choosing a selected option for projects where decisions have been made (b) alternative options considered for projects that are planned to start in the next five years. (c) consideration of planned innovations that improve efficiencies within the network, such as improved utilisation, extended asset lives, and deferred investment.	Appendix E provides detail on development options, including the reasons for selected solutions, alternative options considered, and planned innovations aimed at improving efficiency, extending asset life, and deferring investment.
	12.8 A description and identification of the network development programme and actions to be taken, including associated expenditure projections. The network development plan must include- (a) a detailed description of the material projects and a summary description of the non-material projects currently underway or planned to start within the next 12 months (b) a summary description of the programmes and projects planned for the following four years (where known). (c) an overview of the material projects being considered for the remainder of the AMP planning period. *For projects included in the AMP where decisions have been made, the reasons for choosing the selected option should be stated which should include how target levels of service will be impacted. For other projects planned to start in the next 5 years, alternative options should be discussed*.	The AMP summary document discusses overall forecasts, including those relating to network development. Further details on planned works and their timings are set in Appendix E.

Attachment A: Asset Management Plans		AMP Reference
Lifecycle Asset Management Planning (Maintenance and Renewal)		
13	The AMP must provide a detailed description of the lifecycle asset management processes, including- 13.1 The key drivers for maintenance planning and assumptions.	The overall lifecycle asset management approach is set out in Appendix D.

Attachment A: Asset Management Plans		AMP Reference
Lifecycle Asset Management Planning (Maintenance and Renewal)		
	13.2 Identification of routine and corrective maintenance and inspection policies and programmes and actions to be taken for each asset category, including associated expenditure projections. This must include- (a) the approach to inspecting and maintaining each category of assets, including a description of the types of inspections, tests and condition monitoring carried out and the intervals at which this is done. (b) any systemic problems identified with any particular asset types and the proposed actions to address these problems. (c) budgets for maintenance activities broken down by asset category for the AMP planning period.	Maintenance and inspection programmes for each asset category are outlined in Appendix D - Lifecycle management. (a) Routine inspections and maintenance activities are described for each asset, as outlined in the above-mentioned section. (b) Key risks and issues for each asset are identified and outlined under the Risks and Issues heading. (c) Budgets for maintenance activities are provided in Appendix D – Lifecycle management.
	13.3 Identification of asset replacement and renewal policies and programmes and actions to be taken for each asset category, including associated expenditure projections. This must include- (a) the processes used to decide when and whether an asset is replaced or refurbished, including a description of the factors on which decisions are based, and consideration of future demands on the network and the optimum use of existing network assets. (b) a description of innovations that have deferred asset replacements. (c) a description of the projects currently underway or planned for the next 12 months. (d) a summary of the projects planned for the following four years (where known). (e) an overview of other work being considered for the remainder of the AMP planning period	The overarching approach to identifying and prioritising renewals investment is discussed in Section D.1. Asset specific considerations are provided throughout Sections D.3 to D.7 Expenditure projections are in Section 4.2 of the AMP Summary. Appendix D sets out interventions aligned with the specified timeframes.
	13.4 The asset categories discussed in clauses 13.2 and 13.3 should include at least the categories in clause 6.	The assets identified in the appendices noted against Clauses 13.2 and 13.3 include those specified in Clause 6.
Non-network development, maintenance and renewal		**AMP reference**
14	AMPs must provide a summary description of material non-network development, maintenance and renewal plans, including- 14.1 a description of non-network assets 14.2 development, maintenance and renewal policies that cover them	Section C.3 provides an overview of our non-network assets including asset descriptions and our approach to managing them. It also sets out interventions aligned with the specified timeframes.

