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**Government Inquiry into Havelock North Drinking Water**

**Stage Two Issues and Questions**

NB 1 This list covers a substantial range of issues concerning drinking water. The Inquiry acknowledges that not all issues are likely to be of equal importance to the matters to be reported on, and that some issues will warrant closer examination than others. However, the Inquiry does not see it as appropriate to accord priority or importance to particular issues at the outset, and parties are invited to make submissions to the Inquiry which indicate the relative importance which they believe attaches to various issues, and which focus most fully on those which that party sees as having most importance.

NB 2 The column “Scope and Elements of Issue” is a guide to the matters which the Inquiry currently considers most relevant or useful; parties are free to raise additional matters, provided they are relevant to the issue, and within the Terms of Reference.

NB 3 The Inquiry’s approach will generally be to consider all drinking water regulated by the Health Act but, where appropriate, it may limit its consideration to only large, or large and medium, supplies (as defined in the Health Act). It acknowledges that smaller supplies may have different considerations.

|  | **Issue** | **Scope and Elements of Issue** |
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| 1 | **Current safety Havelock North Drinking Water** | 1. As concerns Brookvale bore 3 and its associated treatment plant: since re-opening on 7 March 2017, review its effectiveness, operational history, test results, maintenance and inspection schedule, any problems or concerns with it;
2. Status of, and any plans for, Brookvale bore 2;
3. HDC’s current WSP
4. HDC’s current Emergency Response Plan (ERP) for Drinking Water
5. The status of, and plans for, the Hastings bores supplying Havelock North
6. The investigative monitoring regime recommended by the Inquiry on 15 December 2016: results, proposals for continued investigative monitoring, issues arising out of investigative monitoring;
7. The experience of the JWG in overseeing current drinking water safety: effectiveness, progress, issues
8. What aquifer investigations to date; status of, and plans for further investigating, the aquifers from which the Hastings bores and Brookvale bore 3 draw
9. Status of, and plans for, treatment of all water supplied to Havelock North.
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| 2 | Drinking water partnerships & collaboration. | 1. What form(s) of collaboration are most effective and workable
2. Review operation and merits of the Hawke’s Bay JWG
3. What level of representative should participate in JWGs
4. Leadership and guidance from Ministries on collaboration
5. Should collaboration extend beyond liaison and communications to some aspects of management or supervision; if so, what aspects
6. Should there be required specific outputs from a JWG e.g. a plan for a “source protection zone” as mentioned in 10 e and f below; should there be a catchment management committee within a JWG to ensure adequate focus on first barrier safety or is that unnecessary
7. How should JWGs be accountable. To whom. Role of regulator in JWGs.
8. Should collaboration be mandated or prescribed. How?
9. What to avoid in collaboration
10. How to avoid/address tension between parties’ regulatory and non-regulatory functions
11. Role of s69U Health Act in this context
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| 3 | Drinking-water safety and compliance levels in New Zealand | 1. This issue to be considered as context for following issues
2. Compliance and safety levels applicable to bacteriological and protozoa safety to be included
3. What evidence is there of trends of improvement or deterioration
4. How do types and frequencies of contamination compare with similar countries
5. What information is available on causes of waterborne illnesses
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|  | **High Level issues** |  |
| 4 | Should the “secure” category in DWSNZ 4.5 and definitions remain | 1. Is the concept of “secure” water supply (which does not need to be treated) acceptable. What difficulties or deficiencies exist in the current basic concept of a secure supply.
2. What difficulties or deficiencies exist in the criteria for security currently in DWSNZ 4.5.
3. If divorced from the question of treating water, is there still a legitimate role for classifying water as “secure”
4. Is there a role for the “secure” rating in respect of smaller supplies which may not treat to the same level as large or medium supplies
5. If the classification as “secure” remains acceptable, should the criteria for security be changed or added to; can they be substantially simplified
6. If the classification is to remain, who is to confer secure status and also downgrade status when needed
7. Does water age testing have a useful role in classifying bore water; if so, what. Are there risks of over-reliance on water aging?
