9.3 WITHDRAWAL OF FAULT HAZARD AREA – 139, 155 AND 157 TE MAIRE ROAD

Author: **Courtenay Isherwood, Manager, Planning**

Authoriser: **Clare Barton, Group Manager, Planning and Regulatory**

File Number: **N/A**

Applicant:

Owner:

Proposal:

Location:

PURPOSE

The purpose of this report is to recommend that the Fault Hazard Area on the properties at 139, 155 and 157 Te Maire Road, Kahutara be withdrawn from the Proposed Wairarapa Combined District Plan under Clause 8D, Schedule 1 of the Resource Management Act 1991.

EXECUTIVE SUMMARY

The Fault Hazard Area on the properties at 139, 155 and 157 Te Maire Road mapped in the Proposed Wairarapa Combined District Plan was based on GNS Science active fault mapping commissioned for district planning purposes. Subsequent site-specific investigations initiated by the landowners and prepared by Ian R Brown Associates Ltd and independently peer reviewed by ABuild Consulting Engineers Ltd conclude there is no evidence of active faulting affecting the property within the timeframe relevant to district plan hazard management. Hamish Wesney, a consultant planner from Boffa Miskell has prepared a Recommendation Report (Appendix 1) based on these site-specific investigations and peer review. Mr Wesney in his report has outlined the background to these investigations and discussed options to either withdraw the fault hazard area or retain the fault hazard area in the Proposed Wairarapa Combined District Plan. The report considers this more detailed information justifies refinement of the district-wide mapping and outlines the Fault Hazard Area mapped on the properties at 139, 155 and 157 Te Maire Road be withdrawn from the Proposed Wairarapa Combined District Plan under Clause 8D, Schedule 1 of the Resource Management Act 1991. Council Officers agree.

RECOMMENDATIONS

Officers recommend the Council:

1. Receives the report "Withdrawal of Fault Hazard Area – 139 Te Maire Road".
2. Resolves, pursuant to Clause 8D, Schedule 1 of the Resource Management Act 1991, to withdraw the Fault Hazard Area mapped on the properties at 139, 155 and 157 Te Maire Road, Kahutara (legally described as Lots 1 – 3 DP 613062) from the Proposed Wairarapa Combined District Plan.
3. Directs officers to publicly notify the withdrawal and the reasons for the withdrawal in accordance with Clause 8D of Schedule 1 of the Resource Management Act 1991.

4. Directs officers to amend the Proposed Wairarapa Combined District Plan maps and associated planning documents to remove the Fault Hazard Area from 139, 155 and 157 Te Maire Road following the public notification of the withdrawal.

BACKGROUND

The Proposed Wairarapa Combined District Plan Maps shows a Fault Hazard Area associated with the Te Maire Fault on the property at 139 Te Maire Road (refer Figure 1 below). The owners of the property have recently subdivided the property into three lots (creating new properties with the addresses of 155 and 157 Te Maire Road). The owners seek to have the Fault Hazard Area associated with the Te Maire Fault removed from these properties.



Figure 1: Fault Hazard Area (orange area) on 139, 155 and 157 Te Maire Road (red outline)

OPTIONS

Given these circumstances, two options have been identified.

Option 1: Withdraw the Fault Hazard Area.

Option 2: Retain the Fault Hazard Area.

Specific detail on these options is contained in the report in Appendix 1.

CONCLUSION

Officers consider the new site-specific evidence justifies refinement of the district-wide mapping and recommend withdrawal of the Fault Hazard Area from this property (Option 1).

The withdrawal process involves Council giving public notice of the withdrawal and including the reasons for the withdrawal. Following Council's decision to withdraw the provision and public notification of that withdrawal, the Proposed District Plan maps would be updated to remove the Fault Hazard Area overlay from the subject property.

Officers do not consider that withdrawal of the Fault Hazard Area from 139, 155 and 157 Te Maire Road establishes a precedent for the withdrawal of other Fault Hazard Areas or other overlays from the Proposed Wairarapa Combined District Plan. This recommendation is based on the specific circumstances of this property, including the availability of detailed site-specific geological investigations and an independent peer review that both conclude the mapped Fault Hazard Area is not supported by the available evidence. The withdrawal mechanism under Clause 8D of Schedule 1 is intended to address situations where new information demonstrates that provisions or mapping should no longer form part of a proposed plan. Each request must therefore be considered on its own merits and supported by appropriately qualified technical evidence.

Officers also note the ability to withdraw provisions from a proposed plan under Clause 8D is limited to the period before the Proposed Wairarapa Combined District Plan is made operative. Once the plan becomes operative, amendments to planning maps and provisions would generally need to occur through a plan change process. As such, the circumstances under which a withdrawal request can be considered are both fact-specific and time-limited.

COMPLIANCE SCHEDULE

Full consideration has been given to the provisions of the Local Government Act 2002 S77 in relation to decision making, in particular:

1. A Local authority must, in the course of the decision-making process,

a) Seek to identify all reasonably practicable options for the achievement of the objective of a decision; and

b) Assess the options in terms of their advantages and disadvantages; and

c) If any of the options identified under paragraph (a) involves a significant decision in relation to land or a body of water, take into account the relationship of Māori and their culture and traditions with their ancestral land, water sites, waahi tapu, valued flora and fauna and other taonga.

2. This section is subject to Section 79 - Compliance with procedures in relation to decisions.

Compliance requirement	**Staff assessment**
State the level of significance (high or low) of the issue or proposal as determined by the Council's Significance and Engagement Policy	This is a matter of low significance as it relates to a single property.
State the relevant Council policies (external or internal), legislation, and/or community outcomes (as stated in the	This report complies with Resource Management Act 1991 and Local Government Act 2002.

Long Term Plan) that relate to this decision.	
State the possible implications for Māori and how Māori have been provided with an opportunity to contribute to decision making if this decision is significant and relates to land and/or any body of water.	No specific impacts on Māori interests have been identified. The decision relates to the accuracy of a mapped natural hazard overlay affecting private land and does not affect identified sites, waahi tapu, or statutory acknowledgements.
Chief Financial Officer review	No financial implications have been identified, and CFO review was not considered necessary.
State the possible implications for health and safety	The decision concerns the accuracy of a planning hazard overlay. The supporting technical evidence concludes there is no active fault hazard affecting the property. No additional health and safety implications have been identified.

