

29 February 2016

Attention: Jane Macartney
Waikato District Council
Private Bag 544
Ngaruawahia 3742

Tuakau Structure Plan
IZ058500

Tuakau Structure Plan - T&T Report Peer Review

Dear Jane

Thank you for the request for a peer review of the Tonkin and Taylor (T&T) report on air quality and separation distances prepared for the Tuakau Structure Plan Change.

You explained that you are working on a plan change to re-zone of land for residential purposes and have commissioned T&T to prepare a report recommending certain buffer distances from established businesses including: Waikato Byproducts (now Tuakau Protein), Envirofert and various poultry operations.

I understand that your objective is to have a well-developed and defensible position for potential hearings and possibly Environment Court proceedings, if required. You specifically asked if the T&T approach is well founded and would be supported by others in the air quality field.

The approach I have taken in conducting the review is to consider:

- what position would I take if I was working for a party in opposition to the proposals; and
- what would I do to strengthen support for the proposals.

Section 1 of the T&T report states the purpose of the report under listed items i) to v) and these are repeated below. I provide comment on each in turn.

i. Provide background information on the need for separation distances between industrial facilities and sensitive activities to avoid adverse effects of emissions to air, particularly amenity effects of dust and odour, and to avoid reverse sensitivity effects on existing industry.

In my view, this section would benefit from more detail on what the effects of dust and odour are and a brief summary how these effects are assessed and mitigated particularly by separation of activities giving rise to these effects on sensitive land uses. The section should also discuss “reverse sensitivity” and the principle of internalisation. The MfE *Good Practice*

Guide to Odour Assessment and Management (2003) could provide a useful source of information. In my view this additional information would provide more background and justification for the approach being proposed by WDC to provide separation distances for avoiding or minimising reverse sensitivity effects from rezoning. At present this is not explicit.

The MfE, publication *Managing Rural Amenity Conflicts* (2000), while relatively old and specific to the rural urban interface, it contains also useful background concepts and case law on reverse sensitivity, internalisation and separation distances in New Zealand.

I understand that there may be little precedent in New Zealand where separation distances for air quality effects have been successfully applied in District Plans, or through land use decisions, particularly for industrial activities. On this basis, the approach itself would likely be subject to criticism from a party in opposition, where other experts may argue for internalisation to a higher degree as an appropriate mitigation. Reference to the legislative basis for applying this tool would add value to the report, although I acknowledge that this aspect is likely to be covered by WDC planning staff.

In my view, it would strengthen the arguments, if T&T were able to find some New Zealand case examples of separation distances as a land use planning tool and/or in land use decisions, preferably for similar or the same activities. Information which may assist with the proposed land use controls is available from the Quality Planning (QP) website: <http://www.qualityplanning.org.nz/index.php/planning-tools/air-quality/district-air-quality-planning>. On the QP website, Nelson is cited as a good practice example for specifying a policy to address separation distances. While methods A5-1.8.viii of this policy advocates the physical separation of incompatible activities through zoning, buffer areas, covenants or similar mechanisms, we are not aware if specific buffers have been specified to date.

The New Plymouth District Council has specified separation distances for piggeries and poultry farms in rural zone rules (as in Franklin). No specific separation distances appear to have been provided for specific industrial activities in the New Plymouth Plan in relation to specific industries, although the zoning as heavy and light does appear to take into account the proximity to residential use.

ii. Summarise published guidance on separation distances between industrial activities and sensitive activities.

I agree that T&T has covered the key references for separation distances and that the more recent references should be considered the most relevant. This is given that the more recent references are likely to reflect current good practice controls for internalisation within each sector/industry. I note that Table 6.1 summarises the published guidance for the activities in the Whangatarata Industrial area. I would have expected to see a table that summarises all the relevant separation distances from all the referenced sources somewhere in the report.

While the key sources of published guidance are identified, it is not always apparent why T&T has selected a particular source over another. In some cases, the rationale for selection of a particular reference/source for the recommended buffer should be more explicit eg. the waste water treatment plant (WWTP) refers only to the VicEPA, is this because the other reference sources do not cover WWTPs?

I attach an overview of industry zones for Brisbane City, which is generally consistent with T&T's overall recommendations. It may be of assistance to make contact with Brisbane City Council staff to see what documentation it holds to further support the setting of separation distances.

