



## **HAZARDOUS SUBSTANCES SECTION 32**

### **HAZARDOUS SUBSTANCES AND CONTAMINATED LAND CHAPTER**

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## **1. STRATEGIC CONTEXT**

### **1.1 PURPOSE AND SCOPE OF THE HAZARDOUS SUBSTANCES PART OF THE HAZARDOUS SUBSTANCES AND CONTAMINATED LAND CHAPTER**

1. The purpose of the hazardous substances part of the Hazardous Substances and Contaminated Land Chapter is to provide current best practice to achieve consistency with current legislation and good environmental outcomes.
2. Hazardous substances are controlled by the Hazardous Substances and New Organisms Act (HSNO) 1996. Sections 30 and 31 of the Resource Management Act (the 'Act') 1991 provide for both regional councils and territorial authorities to control any actual and potential effects of the use, development or protection of land. This includes preventing or mitigating adverse effects of the storage, use, disposal or transport of hazardous substances. Usually it is the territorial authorities who exercise this function. A regional policy statement must state which local authority has the responsibility for exercising the hazardous facilities function in that region. If the regional policy statement does not state this the default position is that the territorial authority has responsibility.
3. In general, hazardous facilities which comply with the HSNO requirements for the management of hazardous substances should not have significant actual adverse effects on the environment. The Act need only deal with particular risks associated with a particular site that are not already managed by the generic controls under HSNO.
4. Resource Management Plans should not be in conflict with HSNO requirements and should not repeat them, but may add a higher degree of environmental protection where necessary in the local context. The rationale for a higher level of protection through the additional land use controls under the Act may be appropriate for substances not controlled by HSNO or for issues which are not within the scope of HSNO, such as reverse sensitivity. They may also be appropriate where a site has unusual characteristics which are not contemplated or addressed by the relevant HSNO controls. These local site issues might include proximity to water courses or potable water supplies, high hazard areas, groundwater and effects on adjoining sites where activities are not comprehensively controlled by the minimum requirements for hazardous substances under the HSNO legislation. Plan provisions should not duplicate requirements imposed by the HSNO Act or other statutes.
5. As the planning framework for hazardous facilities under the Act focuses solely on land use planning aspects, it is complementary to the controls under the HSNO legislation. Its elements do not represent a competing control mechanism. The potential situations where additional controls under the Act may be necessary include:
  - a. managing potential effects on sensitive activities;
  - b. reverse sensitivity issues;
  - c. managing potential effects on areas of particular sensitivity including substances that are not controlled by HSNO;
  - d. the risk to public safety from natural hazards that could affect hazardous facilities;
  - e. managing cumulative effects from multiple facilities; and
  - f. where the relevant HSNO requirements do not anticipate or adequately manage these issues.
6. Both the Christchurch City Plan and the Banks Peninsula District Plan currently provide a suite of objectives and policies in relation to hazardous substances. In reviewing those provisions of both Plans, a number of gaps were identified. Overall, the current provisions:

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- a. are out-of-date – the provisions (some being nearly twenty years old) need to reflect the direction of relevant statutory documents, in particular the Greater Christchurch Land Use Recovery Plan (LURP), Canterbury Regional Policy Statement (CRPS), Land and Water Regional Plan (LWRP) 2014 and HSNO Act 1996;
  - b. are not consistent with HSNO hazard classifications;
  - c. are not equitable between different industry sectors and land use activities in terms of activity status and applicable controls; and
  - d. are in many aspects inconsistent with the majority of approaches taken by other district councils in the country, including the hazard categories, the numerous exceptions/variations introducing inconsistencies and providing for non-complying activity status.
7. The District Plan review has divided the chapters (or parts of chapters) into stages according to its priority and importance to earthquake recovery. For the Hazardous Substances and Contaminated Land Chapter, Stage 1 of the District Plan review included part of the Contaminated Land section of this chapter and covered an overarching objective and policy framework for managing the prevention of adverse effects on public and environmental health from the development, subdivision or use of contaminated land, and facilitates the observance of the National Environmental Standard (NES) for Assessing and Managing Contaminants in Soil to Protect Human Health 2011.
8. The second stage of the District Plan review and this Section 32 Assessment deals with the storage, use, transport and disposal of hazardous substances. The Section 32 Assessment for the Contaminated Land part of the Hazardous Substances and Contaminated Land Chapter is addressed in a separate document.

### 1.2 PROPOSED DISTRICT PLAN: OVERVIEW AND SYNOPSIS

1. District and Regional Councils have functions related to hazardous substances. Chapter 18 of the CRPS states that the Canterbury Regional Council (CRC) will have responsibility for the management of hazardous substances with regard to adverse effects on the quality of air and water; while Territorial Authorities (TAs) are to be responsible with regard to adverse effects 'on the environment'. Region-wide rules in relation to the storage of hazardous substances around discharges to air, ground and water are provided for in the LWRP.
2. The Strategic Directions Chapter of the District Plan review (section 3.4.4.5) identifies the use of hazardous substances as an issue in respect of the health and safety of people and the environment. It notes that information sharing between management agencies and manawhenua and the wider community can assist in managing these issues. The policy direction for the district in this regard is set (section 3.5.3) at enhancing the health and well-being of communities. Objective 3.6.6 sets out the need to protect people and the environment from the adverse effects of hazardous substances.
3. The Hazardous Substances and Contaminated Land Chapter gives effect to these strategic directions and other strategic documents listed in **Appendix 1**. Linkages between the objectives and policies in the Strategic Directions Chapter and the Hazardous Substances part of the Hazardous Substances and Contaminated Land Chapter are summarised in **Appendix 2**.

### 1.3 RESEARCH

1. The Council has commissioned technical advice and assistance from an external expert and utilised this to assist with setting the Plan framework for the hazardous substances part of the proposed

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Hazardous Substances and Contaminated Land Chapter. This advice includes the following:

Table 1: Technical Reports

|   | Title   | Author            | Description of Report  |
|---|---|-------------------|--|
| a | Christchurch City Council – Hazardous Substances and Contaminated Land Management, Report on Management Options for the District Plan, May 2014 | Resources         | Provides a detailed analysis of the current District Plans' (both Christchurch and Banks Peninsula) provisions and approach, and recommended approach for the use, storage, transport and disposal of hazardous substances and the management of the effects of contaminated land. |
| b | Evaluating the Effectiveness and Efficiency of the Christchurch City Plan, Project Report 2011  | Response Planning | Reports on the efficiency and effectiveness of the provisions of both the operative Christchurch City Plan and Banks Peninsula District Plan.  |
| c | Evaluating the Effectiveness and Efficiency of the Banks Peninsula District Plan, Addendum Report 2011  |                   |  |

2. In addition to the above report and advice, the Council has compiled, reviewed and developed a collection of material on hazardous substances (refer to Bibliography). This information has been used to inform the District Plan review and this Section 32 Report.

### 1.4 CONSULTATION

1. The Act requires the Council to consult with the Minister for the Environment, other Ministers of the Crown who may be affected by the plan, local authorities who may be affected, the tangata whenua of the area affected, and any customary marine title group in the area. The Council may also consult with anyone else during the preparation of the plan.
2. The Council undertook stakeholder consultation as part of the potential plan change process for hazardous substances before the District Plan review process. In respect of the District Plan review, the Council has undertaken two public consultation exercises for the first stage of the review, one early in the drafting of the proposed plan in August and September 2013 (see **Appendix 3** for a summary of this consultation) and another on a draft of the proposed plan during February and March 2014 (see **Appendix 4**).
3. Discussions have been held with staff from the Canterbury Earthquake Recovery Authority, Environment Canterbury and Mahaanui Kurataiao Limited, in preparation of the draft chapter to outline the direction of the chapter and invite their feedback, particularly in relation to hazardous substances. A Collaborative Agency Group comprising representatives of the Canterbury Regional Council, Selwyn District Council, Waimakariri District Council, Canterbury Earthquake Recovery Authority, New Zealand Transport Agency, Ngai Tahu and the Ministry for Environment (in an advisory role) has provided feedback through late 2014.

4. Ngāi Tahu and the Rununga representing the Christchurch City Rohe have also provided input by way of a Rununga Focus Working Group.
5. No significant matters for the hazardous substances section of the Hazardous substances and Contaminated Land Chapter were raised in the context of any of these discussions.

## 2. RESOURCE MANAGEMENT ISSUES

### 2.1 ISSUES IDENTIFICATION

1. The resource management issues set out in this section have been identified mainly from the following sources:
  - a. primary and secondary research (refer to attached bibliography);
  - b. public feedback and comment received from sources including the media and general public;
  - c. monitoring and review of current district plan; and
  - d. matters raised in various forums by stakeholders and statutory partners.

