

# Proposed South Taranaki District Plan

Submission by Climate Justice Taranaki Incorporated, 12 Oct 2015

## 1. Scope of Submission

This submission concerns all aspects of petroleum activities and hazardous substances in the proposed district plan, including but not limited to the Definitions in section 1.11 and the following provisions: Rural Zone Rules 3. 2.2 on minimum setbacks; Rural Industrial Zone Rules 8.1.1 and 8.2; Hazardous Substances Rules 12.2.4 on discretionary activities, 12.3.1-12.3.3 on performance standards and 12.3.4 on natural hazards; Energy Rules 13.1.1, 13.1.4, 13.1.5, 13.2; Natural Environment Rules 17.1.4-17.1.6; and all maps concerning the Coastal Protection Area.

Climate Justice Taranaki Incorporated (CJT) has made every attempt to review and understand the proposed plan, the section 32 reports and other related documents. These are complex documents concerning difficult issues and competing interests. Unfortunately, the plan as it stands is confusing, and in places, contradictory to itself or to the associated documents, and is therefore prone to misinterpretation. It is of critical importance that the plan be revised in a way that clarifies the intent and some of the definitions, rules and performance standards, as well as the relationships between this plan and other regulatory frameworks and between councils and other authorities. Such clarifications will ensure that the finalised plan is robust and can be implemented effectively, without room for misinterpretation or misuse.

## 2. Submission

Climate Justice Taranaki Incorporated (CJT) oppose the specific provisions identified above because of these reasons:

### Definitions

- a) The definition of "Major Hazardous Facility" in section 1.11 excludes petroleum exploration and petroleum production "*where the Health and Safety in Employment (Petroleum Exploration and Extraction) Regulations 2013, Health and Safety at Work (Petroleum Exploration and Extraction) Regulations 2015, Health and Safety in Employment (Mining Operations) Regulations 2013 would apply*".
- b) CJT understand that whilst the HSE (PEE) Regulations 2013 ensure that operators of PEE installations are responsible for the safety of the installations, it is councils' duty under the RMA to ensure appropriate location of such installations by assessing the extent of their potential adverse effects and risks to sensitive landuse. The Section 32 report on Hazardous Substances and Contaminated Land<sup>1</sup> listed the "*managing of potential effects on sensitive activities, reverse sensitivity issues, potential effects on sensitive natural environments, the risk to public safety from natural hazards*

*that could affect hazardous facilities, managing cumulative effects from multiple facilities” and “where relevant HSNO requirements do not anticipate or adequately manage such issues”, as “potential situations where additional controls under the RMA may be necessary”. We therefore submit that petroleum exploration, production and injection installations should NOT be excluded from the definition of Major Hazardous Facilities (MHF). There could potentially be some kind of threshold in terms of the amount of hazardous substances, the number of wells, the scale or intensity of drilling/fracking/injection activities, that determine whether a site is a MHF.*

- c) Section 1.11 also excludes petroleum exploration and production installations (from the definition of Major Hazardous Facilities) where *“Health and Safety at Work (Petroleum Exploration and Extraction) Regulations 2015”* would apply. CJT question whether council was actually referring to the Health and Safety at Work (Major Hazard Facilities) Regulations 2015 which is currently under consultation? According to the draft for consultation (section 3(4)(a)), these regulations do NOT apply to an installation to which the HSE (PEE) Regulations 2013 apply. If council is in fact referring to the draft HSW(MHF) regulations 2015, then PEE installations would not be excluded in the proposed plan.
- d) On 7<sup>th</sup> October 2015, council planning manager Blair Sutherland made this public statement<sup>ii</sup>: *“...in the proposed plan, drilling and fracking activities won’t be considered as hazardous facilities, they will be classed major hazardous facilities”*. CJT request clarifications on this and the above points which constitute the definitions of Major Hazardous Facilities and Hazardous Facilities in the plan. Unambiguous definitions of these, and whether petroleum exploration, production and injection facilities are considered major or non-major hazardous facilities, must be presented in the plan in a way that prevents mis-interpretation.
- e) Section 1.11 currently has no definition of **‘Separation’ or ‘Setback’ Distance** and how it is measured. A clear definition on this is critical to the understanding and implementation of the plan.
- f) CJT submits that this distance be measured from the boundary of the petroleum exploration, production and/or injection site or hazardous facility **to the boundaries with neighbouring properties, or with any sensitive landuse (as defined in the proposed plan), whichever is the closest**. The measurement to the ‘boundaries’ with neighbouring properties (rather than only the dwellings within those properties), is important for the protection of neighbours’ day to day activities, notably farm activities in the barn or outdoor. This way of measurement also reduces the impact on neighbours’ future options such as putting in new or relocating existing dwellings.
- g) A definition of **Coastal Protection Area** and the criteria for determining its boundary should also be included in section 1.11.
- h) CJT question the rationale behind halving the total Coastal Protection Area from 10,401 ha to 5,042 ha (Sarah Ongley, 8 Oct 2015)<sup>iii</sup>.