APPENDICES

Appendix 1 **Recommendation Report for Withdrawal of Fault Hazard Area at 139 Te Maire Road, Hamish Wesney- Boffa Miskell, dated August 2026**

Appendix 2 **139 Te Maire Road- IBRA- Fault Hazard Assessment**

Appendix 3 **139 Te Maire Road - ABuild Peer Review of Fault Hazard Assessment**

SOUTH WAIRARAPA DISTRICT COUNCIL
Kia Reretahi Tātau

South Wairarapa District Council
Kia Reretahi Tātau

Meeting Date: 1 October

Author: Hamish Wesney
Authoriser: Clare Barton

Recommendation Report- Withdrawal of Fault Hazard Area – 139, 155 and 157 Te Maire Road

1. Purpose

The purpose of this report is to recommend that the Fault Hazard Area on the properties at 139, 155 and 157 Te Maire Road, Kahutara be withdrawn from the Proposed Wairarapa Combined District Plan under Clause 8D, Schedule 1 of the Resource Management Act 1991.

2. Background

The Proposed Wairarapa Combined District Plan Maps shows a Fault Hazard Area associated with the Te Maire Fault on the property at 139 Te Maire Road (refer Figure 1 below). The owners of the property have recently subdivided the property into three lots (creating new properties with the addresses of 155 and 157 Te Maire Road). The owners seek to have the Fault Hazard Area associated with the Te Maire Fault removed from these properties.

The Fault Hazard Area affecting 139, 155 and 157 Te Maire Road is derived from the active fault mapping undertaken by GNS Science in its report Active Fault Mapping for the South Wairarapa, Carterton and Masterton Districts (Consultancy Report 2021/117), which was commissioned specifically to support district plan hazard mapping. The fault mapping contained within the Proposed Wairarapa Combined District Plan was based on the best information available to Council at the time and appropriately relied on the findings and recommendations of that report. The report recommended that the mapped active faults, Fault Avoidance Zones and Fault Awareness Areas be used to inform planning decisions and district plan provisions. Accordingly, the mapped Fault Hazard Areas in the Proposed District Plan reflect the Fault Avoidance Zones identified in this GNS Science Report.



Figure 1: Fault Hazard Area (orange area) on 139, 155 and 157 Te Maire Road (red outline)

3. Discussion

The GNS Science mapping was undertaken at a district-wide scale using LiDAR and other available geological information. The report acknowledges that there is inherent uncertainty in identifying and locating active fault traces and that the level of confidence varies depending on the quality and nature of the available evidence. The report notes that uncertainty may arise from limitations in surface expression, erosion, burial of fault features, mapping accuracy, and uncertainty regarding whether particular landforms are of tectonic origin. The GNS Science report specifically identifies the Te Maire Fault as having a Recurrence Interval Class III classification with low confidence and notes that many fault classifications and locations are preliminary and may be refined through further investigation.

The GNS Science report also recognises that fault mapping is subject to refinement as more detailed investigations become available. In particular, the report distinguishes between district-wide planning mapping and detailed site-specific investigations and recommends further investigation in areas where greater certainty is required. Accordingly, refinement of mapped fault locations through site-specific geotechnical and geological assessment is an anticipated outcome of the active fault mapping framework and does not undermine the appropriateness of the original district-wide mapping.

Ian R Brown Associates Ltd were engaged by the landowner to review the Fault Hazard Area on the properties at 139, 155 and 157 Te Maire Road. The review concluded that

the active fault line traces that informed the mapped Fault Hazard Area do not represent active faults.

ABuild Consulting Engineers Limited completed a peer review of the Ian R Brown Associates Ltd report. The purpose of the peer review was to independently assess the findings of and conclusions of the original report. ABuild Consulting Engineers found that there is no clear evidence of fault activity at 139, 155 and 157 Te Maire Road within the timeframes relevant to the definition of active surface processes[1]. ABuild Consulting Engineers comment that while the available evidence does not indicate active surface faulting at the site within the relevant planning timeframe, there is always the potential for longer recurrence interval faulting. However, the potential for this is no greater for this property than any of the surrounding properties. Based on the available evidence, including the absence of any observable surface expression of faulting, ABuild Consulting Engineers support the findings of Ian R Brown Associates Ltd's report.

Notwithstanding this conclusion, ABuild Consulting Engineers recommended that site-specific geotechnical investigation and engineering design be required as part of any future development.

The landowners of the properties at 139, 155 and 157 Te Maire Road have agreed to a consent notice being registered on the Record of Title for the subdivided lots to ensure site-specific geotechnical investigation and engineering design is required as part of any future development.

Options

Given these circumstances, two options have been identified.

Option 1: Withdraw the Fault Hazard Area

Advantages:

- Reflects current technical evidence.
- Removes an unsupported planning constraint.
- Improves accuracy of the Proposed Plan.

Disadvantages:

- Requires public notification of withdrawal and associated costs.

Option 2: Retain the Fault Hazard Area

Advantages:

[1] In the geological context of this site, active surface processes are taken to include ongoing or recent geomorphic processes capable of modifying the ground surface, including the deposition of alluvial and colluvial material over hundreds to thousands of years

- No amendment/withdrawal process required.

Disadvantages:

- Retains a hazard overlay that is not supported by available evidence.
- May create unnecessary restrictions on land use and associated cost in obtaining resource consent if a property owner choose to develop within the Fault Hazard Area.

Given the assessment of options above, it can be satisfactorily determined that the Fault Hazard Area included in the Proposed Wairarapa Combined District Plan was based on the best available information at the time it was prepared. However, subsequent detailed site-specific investigations undertaken by Ian R Brown Associates Ltd and independently reviewed by ABuild Consulting Engineers Ltd provide a higher level of detail than was available through the district-wide GNS Science assessment. Both reports conclude that there is no clear evidence of active faulting affecting 139, 155 and 157 Te Maire Road within the timeframe relevant to the definition of an active fault. It is therefore recommended that the new site-specific evidence justifies refinement of the district-wide mapping and recommend withdrawal of the Fault Hazard Area from this property (Option 1).

The withdrawal process involves Council giving public notice of the withdrawal and include the reasons for the withdrawal. Following Council's decision to withdraw the provision and public notification of that withdrawal, the Proposed District Plan maps would be updated to remove the Fault Hazard Area overlay from the subject property.

It is to be noted that withdrawal of the Fault Hazard Area from 139, 155 and 157 Te Maire Road establishes a precedent for the withdrawal of other Fault Hazard Areas or other overlays from the Proposed Wairarapa Combined District Plan. This recommendation is based on the specific circumstances of this property, including the availability of detailed site-specific geological investigations and an independent peer review that both conclude the mapped Fault Hazard Area is not supported by the available evidence. The withdrawal mechanism under Clause 8D is intended to address situations where new information demonstrates that provisions or mapping should no longer form part of a proposed plan. Each request must therefore be considered on its own merits and supported by appropriately qualified technical evidence.

It is additionally noted that the ability to withdraw provisions from a proposed plan under Clause 8D is limited to the period before the Proposed Wairarapa Combined District Plan is made operative. Once the plan becomes operative, amendments to planning maps and provisions would generally need to occur through a plan change process. As such, the circumstances under which a withdrawal request can be considered are both fact-specific and time-limited.