As above, there may be some additional separation distance provisions available from district or unitary plans in New Zealand, that could be considered. In addition, a discussion on the

status of the Auckland Council document and/or that Council's experience with applying the recommendations would add context for the WDCs adoption of the separation distances from the same Australian jurisdictions. ie in my view, if there is little evidence of the application of this tool in the New Zealand context, it would be useful to consider why and develop/ensure a sound basis for adopting them in this case.

It would appear that T&T has discounted the Auckland Council's discussion document as being out of date (and possibly because it is lacking in status). It would be good if T&T could make their rationale explicit ie if they have consequently relied on their own review of the more up to date Australian guidance.

iii. Identify activities sensitive to amenity effects of dust and odour and discuss amenity expectations in different zones, particularly those that provide for residential activity. Identify activities that are compatible with being located in a buffer around industrial activities.

T&T has quoted a definition for sensitive activities from the Vic EPA, which is not wholly relevant in an RMA/NZ context. New Zealand guidance exists both on what is a sensitive activity and on amenity expectations for different types of land use category, see the MfE Odour Guide. The NZ Transport Agency also defines Highly Sensitive Receivers as receivers in locations where people or surroundings may be particularly sensitive to the effects of air pollution. Examples include residential houses, hospitals, schools, early childhood education centres, childcare facilities, rest homes, marae, other cultural facilities, and sensitive ecosystems <http://air.nzta.govt.nz/>. These sources would appear to provide more clarity in the NZ context than the definition provided by the Vic EPA.

There is no reference provided for the list of activities suitable for buffer areas. The source of the list and/or an explanation of how it was derived would add value.

iv. Identify existing industrial activities in the Tuakau area with the potential for amenity effects, particularly those activities that require resource consent for discharges to air of dust and odour. Recommend appropriate separation distances for these identified industrial facilities to inform the potential re-zoning of land near these sites.

We have not specifically reviewed the list of industries and assume that it is comprehensive. I agree that the scale and technology employed are key to considering the appropriate separation. As noted above, the specific justification for a particular separation distance is not clear in all cases. For any plan hearing, the selected separation distance may need to be supported by additional information on effects eg odour complaint data with distance from source and/or experience from elsewhere in NZ.

v. Identify an appropriate separation distance (buffer area) for the Tuakau/Whangarata Industrial area base on existing activities within the zone.

T&T has based its recommendations for the Whangarata Industrial area on an assumption that the nature of the activities will not be changing. In our view, it is important that this assumption is supported by the underlying land use provisions about what type of activities are allowed in the zone under both current and proposed provisions.

I note that the report refers to risk of explosions due to hazardous substances and excludes this from consideration. In our experience, explosion risk has arisen as a reverse sensitivity issue due to a change in adjacent land use and may warrant further consideration. This aspect may be covered by other rules in the plan.

General Comments on the T&T Report

In Section 2.5 of the T&T report, it is not clear why the Vic EPA method for setting separation distance was adopted, particularly without discussion of methods from other jurisdictions, or a more general discussion of the approaches to defining separation distances. I would expect to see a broader discussion of the alternatives followed by a recommendation.

It is important to note that the method for setting and/or measuring the separation, goes with the jurisdiction the value was taken from and this should be considered when considering values from different sources.

In my view, the report does not provide “an assessment of effects of air quality” of the plan change proposal as envisaged in the report title. The report does not discuss, quantify or come to a conclusion as to whether the land use change in this instance has an adverse effect on neighbouring land use ie a reverse sensitivity effect and whether the proposed buffers are adequate mitigation. The report simply reviews literature on separation distance and seems to arrive at what the authors consider a reasonable value for separation based on the review of established buffers from Australian jurisdictions. There is little specific justification for adoption of the recommended separation values provided in the document.

Further, the report does not fully explore the existing situation ie baseline. What are the existing separation distances to residential use and to what extent are these distances changing. To what extent have there already been adverse effects from existing industries and how would this be likely to change with the proposed land use?

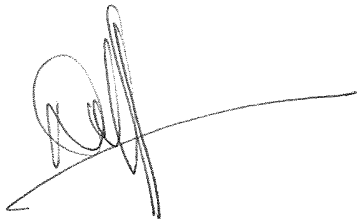
I also note some matters for WDC consideration, which I understand are likely to be outside the scope of the T&T report, but that from our experience we understand are important aspects to considering land use controls for air discharge aspects as follows:

- what is the planning context for the inclusion of separation distances? ie do the policies and methods support this approach; and
- what is the general availability of land for residential use eg. what alternatives have been considered?

