

**7. SOUTH WEST AREA - INTEGRATED CATCHMENT MANAGEMENT PLAN**

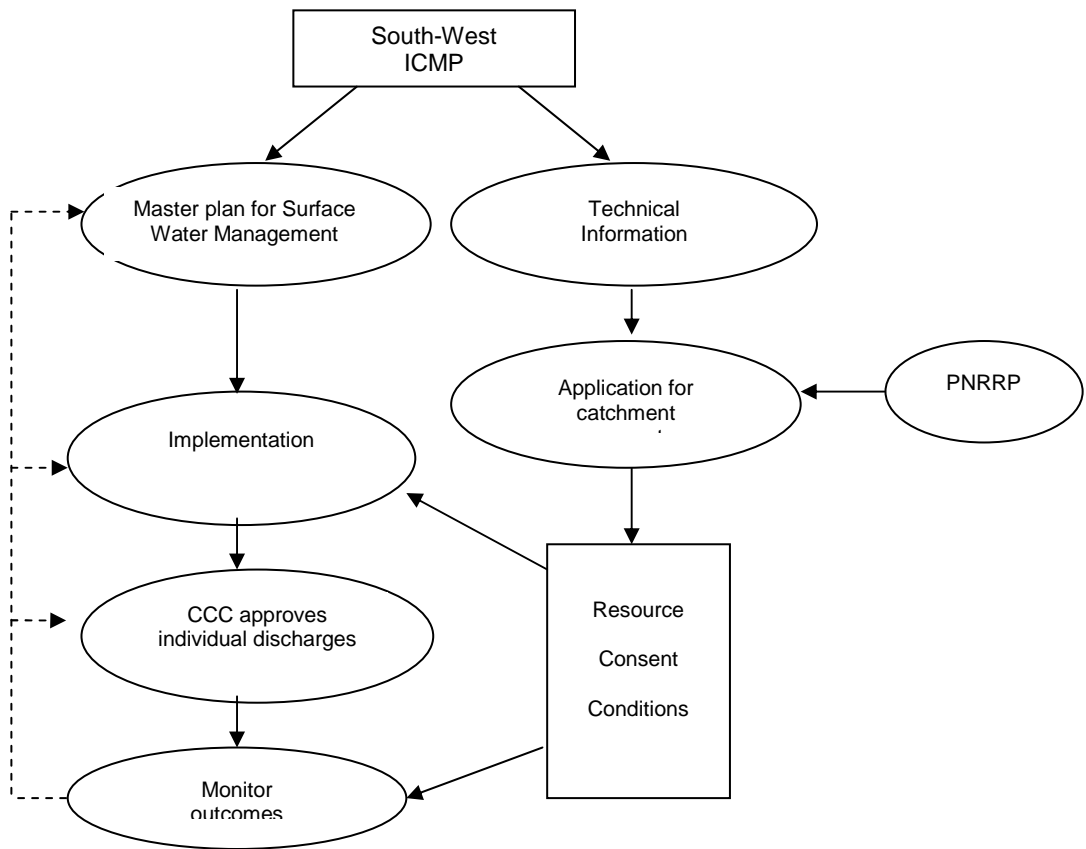
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**PURPOSE OF REPORT**

1. This report seeks Council adoption of the Integrated Catchment Management Plan (ICMP) as the surface water facilities plan for the South West Area and as the technical basis for an application to Environment Canterbury (ECan) for a catchment consent for the Upper Heathcote River and Upper Halswell River.

**EXECUTIVE SUMMARY**

2. The City Council has undertaken extensive investigations and planning work which has contributed to the preparation of an Integrated Catchment Management Plan (ICMP) for the South West Area of Christchurch. The ICMP forms a masterplan for surface water management to support the growth of South West Christchurch. The approach taken is in keeping with the Council’s “Waterway and Wetlands Natural Asset Management Strategy 1999”.
3. The adoption of the ICMP will allow the Area Plan to progress along with the acquisition of the required land and construction of “best practice” multi-value stormwater management facilities.
4. The ICMP will serve as the technical basis for a catchment consent application to Environment Canterbury for the South West Area (Figure 1). The Catchment Consent will be the subject of a later report to the Council once the draft consent conditions have been formulated. In the meantime it will serve as a plan for large scale facilities in the area.



