

**BEFORE INDEPENDENT HEARINGS COMMISSIONERS APPOINTED BY
THE CENTRAL HAWKES BAY DISTRICT COUNCIL**

UNDER the Resource Management Act 1991

IN THE MATTER of the Central Hawkes Bay District Council Proposed District
Plan (Energy, Infrastructure and Transport and Designations)
Hearing Stream 7

**STATEMENT OF EVIDENCE OF NICOLA ELIZABETH HINE FOR FIRST GAS
LIMITED**

13 DECEMBER 2022

INTRODUCTION

- 1. My full name is Nicola Elizabeth Hine.
- 2. I am a Land and Planning Advisor at First Gas Limited (Firstgas). I am authorised to provide evidence on behalf of Firstgas.
- 3. I hold a Bachelor of Arts (English Studies) from Victoria University of Wellington, which I obtained in 2012.
- 4. I hold a Legal Executive Diploma from Toi-Ohomai Institute of Technology, which I obtained in 2018.
- 5. I have seven years combined experience working in Local Government at Wellington City Council, Auckland Transport, and South Taranaki District Council, where I worked on the various aspects of land in property-based roles. Fields of work include road stopping, leasing, licensing, and general property management and advice pursuant to various statutes.
- 6. I have over three years combined experience working for private consultancy firms WSP (formerly Opus International) and DTZ New Zealand Limited (now Darroch Limited), working on central government property contracts, including for the Ministry of Education and Waka Kotahi, which included the disposal of land, acquisition of land, and general property advice.
- 7. I have previously held Nominated Person status for Public Works Act 1981 – Statutory Right of Repurchase with Land Information New Zealand Crown Property Regulatory.
- 8. I have been in my current role as Firstgas’ Land and Planning Advisor for four years seven months.
- 9. I am familiar with the Central Hawkes Bay Proposed District Plan.

SCOPE OF EVIDENCE AND APPROACH

- 10. I provide this evidence in support of Firstgas’ Notice of Requirement seeking designation. Overall outcomes sought through Firstgas’ submission are to achieve a designation of Firstgas’ existing assets for the purpose of ongoing access, operation and maintenance.

11. My evidence focuses on the practical nature of transmission pipeline ownership and operation, which includes managing external interferences that may cause harm to the gas transmission network and therefore affect public safety and gas supply continuity, as well as the ability to safely operate and maintain our equipment without impractical impediment.

12. My statement of evidence addresses the following matters:
 - (a) Firstgas assets
 - (b) Pipeline regulatory framework
 - (c) Property easements
 - (d) Managing risk to pipeline integrity, network operations and other activities
 - (i) Land Use – Sensitive Class Location
 - (ii) Land Development
 - (iii) Earthworks
 - (iv) Subdivision
 - (e) Firstgas Operations – Maintenance Activities
 - (f) Firstgas Operations - Noise
 - (g) Firstgas Operations – Landowner Engagement
 - (h) Firstgas submission points
 - (i) Conclusion

13. I rely on the evidence of Graeme Roberts to communicate Firstgas requirements in from a more detailed planning perspective.

FGL ASSETS

14. Firstgas owns and operates approximately 2,500 km of high-pressure natural gas transmission pipelines within the North Island of New Zealand. In most instances, Firstgas' legal interests in the pipelines are protected by way of 12 metre wide easements, on land where a title is held.

15. Firstgas is a Lifeline Utility, as defined under Schedule 1, Part B of the Civil Defence Emergency Management Act 2002. Lifeline Utilities provide essential infrastructure services to the community and have requirements under the National Civil Defence Emergency Management Plan.
16. As a Lifeline Utility, FGL's Network remained fully operational during the past and current COVID 19 pandemic lockdown, to ensure reliable and affordable energy was available to New Zealanders during this emergency.
17. Firstgas is committed to continuing to provide affordable and reliable energy to New Zealanders to support the transition to a low emissions economy. Firstgas is actively transitioning toward delivery of zero carbon gas by 2050.
18. The transmission pipeline located within Central Hawkes Bay Region was installed in 1982. This is a steel pipeline, which forms part of the gas transmission network that provides gas from Kapuni, Taranaki to Hastings, and provides natural gas to communities along the way. This is the only source of reticulated natural gas for the region.