4. Report Conclusion

After considering both the identified options, withdrawal of the Fault Hazard Area from this property (Option 1) is the recommended option.

5. Appendices

Appendix 1 – Fault Hazard Assessment 139 Te Maire Road, Kahutara, prepared by Ian R Brown Associates Limited, Geological Engineering Consultants, dated February 2026.

Appendix 2 – Geotechnical Desktop Peer Review of IRBA Fault Hazard Assessment 139 Te Maire Road, Kahutara, Wairarapa, prepared by ABuild Consulting Engineers Ltd, dated 6 August 2026.

IRBA

GEOLOGICAL ENGINEERING CONSULTANTS

Fault hazard assessment
139 Te Maire Rd
Kahutara

February 2026

For [redacted]

Project Number 1766

P.O. Box 983 • Wellington 6140 • New Zealand
Telephone (+64) 4 565 1777 • www.irba.co.nz

Contents

Executive Summary 3
Introduction 3
Te Maire Fault description 4
Revised interpretation 7
Site assessment 10
Fault hazard assessment 12
Conclusions and recommendations 13
Applicability and reliance 14
References 15

Figure 1 Overview map showing southern portion of Te Maire Fault. Red lines from GNS mapping by Litchfield et al (2022), orange dashed line = inactive thrust fault from Nicol et al (2002), site marked in yellow. 5
Figure 2 LiDAR topographic map across central Te Maire Fault. 6
Figure 3 NW to SE cross section through Bidwill Hill ridge. Active thrust faults indicated with red arrows, inactive thrust fault indicated with orange arrow. Purple arrows indicate axes of anticline (upwards) folds. Cross section location shown on Figure 2. Vertical exaggeration 15:1 7
Figure 4 Cartoon schematic showing general characteristics of a pop-up block. Frum United States Geological Survey 7
Figure 5 Idealised cross section through pop-up ridge showing typical fault configuration. From ETH Zurich 8
Figure 6 Geological interpretation for central Te Maire fault zone, overlain over LiDAR slope angle map. Main thrust location taken from GNS. 9
Figure 7 Topographic map for site and adjacent areas, 1m contours and colour overlay derived from LiDAR data. The mapped backthrust fault is as per Figure 6 10
Figure 8 Slope angle map, colour enhanced to show slopes of 0-5° 11
Figure 9 Historical aerial image of site. Source: Retrolens image SH295_1030_6 dated 2 5/8/1944. 12

Revision 1

Prepared by	Dr Simon Ward, BSc(Hons), PhD
Reviewed by	Dr Ian Brown, BSc(Hons), MPhil, MEng, DEng, CMEngNZ, Int.PE, CPEng Registration no: 45363

Executive Summary

The site at 139 Te Maire Road lies on the western side of the Bidwill Hill ridge, an elevated landform formed by compressional faulting over the last c. 2 million years. The ridge is bounded by various faults, some of which are still considered active. The western boundary fault lies at the foot of the slope above the site. The Wairarapa Combined District Plan fault hazard overlay depicts two short active faults crossing the site. These had been mapped with a low degree of certainty by GNS.

We have remapped the faults around the Bidwill Hill, and reviewed the landscape data for the site and adjacent areas in order to gain a better understanding of the active faulting hazard. Our review indicates that the mapped faults crossing the site are unlikely to be present, as indicated by a lack of disruption to the landscape. Various features relating to historic farming activities may have been misinterpreted as indicating the presence of active faults.

Introduction

Ian R Brown Associates Ltd (IRBA) were engaged by [redacted] to review the fault rupture hazard at a property located at 139 Te Maire Road, Kahutara, Wairarapa. Mapping in the newly adopted Wairarapa Combined District Plan indicates the property is intersected by traces of the active Te Maire Fault, along which Fault Avoidance Zones have been adopted. The owners have recently subdivided the property into three lots. We have received a plan for the subdivision prepared by Tomlinson & Carruthers Surveyors dated August 2024. The digital titles were approved in January 2025.

The purpose of this report is to address the fault hazard related to the site (including the subdivided lots). Our client has requested we address the following matters:

- Interpretation of the mapped fault
- Implications for hazard overlays
- Provenance of the District Plan mapping
- Foundation and consenting implications
- Insurance and lending relevance

This study is a desktop review of publicly available data, comprising current and historic aerial imagery and LiDAR data (the 2013 Wellington Rural survey), available from LINZ and Retrolens. No site inspection was undertaken. We note the District Plan mapping was prepared using the same LiDAR survey. Analysis of LiDAR data, which has a 1x1m spatial resolutionis an effective method to map active fault traces, using various digital enhancement tools.

Te Maire Fault description

The Te Maire Fault has been recognized as a significant tectonic feature of the eastern Wairarapa Basin. The fault comprises a number of northeast-southeast oriented thrust faults, along which greywacke basement rock and early Pleistocene sediments (c.1.8 million years ago) have been uplifted. This resulted in the formation of the Bidwill Hill ridge (sometime referred to as the Te Maire ridge). The total width of the uplift zone is about 3.2km. The ridge separates the lower Ruamahanga River drainage axis from the Lake Wairarapa Basin. Total vertical uplift is unknown, as significant erosion has occurred across the uplift zone.

The fault appears to have first been depicted as a single active fault trace on the GNS 1:250,000 scale regional geological map (Begg & Johnston 2000). Nicol *et al.* (2002) mapped part of the fault system in their study of the Martinborough area, showing that a thrust fault must be present on the east side of the uplifted greywacke basement (Figure 1). This fault is regarded as inactive. The current main thrust fault lies about 1.2km west of the eastern thrust. Recent mapping using 2013 LiDAR data (Litchfield *et al.* 2022) identified further active fault traces around the Bidwill Hill ridge (Figure 1). This work informed the development of Fault Hazard overlays in the recently adopted Wairarapa Combined District Plan.

Current research (Litchfield *et al.* 2022) indicates the Te Maire Fault should be regarded as a Class III active fault, with a recurrence Interval of >3500 to 5000 years, based on the apparent traces intersecting Q1 surfaces on NW side of the Bidwill Hill ridge. The degree of confidence in this assessment is low. There are no paleoseismological data available for the Te Maire Fault.

