

**BEFORE THE TAUPŌ DISTRICT COUNCIL
PLAN CHANGE 37**

Under the Resource Management Act 1991

In the matter of an application for a private plan change
(**PC37**) to rezone land for residential purposes at
Nukuhau

STATEMENT OF EVIDENCE OF MARK BULPITT CHRISP (PLANNING)

ON BEHALF OF CONTACT ENERGY LIMITED

29 October 2021

QUALIFICATIONS AND EXPERIENCE

1. My full name is **Mark Bulpitt Chrisp**. I am a Partner and a Principal Planner in the Hamilton Office of Mitchell Daysh Limited, a company which commenced operations on 1 October 2016 following a merger of Mitchell Partnerships Ltd and Environmental Management Services Ltd (of which I was a founding Director when the company was established in 1994 and remained so until the merger in 2016).
2. My evidence is given on behalf of Contact Energy Limited (**Contact**), a submitter in relation to Plan Change 37 (**PC37**) to the Taupō District Plan (“**TDP**”) which seeks to rezone 77.78 hectares of Rural-zoned land to a mix of General Residential and Medium Density Residential.
3. I have the following qualifications and experience relevant to the evidence I shall give:
 - (a) I have a Master of Social Sciences degree in Resources and Environmental Planning from the University of Waikato (conferred in 1990) and have more than 30 years’ experience as a Resource Management Planning Consultant;
 - (b) I am a Certified Commissioner under the Ministry for the Environment’s ‘Making Good Decisions’ course;
 - (c) In addition to my professional practice, I am an Honorary Lecturer in the Department of Geography, Tourism and Environmental Planning at the University of Waikato. I am also the Chairman of the Environmental Planning Advisory Board at the University of Waikato, which assists the Environmental Planning Programme in the Faculty of Arts and Social Sciences in understanding the educational, professional and research needs of planners;
 - (d) I have appeared as an Expert Planning Witness in numerous Council and Environment Court hearings, as well as several Boards of Inquiry (most recently as the Expert Planning Witness for the Hawke’s Bay Regional Investment Company Ltd’s proposed Ruataniwha Water Storage Scheme);
 - (e) I appeared as an Expert Planning Witness in the Board of Inquiry hearing that led to the granting of the resource consents for the construction and operation of Te Mihi Power Station and the Tauhara Power Station;
 - (f) Environmental issues associated with the development, expansion, and on-going operation of industrial activities, particularly within the energy sector, is one of my specialties. I have been a planning advisor for the following industrial / energy projects over the last 27 years:
 - (i) Wairākei Binary Plant (1994 – 1998);

- (ii) Te Rapa Dairy Factory Expansion and Co-generation Power Plant (1996 – 1997);
 - (iii) Ohaaki Geothermal Power Plant Re-consenting (1998 – 1999);
 - (iv) Tauhara I Geothermal Power Development (now called Te Huka Power Station) (1999 – 2000);
 - (v) Tongariro Power Scheme Re-consenting – advising the Waikato Regional Council (2000 – 2002);
 - (vi) Wairākei Geothermal Power Plant Re-consenting (1999 – 2007);
 - (vii) Resource consents for exploratory drilling on the Wairākei - Tauhara Geothermal System (2007);
 - (viii) Resource consents for the Te Mihi Geothermal Power Station (2008);
 - (ix) Resource consents for the Tauhara II Geothermal Project (2010);
 - (x) Resource consents for the ongoing operation of the Ohaaki Geothermal Power Plant (2013); and
 - (xi) Resource consents for the ongoing operation of the Wairākei Geothermal Power Scheme (referred to as GeoFuture) (2019 - current).
4. I am very familiar with the area that is the subject of PC37. I have worked for Contact and other clients within the Taupō District over the last 30+ years. Through this work I also have considerable experience with the TDP and other statutory documentation relating to the management of natural and physical resources within the Taupō District.
5. In relation to statutory planning matters, I have been an advisor to Contact in relation to the Waikato Regional Policy Statement, the Waikato Regional Plan, and the TDP as they have evolved over the last 25 years. This has included, in particular, the formulation of planning provisions relating to the management of the geothermal resource in the Waikato Region and the Taupō District.
6. I am a member of the:
- (a) New Zealand Planning Institute (Full Member) (NZPI);
 - (b) New Zealand Geothermal Association; and
 - (c) Resource Management Law Association.
7. I confirm that I have read the 'Code of Conduct' for expert witnesses contained in the Environment Court Practice Note 2014. My evidence has been prepared in compliance with that Code. In particular, unless I state otherwise, this evidence is within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