## **Rural Zone Rules**

- i) The Rural Zone Rules **provision 3.2.2** permits dwellings and other sensitive activities just 150m from petroleum exploration and production activities, 200m from hazardous facilities or 300m from a

Rural Industrial Zone (e.g. STOS Maui Oaonui Production Station, Ballance Agri-Nutrients Ammonia Urea Plant). Although this provision primarily addresses reverse sensitivity issues, it does mean that oil/gas drilling, fracking, production and injection activities can occur within such minimum distances from homes, schools, hospitals and other sensitive landuse.

- j) CJT submit that in the Rural Zone, dwellings and other sensitive activities should be **Prohibited within the setback distances** and Discretionary beyond the setbacks. This will send a clear message to the public that there are considerable risks in having homes and other sensitive landuse close to petroleum and other hazardous/industrial facilities, and help to avoid or reduce adverse effects on people and conflicts of landuse.
- k) There appears to be no explanation in the proposed plan as to how the three different setback distances were determined. Nor is there any explanation on why there need to be such distances to address reverse sensitivity issues but not for limiting how close petroleum exploration and production activities may be located from sensitive landuse by way of the Energy Rules.
- l) CJT submit that the proposed **setback distances (150-300m) are far too small** to offer adequate protection to people's health and safety (e.g. fatality and injury from well blow-out and uncontrolled gas release, longterm health impacts). For contrast, EPA West Australia<sup>iv</sup> stipulates a separation distance of 2000m between oil or gas extraction/production and sensitive land uses.
- m) Medical studies from USA have illustrated links between distances from well sites and the **risks of cancer and birth defects** far beyond 150-300m. One study found that residents living less than 700m from unconventional gas wells are at greater risk for health effects than those living greater than 700m from wells, largely due to exposure to trimethylbenzenes, aliphatic hydrocarbons and xylenes (McKenzie, et al. 2012)<sup>v</sup>. Cumulative cancer risks were significantly greater in residents living less than **700m** from wells, attributed mainly to benzene exposure. Another large study based on 124,842 live births over 13 years observed an association between density and proximity of gas wells within a **1600m** radius of maternal residence and prevalence of congenital heart defects and possibly neural tube defects years (McKenzie, et al. 2014)<sup>vi</sup>.
- n) CJT submit that to protect local communities, provision 3.2.2 be amended with much increased setback distances determined by **science and thorough analyses and following the precautionary principle**, rather than arbitrarily. Based on the above health studies, CJT propose a minimum of 700m setback from petroleum exploration, production and injection activities. Within the setback, the establishment of new dwellings and other sensitive activities would be Prohibited. Beyond the setback, such activities would be Discretionary. The setback distances should be measured as described in submission points 2e and 2f.

## **Rural Industrial Zone Rules and Energy Rules**

- o) The Rural Industrial Zone **Rules 8.1.1** classify "*Energy generation activities (including petroleum exploration and production)...*" and "*activities and facilities involving or associated with the recovery, treatment and/or processing of petroleum or its derivatives*" as **Permitted**. The associated performance standards (provisions under 8.2) relate to concept plans, bulk, landscaping, lighting, odour, transport and noise, but not the safety risks and potential adverse effects from the hazardous

nature of these activities. Whilst there is a setback distance of 300m in the Rural Zone Rules for dwellings and other sensitive activities from the Rural Industrial Zone (primarily to address reverse sensitivity issues), there is **no setback distance** for the establishment of new petroleum associated activities in the Rural Industrial Zone.