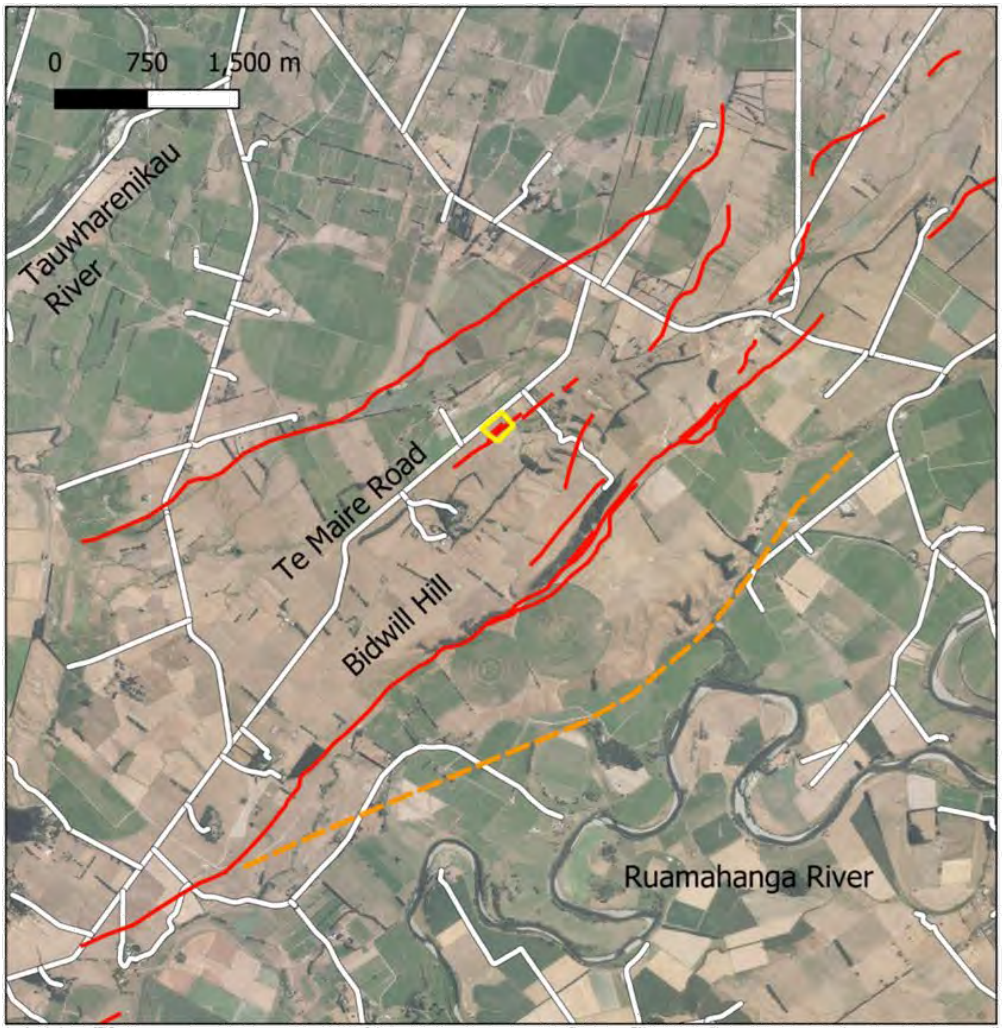


Figure 1 *Overview map showing southern portion of Te Maire Fault. Red lines from GNS mapping by Litchfield et al. (2022), orange dashed line = inactive thrust fault from Nicol et al. (2002), site marked in yellow.*

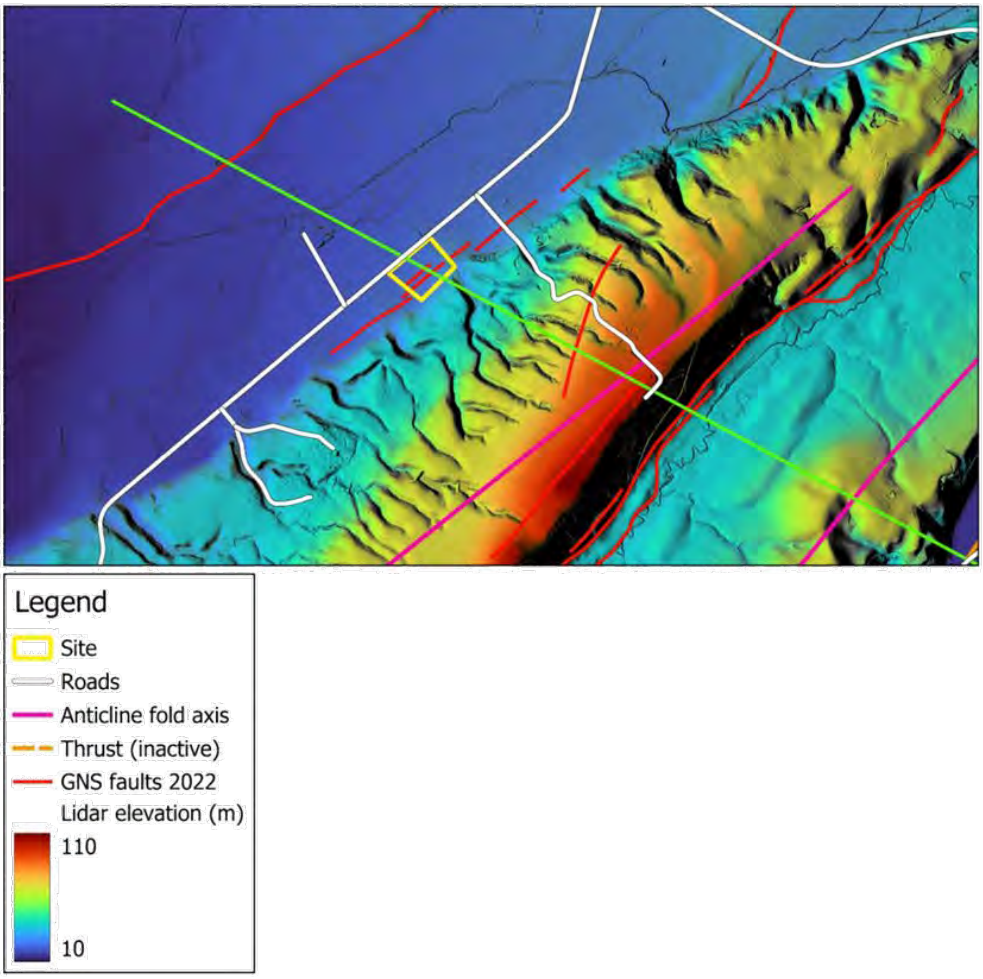


Figure 2 LiDAR topographic map across central Te Maire Fault.



Figure 3 *NW to SE cross section through Bidwill Hill ridge. Active thrust faults indicated with red arrows, inactive thrust fault indicated with orange arrow. Purple arrows indicate axes of anticline (upwards) folds. Cross section location shown on Figure 2. Vertical exaggeration 15:1*

Revised interpretation

While a full reinterpretation of the geological structure of the Bidwill Hill ridge is beyond the scope of this report, we have developed a revised interpretation of the faulting patterns of the area in order to better interpret the site. The key to our interpretation of the area is that the ridge is what is known as a pop-up structure, which is a geological feature formed by the effects of thrust or reverse faulting, with opposite facing faults bounding the structure (Figure 4).