SCOPE OF EVIDENCE

8. The purpose of my evidence is to:
 - (a) Outline Contact's land holdings and other property interests in the vicinity of the land the subject of PC37;
 - (b) Outline the nature of the resource consents held by Contact for steamfield activities in the vicinity of the land the subject of PC37;
 - (c) Note the land use status of Contact's steamfield activities under the TDP;
 - (d) Set out Contact's concerns in relation to PC37;
 - (e) Provide an update in relation to discussions with the applicant and issues resolved to date;
 - (f) Describe the nature and significant consequences of reverse sensitivity effects that are highly likely to arise if not property addressed;
 - (g) Discuss the relevant policy guidance in RMA policy and planning documents;
 - (h) Discuss the conclusions reached in the s.42A report; and
 - (i) Present an overall conclusion (including the solution to the issues raised by Contact in its submission).

CONTACT'S LANDHOLDINGS AND OTHER PROPERTY INTERESTS

9. Figure 1 shows Contact's landholdings and other property interests in the vicinity of the land covered by Plan Change 37.

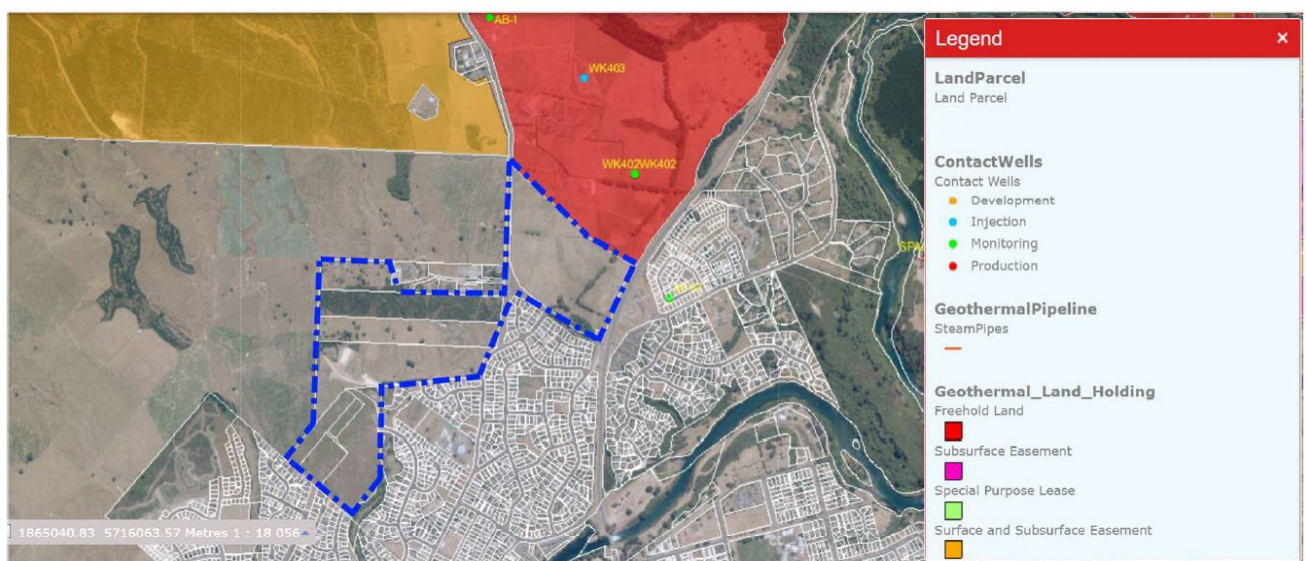


Figure 1 – Contact's Landholdings and Property Interests

10. Contact is an owner of land immediately north of, and adjoining, part of the land forming part of Plan Change 37 (shown in red on Figure 1). Contact undertakes activities on this land associated with the development and use of the Wairākei-Tauhara Geothermal System for electricity generation purposes. This includes well drilling and testing, the use of geothermal wells (predominantly for the reinjection of Separated Geothermal Fluid (SGW)) and pipelines.
11. Contact also holds surface and sub-surface rights in relation to the land owned by Landcorp on the western side of Poihipi Road (shown in brown on Figure 1).
12. An encumbrance 7482571.4 is held by Contact in relation to the part of the land covered by Plan Change 37 between Poihipi Road, Wairākei Drive and Contact's land to the north (i.e. the land legally described as Lot 2 DP 384060). That encumbrance sets out a range of obligations on the land owner(s) to avoid a range of potential adverse effects. However, it is not sufficient for the purposes of avoiding reverse sensitivity effects, particularly in relation to complaints or objections to applications by Contact on the grounds of concerns about noise, odour, lighting or effects on any other aspects of amenity.