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| 5 | Should all drinking water be treated | 1. What are the arguments in favour of mandatory treatment all drinking water
2. What arguments against, including the wishes of communities
3. How should treatment be mandated? (Health Act, DWSNZ, other)
4. Should the need to treat water be determined on grounds other than the existing “secure” classification; If so, on what grounds
5. If the default position is that drinking water should be treated, what exceptions or carve-outs (if any) should exist; Should any mandating of treatment apply to supplies of only certain types or sizes
6. Should all network supplies include a residual disinfectant to provide a barrier against contamination post source/treatment
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| 6 | Treatments of drinking water | 1. Is there a need to change or review the DWSNZ regulation and prescription of treatments; should the DWS address the minimum type and level of treatment required for various sources
2. Is there adequate provision for reviewing the treatment provisions in the DWSNZ periodically. See 19 c below.
3. (If not required by regulation) who should make the decision whether to treat or not, and what treatment to apply
4. Should there be further regulation of treatment plants or methods; Should expert engineering certification be required
5. Should treatment plant performance be regulated; should specified records be kept
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| 7 | Should there be a dedicated drinking water supply entity or entities | 1. What options exist for the management and delivery of drinking water; benefits of existing models
2. Arguments in favour of, or against, a dedicated supply entity; is there a role for such an entity in the case of a single supplier or only on a joint basis for several suppliers
3. What role could or should such an entity have; what ambit of activities should it have
4. What governance and structure should it have
5. What accountability would such an entity have; to whom
6. Consider success or otherwise of examples of dedicated supply entities including Watercare and Wellington Water and, if useful, overseas entities

*[NB excluded from this issue are the structural arrangements for local government]* |
|  | **Operational** |  |
| 8 | NES Regulations | 1. Does the nature and extent of regional councils’ responsibility for drinking water need to be reviewed/extended
2. If so, are the NES Regulations the appropriate vehicle for achieving that
3. Issues arising out of the application of the NES in practice; have the NES Regulations served their intended purpose
4. What should be the scope and effect of the NES Regulations; are they too narrowly cast
5. Is the current trigger for engagement of NES protections (activity likely to affect water in specified ways) workable and appropriate; should it be replaced, or complimented by a spatial criterion such as the stipulation of a “source protection zone” [ see 10 f below re delineation of “catchment”]
6. What changes, if any, should be made to regulations 7/8
7. What changes, if any, should be made to regulation 10
8. What changes, if any, should be made to regulation 12
9. Should the definition of “upstream” be amended
10. Should the definition of “abstraction point” be amended
11. Should the NES regulations apply to an application by a drinking water supplier for a water permit If so, what changes are needed to make this clear.
