

**BEFORE A HEARINGS PANEL OF THE GREATER WELLINGTON REGIONAL  
COUNCIL AND MASTERTON DISTRICT COUNCIL**

**Resource Consents: WAR 070077 (27160-27172)  
Notice of Requirement**

*In the matter of* Resource consent applications to Greater Wellington  
Regional Council pursuant to section 88 of the Resource  
Management Act and its Amendments.

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*In the matter of* a Notice of Requirement to Masterton District Council  
pursuant to section 168A and 181 of the Resource  
Management Act and its Amendments.

*By* Masterton District Council

*For* The Masterton Wastewater Treatment Plant and  
Disposal System Long-Term Upgrade

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**STATEMENT OF EVIDENCE OF ROBERT SCHOFIELD  
ON BEHALF OF MASTERTON DISTRICT COUNCIL**

**Subject Area: Planning and resource management analysis**

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## 1. INTRODUCTION

- 1.1 My name is Robert John Schofield, and I am a Director of Boffa Miskell Limited, a national firm of consulting planners, urban designers, ecologists and landscape architects. I hold the qualifications of BA (Hons) and Master of Regional and Resource Planning (Otago). I am a Fellow of the New Zealand Planning Institute, and a Past President (1998-2000). I have been a planning consultant based in Wellington for over 24 years, and my professional experience has principally been at district level, including providing consultancy services for many local authorities around New Zealand. In 2008, I was awarded the New Zealand Planning Institutes Distinguished Services Award for my services to planning in New Zealand.
- 1.2 I am familiar with Masterton and its environs, having worked with the former Masterton County Council, and then the Masterton District Council (**MDC**); with the latter, I primarily focused on the preparation of the Masterton District Plan (between 1992 and 1997). Since 2004, I have been extensively involved with the preparation and administration of the proposed Wairarapa Combined District Plan, which has included a review of the zoning and related provisions for Masterton. I am therefore familiar with the provisions of the Plan, including those relating to the proposal.
- 1.3 In this matter, I was first engaged by Masterton District Council in mid-2006 to assist in the preparation of its Notice of Requirement (**NOR**) and the resource consent applications that seek to establish an appropriate environmental management regime for the construction, operation and maintenance of the proposed Masterton Wastewater Treatment Plant and Disposal System Long-Term upgrade (herein referred to as the “MWTP”).
- 1.4 My evidence assesses the proposed upgrade under the relevant RMA planning framework required under sections 104 and 168A and 171 of the RMA and includes an assessment of the relevant provisions of the Operative Masterton District Plan (**‘District Plan’**), the proposed Wairarapa Combined District Plan (as amended by decisions notified on 29 March 2008) (herein referred to as the **‘Proposed Plan’**), the Wellington Regional Policy Statement, and the Operative Wellington Regional Freshwater, Air Quality Management, Soil, and Discharges to Land Plans.

**1.5** The NOR and resource consent applications (including the AEE) that I prepared jointly with various experts, including lead project engineer Humphrey Archer (Beca), provides a detailed account of the proposal and consultation carried out prior to the application being lodged, its effects on the environment, an assessment of relevant statutory provisions, and various supporting documents. To avoid undue repetition, my evidence below focuses on matters that have been raised by Greater Wellington, MDC (as requiring authority) and the submitters.

**1.6** I have read the Code of Conduct for Expert Witnesses issued as part of the Environment Court Practice Notes. I agree to comply with the code and am satisfied the matters I address in my evidence are within my expertise. I am not aware of any material facts that I have omitted or might alter or detract from the opinions I express in my evidence.

## **2. SCOPE OF EVIDENCE**

**2.1** My evidence is structured as follows:

- (a) executive summary;
- (b) background – proposed upgrade and planning context;
- (c) statutory context;
- (d) regional and district plan overview;
- (e) submitters' issues;
- (f) consultation;
- (g) assessment of resource consent applications;
- (h) assessment of proposed designation;
- (i) conditions;
- (j) term of consent; and
- (k) conclusions.

**2.2** The primary matters I address relate to statutory planning requirements and planning related matters raised by submitters, including cultural and amenity issues.

### 3. EXECUTIVE SUMMARY

3.1 I have been engaged since 2006 by Masterton District Council (**MDC**) to assist with meeting its statutory requirements for obtaining the necessary RMA Authorisations for the proposed Masterton Wastewater Project Upgrade. I am familiar with the site and immediate environs having carried out much planning work in the Wairarapa over the past 24 years. I am familiar with the relevant statutory planning framework for which the proposed scheme is to be assessed.

3.2 Together with Mr Archer, I was responsible for preparing the Notice of Requirement (**NoR**), resource consent applications and Assessment of Effects on Environment (**AEE**) required for the proposed scheme.

3.3 My evidence focuses on providing a planning and resource management analysis of the proposed scheme, drawing on:

- (a) The information contained in the NoR, resource consent applications and the AEE;
- (b) The expert technical evidence prepared in support of MDC as well as from Wes ten Hove and David Hopman from MDC; and
- (c) The submissions received by both Greater Wellington Regional Council (**GWRC**) and MDC.

3.4 I note that, in preparing this evidence, I did not have an opportunity to review the s42A Officers' Reports prepared on behalf of GWRC and MDC. In this regard, I may provide supplementary evidence in response to any matters raised in those Reports.

3.5 I have drawn the following key conclusions from my assessment of the proposed upgrade:

- (a) There has been extensive and ongoing consultation since 2004 over the purpose of the upgrade, the identification and selection of the upgrading scheme, and the refinement in the design of the selected scheme, and accordingly I am fully satisfied that the level and quality of consultation has been appropriate, notwithstanding the concerns of some submitters.

- (b) Notwithstanding that the MDC has an interest in the land to which the proposal relates, I am also satisfied that a comprehensive assessment of alternative upgrading schemes has been undertaken, with a full investigation of alternative methods and combinations of methods. Moreover, these investigations have been responsive to questions and suggestions received to date, and the Council is committed to remain responsive to opportunities once the upgrade has been implemented.
- (c) The proposed upgrade would bring about a significant improvement in the quality of the existing environment, particularly in regard to the quality of the water in the lower Makoura Stream and in the Ruamahanga River during those times at which the River is most valued and most used for recreational purposes. It would also eliminate the current leakage into the ground of effluent from the existing treatment ponds.
- (d) A range of measures are proposed to be undertaken to avoid, remedy or mitigate any potential adverse effects from the construction, use and operation of the upgraded Plant, including the use of planting to supplement the existing level of on-site planting. A number of conditions can be imposed on both the designation and the resource consents to address both the temporary construction effects as well as ongoing monitoring and review requirements.
- (e) The proposed works and designation are reasonably necessary to achieve the objectives of the MDC for upgrading the Masterton Wastewater Treatment Plant, in that the selected scheme addresses all of the project objectives, and delivers the best practicable option for the long-term improvement of the treatment and disposal of Masterton's wastewater.
- (f) The proposed upgrade represents a sustainable form of effluent treatment and disposal, with the proposed pond system being a proven, reliable and energy efficient form of treatment that can produce a high quality of output. The proposed upgrade would provide a good foundation for potential future stages of land treatment and disposal or other possible modifications or adjunct forms of disposal.

- (g) The proposed upgrade is consistent with the objectives and policies of the relevant RMA Plans, and with the purpose and principles of the Act.

**3.6** Accordingly, I recommend that:

- (a) The resource consent applications are granted, subject to conditions; and
- (b) The Notice of Requirement is recommended to be confirmed by the requiring authority, subject to appropriate conditions.

#### **4. SITE DESCRIPTION AND SURROUNDING ENVIRONMENT**

##### **Location & General Description**

**4.1** The site and surrounding environs are comprehensively described in section 5 of the AEE. In summary:

- (a) The existing and proposed treatment plant is located adjacent to the Ruamahanga River, in part of an “elbow” of the river that was part of the old riverbed. The land is generally flat and is surrounded by farmland, primarily intensive farming and horticulture, with associated residential uses. The Masterton landfill is located approximately 1.6 km to the north of the site, while Masterton Aerodrome is approximately 4 km to the northwest.
- (b) Approximately half of the land occupied by the existing ponds (i.e., that part closest to the Ruamahanga River) has a Land Use Capability assessment classified as Class VI<sub>s4</sub> on the NZ Land Resource Inventory Worksheets (**RIW**), which is not of high productive value due to the limitations caused by the predominance of gravel. The nearby vegetation consists of a range of pasture, broom and gorse (scrubs) and a small copse of native trees. The other half of the ponds and the remainder of the proposed treatment site have a Land Use Capability Assessment of Class Iw<sub>1</sub>, which is classified as largely flat river plains

and terraces, with deep fertile soils and a very slight wetness (drainage) limitation. The majority of the site is under pasture, with some exotic and remnant indigenous trees.

- (c) The existing wastewater treatment plant is located in relatively close proximity (5 km southeast) to the Masterton urban area, with the closest residences located approximately 1 km to the north of the existing MWTP. Appendix C of the AEE provides a plan which identifies the site and relationship to adjoining properties, including bores<sup>1</sup> in the immediate vicinity of the area.

**4.2** The AEE submitted with the application provides comprehensive details of:

- (a) The site's land uses, ecology, geology, faulting and seismicity, soils, and climate;
- (b) The Ruamahanga River catchment and river flow characteristics, water quality and ecology, flooding and erosion activity;
- (c) The area's groundwater characteristics, including flow and quality;
- (d) Community characteristics, including recreational use of the Ruamahanga River;
- (e) The Makoura Stream's characteristics; and
- (f) The existing treatment plant, including its environmental effects.

## **Land Ownership**

**4.3** The land to which the NOR and resource consent applications relate consists of numerous land parcels, and the Ruamahanga River and Makoura Stream. The legal description of each aspect of the proposed development is listed in section 2 of the application documents.

## **Surrounding Environs**

**4.4** As described in the AEE, the local rivers (in particular, the Ruamahanga River), the river plains and the rolling hills dominate the immediate landscape. The rolling hills to the southeast of the ponds contrast with the flat plains to the north. Land holdings to the east and north of the ponds are large, while to the west,

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<sup>1</sup> It is noted that some submitters have highlighted that not all bores are shown on this plan. In this regard the bores shown on this plan are only those identified in the latest GIS records available to MDC from GWRC.

towards the Waingawa River, a number of smaller holdings adjoin the Masterton-Martinborough Road (now called Te Whiti Road).

- 4.5** Pastoral farmland is the predominant land use character, with groupings of trees, particularly shelterbelts, breaking up the landscape. A 3-4 ha stand of remnant kahikatea is located immediately to the north of the ponds, while exotic species such as eucalypts, conifers and deciduous varieties are more common to the west and along a narrow riparian strip on both sides of the Makoura Stream. There are also a number of isolated trees scattered across the site, most of which are to the north and north-west of the oxidation ponds. The groupings of trees break the scale of the landscape by limiting views across the extensive plains and form several character zones within the locality. These zones are identified in Section 5.2.2 of the AEE.