PIPELINE REGULATORY FRAMEWORK

19. Currently, the Health and Safety in Employment (Pipeline) Regulations 1999 regulates the design, construction, operation, maintenance and suspension or abandonment of the Firstgas transmission pipeline network. Regulation 8 mandates that these activities must, as far as is reasonably practicable, be carried out in accordance with specified standards, the most relevant of which is NZS/AS2885 Pipelines-Gas and Liquid Petroleum, comprising (i) AS2885.0 Part 0: General Requirements, 2018; (ii) AS2885.1 Part 1: Design and Construction, 2018; (iii) AS 2885.2 Part 2: Welding, 2016; (iv) AS 2885.3 Part 3: Operation and Maintenance, 2012; and (v) AS 2885.6 Part 6 Pipeline Safety Management.
20. Section 5 of AS2885.3 2012 relates to Pipeline Integrity Management. It states that pipeline structural integrity is achieved when the pipeline is leak-tight, operating within design parameters and able to withstand all identifiable forces to which it may be subjected during operation. Pipeline owners are required to prepare safety management studies, which requires the pipeline route to be divided into safety management sections depending on land use and population density, and to prepare and implement a pipeline integrity management plan (PIMP), which among other things has to consider external interference threats to the pipeline. Section 7 relates

to External Interference Management and states that regular communication with the community and stakeholders and the relevant authorities is required to raise and reinforce awareness of the presence of a pipeline and the constraints with respect to the use of land on and near the pipeline. Pipeline owners are to identify groups such as land use planners, developers, property and service designers, owners and operators, drillers and excavators, blasting companies and borers and liaise with these groups to identify as early as possible any changes in planning, development or other activities that pose a threat to the pipeline.

PROPERTY EASEMENTS

- 21. The majority of the Firstgas pipeline within the Proposed District Plan are located within Pipeline Easement Certificates (PEC) and their subsequent variations. PECs were issued pursuant to the Petroleum Act 1937. While the Petroleum Act 1937 has been repealed, there are some saved provisions of the Act which Firstgas are still required to adhere to, as well as the details contained within the easement instrument. Nowadays, easements are registered pursuant to the Land Transfer Act 2017.
- 22. Per previously supplied evidence (within Firstgas NOR 2021, and further on 20 September 2022 by email from Meghan Stenner following Hearing Stream 5), there are two locations within Central Hawkes Bay District where there is no PEC, rather statutory gazettal processes have been followed in relation to the pipeline. At one location there is no easement as there was no land title when the pipeline was constructed.
- 23. The pipeline is not held in an easement when the land is not contained in a land title, for example, legal road corridor and statutory rivers.
- 24. No matter the statute, these instruments work the same in that they create legally binding obligations on both parties (being the pipeline operator and the landowner).
- 25. These instruments are registered in gross to Firstgas (as a successor to the Natural Gas Corporation of New Zealand).
- 26. The easement area is defined as having a width of six (6) metres either side of the pipeline, and along the full length of the pipeline located within the land subject to the easement. The NOR seeks to establish a designation of the same width.
- 27. The easement instrument contains a general requirement that the landowner shall not do anything which would or could damage or endanger the pipeline without first

obtaining the consent of the pipeline owner – and that consent shall not be unreasonably withheld.

28. Reliance on this land instrument has not always secured good outcomes for Firstgas. For example, activities which are sensitive to the gas transmission network have been authorised and operate in too close proximity to the network, thereby creating increased risk to those living nearby the pipeline and reverse sensitivity effects for Firstgas. I provide some examples of this below. I also note that the designation, if confirmed, would oblige the consent authority to notify FirstGas as an affected party should any proposals with potential impacts on the designated land be received for processing.

MANAGING RISK TO PIPELINE INTEGRITY, NETWORK OPERATIONS AND OTHER ACTIVITIES

29. When the transmission pipelines were originally designed and constructed, they were designed for the environment within which they were placed at the time.
30. The pipelines placed in urban areas with denser populations and/or more intense land uses had different specifications (pipewall thickness and pipeline burial depth) from those used in rural areas with low populations and rural land uses.
31. Urbanisation carries a number of threats to pipelines designed for rural land, including as a result of excavation/disturbance on or near the pipelines, unacceptable soil loading, vibrations from heavy machinery, electromagnetic interference, buildings being placed too close to pipelines, restricted access to pipelines, the presence of hazardous facilities and substances and so on. Urbanisation also changes the risk profile of the pipelines in the event of an incident. Effectively, this relates directly to the number of persons being in a location in close proximity to the pipeline. For most uses this is acceptable and the key is uses which have persons of limited mobility (aged care or early childhood education for example). The pipelines were not originally designed to mitigate against these risks.
32. Firstgas accept the need to adopt a pragmatic approach and are not intending to prohibit development within the vicinity of the pipelines, but rather seek the opportunity to be able to assess potential development activities to ensure that the appropriate modifications can be made to minimise any identified risk. A designation provides Firstgas with this opportunity.

