MEMO

Planning | Surveying | Engineering | Environmental

To:	Far North District Council	**Date:**	10/10/2025
From:	Neil Yin – Environmental Engineer	**CC:**	
Reviewed:	Bronwyn Rhynd, Environmental Engineer	**CKL Ref:**	A24315
Re:	**Rezoning - Donald Road & Allen Bell Drive, Kaitaia**		

This memo has been prepared to provide additional information requested by the Hearing Panel to support the justification for a partial rezoning of the site. The purpose is to summarise the extent of existing Residential (General Residential) Zone land and dwellings affected by flooding, and to discuss the need for additional residential land to provide retreat for resilience and discourage further development within floodplain areas.

1 Background

The recent and comprehensive regional flood model is available from the Northland Regional Council (NRC), which provides flood extents for the 1% AEP rainfall event (including the effects of climate change) for the wider Kaitaia area.

A large proportion of the Kaitaia township and surrounding area is within the NRC identified floodplain. To understand the extent to which existing residential land and dwellings are affected by flooding, the relevant data from LINZ and zoning layers have been analysed with the outcomes summarised within the following sections of this memo.

2 Flood extent and Zoning

An assessment of the flood extent in relation to the existing Zoning provided in the FNDC District Plan has been undertaken. This section provides an overview of the 1% AEP flood plain in relation to the existing and potential residential development for the Kaitaia urban area. This analysis provides spatial evidence to support the rezoning justification discussed in Section 4.

A series of figures are presented below to illustrate the spatial relationship between the flood extent and zoning layout. Together, these figures highlight the degree to which existing residential areas are exposed to flooding and identify areas that remain outside the floodplain.

An assessment of the extent of the 1% AEP flood plain, as presented by NRC and FNDC, together with the site location is presented in the following figure.

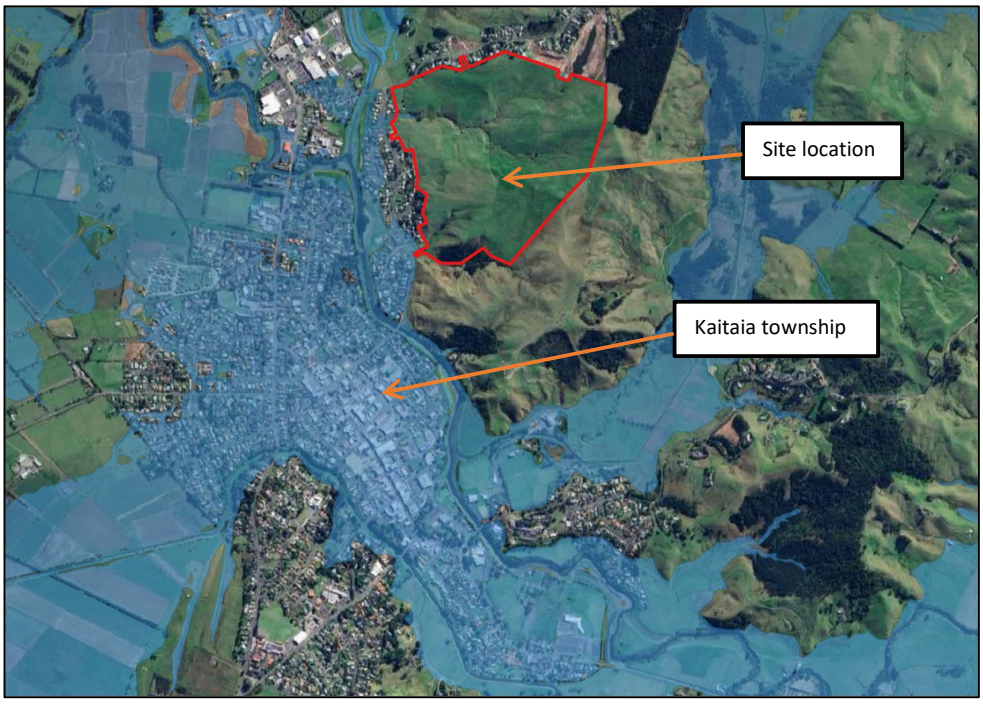

Figure 1: Site location and flood extent overview

The existing 1% AEP flood extents, shown in blue, cover much of the established Kaitaia urban environment within the defined urban limits. In contrast, the proposed plan change area is located outside the floodplain, indicating lower exposure to flood risk.

With respect to the current FNDC zoning, the following figure represents the extent of the flood plain.