RESOURCE CONSENTS HELD BY CONTACT

13. Contact holds a suite of resource consents issued by the Waikato Regional Council (**WRC**) which authorise activities associated with the development and use of the Wairākei-Tauhara Geothermal System for renewable electricity generation purposes. One of those resource consents is Consent 116786 which, subject to various conditions, authorises Contact to:

“discharge up to 95,000 tonnes per day of geothermal water, steam condensate, cooling water blow-down, suspended material, and added chemicals into land and underground water through reinjection wells within those areas of the Wairākei- Tauhara Geothermal System more particularly shown as the area inside the yellow boundary on Plan 124922-RC01 attached as Schedule One, but excluding the yellow hatched areas shown on that plan for a period to expire 35 years after the date of the grant of this consent”

14. The area to which Consent 116786 relates is shown on Figure 2 below.

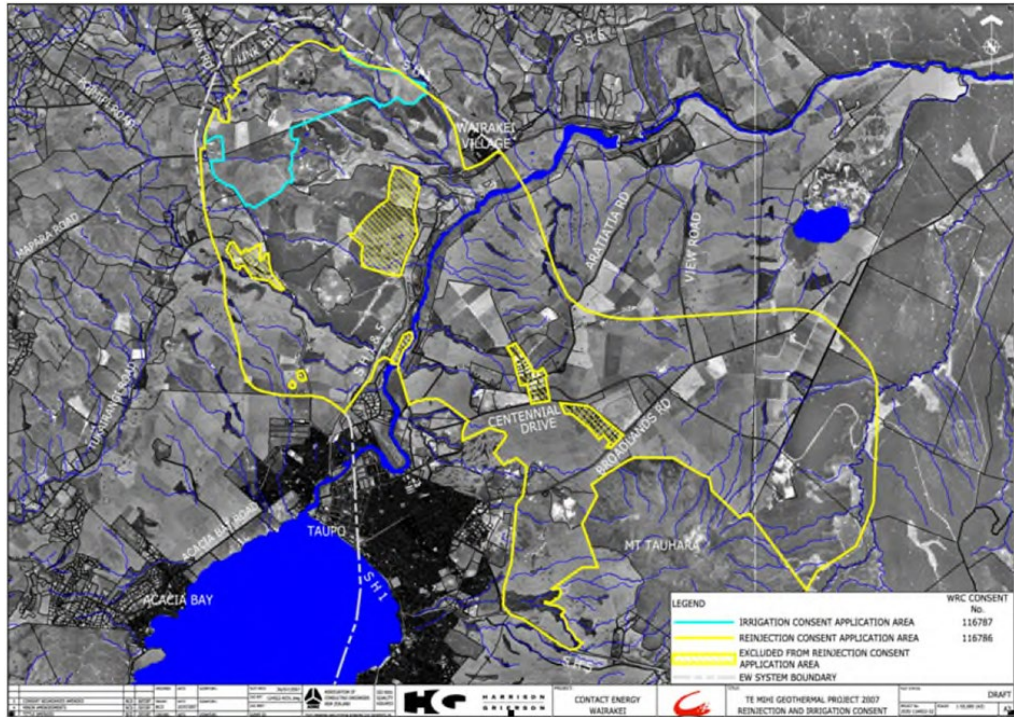


Figure 2 – Plan 124922-RC01

15. Along with various other resource consents for drilling, Contact also holds Resource Consent 115758 to drill exploratory wells below the water table in the Wairakei South area. This enables drilling activities specifically within the land shown in Figure 3 below.