## **5. BACKGROUND – PROPOSED UPGRADE AND PLANNING CONTEXT**

- 5.1** Investigations commenced in 1994 into a long-term strategy for the treatment and disposal of Masterton's wastewater. In 2003, interim consents (through to 2010) were issued to allow for the continued operation of the MWTP while the Council continued its technical investigations and upgrade design process.
- 5.2** In June 2005, MDC chose a scheme for the Homebush site that involved upgrading the existing oxidation ponds and developing a land based effluent disposal scheme on 91 hectares of adjacent land purchased by MDC in 2004. MDC also resolved to continue to seek to acquire more land for the disposal of treated effluent on to land. The resource consent applications and Notice of Requirement for the upgrade were lodged in May 2007.
- 5.3** In July 2007, MDC acquired the 107 hectare site to the west of the 91 ha block. This acquisition enabled MDC to review its options for upgrading the plant. This review included looking into the feasibility of constructing new treatment ponds and extending the land treatment area. Seven options were considered for the siting of new oxidation ponds, in combination with various alternative land treatment layouts.
- 5.4** In December 2007, MDC unanimously selected an option to construct new lined ponds directly to the north of the existing ponds, and to develop 97 hectares of the combined site area for land treatment. The remainder of the site was

identified as land that may be developed for land treatment in the future, but that was, in the meantime, continued to be used for farming.

**5.5** Consequently, in August 2008, the Masterton District Council submitted new resource consent applications and a Notice of Requirement for the revised upgrading scheme. The Notice of Requirement includes all of the land now owned by the Masterton District Council, including those areas that are not currently proposed to be used for treatment and disposal.

**5.6** Construction of new ponds had been considered in the past, but this was not feasible at the time because new ponds on the 91 hectare site would have reduced the irrigation area from 75 to 42 hectares. The purchase of the additional 107 ha site, however, allowed the Masterton District Council the opportunity to re-evaluate the options for new ponds and the extent of the land disposal area, resulting in the revised scheme.

**5.7** The present proposal is largely based on the 2007 proposal, with two principal changes:

- (a) New oxidation pond systems on part of the 91 hectare site, allowing for the decommissioning of the existing ponds, and the development of the underlying ground for land treatment purposes; and
- (b) Using part of the additional 107 hectare site for border-strip land treatment in conjunction with the remainder of the original 91 hectare site.

**5.8** Further refinements to the scheme arising from consultation include:

- (a) The modification of the layout of the treatment ponds to avoid affecting a number of smaller stands of remnant totara and other native trees on the site;
- (b) The use of the 50m-wide buffer area around the boundary for farming rather than screen planting (unless otherwise agreed by the adjoining property-owner), while those parts of the land treatment area not

screened by existing vegetation will be screened by a narrow band of planting around the perimeter of the land treatment area;

- (c) The re-design of the diversion of the Makoura Stream to include natural meanders and comprehensive stream restoration works; and
- (d) The construction of new drains in the area west of the Makoura Stream to improve drainage and help prevent potential ponding issues.

**5.9** In summary, the proposed upgrade comprises the following key elements:

- (a) The construction of a new oxidation pond system comprising two primary ponds operating in parallel and five maturation ponds-in-series; with provision for live storage of up to 275,000m<sup>3</sup> in the ponds to provide storage when land irrigation or discharge to the Ruamahanga River is not possible or is limited;
- (b) New inlet works comprising coarse grit removal, a new step screen, and emergency/high flow channel with manually raked bar screen;
- (c) Installation of a new influent pumping station and rising main with flow monitoring and distribution system to the primary oxidation ponds;
- (d) Decommissioning the existing ponds with pond sludge air dried and stored in a fill area at the existing pond site;
- (e) A pump station to deliver effluent to the land treatment area;
- (f) Construction of a land treatment scheme on the 91 ha site, the decommissioned pond area, and the eastern part of the 107 ha site adjacent to the Makoura Stream, to apply pond effluent to land as soil conditions allow;
- (g) No discharge of effluent to the river at flows below median flow in the Ruamahanga River (1 November to 30 April), and below half median flow in winter (1 May to 31 October);

- (h) Whenever there is a discharge to the Ruamahanga River, maintain a minimum ratio of 30:1 of river flow to effluent discharge;
- (i) New effluent discharge point in the Ruamahanga River adjacent to existing Pond 3, with an outfall diffuser;
- (j) Raising the level of the stopbank upstream of existing Pond 1 to provide protection for a 100-year return period flood; and
- (k) A 60m wide planted buffer area for erosion control, adjacent to the existing ponds with minor bank protection works (the original proposal to provide major rock protection for erosion control is no longer required due to the existing ponds being decommissioned).

**5.10** A key component of the proposed upgrade is the land discharge regime (which is the same as that proposed in 2007). This is aimed at maximising land disposal and further treatment, thereby minimising discharge to the river and avoiding river discharge at times when the river environment is more sensitive to such discharge. Over a year, it is anticipated that up to 40% of the treated effluent would be disposed of via the land treatment system.

**5.11** The land disposal involves a system that seeks a balance between the influent (incoming volume of raw wastewater), storage in the ponds (calculated maximum of 200,100 m<sup>3</sup>), volumes of effluent discharged to land and the volumes that have to be discharged to the river. To identify the most effective discharge regime, a water balance model was constructed to determine the volumes irrigated to land, stored in the ponds and discharged to the river. From this model, the operating philosophy for the proposed disposal of treated wastewater was established as follows:

- (a) Irrigation of treated wastewater will occur whenever soil conditions allow (summer and winter);
- (b) In summer (1 November to 30 April) there will be no discharge to the river when the flow in the river is less than 12.3 m<sup>3</sup>/s (median river flow);

- (c) In winter (1 May to 31 October) there will be no discharge to the river when the flow in the river is less than 6.1 m<sup>3</sup>/s (half median river flow);
- (d) Whenever there is a discharge to the river, the river flow will be at least 30 times greater than the discharge rate of effluent (i.e., a minimum dilution of 30X);
- (e) The discharge to the river will be suspended at river flows of great than 300m<sup>3</sup>/s. This is in order to address iwi concerns about the floodwaters containing the discharge of wastewater flowing onto private properties;
- (f) If irrigation and disposal to the river are prevented, or are limited to less than the inflows, then the expanded pond system will be used for storage; and
- (g) The discharge model includes factors for contingencies based on cautious approaches, and is therefore considered to be a conservative operating regime.

## **Existing Consents**

**5.12** The existing consents for the MWTP were granted on 20 January 2003 for discharges to water, land and air (see Table 1 below).

**5.13** These “interim” resource consents provided for a number of upgrades to be made to the existing Plant, including improvements to pond mixing, the installation of new brush aerators and an outlet screen, and the construction of a bund and rock filter to create a new maturation cell within the secondary oxidation pond. These upgrades were completed in June 2003.

**5.14** The existing consents expire on 20 January 2010, with condition 6 of the consent to discharge into water requiring a long-term upgrade of the treatment plant to be operating by the expiry of the consent. The current discharge permit was granted on an interim, short-term basis because it was considered that the plant required upgrading beyond that provided by the consents.

**5.15** The current discharge meets the existing guidelines in the Wellington Fresh Water Plan. However, at times of the year and at lower flows (in summer low flows when the river is most desirable for contact recreation) the existing discharge does have adverse effects on amenity values. The primary reason for the proposed upgrade is the desire to move to a longer-term and more sustainable form of treatment and disposal to reflect community expectations.

**(Table 1 in the AEE) Existing RMA Consents and Authorities Held for Wastewater Treatment Plant**

Relevant Regional/District Plan	Consents Held	Consent Effective From	Date Expires
Freshwater Plan	Discharge permit to discharge treated wastewater to surface water I (Makoura Stream)	2003	2010
Plan for Discharges to Land	Discharge permit to discharge contaminants (treated wastewater) to land (where it may enter water)	2003	2010
Air Quality Management Plan	Discharge Permit to discharge contaminants to air	2003	2010
Masterton District Plan	Designation D88 (refer to Appendix 9 and Planning Map 10)	1997 (plan operative)	Not applicable

### **NOR & Resource Consent Applications**

**5.16** Including the renewal of the existing resource consents for the ongoing operation of the treatment plant and the one-off consents associated with the proposed construction activities, thirteen resource consents were sought from Greater Wellington Regional Council (**GWRC**).

**5.17** Concurrently, a NOR has been lodged with MDC (as the requiring authority) to modify and extend the existing designation.

## Consents Sought from the Greater Wellington Regional Council

5.18 The resource consents being sought are as follows:

### Ongoing consents:

- (i) Discharge permit to discharge treated wastewater (effluent) to the Ruamahanga River (consent number 27160)<sup>2</sup>
- (ii) Discharge permit to discharge stormwater runoff from the wastewater irrigation land to the Ruamahanga River and Makoura Stream (consent number 27161)
- (iii) Discharge permit to discharge treated wastewater (effluent) to land via an irrigation system (consent number 27162)<sup>3</sup>
- (iv) Discharge permit to discharge partially treated wastewater (effluent) to land and groundwater through the base of the existing oxidation ponds and new oxidation ponds (consent number 27163)
- (v) Discharge permit to discharge wastewater sludge and residual liquid to land from the sludge dewatering process and sludge landfill (consent number 27164)
- (vi) Discharge permit to discharge odours and aerosols to air from the oxidation ponds, land irrigation system, and sludge dewatering process and landfill, and other activities from the site (consent number 27165)
- (vii) Water permit to divert surface water in the Ruamahanga River during flood events by upgrading existing stopbanks (consent number 27166)
- (viii) Water permit to permanently divert the Makoura Stream around the new oxidation ponds (consent number 27167)
- (ix) Land use consent to construct, place, use, and maintain a structure (diffuser outfall) in the bed of the Ruamahanga River (consent number 27168)

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<sup>2</sup> Above median flows in summer and above half median in winter.

<sup>3</sup> Does not extend to possible further land treatment area covered by the proposed designation.

- (x) Land use consent to disturb the bed of the Ruamahanga River arising from construction and maintenance the diffuser outfall and erosion protection works adjacent to the existing oxidation ponds (consent number 27169)

#### One-off construction related consents

- (xi) Discharge permit to discharge sediment-laden stormwater to the Ruamahanga River and Makoura Stream arising from bulk earthworks (consent number 27170)
- (xii) Discharge permit to discharge any treated wastewater and groundwater to water arising from dewatering processes at various locations (consent number 27171)
- (xiii) Water permit to take groundwater arising from dewatering processes from cut-off and drainage trenches during constructive activities (consent number 27172)

### **Proposed Designation in the District Plan**

**5.19** MDC has lodged a Notice of Requirement to:

- (a) Continue and modify the existing designation (42 ha) for the MWTP so that it covers all land use activities associated with the operation of the modified Plant; and
- (b) Designate an additional 91 ha adjacent to the existing Masterton Wastewater Treatment Plant (to the northeast, adjacent to the Ruamahanga River) for the construction of new ponds and discharge of treated wastewater to land, as well as a further 107 ha of land (to the north-northwest of the proposed new ponds between the Te Whiti Road and the Makoura Stream) for the treatment and disposal of wastewater to land and all associated land use activities.

**5.20** The Notice of Requirement incorporates the following activities associated with the upgrade works:

- (a) The construction and operation of a new Wastewater Treatment Plant

- (b) The construction of new clay/silt lined oxidation ponds
- (c) The construction and operation of a land treatment scheme to dispose of treated wastewater (effluent)<sup>4</sup>
- (d) Pump stations and pipelines for the land treatment scheme
- (e) The construction of a new outfall in the Ruamahanga River
- (f) Pond de-sludging, drying and storage in an on-site landfill
- (g) River erosion protection measures, being a planted buffer and minor modifications to existing rock protection
- (h) Raising the existing stop bank immediately upstream of the oxidation ponds for a length of 630 m
- (i) All earthmoving activities associated with the construction of the new ponds, land treatment scheme, and restoration of the existing ponds area, including, but not limited to; haul roads, excavation from borrow areas, trommel screening, rock crushing, stockpiling, spreading, vibratory compaction and site restoration
- (j) General ongoing operation, management and maintenance of the MWTP (ponds and land treatment area)
- (k) Any other land use activities ancillary to the construction, operation and maintenance of the MWTP.