- p) **Energy Rules provision 13.1.1(c)** classifies petroleum prospecting, exploration and production in the Rural Industrial Zone as Permitted, and stipulates no performance standards (provision 13.2) or setback distance.
- q) Given the health and safety risks and potential amenity and environmental effects of petroleum related activities, and the fact that the Rural Industrial Zone is adjacent to the Rural Zone, **provisions 8.1.1 and 13.1.1(c)** are unacceptable. Adequate setback distances are required to minimize the risks on nearby people and the environment. CJT propose a minimum of 700m setback from sensitive activities, within which all petroleum associated activities would be Prohibited. Beyond the setback, such activities would be Discretionary, and all landowners within 1600m or further (depending on the scale and intensity of the petroleum related activities and the actual level of risks) from site would be affected parties. (See also submission points 2m)
- r) **Provision 13.1.1(a)** classifies petroleum prospecting, including seismic exploration, as Permitted in the Rural Zone, and stipulates no performance standards or setback distance. Seismic surveys were exempted from the Hazardous Substances provisions following PEPANZ's feedback (section 32 report on hazardous substances), as was the exclusion of oil and gas activities from the definition of Major Hazardous Facilities subject to Health and Safety Regulations. This is suggestive of regulatory capture. In the latter case of exclusion of oil and gas activities from the definition of Major Hazardous Facilities, as noted above this appears to conflict with the public comments of Blair Sutherland, and the evidence that demonstrates the major hazardous nature of such activities. (See also submission points 2a to 2d)
- s) **Provision 13.1.4** classifies petroleum exploration and production activities in the Rural Zone (but not in the Coastal Protection Area or in an area of Outstanding Natural Features and Landscapes) as Discretionary, without any separation distance. CJT would support this provision, but only with an adequate separation distance from sensitive landuse. It is a real concern that the 150m setback distances in the Rural Zone Rules for dwellings and other sensitive landuse from petroleum activities (primarily to address reverse sensitivity issues), could potentially be used by companies and regulators to argue that 150m would be an adequate separation distance for establishing new petroleum activities in the Rural Zone. (See also submission points 2l and 2m)
- t) **Provision 13.1.5** classifies petroleum exploration and production activities in the Coastal Protection Area or an area of Outstanding Natural Features and Landscapes, as Non-complying. CJT disagree and submit that petroleum exploration, production and waste disposal activities should be Prohibited within:
- an adequate separation distance from sensitive activities in the Rural Zone,
  - the Coastal Protection Area (See also submission points 2g, 2h and 2cc),
  - an area of Outstanding Natural Features and Landscapes,
  - the Residential, Township, Commercial and Industrial Zones, and
  - any regionally significant wetlands, and significant natural areas.

## Hazardous Substances Rules

- u) CJT seek clarification of the Hazardous Substances **Rule 12.2.4**. In the proposed plan, Discretionary Activities include: *“In the **Rural Industrial Zone**, any existing major hazardous facility which increases the use, storage or handling of hazardous substances by **no more than 20%** over the base figure...”* This appears rather different from the Section 32 Report on Hazardous Substances and Contaminated Land which says, *“Rule 12.2.4(c) Requires discretionary resource consent for the use, storage or handling of hazardous substances by an increase of **more than 20%** for existing major hazardous facility in the **Rural Zone**.”* If the latter statement implies that the increase of no more than 20% is Permitted, CJT argue that it is not acceptable, especially where homes and other sensitive activities already exist within 200-300m from such hazardous facilities.
- v) CJT submit that **any increase or expansion of major or non-major hazardous facilities** within the Rural Industrial or Rural Zone should be Discretionary, irrespective of the amount of increase, and any increase of more than 20% should be publicly notified. (See also our submission points 2a, b and c on definitions).
- w) Provision **12.3.1** states that *“Hazardous facilities shall be located no closer than 200m of a sensitive activity”*. During council’s consultation, WorkSafe New Zealand commented that *“the draft provisions did not go far enough to address reverse sensitivity issues on hazardous facilities. The risk posed by a hazardous facility is directly related to the nature (particularly the population density) of the receiving environment. New sensitive activities close to an existing hazardous facility may result in unacceptable risks to the new activity and/or reverse sensitivity effects on the existing facility.”* Based on these comments by WorkSafe and health studies overseas, CJT submit that the 200m setback distance be extended considerably. **Hazardous facilities should be Prohibited within the determined setback**, and Discretionary beyond the setback. CJT propose a **minimum of 700m** setback, within which all petroleum associated activities would be Prohibited. Beyond the setback, such activities would be Discretionary, and all landowners within 1600m or further (depending on the scale and intensity of the hazardous activities and the actual level of risks) from site would be affected parties.
- x) **Provisions 12.3.2-12.3.4** do not stipulate a setback distance between Hazardous Facilities and **Significant Waterbodies, Regionally Significant Wetlands or Significant Natural Areas**, unless a Significant Waterbody is identified with natural hazards (12.3.4). These provisions should be amended to include an adequate setback distance for all significant waterbodies, wetlands and natural areas, whether or not they are prone to natural hazards. The 50m setback distance to a Significant Waterbody identified with natural hazards appears to be determined arbitrarily. CJT question how this figure was determined?
- y) **Provision 12.3.4** on natural hazards has removed the restriction (limited discretionary) on all developments within **100m of a geological fault line** stated in the 2004 operative district plan. This needs to be reinstated, and possibly with a larger separation distance, considering the increasing number of peer-reviewed scientific studies showing the links between increased earthquake events, deepwell injection and fracking. Given Taranaki has over a dozen fault lines (GNS, 2013)<sup>vii</sup> and is subject to episodic seismicity, including earthquakes of greater than magnitude 5, it is extremely unwise to allow oil and gas drilling, fracking and deepwell injection to occur anywhere near fault