### 2.2 STRATEGIC PLANNING DOCUMENTS

1. Many issues are of a strategic nature and consideration has already been given to the strategic policy direction in higher order documents that are carried through into the Strategic Directions Chapter of the District Plan review.
2. Those strategic matters and provisions that have been specifically given effect or had regard to in the Hazardous Substances and Contaminated Land Chapter are summarised in **Appendix 1**. These documents already broadly identify the resource management issues for the District and provide the higher level policy direction for resolving these issues.
3. The Strategic Directions Chapter also contains higher order objectives and policies to reflect the outcomes sought in a number of strategic planning documents. An assessment of these objectives and policies is contained within the Section 32 Strategic Directions Report. Those objectives and policies within the Strategic Directions Chapter that are relied on in this chapter are discussed in section 4 and 5 below.

### 2.3 ORDER IN COUNCIL

1. The process for the Replacement District Plan is prescribed by the Order in Council made by Government on 7 July 2014. The order modifies the Act to provide a streamlined process for the review of the Christchurch City and Banks Peninsula District Plans and preparation of a Replacement District Plan. The order states that the Council must have particular regard to the Statement of Expectations (Schedule 4 of the order). The relevant expectations for the Hazardous Substances and Contaminated Land Chapter include:

*(a) clearly articulates how decisions about resource use and values will be made, which must be in a manner consistent with an intention to reduce significantly (compared with the existing district plans) —*

- (i) reliance on resource consent processes; and*
- (ii) the number, extent, and prescriptiveness of development controls and design standards in the rules, in order to encourage innovation and choice; and*

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*(b) contains objectives and policies that clearly state the outcomes that are intended for the Christchurch district:*

...

*(i) uses clear, concise language and is easy to use.*

2. Overall the provisions proposed in the Hazardous Substances and Contaminated Land Chapter respond to the above expectations as follows:
  - a. The use, storage, transport and disposal of hazardous substances contain minimum development controls based mainly around acceptable thresholds. Unnecessary controls have been removed where they go beyond these. The exception is with the retail sale of fuel, pipelines used for the transfer of hazardous substances, and wastes in process in the Council's trade waste sewers, waste treatment and disposal facilities, where additional development controls are related to providing certification from a suitably qualified engineer in relation to:
    - i. location and layout of hazardous facility;
    - ii. hazardous facility site design, construction and operation;
    - iii. hazardous facility within High Flood Hazard Areas and Floor Level and Fill Management Areas;
    - iv. storage and use of hazardous substances;
    - v. site drainage systems;
    - vi. hazardous facilities spill containment system; and
    - vii. hazardous facilities washdown areas.

**RESOURCE MANAGEMENT ISSUES**

| <b>RESOURCE MANAGEMENT ISSUE 2.3.1 – Protection of sensitive land use activities</b>  |
|---|
| <ol style="list-style-type: none"> <li>1. The protection of sensitive land use activities from adverse effects of hazardous substances is a principal resource management issue. This mainly refers to the protection of the health and safety of people but also includes the physical environment (structures, buildings and infrastructure).</li> <li>2. The HSNO controls with regard to hazardous substances are the minimum requirements applicable to any site. Adverse effects of hazardous substances on sensitive land use activities can be addressed by applying location and site-specific requirements in the District Plan, which is not new.</li> </ol> |

| <b>RESOURCE MANAGEMENT ISSUE 2.3.2 – Protection of natural environment and ecosystems</b>  |
|--|
| <ol style="list-style-type: none"> <li>1. The protection of local natural environment and ecosystems from adverse effects of hazardous substances is another resource management issue. It is applied to particular locations, features or aspects of the natural environment which have been identified as requiring protection. Often such environments are aquatic (coastal, river/streams, lakes/wetlands, or aquifers) but may also include terrestrial plant or animal communities.</li> </ol> |

**RESOURCE MANAGEMENT ISSUE 2.3.3 – Assessment/management of cumulative risk**

1. The technical report prepared for the Council identifies limitations with the HSNO Act generally not taking into account the additional risk that may result from the accumulation and concentration of a range of different hazardous substances present in a particular area.
2. As an example, neighbouring hazardous facilities which store bulk flammable liquids may present a combined cumulative off-site fire risk which is deemed to be significant and which requires an added degree of risk assessment. Similarly, numerous minor hazardous substances spills from different sites within a catchment may be deemed tolerable individually but may result in potentially significant adverse cumulative long-term effects in the receiving environment.
3. These matters are location-specific, i.e. relevant under the Act. It is generally considered that this is best addressed as part of the assessment criteria or information requirements if resource consent is required.

**RESOURCE MANAGEMENT ISSUE 2.3.4 – Interaction between natural hazards and hazardous facilities**

1. The interaction between natural hazards (such as land instability, seismic, flooding, etc) and hazardous facilities is an issue which falls entirely within the Act, and is not addressed by HSNO requirements.
2. For Christchurch City, risks from flooding, liquefaction and land stability need to be addressed. Identifying the interaction between natural hazards and hazardous facilities as an issue and its management requires specific objective(s)/policies in the proposed District Plan. The activity status of facilities may vary depending on whether a location is subject to natural hazards and appropriate assessment criteria specified to manage any additional risks.

**RESOURCE MANAGEMENT ISSUE 2.3.5 – Reverse sensitivity**

1. Reverse sensitivity is a significant resource management issue. The majority of reverse sensitivity issues for Christchurch relate to noise or odour. Reverse sensitivity effects can also occur where more sensitive land uses are proposed near an existing hazardous facility. The technical report prepared for the Council identifies reverse sensitivity as specifically relevant if the existing facility involves hazardous substances with the potential to damage human health and property, rather than the natural environment.
2. This matter is not well addressed in most first generation plans and in Christchurch activities involving agrichemicals and orchard overspray are of particular relevance.
3. Reverse sensitivity effects of proposed more sensitive land uses can occur almost anywhere that significant hazardous facilities are established. Reasons for locating a sensitive land use in a particular location could include:
  - a. Local infrastructure provision;

- b. Availability of land – particularly for larger developments; or
- c. Restrictions on alternative sites including those arising from environmental values and hazard risks.
4. The issue in relation to reverse sensitivity is primarily one of the residual risks of hazardous facilities being significant enough off-site to compromise the establishment of more sensitive land use activities.
5. There are no black-and-white answers on how to deal with potential conflicts between existing hazardous facilities and more sensitive land uses. Matters that need to be resolved include:
  - a. Whether the hazardous facility been established lawfully and is operating responsibly and within the parameters of any conditions of consent imposed upon it.
  - b. Whether the adverse effects of the hazardous facility are significant and whether they have been explicitly identified and assessed in the past.
  - c. Where there is a lack of information whether the plan or any existing land use consents provide any scope to require an up-to-date assessment of risks – for example, whether they provide for any additional or amended controls that would assist in reducing the risk profile.
  - d. Whether the operator is willing to voluntarily address any risk issues, including in exchange for appropriate assurances to be able to continue operations.
  - e. Whether section 17 of the Act applies and is enforcement action is an appropriate option.
  - f. Whether there are alternative sites for locating the activity.
  - g. Whether any residual risks can be addressed by mitigating measures including design, lay-out, management, risk communication and restrictions placed on the activity.
6. The most important objective is achieving a risk profile that is acceptable for any of the land use activities likely to be established. Hazardous facility operators may require an assurance of the ability to continuously operate their facility or, if all else fails and this is a viable option, assistance with relocation.
7. While there are relatively few hazardous facilities in Christchurch which would be described as significant, reverse sensitivity effects can also occur with smaller facilities and it would appear prudent to address this matter in the District Plan for future developments.

### **3. SCALE AND SIGNIFICANCE EVALUATION**

1. The level of detail undertaken for the evaluation of the proposed District Plan provisions has been determined by an assessment of the scale and significance of the implementation of the proposed District Plan provisions. The scale and significance assessment considers the environmental, economic, social and cultural effects of the provisions. In making this assessment regard has been had to whether the provision:
  - a. is of regional or city-wide significance and whether the provisions are predetermined by a higher order document;

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- b. is important to resolve an issue or problem particularly to protect life and property;
  - c. has effects on resources that are considered to be a matter of national importance in terms of section 6 of the Act;
  - d. adversely affects those with particular interests including Maori (consideration needs to be given as to whether there is certainty of effects based on the availability of information to assess benefits and costs);
  - e. limits options for future generations to remedy effects;
  - f. includes regulations or other interventions that will impose significant costs on individuals or communities; and
  - g. will directly assist in the city's recovery.
2. The level of evaluation able to be undertaken through this Section 32 Report has been significantly influenced by the truncated process and timeframe for the District Plan review. The Section 32 Assessment will continue to be updated through the consultation process and in particular in response to recommendation from the Minister for the Canterbury Earthquake Recovery and submissions from the community and stakeholders.
  3. The issues covered in this chapter are generally significant, both in terms of scale and timing. This is particularly so following the earthquakes, although it is also important to ensure that the long term attractiveness, vitality and sustainability of the district are not compromised.