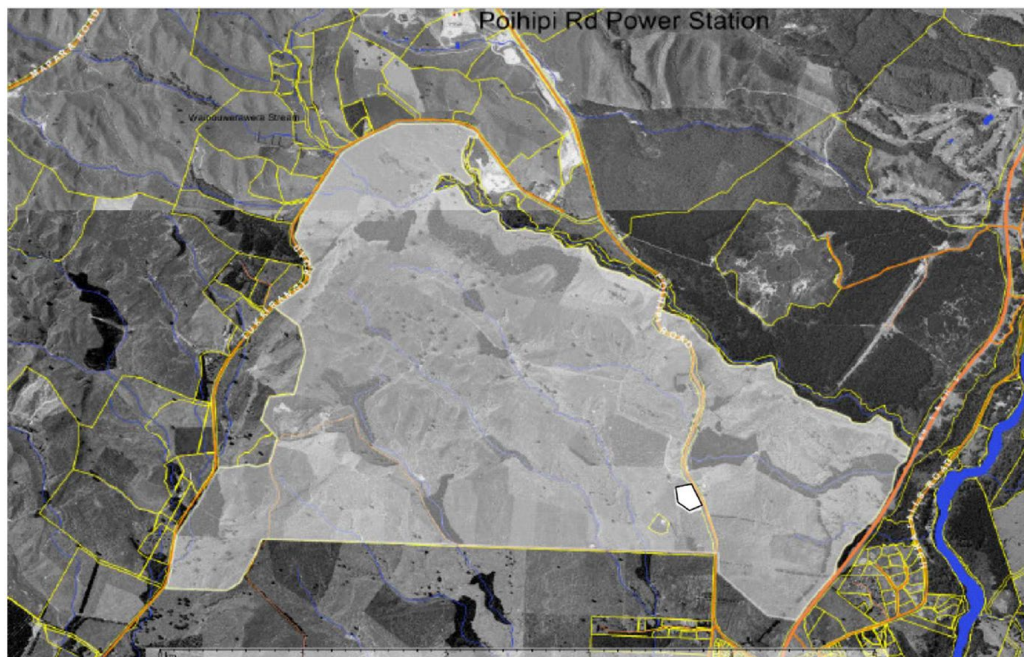


Figure 3 – Plan RC 115758

16. The consent areas for Consents 116786 and 115758 includes Contact's land immediately north of, and adjoining, the area covered by PC37 between Poihipi Road and Wairākei Drive. It also includes land owned by Landcorp on the western side of Poihipi Road in close proximity to the area covered by PC37.

LAND USE STATUS OF CONTACT'S ACTIVITIES

17. Contact's geothermal related activities on its land in the Rural Environment (including its land to the north of the land covered by PC37) are provided for as permitted activities under Rule 4b.2.4 in the TDP (being the continued operation of a geothermal steamfield and associated structures). These activities (existing and future activities) are part of the existing environment for the purposes of assessing PC37. Of note, in this regard, is the fact that, apart from minor upgrading (which is subject to noise performance standards), the activities permitted under Rule 4b.2.4 are not subject to any performance standards.

CONTACT'S CONCERNS REGARDING PC37

18. Contact lodged a submission in relation to PC37 which raised concerns in relation to the following matters:
 - (a) Lack of consultation by the applicant (despite Contact being an adjoining land owner);
 - (b) An inadequate assessment of the effects on the environment associated with PC37 due to a failure to recognise the nature of the existing environment (including Contact's activities); and
 - (c) Most importantly, the very high likelihood of reverse sensitivity effects causing a significant adverse effect on, or even preventing, Contact's ability to continue to undertake its permitted and consented activities (which are recognised as being of national significance under the National Policy Statement for Renewable Electricity Generation 2011).
19. Contact's submission sought the following relief:
 - (a) Plan Change 37 not be approved unless and until the Applicant recognises the nature of the existing environment and undertakes an assessment of actual and potential effects on the Wairākei-Tauhara Geothermal System and Contact's activities to identify measures required in Plan Change 37 to avoid, remedy or mitigate adverse effects. This includes, in particular, measures to avoid reverse sensitivity effects.
 - (b) To the extent that it is not covered by the existing encumbrance 7482571.4 held by Contact, appropriately worded reverse sensitivity covenant / encumbrance should be required, prior to any residential development occurring, on all resulting titles on the land between Poihipi

Road, Wairākei Drive and Contact's land to the north (i.e. the land legally described as Lot 2 DP 384060), similar to those placed on the titles within the Taupo Heights Subdivision on the opposite side of Wairākei Drive.