**Figure 1. ICMP Process**

5. The South West ICMP is the first of a number of ICMPs which will be prepared to manage surface water across the city, the programme for these will take a number of years to complete. In the meantime, an interim Global Consent application will be lodged to cover other areas of the city until a local ICMP has been prepared. The Global Consent will authorise current discharges and reduce the ambiguities and administrative requirements as we transition to discharge consents based on Integrated Catchment Management Plans covering the whole city. (More detail on this is provided in paragraph 28.)
6. Most of the land required for stormwater treatment and detention has already been approved in the Council's Strategic Land Purchases. Some areas of land in multiple ownership will need to be designated. This land value will transfer from the strategic purchase account and into the City Environment Greenspace account when the facilities begin construction.

#### **MATTERS COVERED BY THE ICMP**

7. The ICMP is based on a surface water management scheme which takes both water quality and quantity into account. The proposed scheme aims to reduce the flooding risk in the Heathcote and Halswell catchments and includes a small margin of safety to allow for future changes in climate. Soakage basins and infiltration systems are expected to have only localised impacts on groundwater levels and there should be no adverse effects on spring flows.
8. Receiving waterways have been identified and classified based on water quality and ecological objectives. Changes to groundwater quality are predicted to be no more than minor and are not expected to impact on community drinking water wells. Water quality and ecology will be monitored to assess the success of mitigation measures, which will be adapted as required.
9. The Plan covers land and capital work required to create stormwater management facilities that will permit the Christchurch City Council to meet its obligations under the Resource Management Act and to allow for planned city growth. Financial allowance is made for operational activities directly associated with the proposed facilities.
10. The plan will be reviewed in due course to provide detail around consenting, monitoring, enforcement, education, incentives and other methods of direct and indirect contaminant control. The main drivers for review will include:
  - Catchment consent conditions
  - Water quality and ecology monitoring results
  - Rate of development
  - The Surface Water Strategy
  - Any changes in policy e.g. Water Quantity and Quality chapters of the Natural Resources Regional Plan
11. The preparation of ICMPs allows the Council to take a proactive approach in managing stormwater, rather than reacting to development on a case-by-case basis. Developers also benefit as they will only need to deal with the Council, rather than requiring complementary consents from the Council and ECan.

#### **FINANCIAL IMPLICATIONS**

12. The ICMP for the South West Area will be implemented as part of the South West Area Plan development under the Urban Development Strategy. Investment into the area will occur over a 24 year horizon and be instituted progressively over a number of Long Term Council-Community Plans. While initial funding is currently in place this will be reviewed and considered by the Council as part of the 2009/19 LTCCP. Funding of the ICMP implementation will be by way of rates (for retrofitting and rehabilitation of existing systems) and Development Contributions (for growth related investment).

## **LEGAL CONSIDERATIONS**

13. The ICMP will form the technical basis for the Catchment Consent. The technical standards adopted in the preliminary design are “best practice” and would be the recommended technical solution in both the present and any future administrative arrangements between CCC and ECan.
14. The legal issues are particularly pertinent to the conditions of consent for a future Catchment (Discharge) Consent. The Council has agreed with ECan to foreshadow these matters by negotiating a Implementation Agreement relating to the post-consent operating regime. This gives both parties the opportunity to understand the full implications of this new form of consent which takes a catchment view rather than a facility by facility view. This is further discussed in paragraphs 26 and 27.

## **ALIGNMENT WITH LTCCP AND ACTIVITY MANAGEMENT PLANS**

15. Currently in the LTCCP there is an allowance for the Bishops Green/Douglas Clifford and for the Awatea Road facility. All other facilities have been scheduled according to an assumed logical development pattern which considers the limitations of sewer capacity on the ability to develop land and smoothes out the demand on capital and construction resources. This projected pattern of development over the next 20 years will be used to populate the LTCCP.

## **ALIGNMENT WITH STRATEGIES**

16. This “best practice” stormwater management plan is consistent with the current Council’s Waterways and Wetlands Natural Asset Management Strategy and aligns with the Council’s multiple values – in particular; landscape, ecology, recreation and drainage. It is also consistent with the Heathcote River Floodplain Management Strategy as it aims to reduce the risk of flooding.

## **CONSULTATION FULFILMENT**

17. The preliminary scheme was identified and included as part of the consultation programme on the South West Area Plan in August 2007.

## **STAFF RECOMMENDATION**

It is recommended that the Council:

- (a) Adopt the Integrated Catchment Plan for the South West Area of Christchurch as a proposed masterplan to support surface water management for the growth of South West Christchurch.
- (b) Note that the ICMP will be used as the technical basis for the application for a Catchment Consent for South West Christchurch.