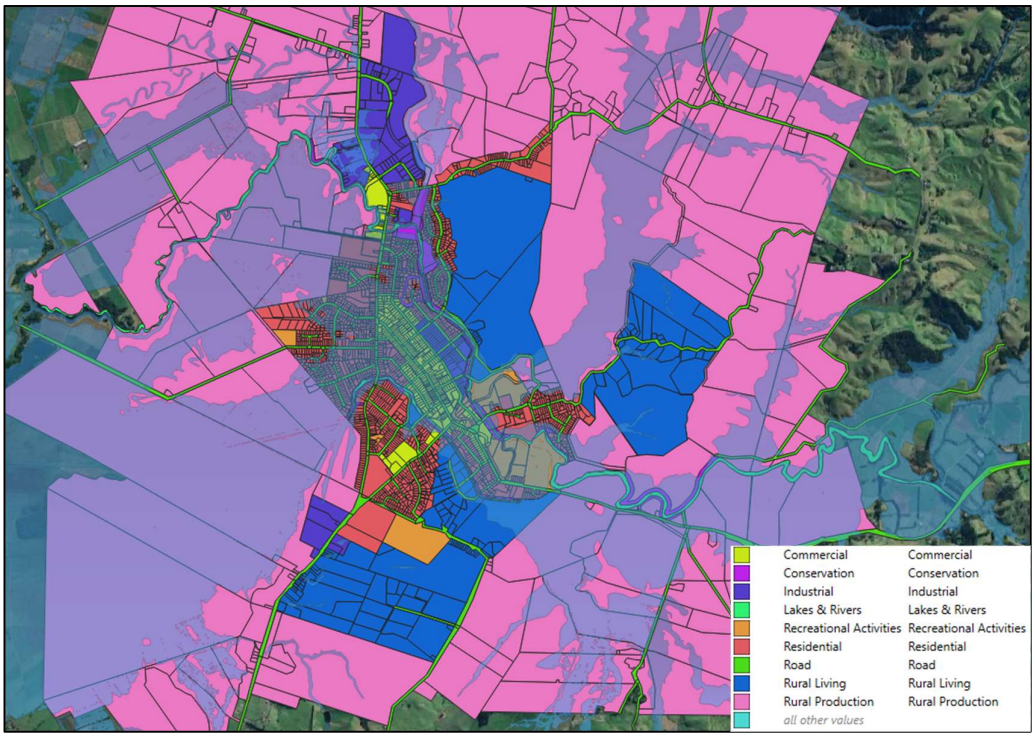

Figure 2: Zoning map overlay with flood extent

This figure overlays the flood extent with the current zoning layout. The floodplain (in blue) extends across a large proportion of the residentially zoned areas, as well as parts of the town centre. By

comparison, the proposed rezoning area (shown in dark blue) sits outside the flood extent, demonstrating the opportunity for development in a lower-risk area.

For the current residential zoning the following figure shows the extent to which this lies within the flood plain.