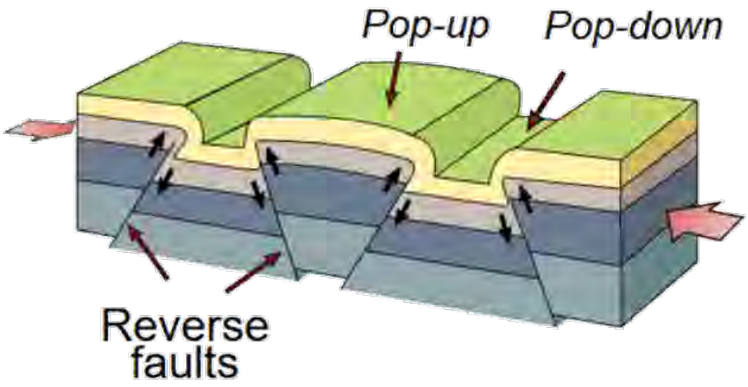


Figure 4 *Cartoon schematic showing general characteristics of a pop-up block. Frum United States Geological Survey*

Rather than the bounding faults being separate structures, a pop-up is usually bounded by a master thrust on one side and backthrust faults on the other side (Figure 5). Minor thrust faults may also form on the "outer" side of the master thrust.

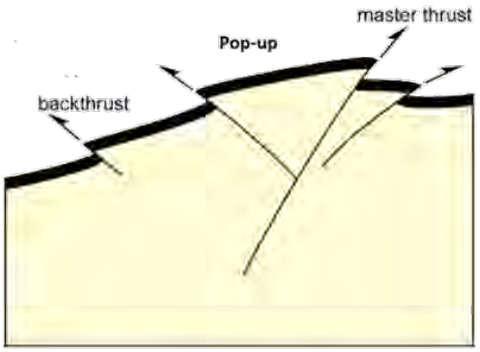


Figure 5 *Idealised cross section through pop-up ridge showing typical fault configuration. From ETH Zurich.*

The faulting pattern is well demonstrated by the changes in slope angle across the area (Figure 6). The eastern bounding thrust fault lies at the base of the east-facing scarp 1km southeast of the site. This fault is westwards dipping, and is included in the GNS mapping.

The western margin of the pop-up block is the scarp immediately above the site, and we interpret this to be controlled by a back-thrust fault which dips eastward, likely joining the main bounding fault at depth beneath the ridge. This backthrust is an integral part of the Te Maire Fault system.

Between the bounding faults, there are at least two smaller back-thrust faults, one of which was mapped by GNS. A longer backthrust fault which lies 350m southeast of the site was not included in the GNS mapping, however this feature is clearly evident in the slope angle map, cutting across the numerous eroded gullies (Figure 6).

The anticline (fold) crest through the area has been mapped along the topographic high of the ridge. This represents the crest of the pop-up structure.

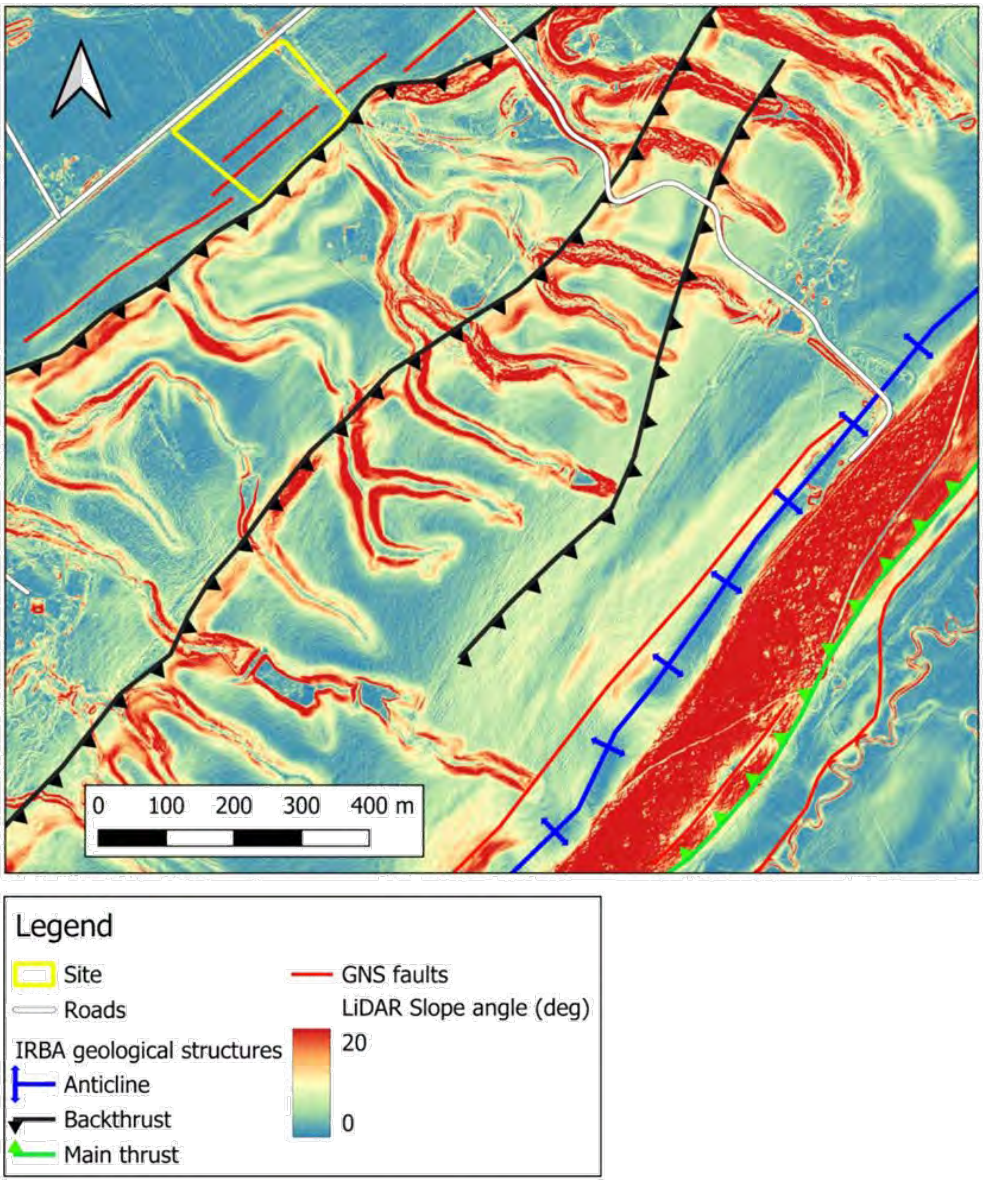


Figure 6 *Geological interpretation for central Te Maire fault zone, overlain over LiDAR slope angle map. Main thrust location taken from GNS.*

Site assessment

The landform of the site comprises a very low gradient alluvial fan which emanates from the eroded gully at the northeast corner of the site (Figure 7). The fan surface extends from about 27m elevation down to about the 21m contour line, where the surface merges with the regional fluvial surface, eventually draining to Lake Wairarapa about 7km to the west. The drainage follows a linear path through the centre of the fan, and is incised about 1m into the fan surface.