### **3.1 OBJECTIVES**

1. The objectives within this hazardous substances part of the chapter give effect to the provisions relating to hazardous substances contained within the Canterbury Regional Policy Statement Chapter 18, and emanate from the proposed Strategic Directions Chapter. Those Strategic Directions which have particular relevance to the hazardous substances part of the Hazardous Substances and Contaminated Land Chapter are listed in Appendix 2. The scale and significance of the Strategic Directions objectives and policies has already been assessed under the Section 32 report for the Strategic Directions Chapter.
2. The proposed Hazardous Substances and Contaminated Land Chapter contains two objectives in respect of hazardous substances, which consolidates and builds on those relevant provisions from the Strategic Directions Chapter by providing more detailed interpretation and direction. The evaluation of the Hazardous Substances and Contaminated Land Chapter objectives relies in part on the Section 32 Assessment undertaken on higher order documents.

### **3.2 POLICIES AND RULES**

1. The evaluation of the policies and rules has focused on those provisions that will result in a substantial change to the storage, use, transport and disposal of hazardous substances.
2. The policies and rules have been evaluated as a package as together they address the issue of the storage, use, transport and disposal of hazardous substances.
3. The policies propose actions to achieve the objective by ensuring people, property and the environment are not adversely affected by the storage, use, transport and disposal of hazardous substances.

4. GENERAL DIRECTION OPTIONS & RECOMMENDATIONS

1. Based on analysis of the Resource Management issues set out from sections 2.3 to 2.11 above (excluding section 2.9), the following options have been considered in order to develop the provisions of the proposed Hazardous Substances and Contaminated Land Chapter:

- a. **Option 1: Status Quo - retain existing Christchurch City and Banks Peninsula District Plan provisions**

*Christchurch City Plan* – The main deficiencies of the provisions in the Operative Plan related to hazardous substances are described as follows:

- i. The objectives and policies directly relevant to the management of hazardous substances are limited to Policies 2.1.3 Natural Environment – Land and Soil Objective, and 4.2.12 City Identity – Amenity Objective. In addition, Policy 7.7.9 Transport Safety state ‘to promote’ the use of appropriate routes and modes for the transport of hazardous substances. Policy 12.11 Industrial Areas combines the management of hazardous substances with amenity issues. The ‘Explanation and Reasons’ makes a brief reference to ‘adequate recognition’ of relevant business managing hazardous substances – in effect a ‘reverse sensitivity’ effect – but this does not appear to be reflected in the wording of the Policy itself or in any of the rules specific to hazardous substances. There is also a reference to hazardous substances in the ‘Explanation and Reasons’ of Policy 13.2.1 Groundwater Recharge, however, this relates primarily to discharges of contaminants.
- ii. Policies 2.1.3 and 4.2.12 are very similar and are based on the wording of section 31 of the Act. In many other District Plans in the country the sentiment of these policies is often combined and stated as an objective with more specific policies added. This enables a clearer link to the methods and rules and makes it also easier to set out the appropriate analysis and justification in a Section 32 Report.
- iii. It is unclear why ‘manufacturing’ and ‘handling’ is added to the activities (in respect of the terms used in s31 of the Act) which need to be managed. It would be more useful to retain the Act wording in this regard and to provide definitions of such terms as ‘use’ and ‘storage’ in the Plan.
- iv. Part 11, Volume 3 sets out the relevant rules for the management of hazardous substances in detail. The rules provide for permitted, discretionary and non-complying activity status. Controlled activity status is not provided.
- v. In terms of environmental effects to be managed, that section refers repeatedly to ‘toxicity and explosion’ but not to other harm to people, property or the natural environment (e.g. fire/chemical reaction, eco-toxicity).
- vi. The Development Standards in clause 3.3.3 of the City Plan are derived from Ministry for the Environment guidance (some amendments).
- vii. The Community Standards (clause 3.3.4), Critical Standards (clause 3.3.5) and Exceptions (clause 3.3.6) introduce a level of complexity to the activity status of managing hazardous substances. A consistent, plausible and equitable approach to activities is not maintained.
- viii. Schedules 1 and 2 are partly based on obsolete legislation which has been replaced by the HSNO legislation. Schedule 1 specifies and defines the hazard categories; while Schedule 2 lists four zone groupings and various quantity limits of hazardous substances. The quantity limits in Schedule 2 are a mixture of aggregate quantities and volumes of the various hazard categories identified in Schedule 1 (no mention is made of conditions such as temperature or pressure to determine the volume). Class 6.2 (infectious substances) is included in Schedule 1 but no thresholds are set in Schedule

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2. Class 8 (corrosives) is specified as Class 7 in Schedule 2, which by convention is applicable to radioactive substances.
- ix. The various land use zones are divided into four groups with differing thresholds. A brief comparison with widely established practice across the country shows that many of the thresholds are lower than applied elsewhere.
  - x. The Assessment Matters specified in clause 3.3.4 are also derived from Ministry for the Environment guidance. Notable omissions include the actual identification and assessment of risks on which meaningful mitigation needs to be based.
  - xi. Based on items vi-x above, the methods and rules are out-dated, inconsistent and contain important omissions. Overall the schedule and table are inconsistent with the classification of hazardous substances pursuant to the HSNO legislation and with established good practice have significant omissions, and (in parts) unnecessarily low thresholds. In comparison, higher thresholds for LPG and agrichemicals appear to be less based on environmental effects and more on tailoring to suit particular industry sectors. This introduces an element of inequity between industry sectors.

*Banks Peninsula District Plan* - The main deficiencies of the provisions in the Operative Plan related to hazardous substances are as follows:

- xii. Chapter 37 of the Banks Peninsula District Plan specifies one issue, one objective and five policies specific to the management of hazardous substances. While this is a minimalist approach there is a reasonably clear link between provisions.
- xiii. Chapter 37 also contains the methods to manage hazardous substances. Primarily they refer to promotion, advice and coordination. As such, they are difficult to assess in terms of their effectiveness. The last method refers to District Plan rules aimed at controlling the environmental effects of hazardous substances. However, the rules section of that chapter has few actual requirements. One section refers to containment but, apart from one generic matter ('use, storage, manufacture and disposal of hazardous substances' – item 7, Resource Consent Conditions – Controlled Activities and Restricted Activities), reference is only made to external standards and codes.
- xiv. Appendix XV of the Plan specifies the hazardous substance categories and thresholds. Like the schedules in the Christchurch City Plan, the criteria are based on repealed legislation and the rationale for the thresholds is unclear.

### *Matters not addressed in both Plans*

- xv. A number of matters conventionally included in many plans, particularly second generation plans, are not addressed in the current provisions of both plans with regard to the management of hazardous substances. This includes:
  - A. Objectives, policies or generic methods to deal with natural hazard/hazardous substance interaction;
  - B. Objectives, policies or methods to deal with reverse sensitivity;
  - C. Provisions for the management of high biochemical oxygen demand (BOD) substances;
  - D. Provisions for buffers between hazardous facilities and more sensitive land uses; and
  - E. Limited glossary/definitions.



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### *Conclusion*

- xvi. Given all of the above matters, the option of retaining the existing provisions of the Christchurch City Plan and the Banks Peninsula District Plan is not the most appropriate way to achieve the purpose of the Act.
- b. **Option 2: Update provisions and adopt the Hazardous Facility Screening Procedure (HFSP) method in determining activity status**
- i. The hazardous substances provisions in the City Plan and Banks Peninsula District Plan are outdated and need to be aligned with changes in legislation, particularly the Hazardous Substances and New Organisms (HSNO) Act 1996 and the Proposed Land and Water Regional Plan 2014.
  - ii. New objectives, policies and rules will be proposed.
  - iii. The classification system, as discussed in 4(1)(a)(viii) and (xiv) above, will be revised in order to bring the Plan up-to-date with the HSNO classification system.
  - iv. The HFSP would be adopted as the method to determine the activity status of hazardous facilities.
    - A. The HFSP is a screening tool to establish the activity status of a proposed hazardous facility. If properly used, it provides a mechanism to approximate environmental effect 'risk'. It requires information on the substances involved and the activities proposed.
    - B. It must be recognised that there are two versions of the HFSP in use. The 1999/2000 revision addressed some perceived shortcomings of the original (1995) version of the HFSP, as well as updating relevant linkages to the then new HSNO legislation. The original version of the HFSP was developed in the mid-1990s, before sufficient detail about HNO was known. A majority of District Councils that had adopted the HFSP in their District Plans still use the older version.
    - C. However, even the updated version of the HFSP is outdated and not consistent with HSNO. This means that, for example, substances may be classified in hazard categories which differ from HSNO. In cases where the actual current hazard classification indicates a higher hazard than was assumed originally, this can lead to underestimating risks relevant to land use safety. There are also issues with the presentation and level of information required to achieve workable plan provisions.
    - D. Another issue is that, despite its often perceived complexity, the procedure is too basic to inform decisions on how an application to establish a hazardous facility is to be treated. It is even less suitable to indicate an outcome. It also does not provide information on whether an application should be notified or not. It does not address issues such as the transport of hazardous substances or hazardous waste management.
  - v. This option is therefore not the most appropriate way to achieve the purpose of the Act.
- c. **Option 3: Update provisions and adopt the Activity Status Table (AST) in determining activity status**