12. Is there sufficient awareness of the NES Regulations by regional and district councils; if not what steps by MfE or others should be taken
13. What changes, if any, should be made to the current draft NES User’s Guide (CB75); should any of its contents be codified in the regulations
14. Role of collaboration/consultation/monitoring in relation to NES Regulations; do these need to be regulated. Relationship between s69U Health Act and regional councils’ responsibilities
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| 9 | Consenting by Regional Council.*NB this issue will overlap with the NES Regs issue 8 above* | 1. What changes in approach, if any, should be made to a regional council’s assessment of a drinking water supplier’s application for a water permit
2. What changes, if any, should be made to regional councils’ approach to imposing conditions on such permits
3. In relation to permit conditions, what compliance monitoring approach should regional councils be required to undertake or provide for
4. Should Regional Councils consider the potential for increased risks for drinking water when granting resource consents for controlled activities
5. Should Regional Councils notify the DHB and DWAs of all resource consent applications with the potential to impact upon drinking water sources
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| 10 | Regional Councils’ approach to first barrier protection for drinking water -other than under NES Regulations | 1. Should first barrier protection be accorded greater recognition and endorsement
2. Should regional councils have responsibilities for drinking water in addition to those in the NES Regulations
3. Should the current indirect or co-incidental responsibility under the RMA be made more direct in respect of drinking water (this will overlap with the NES Regs issues, but may not be limited to the NES Regs regime)
4. Should regional councils’ responsibility for the protection of drinking water sources extend to collaboration and consultation with other relevant parties in the drinking water supply system
5. Should the regulatory regime provide for a catchment protection plan and, if so, how should such a plan be prepared and administered
6. In relation to the responsibilities of all agencies for catchment protection, how should “catchment” be delineated or defined
7. Should any changes be made to regional councils’ knowledge and management of potentially risky bores and other risk activities in the catchment area
8. Is it sufficient that regional councils’ knowledge and management is carried out through their SOE monitoring or is more specific action required
9. Are any changes desirable in relation to the involvement of, and responsibility by, the Ministry for the Environment in respect of drinking water
10. Should there be greater guidance and/or education of regional councils in respect of their role in drinking water
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| 11 | DW Suppliers | 1. Should there be a system of licensing water suppliers i.e. a system more rigorous and effective than the current ss69 J, and K Health Act (registration)
2. should any licensing system extend to individuals acting in key roles
3. What levels of resource and support should a supplier have; is there a critical size
4. What training, qualifications, certification and competence should water supply personnel have; what recurrent training and ongoing competence review
5. What risk-assessment expertise is needed
6. Is there a need to define more clearly roles and responsibilities within a supplier
7. Should there be a mandatory QA function (possibly independent QA)
8. Are local government water suppliers sufficiently accountable; are the LGA provisions in ss 67-81, 82-87, 93-99 effective and sufficient in the context of drinking water
9. How should suppliers retain important safety information in their institutional memories; how should consultants’ knowledge be transferred to suppliers.
10. What is the role of external advice and assistance to suppliers; should the competence and expertise of external advisors be regulated.
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| 12 | DWAs | 1. What issues, if any, exist in relation to DWAs’ employment by and role within a DHB; should DWAs be managed and constituted outside the DHB
2. What size and structure of DWA organisation should there be; should there be “agency” DWAs as per 69ZK
3. Should the present informal amalgamated units (e.g. CNIDWAU) be formalised/extended
4. What national oversight and co-ordination exists; what should there be
5. Is there a need for greater consistency in DWA work across NZ
6. Does the Ministry of Health maintain effective and adequate links with DWAs
7. What training, certification and expertise should DWAs have
8. Is the requirement in s69ZK(2)(b) for accreditation effective and beneficial; what matters should be within the scope of accreditation; can accreditation be used more fully or to better effect.
9. To whom should DWAs be accountable
10. Are any changes needed to section 69ZL Health Act