lines. Furthermore, the Parliamentary Commissioner for the Environment<sup>viii</sup> advised in 2014, “it is desirable to **avoid locating wells, particularly those used for the reinjection of wastewater, in the vicinity of major faults**. Putting aside the potential for triggering earthquakes, there is another more compelling reason for drilling carefully in seismically active areas. Natural earthquakes can damage wells, potentially allowing contaminants to leak into aquifers, and possibly lead to well blowouts and fires.”

### Natural Environment Rules

- z) **Provision 17.1.5** classifies petroleum exploration and production within the Coastal Protection Area as Non-complying. CJT submit that petroleum exploration, production and waste disposal/treatment activities be Prohibited within the Coastal Protection Area, any area of Outstanding Natural Features and Landscapes, and any regionally significant wetlands and significant natural areas (See also point 2s).
- aa) CJT have issues over the clearance of indigenous vegetation over 100m<sup>2</sup> in the Coastal Protection Area and any clearance of indigenous vegetation in any Significant Natural Area or Regionally Significant Wetland listed in Schedules 2 and 6 (**provisions 17.1.4a, d and f**). CJT submit that such clearances should be Prohibited or Non-complying. Indigenous vegetation plays an important role in slowing down coastal erosion which is likely to become more severe with more frequent extreme weather associated with climate change.
- bb) CJT has issues over earthworks not exceeding 2.5m in the Coastal Protection Area (**provision 17.1.4a**) and would prefer these be classified Prohibited or Non-complying rather than Discretionary. CJT seek clarification on the kind of earthworks envisaged and whether these might include landfarming and mix-bury-cover operations for petroleum wastes?
- cc) CJT oppose the proposed halving of the Coastal Protection Area in an erosion prone region where erosion is already occurring at >1m per year in places<sup>ix</sup>, question the rationale behind it, and seek a revision and possibly expansion (rather than reduction) of the existing Coastal Protection Area.

### 3. CJT seek the following decision from the South Taranaki District Council:

Accept the Proposed Plan with the following amendments:

- a) Address all the issues raised in the listed provisions above.
- b) Include an in-depth section on **cumulative effects**, with additional provisions based on the precautionary principle, to address them. The Section 32 report on Hazardous Substances and Contaminated Land highlighted “*managing cumulative effects from multiple facilities*” as one of several potential situations where “*additional controls under the RMA may be necessary*”. The plan in its current form does not adequately address cumulative effects. This is especially important in terms of the heightened risks on sensitive landuse as the number and range of hazardous facilities or oil/gas installations within an area and the number of wells within each wellsite increase over time. E.g. Provisions are needed to take into account the different risk levels from installations of different sizes and intensity of activities.