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- i. Same as Option 2 above except that the AST would be adopted as the method to determine the activity status of hazardous facilities.
  - A. The AST was developed over a decade ago as a simpler and more user-friendly alternative to the HFSP. This method has now been adopted by approximately ten District Councils (e.g. Waikato District, Western Bay of Plenty District, Ruapehu District, and proposed or planned for Auckland, Queenstown Lakes District and Thames-Coromandel), in some cases replacing the HFSP.
  - B. Unlike the HFSP, the AST generally covers all HSNO sub-classes for hazards.
  - C. Another feature of the AST is that it refers directly, and only (with the exception of high BOD substances), to the HSNO classifications of substances. This allows for much easier identification of the specific hazards of substances in the New Zealand context. Overall it can be expected that administration of this system is to be much simpler than that under the HFSP.
  - D. The definitions of the substance classes and subclasses in the AST are based on those in the Hazardous Substances Classifications Regulations 2001, which assists in the classification of substances for planning purposes, because their HSNO classification is known. It also ensures consistency with the controls and management approach of the HSNO legislation. The advantage over substance lists is that only the quantities of substance categories and classes are necessary, not those of individual substances.
  - E. The aggregate quantity thresholds defining the activity status in the AST within hazard classes are based on those developed for the HFSP for the storage of substances and consequently have been subject to a rigorous Section 32 analysis.
  - F. The AST uses only the HSNO classes and, unlike the HFSP, does not lump substances together in 'effects groups'. This applies in particular to substances with eco-toxic properties where substance quantities are specifically lowered to require resource consent and specific assessments of adverse effects where natural waters may be adversely affected by the storage of eco-toxic substances. These advantages are considered sufficient to alleviate the effect of not having adjustment factors applied as an approximation of adverse effects of a particular hazardous facility.
  - G. A look at available and used methods to establish the activity status is useful to be able to evaluate the most suitable option for Christchurch City. The rationale, specific features and limitations of the most common methods are summarised as follows:

**Table 2: Comparison of common methods used in determining activity status**

| Method \ Feature | Hazardous Facilities Screening Procedure (HFSP)  | Activity Status Table (AST)  | Substance/activity lists  |
|------------------|--|--|---|
| Technique        | Provides mechanism to calculate dimensionless effects ratio which determines activity status | Provides quantity limits for substance aggregates within HSNO sub-categories above which consent is required | Provides quantity limits for individual substances or groups of substances; states activity status for specified activities |
| Principle        | Largely effects-based calculation method;  | Comparison of proposed quantities with stated  | Provides clear direction on activity status of  |

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|             | groups types of effects together  | limits for each hazardous property  | substances and activities covered   |
|-------------|---|---|---|
| Scope       | Covers all HSNO classes but not necessarily all sub-classes (e.g., currently not those for chronic toxicity parameters)   | Generally designed to cover all HSNO classes and all relevant hazard levels; can include environmentally damaging substances (i.e., has the widest scope and is most closely aligned with HSNO classes) | Limited by its very nature, covers specified substances and activities only   |
| Advantages  | Largely effects-based, comprehensive  | Comprehensive, user-friendly, brief, clear link between specific hazard and activity status   | Clear (in theory), possibly consistent with historical approach   |
| Limitations | Some room for interpretation; 'artificial' grouping of different hazards together to generate 'Effects Groups'; no updates available  | Not strictly effects based (aggregate quantities for specific hazard classes and sub-categories used as approximation for risk)   | Does not provide for management of unspecified substances and activities; not effects-based   |
| Challenges  | Potential confusion about two versions both of which are dated<br><br>Requires some mathematical operations<br><br>Ability of applicants and processing staff to use, understand (explain) procedures<br><br>Not considered to be user-friendly | Relative simplicity may induce complacency in understanding necessary elements and details<br><br>Potential for amendments by councils that may not reflect philosophy and background                   | No flexibility in scope<br><br>Potential confusion about what is covered and what is not<br><br>Possible conflicts in activity status between different activities covered by other plan provisions<br><br>Potential for significant gaps |

- ii. This option is assessed as the most appropriate way of achieving the purpose of the Act and in giving effect to the CRPS to prevent or mitigate the adverse effects of the storage, use, disposal or transport of hazardous substances on people, property and the environment.

| <b>ADOPTED GENERAL DIRECTION</b>  |
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| <ol style="list-style-type: none"> <li>1. A review of the approaches and plan provisions for hazardous substances in the operative Christchurch City and Banks Peninsula District Plans has been carried out. The review shows that the provisions are of varying quality and detail. In part they are outdated and have significant omissions.</li> <li>2. A number of criteria and principles for best practice have been identified which address the scope, content and structure of proposed planning provisions. While a number of matters such as the protection of people from risks reflect established practice, other matters such as reverse</li> </ol> |

sensitivity effects or the link between hazardous facilities and natural hazards need to be addressed.

3. The approach to be taken is to be based on current best practice and available national guidance. These will cover the following:
  - a. The AST is the method to be used to establish the activity status of hazardous facilities;
  - b. Widening objectives and policies to provide for matters such as reverse sensitivity and the natural hazard/hazardous facilities/contaminated land interface;
  - c. Reducing or deleting exceptions and exemptions to provide for equitable, consistent and fair provisions based on environmental effects rather than activities; and
  - d. Providing for methods which are generally based on risk management principles.
4. Based on the above, the Council has determined that the hazardous substances part of the Hazardous Substances and Contaminated Land Chapter should be revised to align with current legislation and best practice, and to use the AST as the method to determine the activity status of hazardous facilities.

## 5. EVALUATION OF PROPOSED OBJECTIVES

- a. Section 32(1)(a) of the Act requires the Council to evaluate the extent to which the objectives are the most appropriate way to achieve the purpose (section 5) of the Act.

### 5.1 EVALUATION OF PROPOSED OBJECTIVES 12.1.1.1 AND 12.1.1.2

#### OBJECTIVE MOST APPROPRIATE WAY TO ACHIEVE THE PURPOSE OF THE ACT

| Objective  | Summary of Evaluation  |
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| <p><b>12.1.1.1 Objective - Adverse environmental effects</b></p> <p>a. The storage, use, disposal or transport of hazardous substances in the district does not adversely affect people, property and the environment above acceptable levels.</p> | <p>The objective recognises the risk to people and the environment that can arise from the storage, use, disposal and transport of hazardous substances. It meets the specific legislative requirements which, among other matters, are to control any actual or potential effects of the use, development, or protection of land, including for the purpose of the prevention or mitigation of any adverse effects of the storage, use, disposal, or transport of hazardous substances. It meets the requirements of sections 5(2)(a)-(c) and 31(1)(b)(ii) of the Act and key policies of the CRPS.</p> |
| <p><b>12.1.1.2 Objective - Reverse sensitivity effects</b></p> <p>a. Sensitive activities are established at suitable locations to minimise reverse sensitivity effects on established hazardous facilities.</p>                                   | <p>This objective seeks to protect hazardous facilities and land zoned for activities from actual or potential adverse effects (reverse sensitivity) to enable people and communities to provide for their social and economic well-being. This is consistent with section 5(2)(a)-(c) of the Act.</p>   |

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| <p><b>12.1.1.3 Objective - Residual and natural hazard risks</b></p> <p>a. People, property and the natural environment are protected from residual risks (i.e., risk after mitigation) posed by new hazardous facilities.</p> <p>b. Risks and adverse effects from the use, storage, disposal or transport of hazardous substances are managed in locations that may be within sensitive areas or affected by natural hazards.</p> | <p>The objective is appropriate because it suggests that hazardous facilities which may pose significant residual risk to people, property and the environment should be located elsewhere. It reflects district councils' responsibilities to manage the location of hazardous facilities rather than the use of hazardous substances, which is regulated through the Hazardous Substances and New Organisms Act (HSNO) 1996.</p> |
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**CONCLUSION**

These objectives give effect to the CRPS. The CRPS is deemed to achieve the purpose of the Act and the District Plan must give effect to the CRPS.

Consideration was given as to whether alternative objectives would more appropriately achieve the purpose of the Act, taking into account circumstances of the district.

There is no other known alternative objective that would satisfy Councils statutory obligations under the Act.

These objectives address issues 2.3.1 - 2.3.5 above.

The Council therefore considers that the adopted objectives are the most appropriate way to achieve the purpose of the Act and addresses the storage, use, disposal and transport of hazardous substances.

**6. EVALUATION OF PROPOSED POLICIES, RULES AND METHODS**

1. Section 32(1)(b) requires an evaluation of whether the provisions are the most appropriate way to achieve the objectives by identifying other reasonably practicable options, assessing the efficiency and effectiveness of the provisions in achieving the objectives, and summarising the reasons for deciding on the provisions.
2. The assessment must identify and assess the benefits and costs of environmental, economic, social and cultural effects that are anticipated from the implementation of the provisions, including opportunities for economic growth and employment. The assessment must, if practicable, quantify the benefits and costs and assess the risk of acting or not acting if there is uncertain or insufficient information available about the subject matter.