The fan surface appears to be generally uniform, with no indications of scarps cutting across the surface. There is a shallow depression present just south of the centre of the site, indicated by an eastwards bend in the 23m contour line. On the north side of the fan, on the adjacent property, there is a similar shallow depression at the foot of the hill.

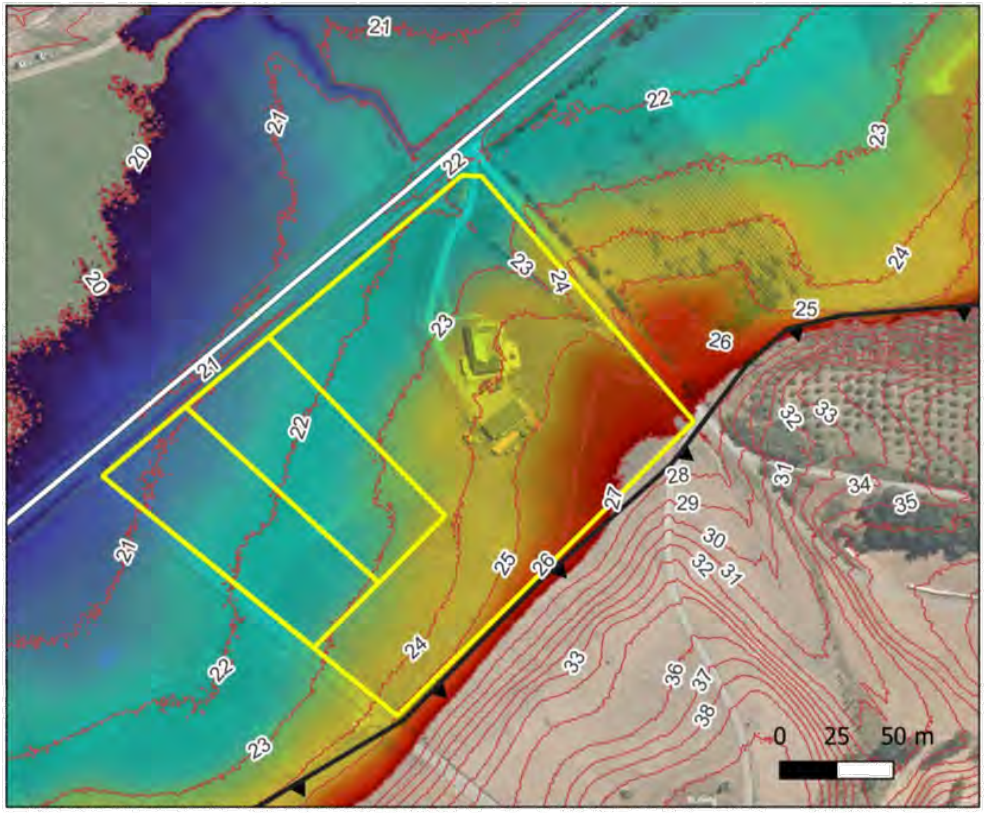


Figure 7 *Topographic map for site and adjacent areas, 1m contours and colour overlay derived from LiDAR data. The mapped backthrust fault is as per Figure 6.*

Similar low gradient alluvial fans are present at the adjacent gully mouths along the range front. None of these fan surfaces appear to have been disrupted by fault scarps, though areas of slightly greater slope angle are present.

A slope angle map derived from LiDAR data is shown in Figure 8. The colour scale has been set at 0-5° to enhance subtle features of the landscape. There is a persistent NE-SW linear trend evident through the site, with lines being parallel to the road. Some of the linear features appear to be continuous with similar lineaments in adjacent paddocks, and others appear to terminate at the property boundaries. None of the slopes present on the alluvial fan surfaces have slope angles similar to those present on the mapped fault scarps, which are typically 20-25°.

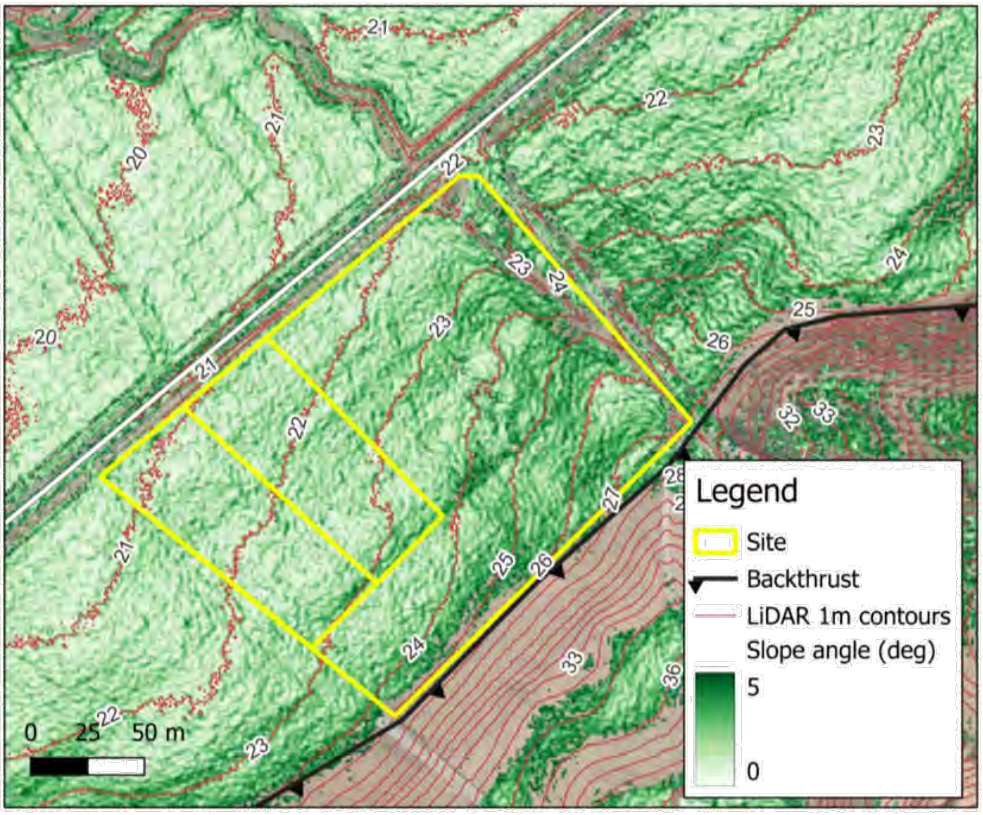


Figure 8 Slope angle map, colour enhanced to show slopes of 0-5°.