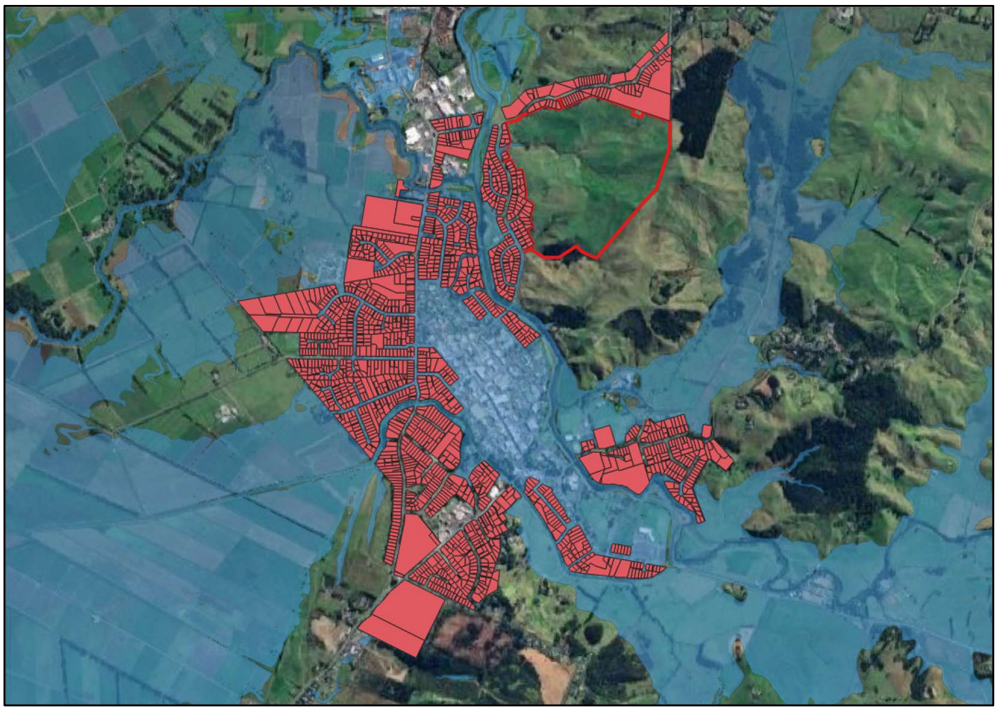

Figure 3: Residential Zone and flood extent overlay

This figure presents the Residential (General Residential) Zone and illustrates the areas of intersection with the floodplain. It clearly shows that a substantial portion of the existing residential land lies within the 1% AEP flood extent, limiting the potential for further intensification without significant mitigation.

For further analysis of the residential zone the following figure illustrates the parcels of land (lots) within the flood plain. These lots could potentially be further subdivided or developed to provide further yield under the FNDC District Plan.

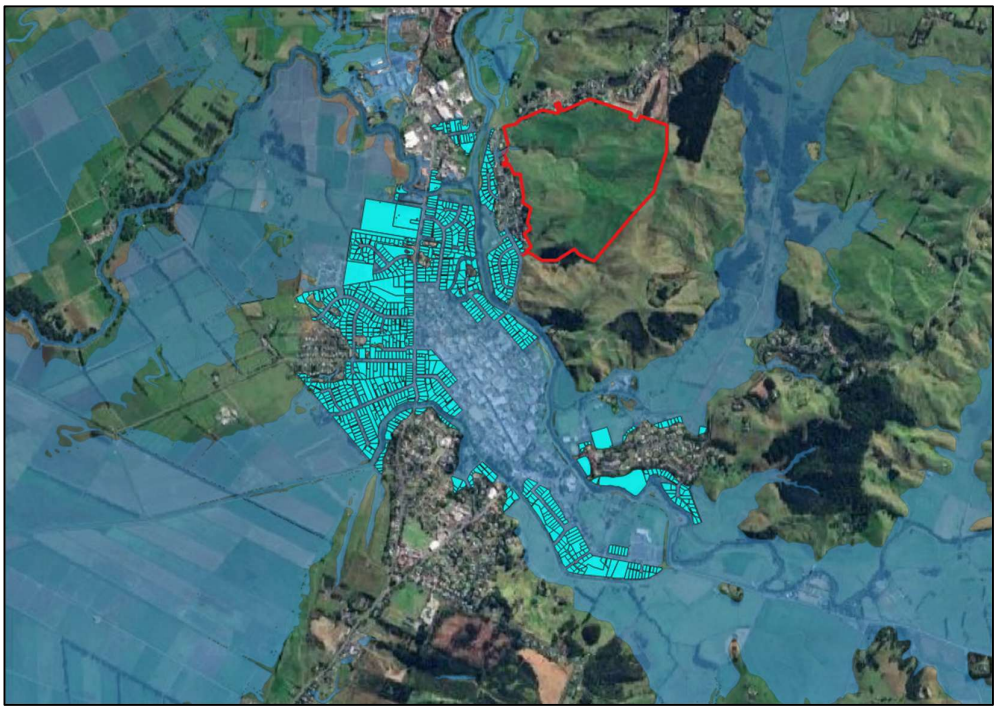

Figure 4: Intersection if Residential Zone and flood extent

This parcel-level representation of the Residential Zone areas subject to inundation under the modelled 1% AEP flood event identifies individual lots that are affected, providing a clearer understanding of the potential constraints for future development.

To give a fuller picture of the areas of Residential zone land the following figure provides the areas inside and outside of the flood extent.