**6.1 PROVISIONS (POLICY, RULE, METHOD) MOST APPROPRIATE WAY TO ACHIEVE THE OBJECTIVES**

**Objective 12.1.1.1 - Adverse environmental effects**

- a. The storage, use, disposal or transport of hazardous substances in the district does not adversely affect people, property and the environment above unacceptable levels.

**Objective 12.1.1.2 - Reverse sensitivity effects**

- a. Sensitive activities are established at suitable locations to minimise reverse sensitivity effects on established hazardous facilities.

**Objective 12.1.1.3 - Residual and natural hazard risks**

- a. People, property and the natural environment are protected from residual risks (i.e., risk after mitigation) posed by new hazardous facilities.
- b. Risks and adverse effects from the use, storage, disposal or transport of hazardous substances are managed in locations that may be within sensitive areas or affected by natural hazards.

| Provision(s) most appropriate  | Effectiveness and Efficiency  |
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| <p><b>Option 3: Update provisions and adopt the Activity Status Table (AST) in determining activity status</b></p> <p><b>1. Policies:</b></p> <p><b>Policy 12.1.1.1.1: Location of new hazardous facilities</b></p> <ul style="list-style-type: none"> <li>a. New hazardous facilities shall be located on appropriate sites to ensure that any residual risks to human health and safety, and the natural environment are minimised.</li> </ul> <p><b>Policy 12.1.1.1.2: Design, construction and management of hazardous facilities</b></p> <ul style="list-style-type: none"> <li>a. Hazardous facilities shall be designed, constructed and managed to minimise adverse effects on people, property and the environment.</li> <li>b. Appropriate facilities and systems shall be provided to minimise pollution of soil, groundwater, watercourses and air in the event of any release (including spills and gas escapes) of hazardous substances.</li> </ul> <p><b>Policy 12.1.1.1.3: Identification and assessment of individual and cumulative effects of hazardous facilities</b></p> <ul style="list-style-type: none"> <li>a. The identification and assessment of the individual and cumulative effects associated with hazardous facilities shall ensure that residual risks to people, property and the natural environment are minimised.</li> </ul> | <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>a. These proposed policies and methods will: <ul style="list-style-type: none"> <li>i. protect the health and safety of people and communities from the residual risk of hazardous facilities. The benefits for the community are a reduction in the number of accidents and the better identification and appropriate siting of hazardous facilities.</li> <li>ii. provide for the design, construction and management of hazardous facilities according to the rules of the Plan and in compliance with HSNO. They link the provisions of the District Plan with relevant HSNO legislation.</li> <li>iii. reduce the risk to the community and natural environment caused by poor design, construction and management of hazardous facilities.</li> <li>iv. reduce the probability of monetary costs to the community and ratepayers in the case of a major hazardous substance incident.</li> <li>v. ensure the efficient operation of existing hazardous facilities.</li> <li>vi. make particular provision to protect soil, groundwater, watercourses and air from accidental environmental pollution (this implements section 5(2)(b) of the RMA).</li> <li>vii. recognise hazardous facilities as economic assets that require protection against the establishment of sensitive land uses.</li> <li>viii. protect investment in and recognise the economic</li> </ul> </li> </ul> |

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| <p><b>Policy 12.1.1.1.4: Transport of hazardous substances</b></p> <p>a. The transport of hazardous substances as part of a land use activity shall ensure adverse effects on the road network, road users and land use activities along transport routes are minimised.</p> <p><b>Policy 12.1.1.2.1: Establishment of sensitive land use activities</b></p> <p>a. The establishment of sensitive land use activities in close proximity to existing hazardous facilities or areas identified for hazardous facilities shall be minimised, to allow such facilities to carry out their operations without unreasonable reverse sensitivity constraints.</p> <p><b>Policy 12.1.1.3.1: Risks and adverse effects within sensitive areas or affected by natural hazards</b></p> <p>a. Any proposal for a hazardous facility within sensitive areas or potentially affected by natural hazards shall be designed, constructed and managed to minimise risks and actual or potential adverse effects on people, property and the environment.</p> <p><b>2. Methods (Other than rules):</b></p> <p>The objectives and policies will be implemented through the following methods:</p> <p>a. Definitions, in particular:</p> <ul style="list-style-type: none"> <li>i. Domestic.</li> <li>ii. Hazardous facility.</li> <li>iii. Hazardous substance.</li> <li>iv. Sensitive activities.</li> <li>v. Sensitive areas.</li> <li>vi. Storage.</li> <li>vii. Use.</li> </ul> <p>b. District Plan:</p> <ul style="list-style-type: none"> <li>i. Appropriate zoning.</li> <li>ii. Use of buffer area provisions to address interface situations, particularly to deal with incompatible land use activities.</li> <li>iii. Application of appropriate resource consent conditions.</li> </ul> | <p>benefit of hazardous facilities.</p> <ul style="list-style-type: none"> <li>ix. protect people, property and the environment from residual risks through the identification of residual risks and assessment of the potential cumulative effects.</li> <li>x. enable the Council to comprehensively consider the actual and potential adverse effects arising from the storage, use, transport and disposal of hazardous substances.</li> <li>xi. require proposals for hazardous facilities to take account of potential natural hazards which might exacerbate the risk of the use and storage of hazardous substances.</li> <li>xii. protect people, property and the environment in taking into account reverse sensitivity effects.</li> </ul> <p>b. The new definitions will contribute to the provisions in the District Plan being consistent with the RMA and current related legislation.</p> <p><b>Costs</b></p> <p>a. These proposed policies and methods will:</p> <ul style="list-style-type: none"> <li>i. result in increased monitoring and compliance costs.</li> <li>ii. potentially result in inefficient use of available land where setbacks are required to minimise risk to people, property and the natural environment.</li> <li>iii. require management and operational requirements that prevent and/or minimise adverse effects which could or may result in additional costs to hazardous facilities.</li> <li>iv. result in additional costs for identification, assessment and management of cumulative and residual risks.</li> <li>v. curtail development potential in areas of high risk.</li> <li>vi. result in potential loss of development opportunity of land resources close to existing hazardous facilities.</li> <li>vii. potentially be more restrictive for any new sensitive land uses that might establish in proximity of existing hazardous facilities.</li> </ul> <p>b. There is a potential environmental and economic cost if definitions and terms are changed in legislation over time, e.g. when certain activities are included or excluded from a particular definition.</p> |
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| <ul style="list-style-type: none"> <li>iv. Monitoring of compliance with rules and resource consent conditions.</li> <li>v. Monitoring of compliance with codes of practice, New Zealand standards, guidelines and regulations for hazardous substances.</li> <li>c. Other methods:             <ul style="list-style-type: none"> <li>i. HSNO – sets out technical standards for the use, storage, inspection, identification and regulation of hazardous substances.</li> <li>ii. Legislation, regulations and codes of practice addressing the transport of hazardous substances – imposes relevant controls on the transport of hazardous substances.</li> <li>iii. Education – will be used to promote public awareness about the costs and benefits of hazardous substances and facilities, to encourage resource users to take responsibility for their own health and safety, and for management of the effects of their activities on the public and the environment.</li> <li>iv. Promotion of industry codes of practice, New Zealand standards and guidelines – will be used to avoid, remedy or mitigate environmental effects and in managing risks associated with hazardous facilities. Industry codes will be utilised in some circumstances to provide the basis for controls on the use of hazardous substances.</li> <li>v. Develop specific guidelines, in cooperation with other agencies, to assist operators of hazardous facilities in achieving compliance with relevant management requirements such as brochures or web-based information.</li> <li>vi. Prepare and operate site management systems and emergency plans to avoid or mitigate the risk of hazardous substances escaping into the environment.</li> <li>vii. Promotion of “cleaner production” and recycling principles.</li> <li>viii. Waste disposal guidelines will be used for the disposal of hazardous waste to Local Authority approved facilities to protect human health and the receiving environment from potential adverse effects. Advice may be given on pre-treatment</li> </ul> </li> </ul> | <p><b>Efficiency and Effectiveness</b></p> <ul style="list-style-type: none"> <li>a. Overall the proposed policies and method will:             <ul style="list-style-type: none"> <li>i. ensure that new hazardous facilities are located with sufficient separation distances from other land use activities that may be adversely affected.</li> <li>ii. provide sufficient detail of how people and the environment are to be protected from the operations of hazardous facilities.</li> <li>iii. enable the efficient and effective management, design, location and operation of hazardous facilities in the local context while protecting people, property and the environment.</li> <li>iv. focus on the key aspects of risks that need to be managed under the Act and enable the establishment of hazardous facilities where appropriate measures are taken to protect people, property and the environment.</li> <li>v. require a primary risk assessment to be undertaken in the case of a resource consent application submitted in accordance with the hazardous substance provisions, and the monitoring of conditions will ensure that the policies are implemented effectively and efficiently.</li> <li>vi. provide a basis for the establishment of thresholds for combined quantities of hazardous substance used and stored for each class. This is an efficient mechanism for addressing cumulative risk that does not capture small quantities and enables an assessment of more significant quantities to be made where the adverse effects of that cumulative risk can be appropriately managed.</li> <li>vii. inform the assessment of hazardous facilities that are of a more significant scale and trigger consent under the Activity Status Table.</li> <li>viii. will take into account effects of new, risk-sensitive activities on the ability of an existing hazardous facility to carry out its operations effectively, particularly for significant hazardous facilities or larger areas of smaller facilities, where residual risks cannot reasonably be reduced to acceptable levels.</li> </ul> </li> <li>b. The benefits of the policies and method are considered to outweigh the costs and will be most appropriate to achieve Objective 12.1.1.1 and</li> </ul> |
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| <p>requirements or alternative methods of disposal for non-acceptable wastes.</p> <p>ix. Liaison with parties involved with hazardous substance use – such as the Regional Council and adjoining District Councils, Ministry of Health, Ministry for the Environment, the Environmental Protection Authority (EPA), the New Zealand Police and owner/operators who use hazardous substances, will allow more effective risk management coordination.</p>  | <p>Objective 12.1.1.2.</p>   |
| <p><b>3. Rules:</b></p> <p>a. <b>12.1.2.1 General Provisions</b></p> <p>(a) The following rules apply to activities that involve the use, storage, disposal or transport of hazardous substances, as well as the management of hazardous facilities.</p> <p>(b) There are regional rules applicable to the contamination of land, air and water associated with the storage, use, disposal or transport of hazardous substances. Certain activities which comply with the rules regulating hazardous substances under the District Plan may still require consent from the Canterbury Regional Council (CRC).</p> <p>b. <b>Rule 12.1.2.2 Activity Status</b></p> <p>c. <b>Rule 12.1.2.2.1 Permitted Activities</b></p> <p>The activities listed below are permitted activities subject to compliance with the Activity Specific Standards:</p> <p>i. <b>P1</b> Any hazardous facility involving hazardous substances in aggregate quantities for the zone the facility is proposed to be located within.</p> <p>ii. <b>P2</b> The use, storage, transport and disposal of domestic hazardous substances (including residues or empty containers generated on the subject property) in original retail packaging and containers (not including chemical storage tanks or vessels).</p> <p>iii. <b>P3</b> Retail sale of hazardous substances for domestic use, where such hazardous substances have been pre-packaged off-site for domestic use.</p> <p>iv. <b>P4</b> Retail sale of fuel.</p> | <p><b>Benefits</b></p> <p>a. The general provisions rule recognises Regional Plans that may have rules applicable to the contamination of land, air and water associated with the storage, use disposal or transport of hazardous substances.</p> <p>b. The permitted activity rules will provide certainty that hazardous facilities and activities involving hazardous substances can occur without the need for resource consent and associated cost, provided they are designed and operated in an appropriate manner to prevent adverse effects on people, property and the natural environment.</p> <p>c. Permitted activities P1-P4 establish a clear hierarchy for hazardous facilities by defining acceptable quantities for hazardous substances according to HSNO classifications.</p> <p>d. The activity status table provides specific thresholds for each substance classification, according to the zoning group of the land, which reflects the variability of the receiving environments.</p> <p>e. The rules introduce a set of standards which are clear and easy to implement. Activities that comply with these standards and the specified quantities are provided for as permitted depending on their location. Only activities that do not meet the given standards and quantity limits are treated as restricted discretionary activities. For most activities this is a cost-effective way of managing effects.</p> <p>f. If a consent process is triggered the extent of assessment is targeted to the actual or potential effects relating to hazardous facilities. This should ensure the process reflects the relative scale, significance and risk of the proposed activity.</p> <p>g. Appropriate separation from more sensitive land uses will prevent reverse sensitivity effects.</p> |