11. What resources should DWAs have; are DWAs appropriately supported in the exercise of their statutory duties
12. Should DWAs have greater or different enforcement powers
13. Is there need for any change in the approach of DWAs to DWSNZ compliance assessment
14. Should the DWA practices in relation to WSPs and ERPs be changed
15. Does the National Drinking Water Assessors Technical Manual (CB54) need revision
16. Is any change needed to the enforcement by DWAs of s69ZD obligations (records)
17. Should trained professionals from international jurisdictions be able to be recruited as DWAs to address DWA under supply;
18. Should demonstrating compliance with s69ZZZ (protection against backflow) be included in the annual assessment of compliance with DWSNZ
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| 13 | Roles of agencies in relation to drinking water*[NB DWA and Regional Council roles dealt with separately above]* | 1. Should there be a single drinking water regulator
2. Is there a problem with fragmentation of responsibility between agencies for drinking water
3. Are the resources applied by DHBs to drinking water adequate
4. Are the resources applied by MOH to drinking water adequate
5. Is there a need for clarification and/or guidance in relation to the roles and responsibilities of various agencies
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| 14 | WSP | 1. What changes, if any, are needed to the identification and assessment of risks in WSPs
2. Should a WSP be part of a supplier’s corporate risk management process and also recognised at senior management and governance levels
3. Are changes needed to the process of updating and renewing WSPs
4. Is any change needed in the extent to which suppliers devolve WSP responsibilities to consultants
5. Are changes needed to the enforceability of WSP promises or obligations, and the assessment of implementation of WSPs
6. What sanctions or consequences should follow a failure to implement a WSP
7. What changes, if any, should be made to the WSP Guidelines document or the use of it
8. Should a ERP be part of a WSP
9. Are any changes needed to CB158, 159 DWA Manual; should WSPs be prepared according to a template or should they be entirely bespoke
10. Are any changes needed to sections 69Z-ZC Health Act
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| 15 | Monitoring & Testing | 1. Are any changes needed in the DWSNZ provisions governing monitoring and testing
2. Are any changes needed to the reporting and use of test results
3. Do the WINZ database and systems for recording test results need change; are changes needed to access to test result data
4. Where should the regulation of sampling fit within the drinking water regime. Are further rules required to regulate sampling
5. Should the same rules and supervision apply regardless of whether sampling is carried out by laboratory staff or water supplier staff, or others
6. What training, certification, oversight and expertise should samplers have
7. Are any changes needed in the sampling process
8. Are any changes needed in relation to tankers/water carriers
9. Should a grading system be reinstated; if so, what features should it have. Was the abandonment of a grading system justified
10. Is the use of FAC as a monitoring tool adequately recognised in the regulatory regime and is it adequately put into practice by HDC
11. Should the national drinking water information system be enhanced so that:

 1. information about historical incidents is visible and accessible;
2. it can link to disease information systems to identify illness rates for particular water supplies; and
3. it supports early detection of changes to supplier's risk profiles?
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| 16 | Laboratories  | 1. Should there be greater regulation of laboratories within, instead of separate from, the drinking water regime
2. Should laboratories be part of the drinking-water partnerships & collaboration, or are they necessarily a separate element by nature of their function and role
3. Are any changes needed to accreditation, training, certification, registers or other aspects of the regime applicable to water testing laboratories
4. What level of expertise is needed by water testing laboratories
5. Should there be a requirement for larger and better resourced laboratories to service water suppliers, or certain sized water suppliers; is there a case for a Government-run laboratory or is private sector supply better; should laboratories be independent of the water supplier(s)
6. What changes are needed to the supervision and auditing of water testing laboratories. Is there adequate internal QA function for laboratories
7. In the event of a positive result, what reporting obligation should laboratories have
8. Is any change needed to the current system for approving laboratories to carry out individual tests
9. What should the process be in the event of laboratory “issues”, such as cross-contamination or errors in testing processes
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|  | **Sundry** |  |
| 17 | Protozoa risk | 1. Are changes needed in relation to education about protozoa risks to drinking water