Summary

I agree that T&T has covered the key references for the use of separation distances for odour and dust (discharges to air); although they appear to have relied heavily on Vic EPA, when the reason for doing so is not always made clear. In our view, the report does not assess the effect of the land use change proposal. In our view, further justification of the proposals will be needed for any plan hearing.

Yours sincerely

A handwritten signature in black ink, appearing to be 'Deborah Ryan', with a long horizontal line extending to the right.

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The new City Plan

your city, your plan, **your say**

INDUSTRY ZONES



Brisbane City Council is planning for, and managing the city's growth and development to support Brisbane's evolution into a new world city. The draft new City Plan will guide how land in Brisbane can be used and developed, help us plan to support growth and create a more diversified economy.

Area classifications will become zones

The City Plan is a land-use plan, that categorises all blocks of land for different uses. These categories say where a house or apartments can be built and where industry can be located. Under the current *Brisbane City Plan 2000*, these categories of land are called area classifications. In the draft new City Plan these categories will be called zones. This change is due to new standardised planning scheme provisions, the Queensland Planning Provisions (QPP), under Queensland Government planning legislation.

Balancing industry and its impacts

The draft new City Plan breaks industrial land into zones based on the anticipated impacts of industry. In this way the draft new City Plan proposes to separate industrial areas from potential residential uses. The plan also proposes 'buffer' zones – areas between industry and residential. These buffer zones will ensure industry uses are properly separated from residential areas to protect residents' amenity, health and wellbeing.

Under the QPP, each zone has a designated colour and meaning. Council uses these colours on maps to show in which zone blocks of land are located.

The table over the page outlines the changes in classification from *Brisbane City Plan 2000* to the draft new City Plan.

Draft new City Plan example of a zoning map*




- Medium impact industry
- Low impact industry
- Open space

* Not all industry zones and precincts are reflected on this map




For more information or to submit your feedback on the draft new City Plan

 Visit www.brisbane.qld.gov.au/newcityplan and make an online submission using the online submission form.

 Write to *new City Plan, Brisbane City Council, Reply Paid 1434, Brisbane, Qld 4001*

 Email the project team on newcityplan@brisbane.qld.gov.au

 Find us on Facebook at [facebook.com/BrisbaneCityCouncil](https://www.facebook.com/BrisbaneCityCouncil)

 Phone Council on (07) 3403 8888

 Find us on Twitter at twitter.com/brisbanecityqld



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INDUSTRY ZONE CATEGORIES

The following table explains the conversion of industry zones.

Current Brisbane City Plan 2000 area classification	New City Plan zone	General locations of new zones	Examples of intended development
Light Industry	Low Impact Industry	Most Light Industry located 250m or less from residential land or other sensitive land uses.	<ul style="list-style-type: none"> Warehouse. Service industry. Some non-residential uses that support industry e.g. cafe.
General Industry	Medium Impact Industry	Some General Industry and Heavy Industry located 250-500m from residential land or other sensitive land uses.	A mixture of: <ul style="list-style-type: none"> medium-impact industrial activities e.g. panel beater shop. low-impact industrial activities e.g. mechanic.
Heavy Industry	High Impact Industry	Some General Industry and Heavy Industry located 500-1500m from residential land or other sensitive land uses.	A mixture of: <ul style="list-style-type: none"> high-impact industrial activities e.g. metal plating works. medium-impact industrial activities e.g. joinery works low-impact industrial activities and some non-residential uses that support industry uses e.g. cold store.
Heavy Industry	Special Industry	Generally Heavy Industry located over 1500m from residential land or other sensitive land uses.	<ul style="list-style-type: none"> Special industry activities e.g. oil refinery.
Future Industry	Industry Investigation Area	Most Future Industry (excluding land where development has occurred).	<ul style="list-style-type: none"> Appropriate interim uses until the land is made ready for future industry uses e.g. industrial storage.
Extractive Industry	Extractive Industry	Extractive Industry locations.	<ul style="list-style-type: none"> Extraction and processing of resources and associated activities, including their haul routes e.g. hard rock quarry.



Disclaimer: The content of this information sheet deals with technical matters in a summary way only and has been prepared to assist the reader to understand the draft new City Plan. Please refer to the draft new City Plan for further detail.

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N2013-03126
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JULY 2013