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| <p>v. <b>P5</b> Pipelines, including necessary incidental equipment, used for the transfer of hazardous substances including gas and oil.</p> <p>vi. <b>P6</b> Fuel or safety equipment contained in and for the operation of motor vehicles, boats, aircraft or small engines.</p> <p>vii. <b>P7</b> Fire-fighting substances on emergency service vehicles.</p> <p>viii. <b>P8</b> Any use or storage of radioactive materials associated with an activity that is specified as an exempt activity in the Radiation Protection Regulations 1982.</p> <p>ix. <b>P9</b> Wastes in process in the Council’s trade waste sewers, municipal liquid waste treatment and disposal facilities which may contain hazardous substance residues.</p> <p style="padding-left: 40px;">Note: This does not apply to the storage of hazardous substances or waste associated with these facilities.</p> <p><b>d. Rule 12.1.2.2 Restricted Discretionary Activities</b></p> <p>The activities listed below are a restricted discretionary activity, where not listed as a permitted activity in Rule 12.1.2.2.1. Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in 12.1.3.</p> <p>i. <b>RD1</b> Any hazardous facility involving hazardous substances in aggregate quantities specified as a restricted discretionary activity in Rule 12.1.2.3 Hazardous Facility Activity Status Table for the zone the facility is proposed to be located within.</p> <p>ii. <b>RD2</b> Any hazardous facility that fails to meet any of the Activity Specific Standards specified in Rule 12.1.2.2.1.</p> <p>iii. <b>RD3</b> Any hazardous facility that involves the retail sale of fuel not permitted by P4 in Rule 12.1.2.2.1.</p> <p><b>e. Rule 12.1.2.3 Hazardous Facilities Activity Status Table</b></p> <p><b>f. Rule 12.1.2.4 Exceptions</b></p> <p>In the case of the Specific Purpose (Lyttelton Port) Zone, the provisions of Rule 21.8.1.3.11 shall apply.</p> | <p>h. For benefits of the AST’s specific features, refer to Table 2 above. The main features of the AST are:</p> <p>i. Organised according to the substance classes used in the Hazardous Substances (Classification) Regulations. This assists in the classification for planning purposes as it is based off a known and understood system.</p> <p>ii. Establishes thresholds across three land use zone groups where activities are of similar character. The three zone groups are:</p> <p style="padding-left: 40px;">A. Group 1 – generally occurring on land and among activities that are the least sensitive to hazardous facilities. This group excludes industrial heavy zones over the unconfined/semi-confined aquifer, which is identified as an area of particular sensitivity in the Land and Water Regional Plan. A more restrictive threshold is more appropriate over the unconfined/semi-confined aquifer;</p> <p style="padding-left: 40px;">B. Group 2 – where hazardous facilities are expected as part of everyday use but in quantities and scales less than would be used as part of any commercial or rural area. This group includes Industrial Heavy Zones over the unconfined/semi-confined aquifer; and</p> <p style="padding-left: 40px;">C. Group 3 – the most sensitive to the residual risks posed by any new hazardous facility.</p> <p>iii. Provides two thresholds for each substance classification within each land use zone group, being permitted or restricted discretionary.</p> <p>i. The benefits of the AST are:</p> <p style="padding-left: 40px;">i. It is based on the understood and accepted HSNO classes, with the added category of high biochemical oxygen demand (BOD<sub>5</sub>) substances not covered under HSNO;</p> <p style="padding-left: 40px;">ii. It incorporates buffer provisions to protect against the adverse effects of hazardous facilities on more sensitive land uses;</p> <p style="padding-left: 40px;">iii. It presents easily understood permitted and restricted discretionary activity thresholds; and</p> <p style="padding-left: 40px;">iv. The system is much less complex than alternative approaches (such as the HFSP).</p> <p>j. Site requirements will ensure the protection of people, property and the natural environment.</p> <p>k. Unintentional spills are addressed by appropriate precautionary methods.</p> |
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| <p>g. <b>Rule 12.1.3 Assessment Matters</b></p> <p>h. <b>Appendix 12.1.4.1 – Site requirements for P4, P5 and P9</b></p> | <p>i. Requirements for spill containment systems are based on best practicable option principles to protect stormwater systems and receiving water bodies.</p> <p><b>Costs</b></p> <p>a. There is potential for the establishment of hazardous facilities that do not meet the given standards and quantities. This might be particularly the case where such hazardous facilities are proposed close to sensitive receiving environments.</p> <p>b. The potential environmental costs associated with enabling certain activities involve a balancing of risk. The plan proposes to manage that risk through the imposition of thresholds within the activity status table at a level where risk from the use or storage of hazardous substances are not regarded as being high. The addition of site requirements that apply to any hazardous facility seeks to further minimise the risk through the imposition of outcomes acceptable to the Council in relation to construction, design, operation and containment.</p> <p>c. With a restricted discretionary activity there is potential for social and environmental costs if the plan fails to recognise a particular issue within its exercise of control.</p> <p>d. While the layout of the AST is easy to understand, the thresholds could lead to difficulties in administration and related unnecessary resource consent costs.</p> <p>e. Applicants may need to secure certification from a suitably qualified engineer to satisfy the requirements of the Council for any hazardous facility with associated costs.</p> <p>f. Potential additional costs of using measures to protect the Council-managed stormwater systems that might not otherwise be specifically required by HSNO.</p> <p>g. Potential costs for additional risk management measures where sensitive environments might be affected.</p> <p><b>Efficiency and Effectiveness</b></p> <p>a. The plan seeks to enable activities subject to compliance with Activity Specific Standards to mitigate their potential adverse effects. Use of Activity Specific Standards is considered the most efficient and effective mechanism.</p> <p>b. The Council has identified a list of matters over which it will restrict its exercise of discretion. These matters incorporate all of the potential adverse effects on the</p> |
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|   | <p>environment that relate to hazardous facilities and are necessary to implement the objectives of the plan. The effectiveness and efficiency of restricted discretionary activities will be enhanced by assessment matters that relate to relevant issues. Together these are considered an effective and efficient means of achieving the objectives for this chapter.</p> <ul style="list-style-type: none"> <li>c. The use of the AST approach is efficient in that it allows thresholds of each substance class to be listed rather than each individual substance.</li> <li>d. When compared against the status quo or the use of HFSP as a method of determining activity status, the AST is a more efficient and effective means of achieving the objectives for this chapter.</li> </ul>   |
| <b>Options less or not as appropriate to achieve the Objectives and Policies:</b>   |  |
| <p><b>Option 1: Status Quo - retain existing Christchurch City and Banks Peninsula District Plan provisions</b></p> <p>Rely on current provisions of the Christchurch City and Banks Peninsula District Plans.</p>                        | <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>a. Retains the established approach which is already familiar to parties.</li> <li>b. Lower administration cost for the Council.</li> </ul> <p><b>Costs</b></p> <ul style="list-style-type: none"> <li>a. Does not address the changes in HSNO and known conflicts with this statute.</li> <li>b. Higher risk of appeals, related costs and time delays.</li> <li>c. Fails to capture improvements in best practice, including Ministry guidelines for plan development since the plan was made operative.</li> <li>d. Risks the provisions becoming further out of date and inconsistent.</li> <li>e. Potential costs to community and ratepayers in case of significant hazardous substance incidents.</li> <li>f. Risks to people, property and the environment arising from a sub-optimal planning framework.</li> </ul> <p><b>Efficiency and Effectiveness</b></p> <ul style="list-style-type: none"> <li>a. Less effective and efficient due to potential for higher costs to applicants, and economic or environmental cost to ratepayers, the community and future generations.</li> </ul> |
| <p><b>Option 2: Update provisions and adopt the Hazardous Facility Screening Procedure (HFSP) method in determining activity status</b></p> <p>Updating the current provisions and using the Hazardous Facilities Screening Procedure</p> | <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>a. Used correctly (including the right quantity for each substance), the HFSP offers a valuable tool to address cumulative effects.</li> </ul> <p><b>Costs</b></p>   |