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
LIFECYCLE ASSET MANAGEMENT PLANNING (MAINTENANCE AND RENEWAL)		
	14.3 a description of material capital expenditure projects (where known) planned for the next five years. 14.4 a description of material maintenance and renewal projects (where known) planned for the next five years.	
Risk Management		
15	AMPs must provide details of risk policies, assessment, and mitigation, including- 15.1 methods, details and conclusions of risk analysis. 15.2 strategies used to identify areas of the network that are vulnerable to high impact low probability events and a description of the resilience of the network and asset management systems to such events. 15.3 a description of the policies to mitigate or manage the risks of events identified in clause 15.2. 15.4 details of emergency response and contingency plans. *Asset risk management forms a component of a GDB's overall risk management plan or policy, focusing on the risks to assets and maintaining service levels. AMPs should demonstrate how the GDB identifies and assesses asset related risks and describe the main risks within the network. The focus should be on credible low-probability, high-impact risks. Risk evaluation may highlight the need for specific development projects or maintenance programmes. Where this is the case, the resulting projects or actions should be discussed, linking back to the development plan or maintenance programme.*	The asset risk management policy, principles, and framework are outlined under section C.2. Plans to mitigate the identified risks are discussed in Section C.2.6. Detail on asset-specific risks is provided within each asset section in Appendix D.

Attachment A: Asset Management Plans		AMP Reference
Evaluation of Performance		
16	AMPs must provide details of performance measurement, evaluation, and improvement, including- 16.1 A review of progress against plan, both physical and financial. (a) referring to the most recent disclosures made under section 2.5.1 of this determination, discussing any significant differences and highlighting reasons for substantial variances. (b) commenting on the progress of development projects against that planned in the previous AMP and provide reasons for substantial variances along with any significant construction or other problems experienced. (c) commenting on progress against maintenance initiatives and programmes and discuss the effectiveness of these programmes noted.	This is provided in Section 3 of the AMP Summary document.
	16.2 An evaluation and comparison of actual service level performance against targeted performance- (a) in particular, comparing the actual and target service level performance for all the targets discussed in the previous AMP under clause 7 and explain any significant variances.	The comparison of actual service level performance against targeted performance is provided in Section 3.4 of the AMP Summary document 4 with further details set out in Section C.4 of the Appendices.
	16.3 An evaluation and comparison of the results of the asset management maturity assessment disclosed in the Report on Asset Management Maturity set out in Schedule 13 against relevant objectives of the GDB's asset management and planning processes.	Section C.3.1 outlines the AMMAT results and identifies future improvement initiatives. It incorporates the results of an ISO55001 assessment and references broader asset management objectives and processes.
	16.4 An analysis of gaps identified in clauses 16.2 and 16.3. Where significant gaps exist (not caused by one-off factors), the AMP must describe any planned initiatives to address the situation.	Improvement initiatives based on gaps identified in the AMMAT results are outlined in Section 3.4 of the AMP summary document and further detailed in Section C.3.1 – Asset management capability.
17	AMPs must describe the processes used by the GDB to ensure that- 17.1 The AMP is realistic, and the objectives set out in the plan can be achieved.	Section C.3.2 describes relevant challenge and review processes as part of our governance approach.

ATTACHMENT A: ASSET MANAGEMENT PLANS		AMP REFERENCE
	17.2 The organisation structure and the processes for authorisation and business capabilities will support the implementation of the AMP plans.	Section C.3 outlines relevant governance roles.

Appendix G. DIRECTOR CERTIFICATE

Certification for Year-beginning Disclosures

Clause 2.9.1

We, Mark Adrian Ratcliffe and Fiona Ann Oliver being directors of First Gas Limited, certify that, having made all reasonable enquiry, to the best of Firstgas knowledge:

The following attached information of First Gas Limited prepared for the purposes of clauses 2.6.1, 2.6.3, 2.6.6 and 2.7.2 of the *Gas Distribution Information Disclosure Determination 2012* in all material respects complies with that determination.

The prospective financial or non-financial information included in the attached information has been measured on a basis consistent with regulatory requirements or recognised industry standards.

The forecasts in Schedules 11a, 11b, 12a, 12b and 12c are based on objective and reasonable assumptions which both align with First Gas Limited's corporate vision and strategy and are documented in retained records.

Director

Dated: 29 Sep, 2025 12:08:58 PM GMT+13

Director

Dated: 29 Sep, 2025 12:21:49 PM GMT+13

Firstgas