NES PERMITTED ACTIVITY FOR SUBDIVISION AND LAND USE CHANGE - WHAT DOES "HIGHLY UNLIKELY" ACTUALLY MEAN AND HOW DO YOU ASSESS IT?

Chris Hillman, Tonkin & Taylor Ltd[1]

INTRODUCTION

The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations, 2011 (the NES) is a national standard that applies throughout New Zealand to address human health effects from contaminated land. The regulations within the NES are relatively prescriptive, except for permitted activity Regulation 8(4). This regulation requires a Suitably Qualified and Experienced Practitioner (SQEP) to make a judgement on whether it is Highly Unlikely that there is a contamination risk to human health from an activity.

There is little guidance on how a SQEP should make an assessment of Highly Unlikely under Regulation 8(4). The purpose of this paper is to generate discussion of what Highly Unlikely means when assessing if the Regulation 8(4) conditions can be met for a particular activity on a site.

DEFINITIONS OF "HIGHLY UNLIKELY"

Regulation 8(4) of the NES states that for subdivision or land use change to be a permitted activity, a preliminary site investigation must exist that states "*that it is highly unlikely that there will be a risk to human health if the activity is done to the piece of land."* The NES User's Guide (MfE 2012) states that *"highly unlikely should be interpreted in a plain English way to mean a high probability that there is no serious or real and substantial risk"*.

Definitions of some of the terms used in the User's Guide explanation of Highly Unlikely are provided in Appendix 1 of this paper. These definitions are derived from case law and current legislation. They help to expand the Plain English understanding of Highly Unlikely, but ultimately do not provide any more clarification than is given by the NES User's Guide.

[1] Tonkin & Taylor, Auckland (CHillman@tonkin.co.nz)

A THOROUGH PSI

Regulation 8(4) requires an assessment of whether there is **a** risk to human health. Not a significant risk, not an acceptable risk, but whether there is **a** risk. This implies that meeting Regulation 8(4) is about how comprehensive the PSI methodology is in searching out risks to human health, not the probability of identified risks causing harm.

The NES User's Guide states that the requirements for a PSI are compliance with the Ministry for the Environment Contaminated Land Guidelines No. 1 (CLMG No. 1, MfE 2011a). A summary of the NES guidance is provided in Appendix 2.

The User's Guide also indicates that for an assessment of Highly Unlikely, *"the most thorough PSIs are often required where… a detailed site investigation is not warranted for subdividing or changing the land use".* The NES directly addresses the protection of human health and Regulation 8(4), as a permitted activity, assumes that the risks are so low that no control by Council is required to provide that protection. It would therefore be reasonable for the SQEP to comprehensively meet the CLMG No. 1 PSI requirements.

Non-HAIL sites can be problematic as there is often a lack of data (almost by definition). For this reason, the most thorough desk study searches can be required where there is a lack of information on potential contamination. It may be appropriate to undertake limited testing as part of a thorough PSI (eg to demonstrate that horticultural chemicals were not present in surface soils). It is noted however, that this could be overly conservative in some cases and that the NES User's Guide specifically states that testing is not required for a PSI to allow an assessment against Regulation 8(4).

WHAT CONSTITUTES "A" RISK?

The NES regulations minimise the contamination exposure risks by a series of conditions for permitted activities and by giving Council control where consent is required. Examining Regulation 8(4) in the context of the NES as a whole indicates that **a** risk is present where exposure to contamination for users of the site over the long term exceeds that which would be received by background exposure (see Appendix 3).

ASSESSMENT METHODOLOGY

The assessment of Regulation 8(4), by the nature of the data gathered in the majority of cases, is qualitative. MfE 2012 states that "*qualitative assessment can be made, based on the likely nature of any contamination and the exposure pathways by which existing or future occupants of the land may be exposed to the soil"* (MfE 2012), ie a qualitative assessment of the Conceptual Site Model (CSM).

A qualitative assessment of exposure can be made using the CSM to identify where linkages between the Source, Pathway and Receptor are absent. Where a linkage is absent, then exposure reduces to background levels. Case Study 5 in the User's Guide uses the example of sealed yards and building floor slabs cutting pathways between contamination and site users (thus reducing exposure to background). Another example would be where chemical bulk storage had occurred (Activity A2 on the HAIL[2] List) and the conditions of storage were such that it was clear no leak had occurred because there were above ground bunded tanks with good historical records (source absent).

ASSESSMENT TIMEFRAME

Regulation 8(4) does not stipulate the time period that should be considered when land use change is assessed. If the assessment relies on a barrier to isolate site users from contamination, then that barrier could potentially be removed in the future as a permitted activity. It is therefore incumbent on the SQEP to consider the risk of barrier removal as part of the Regulation 8(4) assessment, or incumbent on the land owner/operator to either maintain the barrier or to have the situation re-assessed if the barrier is removed. There is limited opportunity for Council to monitor this.

[2] Ministry for the Environment Hazardous Activities and Industries List, a 2012 version of which is presented as Appendix C in the NES User's Guide.

CONCLUSIONS

The NES directly addresses the protection of human health. As a permitted activity, Regulation 8(4) assumes that the risks are so low that no control by Council is required to provide that protection. Assessment of Regulation 8(4) is about how comprehensive the PSI methodology has been to identify contamination risks. It is not about how significant the identified risks are. The most comprehensive PSIs are required for sites where no HAIL activities are identified.

Examining Regulation 8(4) in the context of the NES indicates that **a** risk is present where exposure to contamination for site users over the long term exceeds that which would be received by background levels.