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| <p>(HFSP).</p>   | <p>a. In the district context, it would be onerous to expect applicants to go through the HFSP. It also imposes considerable administrative costs to the Council.</p> <p><b>Efficiency and Effectiveness</b></p> <p>a. The quantity matrix used by the HFSP has been plagued by lack of updating and errors. The risk of referring to a document that has not been updated is high.</p> |
| <p><b>Risk of Acting or Not Acting</b></p>   |   |
| <p>a. While there is enough certainty and sufficient information known about risks presented by individual hazardous substances, the potential adverse effects of hazardous facilities on people, property and the natural environment varies significantly (e.g., quantity and type of substances involved, design and management practices, local environment, land use zoning patterns, and cumulative effects).</p> <p>b. The risk of not acting is that hazardous facilities establish in inappropriate locations and are designed and managed in ways that will have actual and potential adverse effects on people, property and the environment.</p> |   |

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Response Planning (2011) Evaluating the Effectiveness and Efficiency of the Christchurch City Plan. Project Report.

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## **APPENDIX 1: KEY STRATEGIC DOCUMENTS**

The following documents have largely directed the preparation of this Plan Review and influenced its content:

### **1. Resource Management Act 1991**

The Council has as one of its functions under section 31(1)(a) of the Act the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district.

### **2. The Canterbury Earthquake Recovery Strategy 2012**

The Recovery Strategy lists six components of recovery each with associated goals. Those goals that are given specific effect to in this chapter are:

- a. delivering smarter council and government planning and services;
- b. acknowledging and celebrating the rich and diverse Ngāi Tahu, colonial and other heritages and connections; and

The proposed District Plan must not be inconsistent with the Canterbury Earthquake Recovery Strategy.

### **3. The Land Use Recovery Plan (LURP) 2013**

Directs the review of the District Plan and provides policies requiring best practice for investigation, management and remediation.

### **4. Canterbury Regional Policy Statement (CPRS) 2013**

Recovery in Greater Christchurch is supported by provisions in Chapter 5 – Land Use and Infrastructure. Objective 5.2.1 seeks development that is located and designed so that it achieves consolidated, well designed and sustainable growth in and around existing urban areas, and enables people and communities, including future generations to provide for their social, economic and cultural well-being and health and safety.

Chapter 18 provides objectives, policies and methods for managing the effects of hazardous substances. Objective 18.2.1 seeks to avoid, remedy or mitigate adverse effects on the environment from the storage, use, disposal and transport of hazardous substances. Objective 18.2.2 seeks to avoid land contamination by hazardous substances. The policy provisions to deliver these objectives are summarised below:

- a. Policy 18.3.1 seeks to avoid actual or potential adverse effects from the use, storage or disposal of hazardous substances from specific locations;
- b. Policy 18.3.2 seeks to avoid, remedy or mitigate adverse environmental effects, including contamination of land, air and water, associated with the storage, use, transport or disposal of hazardous substances.
- c. Policy 18.3.3 promotes an integrated approach to hazardous substance management within the region.
- d. Policy 18.3.4 promotes practices that prevent or mitigate adverse effects of hazardous substances on the environment, including those that could reduce its use.
- e. Policy 18.3.5 encourages appropriate information to be made available to Local Authority Emergency Operations Centres for appropriate and effective emergency response.

### **5. Proposed Land and Water Regional Plan (LWRP) 2014**

Section 30 of the Act gives regional councils some specific functions around the control of the use of any land, including the prevention or mitigation of effects from the use, storage, transport or disposal of

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### **Hazardous Substances - Section 32**

hazardous substances, particularly in relation to contamination of land, air and water. The LWRP identifies the policies and rules needed to achieve its objectives, and provides direction in terms of the processing of resource consent applications within the Canterbury region. The key provisions providing guidance to this chapter include:

- a. Policy 4.16(d) seeks to manage any reticulated stormwater system for any urban area in accordance with a Stormwater Management Plan that addresses the management of the discharge of stormwater from sites involving the use, storage or disposal of hazardous substances.
- b. Policy 4.24 allows for the discharge of a hazardous substance to water to control a plant or animal pest only: if the substance is registered under HSNO for use against the target organism; if adverse effects on non-target organisms, Ngāi Tahu cultural values, or the use and consumption of water are avoided as far as practicable; and good management practices are used to minimise the risk of accidental discharge to water.
- c. Policy 4.25 primarily seeks to avoid the discharge of hazardous substances onto land or into water; secondarily to ensure, where there is a residual risk of a discharge of hazardous substances, it is contained on-site and does not enter surface water bodies, groundwater or stormwater systems.
- d. Policy 4.26 seeks to avoid adverse effects on people's health or safety, on water supplies or on surface water from discharges of hazardous substances from contaminated land.
- e. Policy 4.27 seeks to avoid the contamination of groundwater or surface water through direct discharge of hazardous substances to water or the leaching of contaminants from landfills and other waste collection or disposal sites.

#### **6. Mahaanui Iwi Management Plan 2013**

The particular interests of Ngāi Tahu Papatipu Runanga are recognised and provided for in urban and township planning. The key provisions providing guidance to this chapter include:

- a. Policy TM6.7 seeks to recognise the Te Runanga o Ngāi Tahu HSNO Policy Statement 2008 as a resource for cultural risk assessment.

#### **7. Te Runanga o Ngāi Tahu HSNO Policy Statement 2008**

This document serves as a resource in relation to HSNO matters for cultural risk assessment and decision-making based on Ngāi Tahu values. The policy statement provides policy guidance on evaluating issues of importance to Ngāi Tahu, identifying and assessing effects from a Ngāi Tahu perspective, identifying options to avoid or minimise adverse effects on Ngāi Tahu values, and identifying outcomes important to Ngāi Tahu. The objectives seek:

- a. To limit the overall use of hazardous substances.
- b. The safe and responsible storage, use, disposal and transport of hazardous substances in a way that protects the environment and Ngāi Tahu values.
- c. Recognition of the relationship of Maori and their culture and traditions with their ancestral land, water, sites wāhi tapu, valued flora and fauna and other tāonga.