**5.21** The extended designation will be limited to land owned by MDC, with the exception of that part of the outfall diffuser that is within the erosion protection works and any erosion protection works within the bed of the Ruamahanga River. The designation extends to the potential future land treatment area, as well as all remaining areas which provide a buffer to the Treatment Plant and several sources of material for the construction of the new ponds.

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<sup>4</sup> Includes area for potential additional land treatment in the future

## **6. STATUTORY CONTEXT**

**6.1** The key relevant statutory provisions in considering a Notice of Requirement and the resource consents sought are provided in Sections 104, 105, 107, 168 and 181 of the Resource Management Act 1991.

**6.2** Section 104 applies when considering a resource consent application, and requires that the consent authority must, subject to Part II, have regard to matters including:

- (a) The actual and potential effects on the environment of allowing the activity;
- (b) The provisions of the regional policy statement, and regional and district plans; and
- (c) Other matters that the consent authority considers relevant and reasonable necessary to determine the application.

**6.3** In addition, the consent authority must not grant resource consent contrary to sections 107 and 107A.

**6.4** Section 105(1) sets out those matters that a consent authority must have regard to when considering a resource consent application for a discharge permit. Consideration should be given to the nature of the discharge and the sensitivity of the receiving environment to adverse effects, the applicant's reasons for the proposed choice, as well as any possible alternative methods of discharge, including discharge into any other receiving environment.

**6.5** Section 107 sets out particular restrictions on the granting of discharge permits.

**6.6** A Notice of Requirement for a designation in respect of the proposed upgrade of the MWTP is provided for under Section 168A of the RMA, which provides specifically for those instances where the requiring authority is also the responsible territorial authority.

- 6.7** The alteration of the existing designation is authorised by section 181 of the RMA.
- 6.8** Section 171 provides the matters that a territorial authority must consider when making a recommendation on the Notice of Requirement. The requiring authority then makes a decision under Section 172 as to whether it accepts or rejects (in whole or in part) the recommendation of the territorial authority, including any conditions.
- 6.9** The Resource Management Act 1991 (**RMA**) is the governing legislation with respect to the use of land, air and water, providing the regulatory framework for discharges to land, air and water. This framework is applied at a local level through the relevant Regional Plans.
- 6.10** The purpose and principles of the RMA under Part II have guided the investigations and design of the proposed upgrade, and have also fed into the MDC's decision-making, along with the MDC's wider Local Government Act responsibilities.
- 6.11** Under Part II, section 5 of the Act states that the purpose of the Act is "to promote the sustainable management of natural and physical resources", with 'sustainable management' defined as:

*... managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—*

- (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

- 6.12** In regard to section 5, I consider the proposed upgrade will:
- (a) Enable the Masterton community to provide for its health and safety by continuing to provide for safe treatment and disposal of the community waste water (an essential service);
  - (b) Sustain the potential of natural and physical resources for future generations, particularly in terms of enhancing the quality of the river, its ecology and associated values and attributes;
  - (c) Maintain the life-supporting capacity of the air, water, soil and ecosystems; and
  - (d) Avoid, remedy or mitigate the existing adverse effects from the MTWP on the environment, while the precautionary design parameters in conjunction with the proposed management and monitoring systems will minimise risks of future adverse effects to the environment.
- 6.13** Section 6 of the Act outlines the matters of national importance that need to be recognised and provided for by the consent authority in terms of the wastewater treatment plant upgrade. The proposed upgrade recognises and provides for the two key matters of national importance, namely:
- (a) The preservation of the natural character of rivers and their margins (i.e., the Ruamahanga River and Makoura Stream); and
  - (b) The relationship that tangata whenua have with the River and the Makoura Stream.
- 6.14** The acquisition of the land also provides opportunities for enhanced public access to the River (for example, from the end of Road to the Ruamahanga River).
- 6.15** Section 7 outlines other matters to which particular regard should be had, of which a number are relevant to this proposal.
- 6.16** Kaitiakitanga (s7(a)) has been addressed through the significant opportunities created for tangata whenua to be involved in the consultation for this project,

and in addressing tangata whenua values and concerns through the design and refinement of the proposed upgrade. The upgrade also consistent with the ethic of stewardship (s7(aa)) in terms of the management of the natural resources of the area, particularly the enhancement of the quality of the water in the Ruamahanga River and lower Makoura Stream.

- 6.17** The proposal is in my view an efficient use and development of natural and physical resources (s7b)), in that the proposal utilises the land for the treatment and disposal of wastewater in a cost effective and environmentally responsible manner. The use of ponds is a particularly energy efficient method of wastewater treatment compared with other methods such as UV treatment (s7ba)).
- 6.18** The amenity values of the Ruamahanga River and Makoura Stream and the intrinsic values of ecosystems within these waterways are either maintained or enhanced by this proposal (ss7(c) and (d)). The amenity values of the surrounding environs are also maintained, partly through the large separation distances, partly through the low-scale nature of the Plant, and partly through existing and proposed screening.
- 6.19** The environmental quality of both the site and its environs, as well as the receiving environment, would be maintained or enhanced (s7(f)), and the habitat of trout and salmon is also to be protected, in terms of the effects on the quality of the water within the Ruamahanga River (s7(h)).
- 6.20** The effects of climate change have been fully considered in the design of the upgrade, both in terms of flood hazards and the effects of floods on the proposed discharge and storage regime (s7(i)).
- 6.21** Section 8 requires the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) to be taken into account when considering an application for resource consent. These principles have been taken into account throughout the consultation and decision-making process.
- 6.22** As set out in the AEE, MDC has fully considered the application against the relevant matters referred to above. In particular, the project has endeavoured to recognise and provide for the relationship of tangata whenua to water, to maintain and enhance the quality of the environment by maximising the

application of wastewater to land and limiting the discharge to the river to times when the river is above median flow.

**6.23** Overall, I consider that the proposed upgrade is consistent with Part II of the RMA.

## **7. OVERVIEW OF RELEVANT PLAN PROVISIONS**

### **Masterton District Plan (Operative)**

**7.1** The existing MWTP site is designated for the purpose of “Sewage Treatment” (D88 shown on Planning Map N° 10) in the operative Masterton District Plan (MDP). The Requiring Authority responsible for the Designation is the MDC. The designation applies to all the land described as “Lot 14 DP 24225, Pt 3, 4, & 5 DP 2412, Pt of DP 1384, Part of Old River Bed, all of assessment 17980/37”.

**7.2** The wastewater treatment site is recorded in NZ Gazette 1972 page 371, and shown on SO Plan 27745.

### **Wairarapa Combined District Plan (Proposed)**

**7.3** The Proposed Wairarapa Combined District Plan (WCDP) provides for generally consistent policies and methods between the South Wairarapa, Carterton and Masterton District Councils. The decisions on the WCDP were notified on 29 March 2008, with appeals from 14 parties received. The proposed rollover of the operative designation was withdrawn from the WCDP and will be replaced by the new expanded designation if it is confirmed.

### **Wellington Regional Policy Statement**

**7.4** The operative Wellington Regional Policy Statement, operative on 15 May 1995, contains objectives, policies and methods regarding the management, protection and enhancement of freshwater appropriate to a range of values and uses. I shall address the key policies later in my evidence. The draft Wellington Regional Policy Statement was notified for submissions in March 2008, but, as a draft, it is a non-statutory document.

## **Wellington Regional Freshwater Plan**

- 7.5** The Regional Freshwater Plan (**WRFP**) is relevant where the discharge of contaminants is to water. The Plan applies to all fresh water in the Wellington region, including water in rivers, lakes, streams, ponds, aquifers and artificial water courses, but excluding freshwater in the coastal marine area. It also applies to all land in river and lake beds.
- 7.6** The Plan identifies issues to be addressed so that fresh water resources can be sustainably managed. Objectives, policies, and methods (including rules) have been adopted to address these issues.
- 7.7** The WRFP sets out a regime for the management for receiving waters, based on maintaining surface water quality for specific purposes in accordance with guidelines in the plan. Proposed Plan Change 3, notified on 26 May 2007, amends provisions for the allocation of water from groundwater zones and identified rivers in the Wairarapa region.

## **Regional Air Quality Management Plan**

- 7.8** The Regional Air Quality Management Plan (RAQMP) became operative on 8 May 2000. Change 1 to the RAQMP was made operative on 1 September 2003. The Plan applies to discharges to air in the whole of the Wellington region, except for the coastal marine area.

## **Regional Plan for Discharges to Land**

- 7.9** The Regional Discharges to Land Plan (RDLP) is relevant when considering disposal or discharge of contaminants to land (for example, leakage from ponds and land disposal).

## **Regional Soil Plan**

- 7.10** The provisions of the Regional Soil Plan are not considered to be relevant to this proposed upgrade.

## **8. SUBMITTERS' ISSUES**

**8.1** The proposed upgrade has attracted a number of submissions, both to the 2007 lodged scheme, and to the revised 2008 scheme which is presently before the Commissioners and Hearing Committee. As outlined in section 4.4 of my evidence, modifications to the scheme have been made to address as many of these submissions points as practicable, many of which were able to be addressed through the revised upgrade scheme.

**8.2** In total, 30 submissions were received by GWRC on the amended resource consent applications and 35 submissions were received by MDC in relation to the Notice of Requirement. Many of the submissions lodged on the resource consent applications and NoR were the same.

**8.3** Various concerns were raised by a number of submitters, including cultural issues and concerns, amenity values, the effects on the river and stream, the scale of the proposal, the effects on adjoining properties and activities, consultation, and technical and operational aspects of the proposal associated with the scheme design.

**8.4** My evidence below addresses these submissions under the following headings:

- (a) Cultural issues
- (b) Amenity values, including recreation
- (c) Construction effects
- (d) Consent requirements & adequacy of information
- (e) Scheme design
- (f) Consultation
- (g) Effects on property values
- (h) Statutory provisions
- (i) Recommended conditions

### **Cultural issues**

**8.5** Tangata whenua, iwi and hapu including Rangitane O Wairarapa Iwi Authority, Kahungunu ki Wairarapa, Hurunuiorangi Marae, Papawai Community, Kotahitanga as well as individuals including Alexander Webster, Henare Manaena, Ian Gunn and Alan Duncan raise cultural concerns in respect of

discharges (of human effluent) into the waterways and to land. Specific concerns raised include:

- (a) That the discharge of effluent to land and waterways (including the diversion of the Makoura Stream) undermines tangata whenua relationship with waterways and land and their place as a significant habitat
- (b) The proposal does not provide for the relationship of tangata whenua in terms of the RMA and is contrary to sections within the RMA
- (c) The lack of understanding and appreciation of the importance of cultural concepts
- (d) Lack of consultation as required under Clause 1(h) fourth schedule
- (e) The application does not provide sufficient procedures for any accidental discovery of taonga during earthworks
- (f) The lack of consideration of culturally appropriate alternatives
- (g) That there was no Cultural Impact Assessment or Cultural Health Index for the Ruamahanga River and Makoura Stream carried out.

**8.6** It is widely acknowledged that discharging effluent into waterbodies should be avoided if possible. This matter was a key factor in the consideration of options for the upgrade.

**8.7** MDC has had regard to this goal in designing the proposed upgrade and alternative options (refer to the evidence of provided by Mr ten Hove and Mr Archer). However, as highlighted by Mr ten Hove and Mr Archer, full-time land disposal would be a very costly option, and was not considered affordable or necessary.