- (c) Plan Change 37 not be approved unless and until an assessment is undertaken of the effects of Plan Change 37, including the proposed closure of the existing intersection of Poihipi Road and Wairākei Drive, in relation to the construction traffic associated with Stage 2 of the Te Mihi Power Station (which forms part of the existing environment) and appropriate measures put in place to manage those effects.
- (d) Delete the proposed Medium Density Residential Zone adjacent to Wairākei Drive (it should be General Residential Zone).
- (e) The realigned section of Poihipi Road is to be the northern extent of any residential development (i.e. the land to the north of the new alignment of Poihipi Road is to remain as Rural Zone) to provide a buffer between the proposed residential areas and the nationally important renewable electricity generation activities to the north of them.
- (f) The realigned section of Poihipi Road is to be a wide landscaped corridor (similar to Wairākei Drive) so as to help create an effective buffer between residential activities and Contact's geothermal activities to the north.
- (g) All roads within the subdivision of Lot 2 DP 384060 shall be created in separate titles, rather than by the usual vesting process, and for those titles to be subject to the same covenant / encumbrance discussed above. In the alternative, Contact proposes that roads be gazetted subject to the same terms.
- (h) If the issues raised in this submission are not adequately resolved, desirably in consultation with Contact and including the specific relief set out above, Contact seeks that Plan Change 37 be declined insofar as it relates to the land between Poihipi Road, Wairākei Drive and Contact's land to the north (i.e. the land legally described as Lot 2 DP 384060).
- (i) Contact has no objection to the approval of Plan Change 37 insofar as it relates to the land the south-west of Poihipi Road (i.e. the land covered by Plan Change 37 apart from Lot 2 DP 384060).

DISCUSSIONS WITH APPLICANT AND RESOLUTION OF ISSUES TO DATE

20. I am pleased to advise that, since the notification of PC37 and the close of the submission period, Contact has been consulted in relation to PC37 by the applicant's representative (Mr Hamish Crawford of WSP), involving various meetings and correspondence, and some of the issues raised in Contact's submission have been resolved and/or will no longer be pursued. Other

aspects of Contact's submission are partially resolved and/or are in progress (but yet to be fully resolved).

21. The current position is set out as follows:
 - (a) Contact is now satisfied that the previous lack of consultation has been rectified;
 - (b) The applicant has agreed to relocate the Medium Density Residential Zone further away from Contact's land;
 - (c) Contact still remains a little concerned about the closure of the existing intersection of Poihipi Road and Wairākei Drive (including the upgrade to the intersection installed by Contact) but will not pursue that matter further on the basis of advice from Mr Crawford and Taupō District Council that Contact will not be required to undertake and/or pay for further roading mitigation works in relation to the construction of Stage 2 of Te Mihi Power Station. Furthermore, the applicant has advised that council will not allow the closure of the existing intersection, until such a time as a new intersection is created that fully complies with the standards suitable for a main arterial route;
 - (d) The applicant has agreed to the positioning of the realigned section of Poihipi Road and an associated reserve strip to provide a buffer between the proposed residential lots and Contact's land and steamfield activities to the north;
 - (e) In order to achieve this, Contact has offered to undertake a minor land swap if necessary, in order to enable a better geometric alignment of Poihipi Road; and
 - (f) Contact has provided the applicant with a Draft Memorandum of Agreement and an Encumbrance to be attached to the relevant Record of Title which is intended to help avoid reverse sensitivity issues arising.
22. Contact has advised the applicant (via Mr Crawford) that if the Memorandum of Agreement (which includes the obligation to register the proposed Encumbrance on the Record of Title) was signed prior to the evidence deadline for submitters (29 October 2021) then Contact would not need to prepare any evidence and nor would it attend the hearing. In those circumstances, Contact would have advised Taupō District Council that its concerns in relation to PC37 were resolved. However, as at the time this evidence has been filed with Taupō District Council, the Memorandum of Agreement has not been signed.
23. If the Memorandum of Agreement is signed by the applicant prior to the hearing, Contact will advise Taupō District Council that its concerns in relation to PC37 are resolved and will not attend the hearing.