#### **8. Canterbury Civil Defence Emergency Management (CDEM) Group Plan 2014**

This Plan is a strategic document that provides direction on how comprehensive risk-based emergency management will be implemented in the Canterbury region. Its principles and objectives in relation to risk reduction and readiness provided guidance to this chapter. These include:

- a. Identifying, understanding and managing the risks from hazards faced by Canterbury's communities.
- b. Ensuring planning and management of risk is based on relevant risk assessments.
- c. Communicating risk information effectively to the community.



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- d. Increasing community and business awareness of risks from hazards and its consequences.
- e. Improving community and business preparedness.

Hazardous Substances - Section 32

APPENDIX 2: LINKAGES BETWEEN PROVISIONS

Linkages and grouping of provisions

| Issue   | Directions  | Objectives  | Policies   | Rules  | Assessment Matters                      |
|---|---|---|--|--|---|
| <p><i>Strategic Directions Chapter</i><br/>3.4.4 Protecting our resources, values, health and well-being</p>  | <p>3.5.1 Recognising manawhenua interests<br/>3.5.3 Enhancing the health and well-being of communities<br/>3.5.3.1 A safe and reliable water/wai supply<br/>3.5.3.3 The district's culture and heritage is valued<br/>3.5.4 Valuing and protecting the natural environment<br/>3.5.4.1 The district's distinctive landscapes and indigenous biodiversity are protected and enhanced<br/>3.5.4.2 Water/wai quality and quantity are protected and enhanced</p> | <p>3.6.2 Development form and function<br/>3.6.3 Manawhenua<br/>3.6.4 Natural and cultural environment</p>                | <p>3.6.2.8 Infrastructure<br/>3.6.3.2 Protection of cultural heritage of significance to Ngāi Tahu<br/>3.6.4.1 Freshwater features and values</p>  |  |   |
| <p><i>Strategic Directions Chapter</i><br/>3.4.4.5 Health and safety of people and the environment</p>  | <p>3.5.3.2 Communities are safe and resilient</p>   | <p>3.6.5 Natural hazards<br/>3.6.6 Amenity, health and safety</p>   |  |  |   |
| <p><i>Hazardous Substances and Contaminated Land Chapter</i><br/>Resource Management Issue 2.3.1 Protection of sensitive land use activities<br/>Resource Management Issue 2.3.2 Protection of natural environment and ecosystems<br/>Resource Management Issue 2.3.3 Assessment/management of cumulative risk<br/>Resource Management Issue 2.3.4 Interaction between natural hazards and hazardous facilities<br/>Resource Management Issue 2.3.5 Reverse sensitivity</p> |   | <p>12.1.1.1 Adverse environmental and reverse sensitivity effects<br/><br/>12.1.1.2 Residual and natural hazard risks</p> | <p>12.1.1.1.1 Location of new hazardous facilities<br/>12.1.1.1.2 Design, construction and management of hazardous facilities<br/>12.1.1.1.3 Identification, assessment and management of individual and cumulative effects of hazardous facilities<br/>12.1.1.1.4 Transport of hazardous substances<br/>12.1.1.1.5 Establishment of sensitive land use activities<br/><br/>12.1.1.2.1 Risks and adverse effects within areas of particular sensitivity or affected by natural hazards</p> | <p>12.1.2.1 General Provisions<br/>12.1.2.2.1 Permitted Activities<br/>12.1.2.2.2 Restricted Discretionary<br/>12.1.2.3 Hazardous Facilities Activity Status Table<br/>12.1.2.4 Exceptions</p> | <p>12.1.3 Assessment Matters a to j</p> |

**APPENDIX 3: CONSULTATION AUGUST –SEPTEMBER 2013**

1. At the outset of the District Plan review project an engagement, communications and marketing programme was developed to:
  - a. Increase the level of awareness and understanding of the role of the District Plan;
  - b. Invite stakeholders and the community to be involved in the review;
  - c. Listen to and consider their views in the drafting of and decision-making on the Plan;
  - d. Build confidence in the review process, and the final new District Plan.
2. A campaign – ‘Finding the Balance’ - was created to help engage the community by informing them and encouraging their involvement in the review. An online conversation was run through the Future Christchurch website, alongside information on the District Plan review on the Council’s site [www.ccc.govt.nz](http://www.ccc.govt.nz). Designed to engender a continuous conversation with the community, the first stage ran in August/September 2013.
3. To introduce the District Plan review, an eight page booklet was delivered to 147,000 households across the city and Banks Peninsula, and made available in libraries, service centres and cafes.
4. At the end of August we held two general stakeholder presentations at Civic Offices which were attended by 120 people. Invitees included community representatives, government agencies and NGOs, developers, lawyers and planners. We also held community drop-in sessions in eight locations, including Akaroa.
5. Promotion of the campaign during this time included extensive advertising in the Press, Star and community papers, plus radio to let people know about the community sessions.
6. The ‘Finding the Balance’ site had more than 4700 page views, and more than 500 comments on the District Plan review were received.

**APPENDIX 4: CONSULTATION FEBRUARY – MARCH 2014**

1. A second round of consultation was held from 24 February to 30 March with the community and other stakeholder groups and organisations, as part of the preparation of the priority draft chapters.
2. The comprehensive, five week programme of community engagement built on the *Finding the Balance* branding introduced in the earlier round.

**Channels and information**

3. Information about options being considered in drafting the first set of chapters, and how people could participate in the development of the District Plan at this stage, was made available through the following channels:
  - a. Council website [www.ccc.govt.nz/districtplanreview](http://www.ccc.govt.nz/districtplanreview), including chapter drafts and associated maps;
  - b. Letters to potentially affected property owners around commercial centres (14,860 plus 1101 following postponement for Riccarton due to flooding); around industrial areas (Hornby – 57, Cookie Time Templeton – 41 and Memorial Ave / Russley Road – 153) and to applicants and agents of District Plan changes underway – 212. Total letters: 16424;
  - c. Info sheets on the District Plan review in summary, for each of the eight draft chapters and 13 specific commercial or industrial locations;
  - d. Public and stakeholder meetings (see details following) including customised Powerpoint presentations;
  - e. Online surveys (see details following);
  - f. A Natural Hazards forum (see details following);
  - g. Print advertising in Press, Star and community papers, Akaroa Mail (outlining the District Plan review and chapters, and promoting meetings and feedback);
  - h. Online advertising in Facebook, TradeMe Property, Press online (directing to the surveys);
  - i. Radio advertising on More FM and Radio Live placements on breakfast, drive and primetime (promoting meetings);
  - j. Media release and briefings (see details following);
  - k. Ongoing Facebook and Twitter updates;
  - l. District Plan review e-newsletter, and stakeholder and community emails ( four messages inviting to upcoming meetings);
  - m. Posters at libraries and service centres (two sets, promoting meetings and feedback).
4. More than thirty presentations and public meetings were held across the city and Banks Peninsula to inform people about the chapters being developed, and for planners to hear their concerns and get local input. More than a thousand people attended these meetings. Areas of focus included:
  - a. Ward-based community meetings covering all eight chapters of Stage 1;
  - b. Residential properties around the commercial centres of Barrington, Church Corner, Papanui, Hornby, Linwood, Bishopdale, Shirley, Merivale and Riccarton, and the Sparks Road development in Halswell;
  - c. Properties around industrial areas of Hornby, Memorial Ave/ Russley Road, and Cookie Time Templeton;
  - d. General stakeholder presentations to community groups, sector interests, government and non-government agencies.

5. Three online surveys were also carried out:
  - a. One for Affected Areas Survey (for property owners living in defined areas directly affected by changes - key commercial centre locations);
  - b. One was a Public Survey (self-selected sample, open to the public living in any location);
  - c. One focussing on the Natural Hazards Chapter (self-selected sample; open to the public living in any location).
6. The first two were open from late February until 30 March 2014. The Natural Hazards one started in the third week of March and is still open.
7. A forum focussing on natural hazards was also held on Saturday 15 March. Titled “Our Changing Environment – the risks and challenges of living with natural hazards”, the event was attended by over 150 people. Topics covered included hazards and risks, the science behind measuring risk and probabilities, land instability and flooding and how the District Plan review might help address these issues.
8. Media activities included an interview by The Press on the topics of land instability in the Port Hills and Flooding, and with the Sunday Star Times on climate change and rules in the District Plan review. A radio interview was held with Radio NZ on the topic of restricting commercial and retail in industrial zones, and a TV interview was done with CTV on the topic of parking. Lastly a combined media briefing was undertaken on natural hazards.

#### **Feedback**

9. Engagement feedback has been recorded through comments and notes at the public meetings, email and telephone, and via Survey Monkey.
10. To date, more than 900 comments had been received through the first two surveys (i.e. not including the Natural Hazards questions). A similar number have come through the meetings, email and telephone.