Land Use – Sensitive Class Location

33. Changes in land use from that for which the pipeline was designed may introduce the need for design and/or operational changes to ensure any ongoing safety obligations can be achieved. As discussed above, this is because the design of the pipeline is influenced by location classifications that are attributed to different sections of the pipeline to determine risks and their associated management. AS2885.0:2018 defines “Location Class” as the classification of an area according to its general geographic and demographic characteristics, reflecting both the threats to the pipeline from land usage and the consequences for the population should the pipeline suffer a loss of containment. Primary location classes include rural, rural residential, residential and high density. Secondary location classes include sensitive use, industrial and heavy industrial. “Sensitive Use” is described within AS2885.6:2018 as land where the consequences of a failure may be increased because it is developed for use by sectors of the community who may be unable to protect themselves from the consequences of a pipeline failure. This includes schools, hospitals, aged care facilities and prisons. Sensitive use location class shall be assigned to any portion of pipeline where there is a sensitive development within a measurement length.
34. Part 6 of the standard defines how a measurement length is calculated, based off pipeline diameter, operating pressure etc. Based on an average pipe size for the FGL network (DN200) and typical Design Pressure of 8.62MPag, using the AS2885.1 Appendix Y method for radiation contours - a radiation intensity of 12.6 kW/m² coincides with a 60m radius from the affected pipe. Referring to AS2885.6 Appendix B3 *“A thermal radiation level of 12.6 kW/m² represents the threshold of fatality, for normally clothed people, resulting in third degree burns after 30 seconds of exposure.”*
35. For clarity, the gas transmission ‘sensitive use’ definition speaks to protect those that cannot self-rescue, for example, young children, elderly persons, and those hospitalised. Limiting crowds gathering in this area, for example in community and educational facilities, reduces the likelihood of mass fatality.
36. The Firstgas encroachment management policy was implemented in 2020 and is the basis on which Firstgas seek to obtain pipeline protections within the Councils’ planning framework. Firstgas are currently working to implement a rule framework, which protects and enables the operation of the transmission pipeline network, by making submission on district and regional plans as they come up for review – current

district and city plan reviews underway are the Waikato, New Plymouth, and Porirua plans.

Land Development

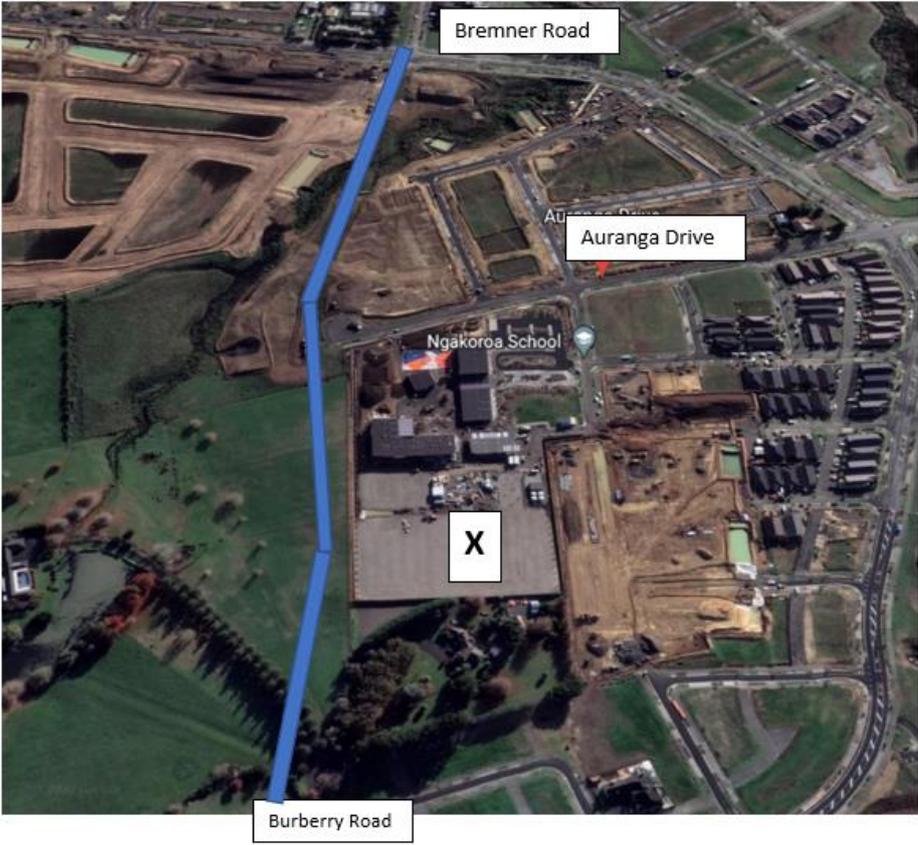
37. The following exemplifies the impact of land use change to the pipeline operation. While this is an Auckland based example, an area which is currently prone to a higher intensification level than the majority of the Central Hawkes Bay region, this provides a snapshot of multiple effects at one location.