REVERSE SENSITIVITY EFFECTS

24. Contact's primary concern regarding PC37 relates to the risk of reverse sensitivity effects arising which may restrict Contact's ability to efficiently use, manage and develop the Wairākei -Tauhara Geothermal System. In particular, Contact is concerned that undertaking permitted activities, the exercise of its resource consents and the development of a nationally significant geothermal resource for electricity generation will be constrained by complaints about noise and other effects arising from well drilling and testing and other geothermal activities, as well as by objections to resource consent applications that Contact may be obliged to make.
25. It is likely that residents will expect a high level of amenity that is incompatible with Contact's existing and future activities. The greater the density of residential development (and therefore the number of people living in the area), the greater the potential for complaints about geothermal activities on the land to the north.
26. As noted above, the continued operation of a geothermal steamfield and associated structures (being the activities undertaken by Contact on its land to the north of the land covered by PC37) are permitted activities under Rule 4b.2.4 in the TDP. Despite the absence of performance standards for most of the activities permitted under Rule 4b.2.4, including noise limits, Contact's activities need to be undertaken in a manner that is consistent with section 16 of the RMA (i.e. the duty to avoid unreasonable noise). That outcome will become increasing difficult (or unachievable) with sensitive noise receptors (i.e. residential activities) being developed closer to Contact's activities in the Rural Environment.
27. Contact also has an expectation that the next version of the TDP will include noise limits for geothermal steamfield activities whereby the boundary of a Residential Environment will be a point of compliance. Contact may not be able to comply with the Plan requirements with regard to noise and therefore may be prevented from undertaking existing activities and regional consents. Figure 3 below is a plot of predicted noise levels associated with drilling activities at Well WK402 which was prepared in relation to the proposed subdivision and development of Taupo Heights on the opposite side of Wairākei Drive. It shows that drilling activities would be unable to comply with the night-time noise limit of 40dBA Leq in an adjoining Residential Environment required by Rule 4b.1.9 in the TDP.

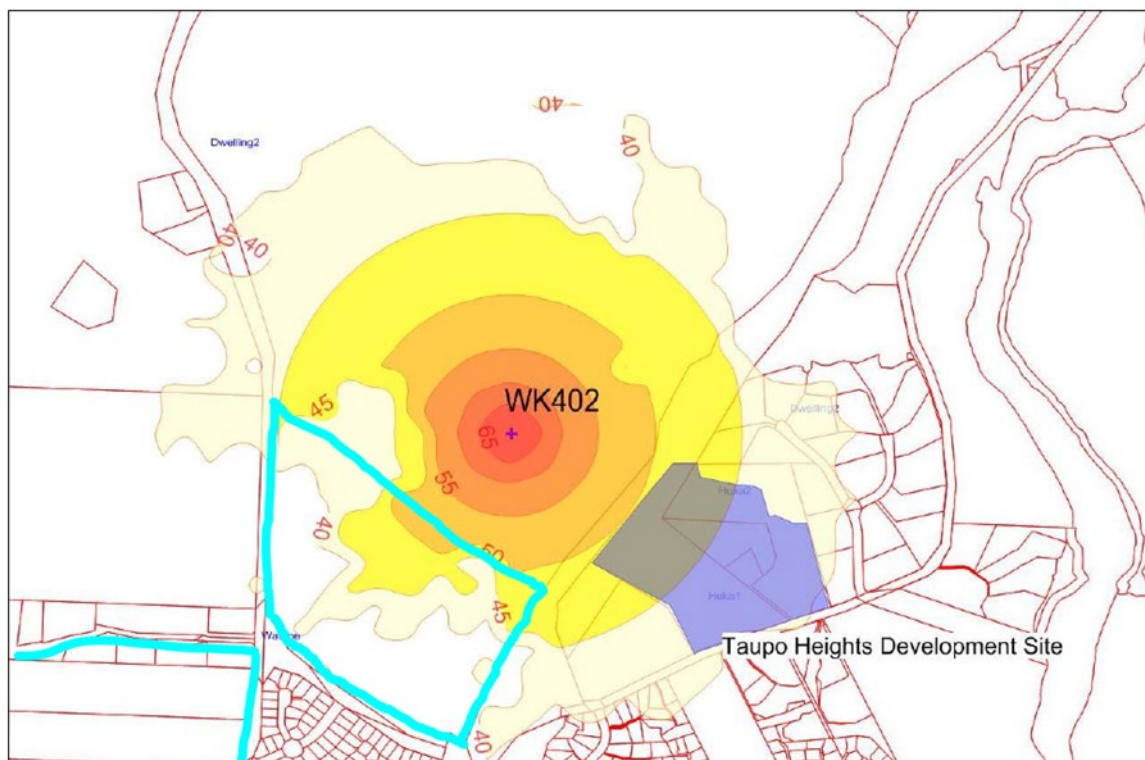


Figure 1 Predicted L_{Aeq} noise levels based on Rig 16 field readings during typical drilling activities.