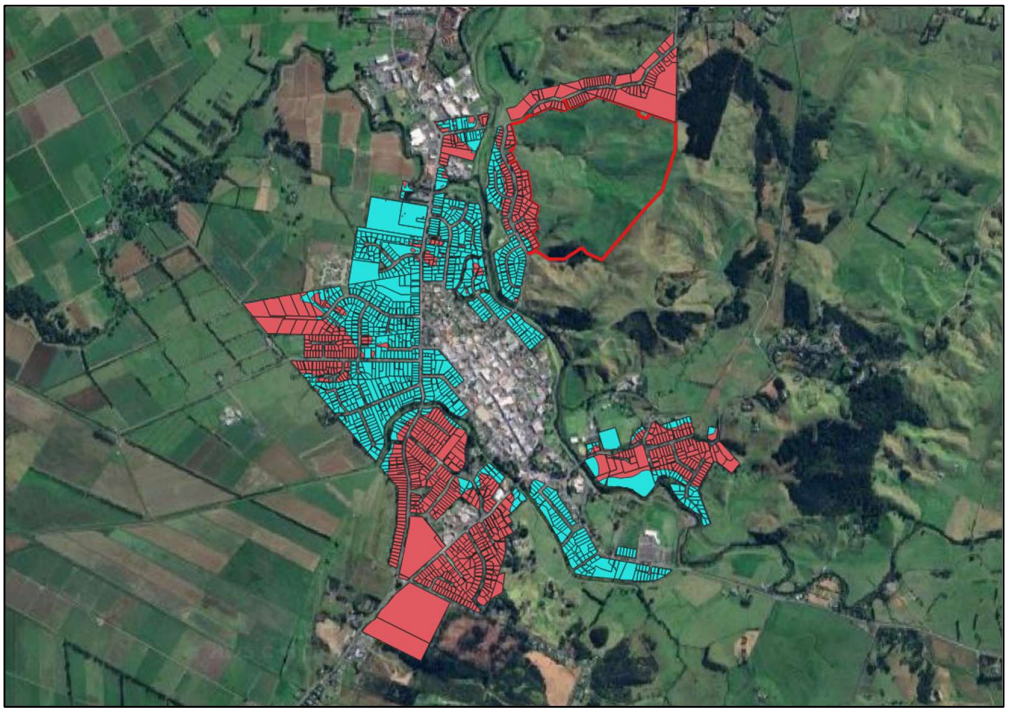

Figure 5: Comparison of total vs flood-affected Residential Zone area

This figure provides a visual comparison between the total Residential (General Residential) Zone area and the portion affected by flooding. The graphic illustrates that approximately half of the residentially

zoned land in Kaitaia lies within the floodplain, underscoring the extent of flood exposure across the urban area.

In summary, the spatial analysis demonstrates that a significant proportion of Kaitaia's existing Residential Zone is located within the floodplain, resulting in limited opportunity for safe urban intensification. Conversely, areas outside the flood extent—particularly those identified for potential rezoning—represent a more resilient and sustainable option for accommodating future residential growth.

3 Quantitative Summary

The spatial observations presented above have been quantified to provide an overall measure of flood exposure within the existing residential zone.

The extent of Residential (General Residential) Zone land and dwellings affected by flooding within the Kaitaia area has been summarised based on the overlay of the floodplain extent and current zoning information, as shown in Table 1.

Table 1: Summary of residential (General Residential) zone Land and Dwellings Affected by the 1% AEP floodplain

Category	**Number of Properties[1]**	**Total Area (m^2)**
Residential Zone (total)	1,695	2,157,008
Residential Zone within floodplain	1,099	1,046,829
Percentage of Residential Zone affected by flooding	65%	48%

This analysis is based on the assumption that each property contains one dwelling. If any part of a property is affected by flooding, it is considered to be affected by the floodplain. The results indicate that more than half of the residential-zoned land and over 1,000 existing dwellings are located within the floodplain area for the 1% AEP event.

4 Discussion

The analysis indicates that a substantial proportion of existing residential-zoned land in Kaitaia is currently affected by flooding, which limits opportunities for safe residential development within the current zoning boundaries. Providing additional residential land outside of the floodplain, such as the Donald Road & Allen Bell Drive rezoning and development plan which provides a logical and low-risk extension of the urban area, would improve the township's long-term resilience and provide opportunities for managed retreat away from flood prone areas.

5 Conclusion

Based on the current FNDC zoning layout and flood extent information from NRC, approximately half of the existing Residential (General Residential) zoned land in Kaitaia is within the floodplain. Consequently, the presence of extensive flood-affected residential land constrains future

[1] The number of properties is based on the FNDC Open Data Portal zoning layer and was analysed using QGIS.

development opportunities, as any intensification would increase exposure to flood hazards and require costly mitigation measures. Therefore, the findings of this assessment clearly demonstrate the planning constraints associated with existing flood-affected residential zones.

To support sustainable development and climate resilience, enabling additional residential land outside of flood-prone areas through partial rezoning is considered appropriate. This would provide long-term flexibility for potential retreat, ensure sufficient residential capacity, and discourage further development within flood-affected zones.