Similar NE-SW linear features are evident on an historical aerial photograph of the site (Figure 9). We interpret these to represent drainage lines, possibly where subsoil tile drains have been installed. The image also shows a farm track accessing the shallow depression south of the site centre. A similar track is evident accessing the area on the adjacent site where a small depression is present. These shallow depressions may indicate former borrow pits where soil has been excavated.

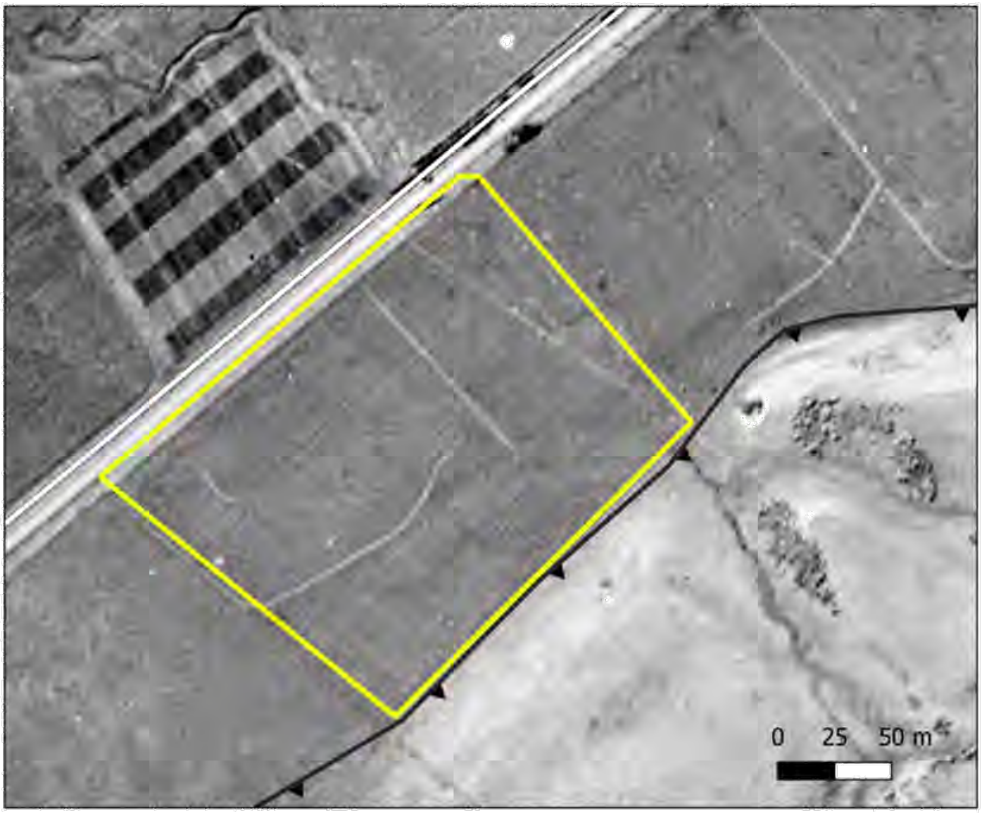


Figure 9 Historical aerial image of site. Source: Retrolens image SH295_1030_6 dated 25/8/1944.

Fault hazard assessment

Our analysis indicates that neither of the fault traces mapped by GNS which cross the site likely represent an active fault. Our conclusion is based on the following key observations:

- Any faulting likely to be present would be backthrusts associated with the Bidwill Hill pop-up structure, which have a consistent pattern of uplift on the southeast side of the fault traces. No such patterns are evident on the site.
- There is insufficient disruption of the alluvial fan surface beneath the site, or its drainage axis, to warrant the interpretation of active faulting.
- Historical imagery indicates that farming activities are likely to be responsible for the subtle features evident in the landscape, including NE-SW oriented lineaments which likely represent drainage systems, and minor excavations.

We therefore conclude that there is no fault rupture hazard on the site. Consequently, the risk that structures on the site could be impacted by active fault movements directly beneath the structures is low. However, we do note that the western backthrust of the Bidwill Hill ridge pop-up structure is present along the southeastern boundary of the site. This fault has not

been included in previous mapping. The location of the fault falls into the "Well Defined" category (Kerr *et al.* 2003) with a high degree of certainty of tectonic origin.

We concur with GNS (Litchfield *et al.* 2022) that all parts of the Te Maire Fault should be regarded as Class III active faults, given clear evidence for faults which intersect the mapped pop-up faults, disrupting recent (<10,000 year old) surfaces within 1km from the site.

On January 15 2026 the National Policy Statement for Natural Hazards (NPS-NH 2025) came into effect. It applies to various natural hazards including active faults and provides direction under the Resource Management Act 1991 for managing natural hazard risk associated with subdivision, use and development. The Explanatory note to NPS-NH 2025 states that it must be applied to active faults among other listed hazards.

Using the Risk matrix (Figure 1 in NPS-NH 2025) the Likelihood level of fault displacement along the Te Maire Fault is Very rare, and the Consequence level is Minor to Negligible. This places a site directly intersected by the Te Maire Fault as Low on the Risk matrix. This class of risk does not require avoidance or mitigation.

Conclusions and recommendations

The site lies at the foot of the western side of the Bidwill Hill ridge, a pop-up ridge which has formed during tectonic compression over the last c. 2 million years. The western bounding back-thrust fault is interpreted to lie at the base of the hill on the western side of the ridge, immediately adjacent to the site. This fault is a Class III active fault.

From our analysis of LiDAR topographic data, we conclude that the active fault traces mapped by GNS in 2022 (using the same data) do not represent active faults. There is insufficient disruption to the land surface to warrant the interpretation that faulting is present. Some linear features and minor topographic features evident on the site appear to relate to historic farming activities.

The subdivided Lots 2 and 3, and the existing structures on Lot 1, lie more than 50m from the mapped backthrust location. We note that the Te Maire Fault complex is regarded as active, with a long recurrence interval, and with clear evidence for regional fault movements in the last 10,000 years within 1-2km of the site. One of these active faults intersects with the mapped backthrust fault about 1.5km north of the site, confirming the possibility that the backthrust remains active.

At the time of the next Wairarapa Combined District Plan review, we recommend that the Te Maire Fault mapping be updated to include our current understanding of the area.

We do not anticipate there will be any foundation implications at the site. Normal geotechnical review will be required to establish that the site is compliant with the requirements of NZS3604 for foundation design and identification of any site-specific hazards.