**8.8** In addition, as noted in the evidence of Mr Archer, and referred to in the AEE (s10, pp193-203), full time discharge to land is not a viable alternative for the subject site given the soil type and area of land presently available for land treatment. A very much larger area of land would be needed to discharge all

treated wastewater onto land under all contingencies. Indeed, given the amount of land that would be required to dispose all of the wastewater onto land, winter or summer, I would contend that full-time land application is essentially an impracticable option. The proposed method of disposal is considered an optimum solution, given the technical, financial and operational constraints associated with the activity on this site, and the significant environmental gains to be obtained by the proposed scheme.

**8.9** As noted in the AEE (p170), I acknowledge that the upgrade does not fully achieve the desire of the kaitiaki to remove the discharge entirely from the river. However, the relationship of tangata whenua with the river has been recognised and will be provided for, as far as practicable, by the following:

- (a) As much of the treated wastewater, as is practical, will be discharged to land.
- (b) The proposed scheme has been designed so that it can be modified in the future to increase the amount of land based disposal if that becomes affordable and practical (refer Mr Archer's evidence) - this approach is in accordance with the objective of MDC to maximise land based discharges.
- (c) For the majority of the time, human effluent is treated through natural processes before it enters any waterbody (refer to Mr Archer's evidence) – thus the wastewater entering the river can be considered to be the product of natural biological process rather than human waste.
- (d) The only direct discharges would be during higher river flows (when the water is discoloured and colder, would not be swum in, and would not be used to gather food) – however, even the discharge has been treated by biological process.
- (e) There will be an improvement in the quality of the wastewater discharged (to both land and water) and overall there will be a significant improvement in the water quality in the river, particular at low flows, when the upstream quality of the river is at its best and when there will be no discharge.

- (f) The proposed scheme will not result in any physical degradation to mahinga kai species.
- (g) The modified Makoura Stream will be constructed to reflect natural environs and systems, including a meandering flow path with holes to provide additional habitats, as well as significant stream bank plantings to be provided along the stream banks.

**8.10** In considering the issues raised by submitters, I note that:

- (a) The proposal is for the upgrade and expansion of an existing, lawfully established network utility that provides a necessary service to the Masterton District.
- (b) MDC has attempted to work with tangata whenua in designing and selecting the proposed upgrade options, evident through the extensive consultation undertaken and the involvement of tangata whenua in the Working Party and Consultation Task Group. More recently (throughout 2008), MDC invited tangata whenua to a number of site visits and meetings to discuss the specific details of proposed scheme and associated issues, with Ngati Kahungunu actively participating in these meetings. Through these meetings MDC has been able to demonstrate:
  - MDC's commitment to 100% land based discharge when practical and if it becomes affordable (the scheme design can potentially be modified to achieve this);
  - The impracticality of 100% land based discharge at this current point in time, and the costs to the community; and
  - The nature of the scheme design in terms of its use of natural processes to breakdown human effluent.
- (c) While acknowledging the concerns of tangata whenua in relation to the consultation, in my opinion, the Council has carried out an open and extensive process of consultation. The fact that tangata whenua do not

wholly support the proposal is neither evidence of lack of proper consultation, nor that an inadequate response has been provided.

- (d) The proposal will result in a significant improvement in water quality in the Ruamahanga River as compared to the current situation. The proposed upgrade will result in the ceasing of direct discharges into the Ruamahanga River during low to median flows, and therefore the proposed scheme is considered to align closely with the aspirations of tangata whenua to enhance the mauri of the Ruamahanga River.
- (e) It also needs to be emphasised that the concerns of tangata whenua about the current health of the Ruamahanga River would not be resolved if the proposed scheme discharged 100% to land and avoided discharges to waterbodies. This is because the effects of the discharges on the health of the Ruamahanga River are insignificant compared to the effects of discharges from the existing rural land uses throughout the Ruamahanga River Catchment (refer to the evidence of Mr ten Hove, Mr Scott and Mr Hickey). Furthermore, in my opinion, it would not be equitable for ratepayers to fund a 100% land discharge scheme when the majority of discharges affecting the health of the Ruamahanga River are directly from rural land uses.
- (f) Submitters, including tangata whenua, have highlighted the cultural significance of the Ruamahanga River and Makoura Stream, and have also expressed concern that the proposed scheme would offend the spiritual connections between Papatuanuku and its people (i.e. the mauri of the river). However, I am not aware of any suggestion that the proposal would prevent any cultural/traditional customary activities from being undertaken in the Ruamahanga River and Makoura Stream.
- (g) Finally, the existing pond leakage will be eliminated, removing that source of discharge into the River.

**8.11** The issue of a cultural report/assessment and Cultural Health Index (**CHI**) has been raised by some submitters<sup>5</sup>. This matter was considered, but, given the

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<sup>5</sup> The CHI is a tool that tangata whenua can use to assess and manage waterways in their area, and effectively is an index that allows iwi/hapu to assess the cultural and biological health of a stream or catchment of their choosing.

scale of the Ruamahanga River system and the widespread effects of other land uses on the health of the River, I do not consider it necessary for MDC to undertake a full CHI for a range of sites down the river system as sought by some submitters. However, MDC would support some components of the index being scored at various sites for measures such as water quality and fish diversity, which could be undertaken as part of the monitoring programme. Any such study shall compare the current state of the river with that post upgrade.

**8.12** In terms of Treaty of Waitangi matters, MDC has investigated a number of options for the site and derived what it considers to be the optimum method for managing sewage treatment and disposal, taking into account the relationship of Iwi and their cultural relationship with the waterways. MDC has also acknowledged the long term desire of tangata whenua (and the community) to avoid discharging effluent into water, and this remains one of the overriding objectives of MDC for the long term.

**8.13** Overall, I consider MDC has suitably recognised and provided for the various cultural concerns associated with the proposal, and, in my opinion, the residual concerns should neither prevent the proposal from being approved nor justify requiring the volume or frequency of discharge to the river to be further reduced in the future.

### **Amenity Values, including Recreation**

**8.14** Concerns have been raised by some submitters regarding the potential effects of the upgrade on neighbouring amenity values from land treatment, in relation to odour, noise (excavation and traffic), construction effects (including the proposed borrow pits) and the impacts on recreation (swimming and walking). Specifically:

- (a) M and C Gardiner raised specific concerns in relation to concerns over destruction of natural river terrace deposits, and adverse effects (noise, dust visual pollution) from construction effects of gravel recovery.
- (b) B and A Perry raised concerns as to the potential damage to neighbouring amenity values.

- (c) Alison Elcock raised further concerns in relation to aesthetics in terms of the nature of planting of the buffer strips and the location of the gravel pits to be dug.
- (d) Peter Martin raised concerns in regard to the buffer planting and sought assurances that the buffer planting on the boundary of the 107ha block will be agreed with neighbours up to five years after the completion of the upgrade, to allow time for visual effects of the upgrade to be assessed.
- (e) Annette Wullems raised dust and noise concerns.

**8.15** Fish and Game NZ raise concerns in terms of amenity and recreational values, and seeks that the recreational values be protected.

**8.16** In respect of amenity values, the proposal has sought to mitigate adverse effects as far as practicable, and in my opinion, the local amenity values will be satisfactorily maintained. The new oxidation ponds themselves will appear as man made lakes, similar to that of water storage lakes, with the majority of trees retained. Offsite views of the relocated ponds will be very limited, partly due to the flatness of the surrounding area, and partly because of the existing and proposed planting. For example, additional planting has recently taken place between the ponds and the river and the existing willow buffer located adjacent to the Ruamahanga River is to be enhanced. The proposed screen planting around those parts of the land treatment areas not already well screened by existing vegetation, will also further limit views of the treatment ponds and associated facilities.

**8.17** A number of submissions have sought clarification on the proposed planting and in particular the buffer areas.

**8.18** Buffer areas along the west boundary of the proposed irrigation area and bounding the east side of Makoura Stream will be established as part of the upgrade. The buffer planting along the margins of the realigned Makoura Stream will be a minimum of 10m wide and will be planted in a range of tree species, compatible with proposals for enhancing the ecological and recreational potential of the Stream.

- 8.19** A 10m buffer planting will also be provided around the boundary of the 107 ha site and at the north of the 91 ha site, where this is agreed with neighbours (some neighbours have expressed a preference to maintain their views of open space). The planted boundary of the buffer areas would also screen the site, where agreed, from properties to the south, west and north of the site. The planted buffer areas will be irrigated by buried driplines using pond effluent, at least until the trees are established.
- 8.20** In addition to the 10m planted buffer, there will be a 40m zone around the perimeter of the site that will permanently not be used for border strip irrigation and will be kept as open pasture. This buffer strip will provide an appropriate setback distance from waterways and adjacent properties that is free of border strip irrigation and other MWTP operations.
- 8.21** In response to concerns as to the adequacy of the 50m buffer, in my opinion, a 50m width provides a large enough area for animal grazing and planting while not overly restricting the amount of land available to discharge the treated effluent to land. Notwithstanding this, MDC is willing to discuss the specific location and type of screen planting with neighbours prior to the commencement of works on site. There is also potential for this buffer area to be marginally increased in size some areas and possibly decreased in other areas. These potential modifications could occur informally during construction of the treatment area in agreement with neighbouring property-owners and MDC. All these matters can be adequately managed by way of conditions imposed on the proposed designation. In terms of aerosol and odour issues, drawing on the evidence of Mr Archer, I also consider the 50m buffer to be adequate.
- 8.22** A further issue raised by submitters is in relation to the effects of the gravel borrow pits required for the provision of material for the land treatment area, as outlined in the evidence of Mr Archer. The extraction will be temporary in nature and the area will be reinstated in pasture. This issue is addressed in conjunction with the construction effects in the following section of my evidence.
- 8.23** In relation to amenity effects related to odour, Section 8.5.2 of the AEE addresses the potential odour issues, concluding that the proposed irrigation system would create no off-site odour, and would be carefully managed and monitored to identify and promptly address any potential problems. Potential effects will be mitigated through planted buffer areas, an automated warning

system and an ongoing odour management and monitoring process. I would note that there has been an excellent record of odour management with the existing ponds, with very few complaints made over the last decade.

**8.24** In relation to noise and traffic effects (other than from construction activities which are discussed later in my evidence), noise measurement tests undertaken at the boundaries of the treatment plant site while the aerators were operating (42 dBA, 41 dBA and 37 dBA) were all below both the night-time and daytime noise limits of the operative and Proposed District Plans.

**8.25** In respect of ongoing traffic generation, the plant will require only one full time operator. Sufficient parking will be provided on site to meet that demand, as well as the demand from other vehicles that will occasionally visit the site. I would consider that the resulting level of traffic generation would be compatible with a permitted farming activity.

**8.26** I consider that any effects on amenity values associated with the proposed changes to natural river terrace deposits will be no more than minor. The site is generally screened by changes in elevations, flood stopbanks (proposed and existing), existing and proposed plantings, and general setback from viewable locations. Further, the subject land is not recognised as having significant landscape or natural geological values.

**8.27** In respect of concerns raised about the amenity values of the Ruamahanga River, I consider that the anticipated effect of water quality and aquatic ecosystems would be negligible. As highlighted in the evidence of Messrs Harding, Ball and Hickey, the proposed effluent discharge regime would improve the quality of the river, and the ability of the community to use and enjoy it for recreational activities, especially at Wardells Bridge and the Cliffs. There will be no discharges to the river during those times when the river is normally used for primary recreational purposes. The proposed upgrade and discharge regime will remove the present adverse visual impact of the discharge plume before it becomes fully mixed, thereby having a positive impact on the aesthetic and amenity values of the Ruamahanga River at Wardells Bridge and further downstream. Furthermore, the elimination of the Plant's contribution of nutrients to the river, and the subsequent build-up of periphyton (algae) on the river bed, will enhance the aesthetic values of the river, particularly in warm summer periods when the river is most valued for

recreational use. The significant contribution of the existing discharge to the poor condition of the Makoura Stream will be eliminated, thereby improving the environmental quality of the stream and its aquatic ecosystems.