Figure 3 – Noise Contours associated with Drilling Activities at Well WK402

28. The same situation applies in relation to the risk of complaints or objections about other aspects of geothermal development such as odour, lighting or effects on any other aspects of amenity.
29. To address concerns about reverse sensitivity, Contact seeks that residential development only be able to proceed if an encumbrance is placed on all the titles created from Lot 2 DP 384060, similar to those placed on the titles within the Taupo Heights subdivision on the opposite side of Wairākei Drive, preventing complaints or objections in relation to the effects of geothermal activities undertaken by Contact including noise from well drilling and testing, odour, lighting and effects on any other aspects of amenity.
30. It is recognised that the land in question is earmarked in the Taupō District 2050 - Growth Management Strategy (TD 2050) as a residential growth area. However, it is important to consider the manner and circumstances in which a change of land use to residential should occur. Accordingly, Contact has sought to advance a “live and let live” approach whereby the urbanisation of the PC37 land can occur in a manner that does not prevent the ongoing operation of Contact’s activities on its adjacent land.

RMA POLICY GUIDANCE

31. There are a number of policy and planning documents prepared under the RMA which provide relevant guidance to decision makers in relation to the concern about reverse sensitivity issues raised in Contact's submission, including the following.

National Policy Statement for Renewable Electricity Generation 2011 (NPS-REG)

32. The objective of the NPS-REG is:

“To recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such that the proportion of New Zealand’s electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government’s national target for renewable electricity generation.”¹

33. The NPS-REG works alongside other government initiatives as part of New Zealand's wider response to tackling climate change.
34. The NPS-REG ensures that the national benefits of renewable electricity generation are taken into account in consenting decisions. It also requires decision makers to have particular regard to the locational requirements, the logistical or technical practicalities, and infrastructure requirements associated with developing, upgrading, operating or maintaining renewable electricity generation activities.
35. Of particular relevance to PC37, the NPS-REG includes Policy D which states:
- “Decision-makers shall, to the extent reasonably possible, manage activities to avoid reverse sensitivity effects on consented and on existing renewable electricity generation activities.”
36. It is my opinion that any decision to approve PC37 without the encumbrance sought by Contact (or some alternative equally effective method) will result in outcomes that are contrary to Policy D of the NPS-REG.

Waikato Regional Policy Statement (RPS)

37. The Wairākei Geothermal Power Scheme (including activities on the land immediately north of the PC37 land) is defined in the RPS as “Regionally Significant Infrastructure”.

¹ The Government's national target for renewable electricity generation is 90 per cent of electricity from renewable sources by 2025.

38. The RPS sets out an extensive range of strongly worded policy directives in relation to the built environment, including Regionally Significant Infrastructure, including the following:

Objective 3.12(c):

“integrating land use and infrastructure planning, including by ensuring that development of the built environment does not compromise the safe, efficient and effective operation of infrastructure corridors”

Objective 3.12(e):

“recognising and protecting the value and long-term benefits of regionally significant infrastructure”

Objective 3.12(g):

“minimising land use conflicts, including minimising potential for reverse sensitivity”

Implementation Method 6.1.2 Reverse Sensitivity:

“Local authorities should have particular regard to the potential for reverse sensitivity when assessing resource consent applications, preparing, reviewing or changing district or regional plans and development planning mechanisms such as structure plans and growth strategies. In particular, consideration should be given to discouraging new sensitive activities, locating near existing and planned land uses or activities that could be subject to effects including the discharge of substances, odour, smoke, noise, light spill, or dust which could affect the health of people and / or lower the amenity values of the surrounding area.”