The Conceptual Site Model provides a method of assessing whether a risk is present using qualitative PSI data. Where linkage(s) between source, pathway and receptor are absent, exposure reduces to background levels, indicating that it is Highly Unlikely there is a risk to human health.

DISCLAIMER

The opinions within this paper have been provided by the author to foster debate and should not be taken as those of Tonkin & Taylor or those of the people acknowledged below

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APPENDICES

APPENDIX 1 - DEFINITIONS

A search for statutory definitions and phrases was undertaken using the following sources:

- Current New Zealand Legislation (Brookers) – principally the interpretation, along with new-style New Zealand statute explanatory notes.
- New Zealand Case Law (Brookers and LEXIS) – largely Resource Management Act or general cases, including commercial cases (eg contracts). Criminal cases were not relevant as they principally dealt with assault, theft, etc.
- Legal words and phrases from around the Commonwealth (mostly case law, but some legislation).

The results of the searches are detailed below.

Highly Unlikely

No definitions of Highly Unlikely were found, but for likely/unlikely:

- *"Not likely, improbable"* (Chambers 1995).
- *"The word "likely" does not require an event to be more likely than not to occur, but merely requires a serious or real and substantial risk"* (Commissioner of Police v Ombudsman [1985] 1 NZLR 578 (CA).

Highly Probable

No definitions of highly probable were found. But for probable:

- *"Having more evidence for than against; likely to happen; likely to be the case"* (Chambers 1995)
- *"The word probable is a common enough word. I understand it to mean that something is likely to happen"* (Carswell 1993).

- *"It has various shades of meaning. Sometimes it appears to mean more probable than not, sometimes it appears to include events likely but not very likely to occur, sometimes it has a still wider meaning and refers to events the chance of which is anything more than a bare possibility and sometimes when used in conjunction with other adjectives, it appears to serve no purpose beyond rounding off a phrase"* (Carswell 1993).
- *"The common use of this word is no doubt to imply that something is more likely to happen than not"* (Carswell 1993).

Serious risk

No definition of serious risk were found. But for serious:

- *"Approaching the critical or dangerous; concerned with weighty matters; significant, notable, or in significant quantities"* (Chambers 1995).

Real risk

No definitions of real risk were found, but for real:

- *"Actually existing, not assumed, genuine, authentic"* (Chambers 1995).
- *"Threshold of real risk is dealt with in Shirley Primary School v Telecom Mobile Communications Ltd: In the end we find all the expert psychological evidence unhelpful. We had direct evidence about people's fears, exposure to RFR*[3] *from enough parents and teachers to be sure that a significant part of the school community is genuinely concerned about, even fearful of, the effects. But whether it is expert evidence or direct evidence of such fears, we have found that such fears can only be given weight if they are reasonably based on real risk."* North Canterbury Gas Ltd v Waimakariri DC EnvC A217/02.

Substantial risk

No definition of substantial risk were found, but for substantial:

- *"Actually existing, real"* (Chambers 1995).

[3] Radio Frequency Radiation

- *"A word of no fixed meaning, it is an unsatisfactory medium for carrying the idea of some ascertainable proportion of the whole"* (Stroud 2012).
- *"It seems to me that His Honour Judge Abbey was quite correct ... when he characterised the "substantial risk" as "real and apparent on the evidence presented. Not a risk that is without substance or which is fanciful or speculative.""* (Carswell 1993).

APPENDIX 2 – METHODOLOGY GUIDANCE

The NES User's Guide provides the following guidance on the formulation of a PSI:

Section 2.1.1 Is the land covered by the NES?

"In practice, the most thorough PSIs are often required where... that [sic]*a detailed site investigation is not warranted for subdividing or changing the land use, because it is highly unlikely that there will be a risk to people if the activity is done".*

Section 2.3.3 Subdividing land or changing land use as a permitted activity

"...to meet the requirements for permitted activity, the investigation report would make an assessment as to the potential for people who will use the land to be exposed to contaminants, and whether it is likely that such exposure would present a risk to their health. It is important to note that, in this case, the regulations do not require soil sampling to be undertaken, nor for applicable standards to be identified. Rather a qualitative assessment can be made, based on the likely nature of any contamination and the exposure pathways by which existing or future occupants of the land may be exposed to the soil."

To comply with the regulation the council must be satisfied that the person who certified the report is a suitably qualified and experienced practitioner and that the report has been completed in accordance with CLMG No.1

APPENDIX 3 – CONTEXT OF REGULATION 8(4) WITHIN THE NES

If the conditions of Regulation 8(4) cannot be met, then a proposed subdivision or land use change would be at minimum a controlled activity and only a controlled activity if contamination were below the NES human health standards (and above background). The intent therefore appears to be that, for exposure to contamination above background, Council should have a degree of control over the proposed activity.

There are three other permitted activity regulations within the NES: Regulations 8(1), 8(2) and 8(3)[4]. These regulations do not require contamination concentrations to be at or below background levels. These regulations also share similar controlled and restricted discretionary rules to Regulation 8(4). The difference with the tank removal, sampling and soil disturbance rules is that their conditions limit activities to a short duration (2 months in the regulations, and generally likely to be two to three days in reality) and the activities are undertaken by adults with the benefit of Health & Safety controls. So although contamination may be present, the short durations and adult receptors limit the exposure of people to any contamination.

In conclusion, the above indicates that to be consistent with the other rules within the NES, site users exposure to contamination would need to be close to that which would be received by background concentrations.

[4] Regulations 8(1), 8(2) and 8(3), for tank removal, soil sampling and disturbing soil respectively.