38. **Figure 1: Auranga Development, Auckland – FGL GIS View:**



Source: FGL Internal GIS Viewer

39. **Figure 2: Auranga Development, Auckland – Google Earth View:**



Source: <https://earth.google.com/web/search/Auranga+Drive,+Karakā/>

- 40. The above two views show the changing environment around the gas pipeline corridor. The pipeline, installed within a rural environment is now subject to earthworks, services installation including new watermain, hundreds of new residential dwellings, new roading infrastructure, and a new school; all within close proximity.
- 41. Firstgas does not hold a designation at this location and was not considered an affected party under the consenting processes. As such, Firstgas’s ability to achieve good outcomes for the pipeline operation, as well as those who will end up living and working nearby are limited to good faith negotiations.
- 42. Firstgas work with land developers and act on reasonable grounds, enabling works to occur within the pipeline easement corridor provided they follow Firstgas works procedures, which aim to keep the pipeline and people safe.

Earthworks

43. Ground cover over the pipeline and the stability of the earth surrounding the pipeline are important factors to keeping the pipeline safe. Earthworks in the vicinity of the pipeline have the potential to undermine these protections.
44. Heavy machinery has the potential to dent the pipeline, which may result in immediate loss of containment or pipeline fatigue over time, or affect the pipeline coating which may lead to pipeline corrosion over time.
45. Instability of the earth near the pipeline can cause earth movement (i.e., land slips) and therefore the displacement of the pipeline, which in turn may result in pipeline dent or rupture and therefore loss of containment or corrosion.
46. While Firstgas have mechanisms in place to manage earthworks activities within 6m either side of the pipeline, earthworks beyond this area can also undermine the integrity of the pipeline, or limit access to the pipeline operation. For example, building a retaining wall on the boundary of the pipeline easement or carrying out excavations outside the pipeline area, which (if not managed properly) cause the earth around the pipeline to give way.

Subdivision

47. Associated with land intensification and urbanisation, Firstgas is seeking to avoid a planning issue that has happened more and more regularly in recent years, where subdivisions have resulted in inappropriate boundaries that dissect the pipeline corridor. This causes the isolation of sections of the pipeline which become inaccessible, and it also dramatically increases unauthorised activities (people doing works within pipeline easement areas without going through a permit process). If Firstgas is unable to access the pipeline, it means our ability to maintain and operate the pipeline safely is compromised.
48. The below is an example of a subdivision which had the potential to result in undesirable access outcomes for Firstgas:

49. **Figure 1: Proposed Subdivision at Awa Road, Kumeu (Proposed Lots 3, 4, 5 and 6):**



- 50. The pipeline easement, which runs north to south, is shown by the orange areas labelled 'A', 'S', 'AA', 'AB', 'B', 'C', and 'F'.
- 51. Proposed Lot 5 is subject to gas pipeline easement in favour of Firstgas. The pipeline easement is located at the rear of the lot, and this is separated from the road frontage (Awa Road) by a waterbody. Physical access to the pipeline easement is therefore not possible within the new legal boundaries of Proposed Lot 5.
- 52. Pipeline easements are often not written to provide access to the pipeline within adjacent land. To clarify, Proposed Lot 3 holds access rights from Awa Road, however the pipeline easement rights relating to Proposed Lot 3 may not be used to access Proposed Lot 5. Without a designation, there is no requirement for the landowner, nor the council in its decision-making assessments, to require consideration of the pipeline and enable physical access.
- 53. In this example, the landowner was providing access to the rear of Proposed Lot 5 via a right of way over area labelled 'R'. Access for Firstgas over this area would have proven difficult once the residential property was developed. The landowner rejected

a request from Firstgas for right of way access over area labelled 'Q' and 'R'. Following legal advice, Firstgas will have to rely on access rights contained within the Gas Act 1991 to achieve access to the pipeline within Proposed Lot 5.