### **Construction Effects**

**8.28** Numerous submitters have raised concerns over construction effects, including the lengthy construction period (Elcock and Wullems) and associated traffic issues, the destruction of natural river terrace deposits, adverse effects (noise, dust and visual pollution) from construction effects of gravel recovery, and resulting wastewater and sediment entering the Ruamahanga River during construction (Holmes).

**8.29** In respect of the construction period, the evidence of Humphrey Archer outlines the proposed construction programme. In summary, a five year period is a worst case scenario and allows for contingency with two summers not being used for construction activities. In practice, I understand that the construction period is expected to occur over three summers. A further important point is that construction will not be contiguous over this period.

**8.30** Effects associated with construction are outlined in the AEE and have been commented on in the evidence of Mr Archer. In summary, I anticipate the temporary effects caused by the earthworks (such as dust, noise, traffic, and runoff) can be mitigated by standard management and contractual procedures.

**8.31** The evidence of Archer also comments on sediment laden stormwater runoff during the construction period.

### **Consent Requirements and Adequacy of Information**

**8.32** One submitter (Gardiner) questions whether consent for the borrow pit is required. In respect of the gravel borrow pits, earthworks are permitted by the Rules under both the operative and proposed District Plans, notwithstanding the effect of the proposed designation. Therefore, land use consent would not be required from Masterton District Council for this aspect of the proposed upgrade.

- 8.33** Henare Manaena, Alexander Webster and Wairarapa Public Health (242613) oppose the 35 year consent duration sought. DoC seeks a consent term of 25 years given what it considers to be the potential resulting cumulative effects. The term of the consent is discussed in the evidence of David Hopman and a the proposed 35 year consent duration is considered appropriate given the investment associated with the facilities and need for certainty in the provision of the utility service. This consent period will not limit or deflect from the MDC's commitment to investigate further opportunities to upgrade the scheme in accordance with the project's objectives once the proposed upgrade is implemented.
- 8.34** Andrew Duncan and Andrew Stewart submit that the actual and potential effects cannot be adequately assessed from the information provided and that MDC should adopt the precautionary approach. Ian Gunn questions how the border dyke system would affect the carbon content of high quality soils, whether the AEE considers effects of climate change, and whether there has been a full economic analysis of all the effects. In response to these matters, I understand there has been substantial work done for each aspect of the proposal, including the effects of climate change. I would also note that the GWRC did not require any further information.
- 8.35** In respect of an economic analysis, one of the issues MDC considered in selecting a preferred upgrade was affordability, which was one of the principles established at the start of the project by the Working Party. MDC commissioned a study on this issue, which identified and analysed the cost and benefits of four main considerations. The study was updated with the selection of the option of new oxidation pond and land treatment scheme (BERL 2008). This matter is addressed fully in the evidence of Mr ten Hove.
- 8.36** Mr Green has provided evidence in relation to the consideration of Climate Change.

### **Scheme Design**

- 8.37** A number of submitters have raised issues with the scheme design, including the discharge of treated effluent to land and water, and various technical and operating aspects. The technical issues that have been raised have been

addressed either in the AEE or in the evidence by relevant experts. Such issues include:

- (a) effects on surrounding bores
- (b) unsuitability of disposal areas susceptible to flooding
- (c) effect on water quality within the Ruamahanga River
- (d) issues of maintaining a crop whilst disposing to land
- (e) potential groundwater contamination
- (f) pollution and diversion of the Makoura Stream
- (g) uncertainty over effects of discharges and groundwater leakage
- (h) infiltration and inflow rates
- (i) irrigation of buffer areas
- (j) composition of effluent entering Makoura Stream during decommissioning of existing ponds
- (k) effects on fish passage, uncertainty over leaching of nutrients to groundwater from border strip irrigation
- (l) proposed border strips/dyke and associated earthworks
- (m) stormwater infiltration
- (n) sedimentation impacts resulting from upgrade works
- (o) development of land between the stopbank and river nutrient levels, ponds, accuracy of trial results
- (p) the cumulative effect to the river of other systems within the Wairarapa, and water contamination.

**8.38** Some submitters have raised the issue of alternative methods of treatment and disposal (including alternative uses for wastewater). I address this matter in s11 of my evidence.

**8.39** Those concerns of planning relevance include those concerns of Gardiner, Perry, Cotter, Limbrick, Griffith, and Wullems that relate to the scale of the proposal, the need and suitability of the 107ha site, the adequacy of the 50m buffers to the north, west and southwest, and the adequacy of the separation distances from surrounding properties and bores.

**8.40** In response to concerns regarding the scale of the proposal, in my opinion, the extent of the proposed designation is appropriate given the need to provide buffer areas, onsite resources for construction purposes, and to protect opportunities for further land treatment. Material needed for the pond and

border strip construction will be mainly sourced from the 107 ha site and the availability of gravelly fill material in the terraces allows the construction of new ponds at significantly lower costs compared to hauling fill material from further away. I would also note that while Pt Lots 1 & 2 DP 9928 and AP 2698 are not going to be used for additional land treatment, I consider it appropriate this land remains in the designation because they form part of the buffer area.

- 8.41** The availability of the 107ha site further provides an element of future proofing and flexibility to address future changes in environmental standards (for example, higher receiving water quality). The proposed system can be readily upgraded to produce higher quality effluent and MDC has additional irrigation land on the 107 ha site which may allow for future expansion of the scheme.
- 8.42** I have commented on the issue of separation distances from adjoining properties and adequacy of the 50m buffers above (para 8.17).
- 8.43** Mr and Mrs Perry have also raised concerns that the scheme design will modify existing drains on the subject site that also traverse their property. There is no evidence that any of the proposal would affect drainage upstream of the site, including that within the neighbouring land, and accordingly it would be unnecessary to impose conditions on the construction works (for example, through a construction management plan) on this matter.

### **Adequacy of Consultation**

- 8.44** I address the matter of consultation later in section 9 of my evidence.

### **Effect on Property Values**

- 8.45** Two submitters (Wullems and Elcock) raised concerns as to adverse effects on property values and the possibility for rate compensation for reduced property values. Riddlesworth Estate Ltd et al raised concerns that the discharges could affect land outside the site and therefore downgrade the farming potential of adjacent landholdings. R and M Ternent raised concerns as to effects on their home, family and property.
- 8.46** These matters are largely outside the scope of the consent authorities to consider, as the Courts have ruled that potential effects on property values are

relevant only as an indirect measure of adverse amenity effects. In my opinion, any adverse effect on the amenity values will be less than minor.

### **Statutory Provisions**

**8.47** A number of submitters suggest that the proposal is contrary to relevant planning documents. Sustainable Wairarapa, Andrew Duncan and Andrew Stewart consider the proposal to be contrary to the purpose and principles of the RMA. Fish and Game NZ submits that, while it supports endeavours to upgrade existing system, it sought to ensure that consents are only issued if they result in treated effluent of a quality that is consistent with relevant policies and objectives of the RPS and Freshwater Plan and ensure that aquatic and recreational values are protected. Kotahitanga considers the proposal contrary to Policy 8.3.2 TWI of the Combined Wairarapa District Plan. Donald KJ Bell submit that no point discharge of effluent to water should be considered in line with the GWRC Freshwater Plan.

**8.48** I have addressed these concerns elsewhere in my evidence, and generally conclude that the proposal is consistent with both the relevant regional and district planning policies, and with the purpose and principle of the Act.

### **Recommended Conditions**

**8.49** A number of submitters sought to have certain conditions imposed on the scheme.

**8.50** Wairarapa Public Health recommended eight conditions to minimise potential adverse health effects:

- (a) monitoring of pathogens in groundwater downstream
- (b) a step-wise management plan relating to stormwater infiltration
- (c) review clauses triggered by monitoring
- (d) specificity regarding the discharge regime
- (e) ongoing investigations into increasing the area used for land based discharges/irrigation
- (f) appropriate signage at the Wardell's Bridge
- (g) a 20 year consent life.

- 8.51** Riddlesworth Estate Ltd et al requested that independent monitoring and ongoing monitoring of the compliance regime be carried out.
- 8.52** Peter Martin sought assurances that, if the potential future land treatment goes ahead, the submitter's bore will be monitored every 3 months for 5 years to ensure no contamination and assurances that the buffer planting on the boundary of the 107ha block will be agreed with neighbours up to five years after the completion of the upgrade, to allow time for visual effects of the upgrade to be assessed.
- 8.53** DoC requested certain conditions relating to reducing inflow and infiltration; providing a buffer area with no irrigation; avoiding stream works during Sept – November to avoid migration period for native fish; and a review condition.
- 8.54** In my opinion the above requests have, or can, largely be accepted, or incorporated, into conditions, except that:
- (a) I disagree with limiting the consent period to 20-25 years as requested by Wairarapa Public Health and DOC respectively, for the reasons I outline in section 14 of my evidence.
  - (b) I disagree with having a condition relating to infiltration and inflow matters, which do not form part of the proposed scheme.
  - (c) I disagree that MDC should be required, as condition of consent or designation, to actively investigate increasing the area of ground based irrigation. Such a condition would be superfluous as MDC is already committed to increasing the area of land disposal and there are complex socioeconomic and practical complications that affect MDC's decisions.
- 8.55** In terms of Wairarapa Public Health's request to have review conditions triggered by specific monitoring conditions, I understand from Mr Archer that this would be difficult to achieve at the Homebush Site and that the conditions imposed on the Moa Point consent may not be appropriate in this case. In this regard, it would be useful if Wairarapa Public Health provides further detail of the parameters sought and how they might practicably be achieved. It would

also be useful for Wairarapa Public Health to provide a copy of the subject Moa Point conditions.

- 8.56** I will address the matter of conditions further in supplementary evidence to be presented at the hearing.

## **9. CONSULTATION**

- 9.1** A number of submitters raised concerns over the level and type of consultation undertaken. Rangitane O Wairarapa Iwi Authority (242513) raised concerns over the use of 10 old reports for consultation purposes in that they are considered out of date. Submitters including A Elcock (242568), A Wullems (242574) and I Gunn (242618) raised concerns as to the lack of meaningful consultation and communication with landowners, and inappropriate time to review and analyse the application and respond. P Cameron (242607) raised concerns as to the absence of consultation with other councils, iwi, residents of Lake Ferry, and the Department of Conservation.

- 9.2** In preparing the application, MDC has spent considerable time undertaking consultation with tangata whenua, the community and landowners. The AEE outlines the three phases of consultation being:

- (a) Initial Consultation Process 2004-2006: The initial programme of consultation is outlined in the *Technical Report on the Recommended Scheme* (Beca 2005), which was undertaken in two phases. Both phases involved stakeholder meetings/workshops, public meetings and open days with site visits and a free telephone enquiry line. A Consultation Task Group (CTG) was established with the function of facilitating an effective consultation process.
- (b) Upgrade Scheme Consultation 2006-2007: Prior to submitting the Resource Consent Applications and Notice of Requirements in 2007, a thorough and extensive consultation process was undertaken to determine a preferred wastewater upgrade option, including system and design changes, as well as possible mitigation measures that may be further required. The consultation forums provided a number of opportunities for key stakeholders and the public to comment on the

findings and recommendations through the process, including the shortlisting of options and the final selection of the proposed scheme.