Development Principles d), h) and o):

“New development should:

- d) not compromise the safe, efficient and effective operation and use of existing and planned infrastructure, including transport infrastructure, and should allow for future infrastructure needs, including maintenance and upgrading, where these can be anticipated;*
- h) be directed away from identified significant mineral resources and their access routes, natural hazard areas, energy and transmission corridors, locations identified as likely renewable energy generation sites and their associated energy resources, regionally significant industry, high class soils, and primary production activities on those high class soils;*

o) not result in incompatible adjacent land uses (including those that may result in reverse sensitivity effects), such as industry, rural activities and existing or planned infrastructure;"

39. In the absence of confirmed measures that will ensure Regionally Significant Infrastructure, such as Contact's steamfield activities, is not compromised (by avoiding reverse sensitivity effects as far as practicable), PC37 is contrary to the above policy guidance in the RPS. I note that, in the context of a proposed change to a district plan, s.75(3) of the RMA states:

"A district plan must give effect to –

...

(c) any regional policy statement".

SECTION 42A REPORT

40. The s.42A report concludes that:

"Effects associated with the inadequacy of capacity at the Control Gate Bridge to accommodate demand represents the only substantial hurdle in terms of effects."

41. While I have no argument with the conclusion reached in relation to the Control Gates Bridge (and any concerns in relation to that matter are beyond the scope of Contact's submission), it is not the only substantial hurdle in terms of effects associated with PC37. Unless and until the actual and/or potential reverse sensitivity effects that will arise as a result of the implementation of PC37 are properly addressed, their remains a significant unresolved and unmitigated effect.

42. Part of the relief sought in Contact's submission was that an appropriately worded reverse sensitivity covenant / encumbrance should be required, prior to any residential development occurring, on all resulting titles on the land between Poihipi Road, Wairākei Drive and Contact's land to the north, similar to those placed on the titles within the Taupō Heights Subdivision on the opposite side of Wairakei Drive. The s.42A report recommends that this relief sought be rejected. This recommendation appears to be based on the following comments in the s.42A report:

*"I recommend rejection of the submission seeking to impose encumbrances on residential development given both the broad manner in which the submission is drafted, and that encumbrances of themselves do not address effects."*²

² Para 266 on page 58.

“Encumbrances do not reduce or remove the actual or potential effect.”³

“Understood from Proponent Letter dated 15 June 2021, that the Proponent has agreed to a side agreement for encumbrances to be registered on the titles.”⁴

43. While it could be said encumbrances of themselves do not address effects, they provide a legally enforceable mechanism by which such effects can be prevented from occurring. This the same situation with rules in a plan. Rules of themselves do not achieve anything. It is the compliance with, and enforcement of, the rules which achieved the intended environmental outcome. If the proposed encumbrance is in place, anyone purchasing a residential lot will be aware of their obligation to not cause reverse sensitivity effects and, if they do, Contact will have a legal means of enforcing the provisions of the encumbrance.
44. In my experience working for Contact and Fonterra over the last three decades (and with the benefit of also knowing what has occurred in relation to AFFCO Horotiu), no-complaint / no objection covenants / encumbrances have been very effective in terms of avoiding reverse sensitivity issues.
45. If one of the reasons for rejecting Contact relief sought is that the applicant has agreed to enter into a side agreement (including the obligation to place an encumbrance on the Record of Title) that means nothing until it actually occurs. Until such a time, Taupō District Council can have no certainty that the reverse sensitivity issues associated with PC37 have or will be resolved.

CONCLUSION

46. If suitable mitigation measures are not in place, the development of residential activities adjacent to Contact’s lawfully established and consented geothermal steamfield activities has a very high likelihood of causing significant reverse sensitivity effects to the extent that Contact’s activities will be curtailed or even prevented from occurring. This is a effect on an activity that is recognised as being of national significance in the NPS-REG and seeks that such effects are avoided.
47. Unless and until the actual and/or potential reverse sensitivity effects that will arise as a result of the implementation of PC37 are properly addressed, their remains a significant unresolved and unmitigated effect, to the extent that PC37 should be declined in its current form.
48. Contact has proposed a way forward which will achieve a “live and let live” outcome. Specifically, in addition to the matters already accepted by the applicant (and now forming part of the proposal), the signing of the proposed

³ Page 102, in relation to OS48.9.

⁴ Page 82. In relation to OS54.1.

Memorandum of Agreement (which includes the obligation to register the proposed Encumbrance on the Record of Title) will resolve the issues of concern to Contact. If that occurs, the issues raised by Contact will no longer be a reason for PC37 to be declined insofar as it relates to Lot 2 DP 384060.

A handwritten signature in black ink, appearing to read 'Mark Chrisp', is shown on a light gray background.

Mark Chrisp

29 October 2021