FIRSTGAS OPERATIONS – MAINTENANCE ACTIVITIES

- 54. The underground pipeline does not require regular maintenance. An internal inspection tool is run through the pipeline every five years. If any defects are detected as a result of this inspection, Firstgas may then decide to excavate the pipeline to visually inspect the area relating to the defect. The nature of the work to remedy the defect will depend on the type of defect. This may include recoating the pipeline, fixing a dent or in the worst-case scenario, replacing a section of pipeline.

- 55. Due to the pipeline being located underground, maintenance of the pipeline will inevitably involve earthworks, being the excavation of a trench. An excavation will be to a depth of 500mm below the pipeline and will span a width which creates a safe working environment for those working in the trench. Firstgas utilise a stepped trench profile, or a slope-batter trench. The trench is wide enough to ensure that the work area is not a confined space and is suitable for the soil conditions (so that the trench won't collapse). A trench length may be 5 metres or up to 70 metres, for example, depending on the reason for accessing the pipeline. I.e., if the pipeline is being visually inspected, the trench length may be 5 metres to 10 metres long. If Firstgas is carrying out pipeline recoating is likely to be a longer trench excavation.

- 56. Station maintenance is carried out regularly throughout the year in order for Firstgas to comply with operating standard AS2885. This includes testing meters, valves, communications, and electrical components. Occasionally equipment needs replacement, due to age of the part or asset or a change in operational requirements. This may include replacing solar panels, the waterbath heater, valves or communications cabinet.

FIRSTGAS OPERATIONS - NOISE

- 57. Noise from Firstgas may result from three works categories. 'Everyday' noise emissions, noise emitted during maintenance activities, and noise emitted during project work.

- 58. 'Everyday' noise may occur from the aboveground station sites, relating to gas continuously moving through the pipeline network and perhaps being heard through

the above ground pipework at a gas station site. Firstgas has no record of noise complaints as a result of this activity within Central Hawkes Bay District.

- 59. Noise emissions during maintenance activities at the above ground sites may result from minor gas venting. This minor gas venting clears a short amount of above ground pipework from gas. This is safety procedure which takes place before certain pipeline maintenance occurs. This is controlled venting and takes less than 15 minutes.
- 60. The 5-yearly internal inspection and cleaning tool may emit an audible low-level squeal as the tool moves through the pipeline. Whether this can be heard above the ground depends on how deep the pipeline is and atmospheric conditions at the time.
- 61. Project work is when Firstgas need to carry out works outside of ordinary maintenance. This may be pipeline recoating or realignment or replacing parts within an above-ground gas station, etc. The most audible construction noise at the project site is emitted from vehicles on site, i.e. diggers and cranes.
- 62. In the occasions whereby Firstgas has likely emitted non-complying noise emissions is during emergency works, whereby a large section of pipeline has to be vented urgently.

FIRSTGAS OPERATIONS – LANDOWNER ENGAGEMENT

- 63. Firstgas are required by operating standard AS2885 to keep a database of landowners who own the land in which the pipeline is situated.
- 64. Firstgas discuss obtaining access to the pipeline, and the nature of the works activity, with landowners prior to those activities being carried out.
- 65. The pipeline easement provides a legal right of entry to land for Firstgas to access the pipeline, to carry out its pipeline operation obligations. Firstgas acknowledge a positive relationship with landowners is essential to achieving safe pipeline operations and positive works outcomes in the long term. Therefore, Firstgas have established protocols and processes to engage with a landowner prior to works activities being carried out.
- 66. In circumstances whereby the above-ground station site is located within private land (and does not have frontage to legal road), Firstgas Field Technicians have established regular access protocols with the landowner.

FIRSTGAS SUBMISSION POINTS

67. For the reasons above, Firstgas seeks that the gas transmission network is designated within the district plan. Historically, it has proved difficult to ensure land use planners, developers, property and service designers, owners, operators, and contractors are made aware of gas transmission pipelines before planning their developments and activities. The intention is not to restrict all development within the vicinity of the pipeline, but to ensure that Firstgas is appropriately notified of development proposals at an early stage.
68. It is important for continuity of supply that the pipeline operation is able to operate and be maintained safely. Firstgas can do so more effectively where the network is afforded a level of protection via designation. If the gas transmission network is not considered, this can have significant safety impacts and poses potential risk to property and human health.

CONCLUSION

69. Firstgas' submission points will assist in meeting requirements under the Health and Safety in Employment (Pipeline) Regulations 1999 that regulate the transmission pipeline network to include pipeline safety management. Firstgas expertise is critical in assessing whether activities sensitive to gas transmission proposed within proximity to the network may threaten the safety of the pipeline and result in the activity being exposed to potential risks. The designation works to provide assurance that these regulations can be met.

Dated this 13th day of December 2022

Nicola Hine