- (c) Revised Upgrade Scheme Consultation 2008: Following the MDC's decision in December 2007 to proceed with a revised upgrade scheme, and some further detailed analysis and design, a number of specific meetings were held with submitters/neighbouring landowners, iwi, DoC, and Fish & Game, to inform them of the recent changes to the design of the proposed upgrade.

**9.3** In addition, prior to the public notification of the Resource Consent Applications and Notice of Requirement MDC held a public open day where neighbours and members of the public could question MDC staff and key consultants on specific details of the proposed upgrade design.

**9.4** Furthermore, the Council has issued a series of newsletters to its ratepayers on progress with the upgrading of the MWTP. The upgrade has also been the regular subject of the local media.

#### **Upgrade Scheme Consultation 2004-2006**

**9.5** The Consultation Task Group was established with the function of facilitating an effective consultation process. The CTG included specific industry and sector group representatives, including:

- (a) Rangitaane O Wairarapa.
- (b) Ngati Kahungunu Ki Wairarapa.
- (c) Dairy Farmers of New Zealand (Wairarapa).
- (d) Industry.
- (e) Recreational Users – Wellington Fish and Game Council.
- (f) MDC.

**9.6** There was also consultation outside the Consultation Task Group, with other interested parties and the community in general.

**9.7** Formal feedback from key stakeholder groups is included in the Appendices to the Technical Report. Feedback has been received from Rangitaane O

Wairarapa, Ngati Kahungunu Ki Wairarapa, Department of Conservation, Fish and Game New Zealand and the DHB.

- 9.8** One outcome of the consultation was that there was still opposition from some quarters to aspects of the schemes short-listed in December 2004 and to the recommended scheme.
- 9.9** In particular, the two iwi expressed residual concerns regarding any ongoing discharge to the river. These concerns have also been echoed to a degree by other submitters.

### **Issues Raised**

- 9.10** The consultation process identified a number of issues. In summary, the main issues identified were:

- (a) Cultural concerns including whether there should be fulltime land based disposal
- (b) Nature of treatment – pond technology and nutrient removal
- (c) Pond leakage volume and effects
- (d) Erosion risks to ponds
- (e) Discharge regime (median or half median)
- (f) River water quality – standards/targets, including metals, attached algae
- (g) Health impacts/risk
- (h) Fonterra's requirements (in relation to wastewater discharges)
- (i) Sludge volume in ponds
- (j) Blue green algae impacts from Oxidation Ponds
- (k) Land treatment/disposal
- (l) Aerosols
- (m) Application method
- (n) High irrigation rates
- (o) Effect on soils
- (p) Nutrient removal
- (q) Ground water effects
- (r) Discharge to the Ruamahanga River vs. Makoura Stream
- (s) Reticulation – addressing high inflows.

**9.11** The CTG considered these issues and, in December 2004, confirmed what it considered to be the “Top 5” issues:

- (a) Wastewater and river water quality
- (b) Risks to the existing treatment plant from natural hazards
- (c) Leakage from the existing treatment plant
- (d) Inflow and Infiltration to the reticulation network
- (e) Future proofing of the treatment process.

**9.12** A summary of how these and other relevant issues were addressed is contained in the table below.

**Consultation Issues 2004-2006 and Measures to Address Them (Table 45 in the AEE)**

<b>Issue</b>	<b>How the issue has been addressed</b>
<i>Concern over wastewater and river water quality</i>	<ul style="list-style-type: none"> <li>• The preferred option provides the best environmental outcome in the most cost-effective manner</li> <li>• Receiving water targets (e.g. phosphorus and bacteria) have been developed from national and international guidelines, and the upgrade will meet these targets</li> <li>• The direct discharge of effluent will be eliminated from the river during low river flows, particularly in summer, thereby providing significant improvements to the river water quality</li> </ul>
<i>Risks to the treatment plant from natural hazards</i>	<ul style="list-style-type: none"> <li>• The potential risks have been investigated in depth in the Masterton and are considered to be acceptable and manageable as part of the proposed upgrade</li> </ul>
<i>Leakage from the existing treatment plant – some groups and individuals considered that the ponds should be lined</i>	<ul style="list-style-type: none"> <li>• As a result of further investigations, it is considered impractical to put an engineered liner in the existing ponds (Beca 2004)</li> <li>• Even if the ponds could be provided with an engineered liner there would still be a certain amount of leakage</li> <li>• There is minimal impact from pond leakage based on the outcome of site sampling undertaken at low river flows</li> <li>• The settled sludge provides a significant degree of natural sealing of the ponds bases</li> <li>• Given the impracticalities of putting an engineered liner into the existing ponds or any new ponds and that the amount and effects of the leakage is not significant, the degree of leakage is considered acceptable</li> <li>• The predicted impact of leakage on receiving water quality has been assessed and found to be negligible</li> </ul>
<i>Inflow and infiltration (I/I) to the reticulation system</i>	<ul style="list-style-type: none"> <li>• The existing ponds have sufficient capacity for coping with large peak flows. However, an ongoing asset management program is in place to address potential excessive inflow and infiltration during wet periods.</li> </ul>

<b>Issue</b>	<b>How the issue has been addressed</b>
<i>Future proofing of the treatment process</i>	<ul style="list-style-type: none"> <li>• With respect to the proposed option, future proofing is an issue of flexibility to address future changes in environmental standards (e.g. higher receiving water quality). The proposed system can be readily upgraded to produce higher quality effluent. MDC has also resolved to pursue further irrigation land.</li> <li>• In addition the MDC can develop a strategy to review its standard of treatment with changes in receiving water quality and standards and upgrade its plant as necessary.</li> </ul>
<i>Desire to see wastewater discharged/ irrigated to land rather than into the Ruamahanga River</i>	<ul style="list-style-type: none"> <li>• The recommended scheme option includes part time land irrigation to eliminate the discharge from the river during critical low river flows and significantly improve the river water quality</li> <li>• The costs of ensuring a fulltime land irrigation disposal system are significant, and, when compared to the limited additional benefits in environmental outcomes, would not represent the BPO</li> </ul>
<i>Discharge to Ruamahanga River vs. Makoura Stream</i>	<ul style="list-style-type: none"> <li>• The recommended scheme option is to discharge directly to the River as it is considered this will improve the overall receiving water quality, and remedy the adverse effects of the existing effluent discharge into the Makoura Stream</li> </ul>
<i>Discharge of treated wastewater to water bodies – i.e., wetland</i>	<ul style="list-style-type: none"> <li>• Investigations into the costs and benefits of a wetland disposal system (Issues and Options Report, Beca 2004) found that there would be little benefit in terms of treatment efficacy, compared with the costs of such a component</li> </ul>
<i>Sludge Disposal –concerns expressed about heavy metals in sludge and implications for disposal</i>	<ul style="list-style-type: none"> <li>• There is not a high heavy metal presence in the sludge as there are very few industries in Masterton producing heavy metals and discharging them to the sewer</li> <li>• There are a number of standard methods for disposing of sludge, with the most effective involving dewatering the sludge and disposing of it as landfill cover</li> </ul>
<i>Concern over outbreaks of Blue Green Algal Blooms as a result of discharge</i>	<ul style="list-style-type: none"> <li>• This issue can be prevented through strategy to identify times of risk during certain weather conditions, and to respond by increasing aeration to the relevant ponds at the appropriate times to prevent the conditions occurring within the ponds that could cause an outbreak of Blue algae</li> <li>• In addition, the fact that there will not be any direct discharges in summer low flows (the time of greatest risk of Blue Green algal blooms) provides a significant reduction in the risk to community health</li> </ul>

## Upgrade Scheme Consultation 2006-2007

**9.13** Prior to submitting the Resource Consent Applications and Notice of Requirements in 2007, a thorough and extensive consultation process was undertaken to determine a preferred wastewater upgrade option, including system and design changes, as well as possible mitigation measures that may be further required. The consultation forums provided a number of opportunities for key stakeholders, iwi, and the public to comment on the findings and recommendations through the process, including the shortlisting of options and the final selection of the proposed scheme. Through the consultation process, the main areas of concern and the issues of particular importance to key stakeholders and the wider community were clearly

articulated and investigated, with a number of additional studies and assessment undertaken in response to some concerns and suggestions.

**9.14** As a consequence, the proposed upgrade option took into account a number of key issues raised by the public and stakeholders through:

- (a) Improving effluent quality;
- (b) Meeting or exceeding receiving water quality targets;
- (c) Land disposal of effluent as a principal discharge method;
- (d) Avoiding discharge into the river during periods of contact recreation;  
and
- (e) Minimising the financial effect on rates.

### **Revised Upgrade Scheme Consultation 2008**

**9.15** Following MDC's decision in December 2007, and some further detailed analysis and design, a number of specific meetings were held with submitters/neighbouring landowners, iwi, DoC, and Fish & Game, to inform them of the recent changes to the design of the proposed upgrade.

**9.16** The additional meetings with iwi and neighbours identified additional concerns, including:

- (a) The necessity and cultural offensiveness of diverting the Makoura Stream
- (b) The relationship of the stream diversion with the work being undertaken by the Makoura Stream Restoration Group
- (c) The effects of new land based discharges on river water and groundwater quality, including neighbouring bores
- (d) Additional erosion and flood risk associated with the raised ponds and additional irrigated areas, including the suitability of existing stopbanks and effects of flooding of the irrigation area
- (e) Effects on existing vegetation within the site, including the stand of remnant kahikatea
- (f) The cost of the project to ratepayers, which discourages potential alternative schemes to be developed in the future
- (g) Odour from the desludging process and additional irrigation
- (h) Dust from earthworks during construction

- (i) General effects on amenity values and the need for a planted buffer area
- (j) Loss of access across the land to the Ruamahanga River
- (k) Concern over the suitability of the scheme design in general, including:
- (l) Questions why centre pivot irrigation is not being used
- (m) Flood risk
- (n) Effects on water levels from removing clay capping layers on the adjoining land
- (o) The need to use on site materials (gravel and clay) as much as possible
- (p) Concern the effluent treatment is not as good as other systems operating in New Zealand (for example, Palmerston North).

### **Conclusion Regarding Consultation**

**9.17** In my opinion, the consultation process to determine and identify the preferred upgrading scheme has been thorough and extensive, including consultation over system and design changes, as well as possible mitigation measures that may be further required.

**9.18** The consultation forums have provided a number of opportunities for key stakeholders and the public to comment on the findings and recommendations through the process, including the shortlisting of options and the final selection of the proposed scheme.

**9.19** Through the consultation process, the main areas of concern and the issues of particular importance to key stakeholders and the wider community have been clearly articulated and investigated, with a number of additional studies and assessment being undertaken in response to some concerns and suggestions. As a consequence, the proposed upgrade option takes into account all of the key issues raised by the general public and stakeholders through:

- (a) Improving effluent quality
- (b) Meeting or exceeding receiving water quality targets
- (c) Land disposal of effluent as a principal discharge method
- (d) Avoiding discharge into the river during periods of contact recreation
- (e) Minimising the financial effect on rates and
- (f) Enabling scheme enhancement options in the future.

**9.20** In my opinion, therefore, the final upgrade scheme for which consent is sought is consistent with the direction sought by those parties involved in the consultation process and delivers the Best Practicable Option for the long-term improvement of the treatment and disposal of Masterton’s wastewater.

## **10. ASSESSMENT OF STATUTORY PROVISIONS**

**10.1** The relevant statutory provisions in considering a Notice of Requirement and the resources consents sought are provided in Sections 104, 105, 107, 168 and 181 of the Resource Management Act 1991. When considering a resource consent application or Notice of Requirement, the consent authority must have regard to the provisions of the regional policy statement, and regional and district plans (in addition to other matters which are assessed later in my evidence).