- c) **Deepwell injection and fracking sites** are especially prone to cumulative effects, as underground pressure builds up and changes, causing unpredictable, potentially devastating outcomes, from earthquakes to groundwater contamination. Setback distances between such sites can only help to address some of the cumulative effects, especially as the scale and intensity of these activities increase, and encroachment into rural and sensitive land use becomes common place. CJT and many other organisations (including Forest & Bird and ECO) are calling for a nationwide ban<sup>x</sup> on fracking because of its impacts on local communities, the environment and the consequential effects on the climate change.
- d) Introduce specific provisions on **landfarming, mix-bury-cover and other petroleum waste facilities**. At least two landfarms are located within the Coastal Protection Area (Rural maps 14 and 10). These facilities should be prohibited from Coastal Protection Area and with adequate setback from Outstanding Natural Features / Landscapes and Significant Waterbodies, Regionally Significant Wetlands and Significant Natural Areas.
- e) It is good to see the range of **renewable energy** sources mentioned in section 2.9, notably policies 2.9.15 *“Recognise and provide for the potential for biogas and biomass energy and electricity generation...”* (Especially from organic wastes) and 2.9.16 *“Recognise and provide for the benefits of small or community-scale renewable electricity generation activities...”* These could be more explicit and elaborated in the Energy Rules (section 13), especially energy and electricity generation from farm wastes. In the context of responsible long term planning, council needs to encourage and support the development and uptake of renewable, sustainable energy systems. The fossil fuel industry is at its twilight as nations worldwide tighten up on emissions and divestment campaigns grow. The increasing costs on council to protect coastal amenities and utilities from climate change impacts exacerbated by the fossil fuel industry must not be ignored.
- f) Council also pointed out the impacts of **climate change and associated sea level rise, coastal erosion and storm surges** in section 2.19. The halving of the Coastal Protection Area and the removal of the entire section 12 on **Natural Hazards** in the 2004 district plan from the proposed plan appear at odds with its policy. The original Coastal Protection Area and the Natural Hazards section both need to be reinstated, reviewed and potentially expanded to take into account the full implications of climate change and associated hazards, for the protection of people, sensitive activities and essential utilities, and to facilitate adaptation.
- g) In the process of reviewing the plan, we find that it contains a number of rules and statements that appear contradictory or without clear explanations. We believe the plan requires substantial clarifications and reworking to make it unambiguous to everyone and effective in achieving its objectives, for the benefits of local and the wider communities and environment in Taranaki. This is especially important if the plan is to become a reference for other councils in New Zealand.

#### **4. CJT wish to be heard in support of our submission.**

#### **5. CJT could not gain an advantage in trade competition through this submission.**

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- <sup>i</sup> Proposed South Taranaki District Plan, 2015. *Section 32 Report – Hazardous Substances and Contaminated Land*.
- <sup>ii</sup> Taryn Utiger, 2015. *Campaigner and council go head to head over South Taranaki oil and gas rules*. Taranaki Daily News, 7 Oct 2015. <http://www.stuff.co.nz/taranaki-daily-news/news/72779623/campaigner-and-council-go-head-to-head-over-south-taranaki-oil-and-gas-rules>
- <sup>iii</sup> Sarah Ongley, 2015. *Protecting Sth Taranaki’s coastline*. Taranaki Star, 8 Oct 2015.
- <sup>iv</sup> EPA West Australia, 2005. *Guidance for the Assessment of Environmental Factors (in accordance with the Environmental Protection Act 1986) - Separation Distances between Industrial and Sensitive Land Uses No.3*.
- <sup>v</sup> McKenzie, L.M., R.Z. Witter, L.S. Newman and J.L. Adgate, 2012. *Human health risk assessment of air emissions from development of unconventional natural gas resources*. Science of the Total Environment. doi: [10.1016/j.scitotenv.2012.02.018](https://doi.org/10.1016/j.scitotenv.2012.02.018)
- <sup>vi</sup> McKenzie, L.M., R. Guo, R.Z. Witter, D.A. Savitz, L.S. Newman and J.L. Adgate, 2014. *Birth outcomes and maternal residential proximity to natural gas development in rural Colorado*. Environmental Health Perspectives. <http://dx.doi.org/10.1289/ehp.1306722>
- <sup>vii</sup> GNS, 2013. *A model of active faulting in New Zealand: fault zone parameter descriptions*. GNS Science Report 2012/19. <http://www.gns.cri.nz/static/pubs/2012/SR%202012-019.pdf>
- <sup>viii</sup> Parliamentary Commissioner for the Environment, 2014. *Drilling for oil and gas in New Zealand: Environmental oversight and regulation*.
- <sup>ix</sup> Proposed South Taranaki District Plan, 2015. *Section 32 Report – Natural Hazards*.
- <sup>x</sup> Community Joint Statement – A call to ban Fracking in New Zealand, September 2015. <https://climatejusticetaranaki.files.wordpress.com/2013/03/community-joint-statement-on-fracking-2015-15sept2015.pdf>