The consenting authority will take into account the current District Plan mapping of fault hazards. This report should be used to confirm that the District Plan mapping is not correct, and further investigations are not required.

With respect to insurance and lending, financial institutions tend to base their judgments of matters relating to natural hazards on their own internal advice and procedures. This report may help them better understand the local active fault hazard should that be necessary.

Applicability and reliance

This report has been prepared for the benefit of Lucy Sanderson-Gammon in accordance with the brief provided to Ian R Brown Associates Ltd.

Lucy Sanderson-Gammon may provide a copy of this report to third parties for their information and reliance in connection with the matters addressed in the report.

While such third parties may rely on the contents of this report for that purpose, this report has been prepared solely for Lucy Sanderson-Gammon and in response to her brief. Ian R Brown Associates Ltd accepts no duty of care, responsibility, or liability to any party other than Lucy Sanderson-Gammon in relation to the report, its contents, or any reliance placed upon it.

The opinions and recommendations contained in this report are based on the information and data obtained during the course of our investigations and are subject to the limitations inherent in the scope of work undertaken.

No liability is accepted by Ian R Brown Associates Ltd, nor by any Director, employee, or agent of the company, for the use of this report by any person other than Lucy Sanderson-Gammon, or for any purpose other than that specified in the agreed brief.

References

Begg JG, Johnston MR (comp) (2000): Geology of the Wellington Area. QMAP 1:250,000 geological map sheet 10, GNS.

Kerr, J.; Nathan, S.; Van Dissen, R.; Webb, P.; Brunsdon, D.; King, A. (2003): Planning for Development of Land on or Close to Active Faults. Ministry for the Environment / GNS client report 2002/134, July 2003.

Litchfield, N.J.; Coffey, G.L.; Morgenstern, R. (2022): Active Fault Mapping for the South Wairarapa, Carterton and Masterton Districts. GNS Science Consultancy Report 2021/117, October 2022.

Ministry for the Environment 2025 National Policy Statement for Natural Hazards 2025

Nicol, A.; Van Dissen, R.; Vella, P.; Alloway, B.; Melhuish, A. (2002): Growth of contractional structures during the last 10 m.y. at the southern end of the emergent Hikurangi forearc basin, New Zealand. New Zealand Journal of Geology and Geophysics, 45:3, 365-385.

ABUILD
Consulting Engineers Ltd

OUR REF 15300 Rev A

06 August 2026

[redacted]

ATTENTION: [redacted]

EMAIL: [redacted] by email only

GEOTECHNICAL DESKTOP PEER REVIEW OF IRBA FAULT HAZARD ASSESSMENT 139 TE MAIRE ROAD, KAHUTARA, WAIRARAPA

In accordance with our fee proposal dated 12 May 2026, ABuild Consulting Engineers Limited (ABuild) have completed a desktop peer review of IRBA Limited's *Fault Hazard Assessment at 139 Te Maire Road, Kahutara*, dated February 2026.

The purpose of the peer review was to independently assess the findings and conclusions of the Fault Hazard Assessment regarding the mapped fault trace at the subject site.

Project Background

The site at 139 Te Maire Road lies on the western side of the Bidwill Hill ridge, an elevated landform formed by compressional faulting over the last c. 2 million years.

The ridge is bounded by various faults, some of which are still considered active. The western boundary fault lies at the foot of the slope above the site. The Proposed Wairarapa Combined District Plan fault hazard overlay depicts two short active faults crossing the site. These had been mapped with a low degree of certainty by GNS.

IRBA Limited's report was tasked with identifying and providing comment on:

- Interpretation of the mapped fault.
- Implications for hazard overlays.
- Provenance of the District Plan mapping.
- Foundation and consenting implications.
- Insurance and lending relevance

ABuild were engaged by the client to undertake an independent peer review of the aforementioned report and to provide a professional opinion on the findings regarding the mapped fault trace.

ABuild's Geotechnical Review Process

ABuild Consulting Engineers Limited confirm that the following information and documentation were reviewed as part of the peer review process:

1. IRBA - *Fault Hazard Assessment at 139 Te Maire Road, Kahutara* (attached);
2. Review of the available LiDAR data;
3. Review of a series of historical aerial photographs; and
4. Meetings and discussions with Ian Brown of IRBA Limited and the client.

Conclusion and Recommendations

Based on ABuild Consulting Engineers' findings, there is no clear evidence of fault activity at the site within the timeframes relevant to the definition of *active surface processes*.

(In the geological context of this site, active surface processes are taken to include ongoing or recent geomorphic processes capable of modifying the ground surface, including the deposition of alluvial and colluvial material over hundreds to thousands of years).

While the available evidence does not indicate active surface faulting at the site within the relevant planning timeframe, there is always potential for longer recurrence interval faulting. However, the potential for this is no greater for this property than any of the surrounding properties

On the balance of the available evidence, including the absence of any observable surface expression of faulting, ABuild Consulting Engineers support the findings of IRBA Limited's report, including that normal geotechnical review be required as part of any future development. This shall include:

1. That a property note be placed on Council's records requiring that the following matters be addressed as part of any future development of the lot, including (but not limited to) any building consent application/s:

    a. **Site-Specific Geotechnical Investigation and Specific Engineering Design (SED)** – Any future development of the site shall be supported by a site-specific geotechnical investigation and undertaken in accordance with Specific Engineering Design (SED). The site-specific geotechnical report shall inform retaining wall and foundation design, and all retaining walls and foundation systems shall be subject to appropriate specific engineering design, inspection, and certification by a Chartered Professional Engineer (Geotechnical). .

    b. **Producer Statement Certification –** A Chartered Professional Engineer (CPEng) with geotechnical expertise shall be engaged during the design and construction phases to provide the appropriate Producer Statement documentation, including a PS1 – Design Producer Statement and a PS4 – Construction Review Producer Statement, in respect to the site-specific geotechnical report.

Limitations

This peer review has been prepared for you as our client with respect to the brief provided in accordance with the SFA signed between Lucy Sanderson-Gammon and ABuild, and Engineering New Zealand Practice Note 2: Peer Review, V2, April 2018, and may be provided to South Wairarapa District Council in connection with the District Plan correction process.

ABuild accepts no liability whatsoever for any reliance on or use of this peer review report, in whole or in part, for any use or purpose other than that stated in the ABuild SFA.

The peer review excludes in-depth study of the site, independent site investigations or independent calculation verification.

If you have any further questions, please do not hesitate to contact the undersigned.

Yours faithfully
ABUILDTM Consulting Engineers Limited



Bruce Simms
BSc, MSc (Hons), CMEngNZ, CPEng 255564
Geotechnical and Company Director

Attached: IRBA - *Fault Hazard Assessment at 139 Te Maire Road, Kahutara*