### **Masterton District Plan (Operative)**

**10.2** The MDP outlines the purpose of designations for public works as “providing special powers relating to the use and development of the affected land.” The provisions in the District Plan for designations relate to the procedures for submitting Notices of Requirement, the information to be supplied, conditions which may be recommended by MDC to avoid, remedy or mitigate the adverse effects of the designation, and outline plans prior to construction of the work.

### ***Issues, Objectives and Policies***

**10.3** The MDP outlines a number of significant resource management issues affecting the District, and the objectives and policies for addressing those issues. The most relevant objective and policies in the Plan relate to Infrastructure and Water Resources.

### ***Importance of Infrastructure***

**10.4** The Plan recognises that infrastructure is an essential part of the district’s physical resources and its maintenance is essential to the social, economic, and cultural wellbeing of the people and their health and safety. The main objective for managing the district’s infrastructure is to achieve “An efficient sustainable

infrastructure that can meet the needs of today's community and the reasonably foreseeable needs of the district's future generations" (Objective 6).

**10.5** The relevant policies that seek to achieve this objective are Policy 6.1, 6.2 and 6.3. These policies reflect the District's dependency on the provision of public services and facilities, and that these should be able to be developed as long as they meet environmental standards. The policies seek to manage the potential adverse effects of such developments by encouraging consideration of alternative options. In particular, Policy 6.3 seeks to maximize the capacity of existing infrastructure before new infrastructure is established and is related to the considerable investments in infrastructure and the need to ensure efficiency for the sake of that investment.

**10.6** In my opinion, the proposed upgrade is fully consistent with these objectives and policies, as a detailed consideration of alternative options has been undertaken, and the proposed scheme will result in a major upgrading of existing infrastructure and the discharge regime, maximising the existing investment in public infrastructure, with consequential improvements in the receiving water quality and flow-on benefits for the community.

### ***Protection of Water Resources***

**10.7** Another significant district-wide issue is the protection of the quality and quantity of the district's water resources (Objective 2). The Plan seeks to achieve this objective by enhancing those aspects of the environment that are not of an acceptable quality and by managing those characteristics that contribute to people's health and wellbeing. These policies also seek to manage activities (such as the MWTP) where there is the potential to affect the quality of water resources, including those of importance to tangata whenua for mahinga kai and for their cultural values.

**10.8** These policies will be met by the proposed upgrade, through which the quality of the receiving waters will be improved as a consequence of the improved wastewater quality and proposed new discharge regime.

### ***Protection of the Land Resource***

- 10.9** Objective 1 (and associated policies) seeks to maintain the productive potential of District's soils. The proposal to discharge treated wastewater to land will add nutrients to the soil and will not affect the long-term sustainability of the soil for future productive use.
- 10.10** The District Plan also seeks some outcomes with respect to rural amenity, including (1) '...maintenance and enhancement of the natural character... (predominance of rural activities)...' (4) "The protection of highly visible parts of the rural area from obtrusive or excessive landscape modification." and (9) "A pattern and diversity of development that is consistent with rural landscape." This proposal is in effect largely an irrigation scheme, with the form and appearance of pastoral activity, which is consistent with the character of the surrounding rural activities and is not considered to contrary to the outcomes sought for the rural area. The site is not highly visible, and the extent of landscape modifications is relatively minor. I would note that the MWTP will produce a product for use in rural production.

### ***Kaitiakitanga***

- 10.11** Objective 3 of the Plan and Policy 3.1 seek to provide for Kaitiakitanga in the management of the District's natural and physical resources. This policy has been implemented throughout the consultation process that has occurred since 1996. Removing the discharge from the Ruamahanga River when the river is in low to average flow and maximising the discharge to land at all times, recognises, insofar as practicable and affordable, the concerns of tangata whenua as kaitiaki to the District's freshwater resources.

### ***Minimising Risks of Natural Hazards***

- 10.12** Another issue for the District is the minimisation of risks from natural hazards to the community and the environment. In particular, the District Plan contains details of flood hazard areas, including the flood potential for the Ruamahanga River.
- 10.13** The District Plan aims to manage effects from natural hazards by controlling activities in high-risk areas. The relevant map identifies the existing treatment

site showing the boundary of the “100 year probable flood extent” along the southern edge of the ponds. It shows the “100 year possible flood extent” including the entire site and considerable land to the north between the site and the Masterton landfill. The flood and erosion risks have been fully addressed in the proposed upgrade, with the protection works to be part of the proposed upgrade adequately seeking to minimise the risks to the community in the event of flooding. The project is therefore consistent with this objective.

### **Proposed Wairarapa Combined District Plan**

**10.14** The Proposed Wairarapa Combined District Plan (**PWCDP**) addresses many of the same issues as that contained within the Masterton District Plan, including issues relating to the maintenance and enhancement of amenity values and the quality of the environment. Section 12 addresses the issues facing the Wairarapa in regard to its freshwater environments. It seeks to provide for sustainable land use activities that are compatible with the natural character and risk of natural hazards in the freshwater environment. For the reasons I outlined above, in my opinion, the proposal is consistent with the PWCDP.

### **Wellington Regional Policy Statement**

**10.15** The Wellington Regional Policy Statement contains objectives, policies and methods regarding the management, protection and enhancement of freshwater appropriate to a range of values and uses. Closely linked to the overall management approach is recognition of tangata whenua values regarding water, and particular concerns regarding disposal of human waste. The values are reflected in the relevant regional plans, which are outlined below.

### **Wellington Regional Freshwater Plan**

**10.16** The Regional Freshwater Plan (**WRFP**) sets out a regime for the management for receiving waters based on maintaining surface water quality for specific purposes.

**10.17** Several objectives in the WRFP (Objectives 4.4.1, 4.1.2, 4.1.3) seek to recognise and provide for the relationship that tangata whenua have with freshwater, and the need to protect the mauri of water bodies and rivers.

- 10.18** The operating philosophy for the proposed upgrade is to maximise the treatment of wastewater via land. This approach is intended to address so far as is practicable and affordable, the concerns raised by the tangata whenua and some others in the community. While tangata whenua have consistently sought that wastewater be disposed of totally to land, this option cannot be practically achieved in a cost effective manner.
- 10.19** The lower and mid Ruamahanga River is identified in the WRFP (Policy 5.2.4) to be managed for contact recreation purposes and as being regionally important for its amenity and recreational values (set out in Policy 4.2.15 – particularly angling – refer Appendix 7 of WRFP). The upgrade will enhance the value of the river for contact recreation, with the receiving water quality meeting the contact recreation guidelines. I therefore consider that the proposal is consistent with the objectives and policy requirements of the WRFP.
- 10.20** Under Policy 5.2.6, the Makoura Stream is identified as needing enhancement for aquatic ecosystems purposes and should be managed for aquatic ecosystems purposes. The removal of the discharge will provide significant improvements to the quality of this stream, and will assist in this policy being met.
- 10.21** Policy 5.2.13 seeks to encourage discharges to land, where possible, rather than to water. The proposed upgrade is consistent with this policy as it involves discharges to land at all times when the land is able to take the wastewater. As discussed, fulltime disposal to land is not currently feasible, although the availability of additional land for irrigation of effluent will assist in enabling MDC to meet this policy.
- 10.22** Policy 5.2.11 relating to mixing requires the consideration of a number of factors such as the purpose of the receiving waters, tangata whenua values, volume or concentrations of contaminants and characteristics of the receiving water. The proposed discharge is consistent with this policy as there will be no discharge to water during key contact recreation periods and, when there is a discharge, it is small in relation to the river flow (minimum 30x dilution), and the proposed new discharge point is the most efficient in terms of mixing (i.e., it takes into account hydrological and other river characteristics, including the nearest main sites for public recreation). The proposed reasonable mixing zone of 300-500m (400m

is suggested) is considerably smaller than present and is consistent with the policy.

**10.23** Policy 5.2.12 (Discharges Containing Sewage) is particularly relevant to the project. It provides for a policy guideline that discharges of sewage should pass through land or artificial wetland, unless the discharge direct to water better meets the purpose of the Act than disposal to land, and there has been consultation with the tangata whenua and generally with the community.

**10.24** These matters have been specifically considered throughout the development of the options since 1996. There has been significant consultation with tangata whenua and the community. I have already discussed the practical difficulty in obtaining a fulltime discharge to land. In terms of disposal via wetlands, one of the conclusions from the process was that a small wetland would not satisfy tangata whenua cultural values, and that a full treatment wetland would not be appropriate in relation to the upgrade proposed. When all social, cultural, environmental and economic factors are taken into consideration, it is my view that the proposed upgrade better meets the purpose of the RMA than full time land disposal at this point in time.

**10.25** In essence the policy direction encourages land disposal where practical – that is exactly what this upgrade does, by maximising land disposal to the extent that is reasonably and practicably possible.

**10.26** The WRFP has a policy, which provides for the river to be managed for the purposes of contact recreation and aquatic ecosystem functioning, but does not provide rules (standards) for water quality<sup>6</sup>.

**10.27** Appendix 5 of the WRFP lists the Ruamahanga River within waterbodies with Regionally Important Amenity and Recreation values, whilst Appendix 7 lists it as a waterbody with water quality needing enhancement in order to meet those values. The Ruamahanga River is therefore subject to Policy 5.2.9 of the WRFP which requires that any management of the river enhances water quality for the purposes of contact recreation (I note the Ruamahanga River is not listed as being managed for aquatic ecosystems, only the Ruamahanga floodway wetland).

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<sup>6</sup> Except in regard to the discharge of free or combined residual chlorine, acid soluble aluminium, suspended solids, and fluoride.

**10.28** Appendix A8.3 of the WRF is a guideline to assist with resource consents which reflects the water quality standards in the third schedule of the RMA. The guidelines state that consent shall not be granted if the discharge *either by itself or in combination with other contaminants* is likely to cause any of the following effects after reasonable mixing:

- (a) All those effects in A8.1 [minimum water quality standards in sections 70 and 107 of the Act].
- (b) All those effects in A8.2 [the water quality standards in the Third Schedule of the Act regarding water managed for aquatic ecosystem purposes].
- (c) The visual clarity of the water to be so low as to be unsuitable for bathing.
- (d) The water to be rendered unsuitable for bathing by the presence of contaminants.
- (e) The presence of undesirable biological growths as a result of any discharge of a contaminant into the water.

**10.29** The focus of Appendix 8.3 is on ensuring that the discharge does not *cause* the effects in question after reasonable mixing, when such effects are not occurring upstream. Thus, for example, if visual clarity upstream is suitable for bathing at a particular flow and the discharge would cause it to become unsuitable for bathing at that flow, after reasonable mixing, the guideline would not be met. Conversely, the guideline will not be breached if the river is unsuitable for bathing because of upstream contamination rather than as a result of the discharge.

**10.30** Policy 5.2.4 refers to the receiving water quality guidelines in Appendix 8; these guidelines have been used to assist with the development of water quality targets and wastewater standards for the project. The guidelines/targets apply after reasonable mixing of the discharge with the receiving waters.

- 10.31** The WRFP does not provide any numerical standards for a river discharge. It sets out qualitative policies and narrative guidelines for assessing whether the policies can be met. MDC has used national guidelines and site-specific studies as appropriate in order to establish appropriate quantitative receiving water targets, as discussed in detail in the evidence of Chris Hickey (section 8.2 of the AEE).
- 10.32** The proposed upgrade is consistent with the receiving water quality guidelines in the RMA and the WRFP and is consistent with the overall objectives and policies of the WRFP. I note that to the extent that some submitters suggest that higher standards should apply that is a matter which should be assessed in the context of a review or change to the WRFP.