2. Are current DWSNZ rules for protozoa deficient
3. If so, what is needed in relation to implementation of better protozoa procedures and risk assessment
4. How frequently should there be reviews of protozoa provisions. See 19 c below.
5. Roles of MOH and MfE in relation to protozoa risks
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| 18 | Boreworks & casings | 1. What deficiencies exist in the current system relating to boreworks and casings (NZS4411, DWS, WSP, Guideline, RC RRMP )
2. Is a single source of specification preferable; is a code of practice needed
3. Should there be a mandatory inspection regime, accountability
4. Should below-ground bore heads be allowed
5. Is an Asset Management Plan adequate to deal with aging reticulation assets
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|  | **Regulatory** |  |
| 19 | Health Act | 1. Does the regulatory framework need to be strengthened to increase accountability for drinking water safety to the Government and the community; or is the present level of regulation sufficient
2. What is the proper relationship between the respective components of the drinking water regime - is there a need to review some of the aspects that overlap, to ensure certain obligations are not omitted
3. Is the statutory regime for changing any DWSNZ provisions acceptable (s69P- need to consult 3 years before any change to DWSNZ; s69R further 2-year delay unless urgent)
4. Should there be different or further sanctions for failures to comply with any of the provisions of Part 2A Health Act; are ss69N and 69ZZH effective/useful? Should the offence provisions in s69ZZR-ZZX be reviewed
5. Should compliance with DWSNZ be discretionary or optional
6. Should s69U Health Act (duty to protect source) be changed
7. Should the s69V Health Act regime (“all practicable steps”) be changed; see also s69S. Should the section 69H Health Act definition of “all practicable steps” be changed
8. Should s69ZF Health Act be changed such that remedial steps are mandatory
9. Whose responsibility is it to monitor and enforce the s69V obligations on a water supplier
10. Health Act does not specifically require an ERP- should it
11. Is there a role for a Water Auditor
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| 20 | DWSNZ | 1. Are the DWSNZ comprehensible to users; can they be simplified or clarified
2. Adequacy of remedial actions: Greater sampling, speedier chlorination, longer chlorination; more than 3 clear results in contamination protocol; (cross refer s69ZF Health Act)
3. Does section 5.16 (UV treatment) need to be reviewed
4. Does 5.2(a) table entry re protozoa need review
5. DWSNZ do not specifically require a ERP- should they
6. Should requirement for annual report to DWA on borehead issues be in DWSNZ (rather than in Guidelines 3.2.5.5
7. Should DWSNZ have stricter rules about drinking water bores; Minimum depths; More stringent aquifer stability requirements.
8. Are the turbidity provisions at 5.7 and 4.3.2.1 and elsewhere appropriate; is change needed
9. Given its prevalence in documented outbreaks around the world, should heavy rainfall be accorded better status and prominence in the DWSNZ (or elsewhere)
10. Should the DWSNZ address the risks from animal contamination more fully
11. Should the DWSNZ include requirements from qualification, training, ongoing competence reviews for water supply operators
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| 21 | DW Guidelines | 1. review concept of a Guideline in addition to the DWSNZ.
2. Could the two be combined
3. What deficiencies exist in relation to existing Guidelines
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|  | **OUTBREAK MANAGEMENT ISSUES** |  |
| 22 | ERPs(Emergency Response Plan)(a.k.a Contingency Plans) | 1. What regulation should there be for ERPs, both their existence and content
2. Size and scope: how comprehensive should ERPs be; should they be relatively short and concise documents?
3. Should drinking water ERPs be multi-agency plans
4. In addition to a ERP, is there a role for a MOU between agencies, or some of them in relation to emergency response; covering such issues as communications, decision-making (an MOU being more directive and enforceable than a ERP)
5. Should training, including multi-agency joint training, be specifically required
6. Should periodic reviews and updates of ERPs be required
7. What further guidance is needed, if any, on the issuance of boil water notices: who, when what consultation
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| 23 | Communications | 1. What changes are needed to communication practices in relation to a drinking water emergency
2. Should a messaging system be used
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| 24 | Other outbreak management issues | 1. What practices should be adopted in relation to use of schools, GPs or others, as early warnings of an outbreak
2. Should the Ministry of Education have a role?
3. Should greater emphasis be placed on drinking water emergencies and the drinking water aspects of other civil defence emergencies? Should drinking water be recognised in civil defence emergency responses as an essential lifeline (as opposed to infrastructure to be managed
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Matters Not Included

1. While the Inquiry acknowledges the general importance of backflow as a risk factor, there was no backflow event or issue relevant to the August 2016 outbreak. Given the available resources, the Inquiry does not propose to include backflow in the issues list for Stage 2 (but see issue 12 r above).
2. The Inquiry regards an economic analysis of Stage 2 issues as beyond the scope of its Terms of Reference and its resources.