### **Regional Air Quality Management Plan**

- 10.33** The Regional Air Quality Management Plan (**RAQMP**) applies to discharges to air in the whole of the Wellington region, except for the coastal marine area.
- 10.34** Objective 4.1.1 and 4.1.2 seek to maintain high quality air and to enhance areas of degraded air quality, while allowing discharges at a rate that enables the community to provide for their social, economic, and cultural well being as well as their health and safety. The proposal will have little impact on the air quality and is therefore consistent with these two objectives.
- 10.35** The key relevant policies are Policy 4.2.4, 4.2.5, 4.2.6, 4.2.7 and 4.2.14. These policies relate to the duty under both sections 5 and 17 of the Act to avoid, remedy or mitigate any adverse effect of any discharge of contaminants to air that is noxious, dangerous, offensive or objectionable as well as any discharge that has adverse effects on amenity values.
- 10.36** Good management practices will be employed to ensure that odour from the sewage treatment is controlled. Accordingly, any discharge to air from the upgraded MWTP will be consistent with the relevant objectives and policies of the plan.

## **Regional Plan for Discharges to Land**

**10.37** The Regional Discharges to Land Plan (**RDLP**) is relevant when considering disposal or discharge of contaminants to land (for example, leakage from ponds and land disposal). The Plan identifies that the area around Masterton and the Ruamahanga River as one of the most vulnerable areas to groundwater pollution in the Wellington Region. An assessment of effects of discharges into land on groundwater quality is provided in the evidence of Graeme Proffitt (and in section 8.3 of the AEE).

**10.38** Objective 4.1.4 seeks to achieve a significant reduction in contamination of surface water, groundwater and coastal water from discharges of human wastewater to land. Policies 4.2.12 to 4.2.18 are designed to achieve the above objective and relate specifically to discharges of human wastewater, the most relevant being Policies 4.2.12 and 4.2.13.

**10.39** Policy 4.2.12 requires that particular consideration be given to any relevant Iwi management plans or statements of tangata whenua views when considering applications for the discharge of human wastewater (treated or untreated) to land. As I have already outlined, full consideration has been given to the values and beliefs of the tangata whenua in the selection of this proposal as the preferred upgrade option for the sewage treatment plant.

**10.40** Policy 4.2.13 sets out those matters to which particular regard should be given when assessing applications to discharge contaminants to land from reticulated sewerage systems. The matters include the nature of the contaminants, monitoring of trade wastes entering the system, potential for overload by stormwater, hydro geological conditions, effects of odour, effects on human health or amenity, plants, animals or ecosystems, other uses of the discharge site and surrounding area, tangata whenua values, and Public Health Guidelines.

**10.41** These matters are addressed in the relevant technical evidence.

## **11. ASSESSMENT OF RESOURCE CONSENT APPLICATIONS**

**11.1** The following part of my evidence focuses on assessment matters of the resource consent applications.

## **Section 104 of the RMA**

**11.2** This section applies when considering a resource consent application. In addition to Part II, the consent authority must have regard to matters including:

- (a) The actual and potential effects on the environment of allowing the activity.
- (b) The provisions (in this case) of the regional policy statement and regional and district plans.
- (c) Other matters the consent authority considers relevant and reasonable necessary to determine the application.

**11.3** In addition, the consent authority must not grant resource consent contrary (in this case) to sections 107 and 107A.

## **Section 105(1) of the RMA**

**11.4** Section 105(1) sets out matters a consent authority must have regard to when considering a resource consent application for a discharge permit. Consideration should be given to the nature of the discharge and the sensitivity of the receiving environment to adverse effects, the applicant's reasons for the proposed choice as well as any possible alternative methods of discharge, including discharge into any other receiving environment.

**11.5** These matters have been addressed in detail throughout the upgrade design process, and compliance with this section is covered in the evidence of the other technical witnesses.

## Section 107 of the RMA

**11.6** In terms of the proposed discharges being sought, section 107 of the Act requires that a consent authority shall not grant a discharge of contaminant or water into water, or a contaminant onto or into land in circumstances that may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water –

*If, after reasonable mixing, the contaminant or water discharged (either by itself or in combination with the same, similar, or other contaminants or water), is likely to give rise to all or any of the following effects in the receiving waters:*

- *The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials*
- *Any conspicuous change in the colour or visual clarity*
- *Any emission of objectionable odour*
- *The rendering of fresh water unsuitable for consumption by farm animals*
- *Any significant adverse effects on aquatic life.*

**11.7** The upgrade will ensure that none of the effects set out in section 107 will occur after reasonable mixing (see the evidence of Jim Cooke and Chris Hickey, section 8.2 of the AEE). Furthermore the reasonable mixing zone will be considerably reduced in size from the present situation and will no longer extend to Wardells Bridge.

**11.8** Overall, the proposed scheme will improve current water qualities of the Ruamahanga River and, in my opinion, the discharges will not have more than a minor adverse effect on the environment.

## **12. ASSESSMENT OF PROPOSED DESIGNATION**

### **Designation Considerations**

**12.1** A Notice of Requirement for a designation in respect of the proposed sewage treatment plant upgrade is given under Section 168A of the Act, which provides specifically for those instances where the requiring authority is also the territorial authority responsible. The proposed alteration of the existing designation is managed by section 181 of the Act.

**12.2** In considering the requirement and any submissions received, the consent authority must consider the effects on the environment of allowing the requirement (addressed in section 7 of the AEE), having particular regard to the relevant provisions of any relevant plans and policy statements (addressed in section 9.3 of the AEE) and to any alternative sites, routes, or methods of undertaking the work.

### **Necessity for Achieving Project Objectives & Consideration of Alternatives**

**12.3** The proposed upgrade was selected because it achieves MDC's objectives (set out in section 3.2.5 of the AEE). In brief, the project is reasonably necessary to achieve MDC's objectives because it:

- (a) Upgrades the existing MWTP to produce a higher quality wastewater.
- (b) Enhances the receiving water quality (Ruamahanga River) in comparison to the existing discharge.
- (c) Removes the direct discharge of wastewater from the River during the period when the river is the most attractive for swimming.
- (d) Removes the discharge from the river during winter low flows (below half median flow).
- (e) Removes the direct discharge of wastewater from the Makoura Stream.
- (f) Involves discharge to land to the greatest extent practicable.
- (g) Is an affordable option for the District.

**12.4** As identified in section 10 the AEE and background reports Masterton Urban Area Sewerage infrastructure Upgrade Project issues and Options (Beca, 2004) and Masterton Urban Areas Sewerage Infrastructure Upgrade Project: Manaia Road Site (Beca, 2006), and as addressed in the evidence of Mr Archer, MDC has given detailed consideration to various alternative options for the siting and design of the treatment and disposal of the Districts urban wastewater.

**12.5** Before confirming the site location and current scheme design, MDC undertook a breadth of investigations into alternative sites and systems for treating the District's urban wastewater to enable it to determine that the subject site and proposed scheme design is the most appropriate. In doing so, MDC has taken advice from various independent experts in respective professions to ensure the

adequacy of these investigations. In my opinion, the nature of investigations of alternative sites and scheme options has been appropriate.

**12.6** I acknowledge the proposed scheme is not supported by some neighbours and members of the community, who desire alternative options to be pursued. However, MDC is in a position where it must improve the current wastewater treatment plant in a cost-effective and environmental acceptable manner, and I believe the combination of the limited nature of adverse environmental effects from the proposed scheme along with the in financial and practical constraints of the alternative options identified are acceptable reasons for MDC not pursuing such alternative options.

**12.7** The designation method is reasonably necessary to achieve MDC's objectives because it has been demonstrated in my view to be the most efficient and effective method, in that:

- (a) It provides for its ongoing management and maintenance.
- (b) It is an appropriate method of managing the effects from this form of land use over time.
- (c) The new site to be designated adjoins the existing MWTP designation.
- (d) It provides clear notice on the Planning Maps as to the type of land use and what controls are in place to manage the effects.

**12.8** The advantages of the designation process are as follows:

- (a) Provides certainty and continuity for large capital works projects.
- (b) Gives the public notice of the proposed public work.
- (c) Is usually more flexible than a resource consent.
- (d) The site to be designated adjoins the existing MWTP designation.
- (e) Is shown in the district plan.
- (f) Replaces multiple rules in the district plan that may affect a project.
- (g) Allows all relevant land use effects to be considered together.

**12.9** However, as an alternative to the designation, resource consents and a plan change process were considered.

**12.10** Resource consent could be sought from MDC. However, the resource consent process is not as flexible as the designation and Outline Plan process for later

modifications with respect to ongoing management, maintenance and upgrading, of the MWTP. Furthermore, a resource consent would not clearly identify the location and purpose of the MWTP within the District Plan, or provide the plant with the level of regulatory priority afforded by a designation. I consider it more appropriate to extend the designation to cover all relevant land use activities on the MDC land.

- 12.11** A plan change could also authorise the project or work. Plan changes can be drafted to provide the necessary flexibility in the wording to provide for the ongoing requirements of the MWTP. However, given that the proposed upgrade is intended to be long-term in nature, there appears to be little necessity to develop discrete and separate district plan provisions for the MWTP to manage all activities associated with the MWTP. This is better achieved by way of a comprehensive designation.

### **13. CONDITIONS**

- 13.1** I consider it appropriate for both the resource consents and the designation to be carried out in accordance with a number of appropriate conditions. As outlined in s12 of the AEE, matters pertaining to the designation and consents where conditions are considered appropriate relate to:

- (a) Discharge rates to land and water (discharge permits).
- (b) Monitoring receiving water and soil qualities (all consents and designation).
- (c) Avoidance of offensive or objectionable odour (discharge to air permit).
- (d) Makoura stream diversion (water permit).
- (e) Activities to be carried out within the buffer areas (designation).
- (f) Existing and proposed vegetation (designation).
- (g) Construction activities including earthworks (designation).
- (h) Hazardous substances and waste (designation).

- 13.2** I will address the matter of conditions in more detail in supplementary evidence to be presented at the hearing.

## **14. TERM OF CONSENT**

**14.1** The term of consent sought by MDC is 35 years, being the maximum available for the regional consents under the RMA. The existing plant is a significant investment in its own right and the proposed upgrade would significantly add to the value of that investment. In that context, I consider that a 35 year term of consent for all regional consents is considered appropriate.

**14.2** As highlighted in the evidence of Mr ten Hove, MDC is committed to considering other opportunities for enhancing the disposal scheme particularly with regard to reducing the discharge to waterways.

## **15. CONCLUSIONS**

**15.1** In my opinion, the proposed upgrade is in accordance with the purpose and principles of the RMA and is well aligned with the objectives and policies of the relevant planning documents.

**15.2** The existing resource consents for the Masterton Wastewater Treatment Plant expire in January 2010, after which date, there will be a need to provide for the ongoing - albeit improved - treatment and disposal of the town's wastewater. I consider the proposed upgrade is necessary to provide for the needs of the community, particularly in terms of an affordable efficient and sustainable form of treatment and disposal of wastewater that yields significant environmental benefits.

**15.3** I consider the adverse effects of the proposed activities will be minor. The proposed upgrade will result in significant improvements to the quality of the existing environment and will maintain the key values associated with the river and its immediate environs, including recreation, visual effects, and public health matters.

Robert Schofield  
Environmental Planner – Director  
Boffa Miskell Limited  
13 February 2009