## **BACKGROUND (THE ISSUES)**

18. The Christchurch City Council took over the responsibility for surface water drainage in Christchurch in 1990 and the Resource Management Act in 1991 created a new planning environment wherein all developments require a resource consent to discharge stormwater into natural waters. Subsequently ECan in their Proposed Natural Resources Regional Plan (PNRRP) made provision for territorial authorities to be granted a Catchment Consent to manage surface water in areas where comprehensive planning had been undertaken. This is in line with an international trend toward integrated catchment management planning where surface water management is co-ordinated with land-use planning.
19. In March 2006 ECan and the Council signed a joint "Planning and Consents Protocol for Surface Water Management". This is based on the principle that "To improve surface water quality, a change in focus from individual sites to a catchment-wide approach is needed". Other practices were agreed:
  - "Ensuring that actions governed by the Protocol are consistent with the PNRRP
  - Prioritising catchments within Christchurch for preparation of ICMPs and applications for catchment-wide consents
  - Continuing to process applications for individual discharges until catchment-wide consents are obtained
  - The Council and ECan focus on catchment-wide management rather than individual non-compliances
  - Taking sewer outflows into account when preparing ICMPs
  - Surrendering relevant existing discharge permits once catchment-wide consents have been obtained
  - Using a pilot area for preparation of an ICMP and catchment-wide consent
  - Authorisation by the Council of discharges into the stormwater network system where catchment-wide consents have been obtained."

## **Urban Development Strategy**

20. In accordance with the Urban Development Strategy the Council has prioritised the South West Area in which to develop an Area Plan. The area comprises the upper catchments of the Halswell and Heathcote rivers. These rivers are both subject to flooding in their lower reaches. The Heathcote in particular, has considerable development in the lower reaches and thus is very sensitive to any increases in flood peaks which would occur from unmitigated development in its upper catchment.
21. Investigations have spanned several years and have included major investigations on the state of the springs, surface water and ecology in the catchment as well as the state of groundwater and the response of groundwater to the operations of a large-scale surface water management scheme as proposed. The computer model of the Heathcote River has been revised and used to investigate flooding scenarios. Other investigations have focussed on surface and groundwater quality. The major streams of investigation have been compiled in a "Water Quantity Report" and a "Water Quality Report". These two reports and the Council's Waterway Wetlands and Drainage Design Guide are the technical basis of the ICMP

## **Stormwater Treatment Systems**

22. The systems chosen for this greenfield area are natural grassed swales, soil filtration (absorption) basins and wetlands for water treatment and detention ponds for flood attenuation and sediment removal. The stormwater management facilities are a fundamental part of the Area Plan as their multi-valued attributes integrate with the landscape, recreational areas and greenspace corridors. These treatment options are preferred because they contribute positively to the living environment. The largest land areas are required for detention of the additional runoff from the impervious areas created when land is developed for residential or business purposes. Where technically feasible, the treated stormwater will be returned to the upper aquifer and thus the area of land required for storm detention and conveyance is minimised.

23. The stormwater management scheme is designed to provide communal facilities for new developments. There is also scope to retrofit some of the existing unmitigated development with treatment and detention facilities. This will not only improve water quality but also restore the 50 year recurrence interval (2 per cent chance in any one year) floods close to those which would have occurred with the state of development in 1991. If the Council does not provide these communal facilities then the current practice of each development providing its own facilities will continue. These small un-coordinated facilities, with their own monitoring and maintenance requirements, are difficult and expensive to run once they are taken over as an asset by the Council. In addition, they do not provide the best opportunity to make a positive contribution to the city environment. Providing a scheme simplifies future planning for the developers and Council staff alike and was one of the main drivers for the Council/ECan "Planning and Consents Protocol for Surface Water Management".

#### **Peer Review**

24. The South West Area ICMP is the first such plan to be prepared in Christchurch and it is therefore a learning process for both the Council and ECan as well as the other stakeholders in the area. It is important none-the-less that there should be confidence that investigation and design is done to a high standard. To this end the Council commissioned an independent peer review of the investigations to ensure that they were of sufficient breadth and depth and also of the implementation strategy and preliminary design to ensure that the knowledge gained in the investigation was appropriately interpreted and applied. The results of the peer review were shared with ECan and the recommendations of the peer review have been incorporated into the latest version of the ICMP.

#### **Working Relationship with Environment Canterbury**

25. At this stage the Council is being asked to adopt the ICMP essentially as "*the stormwater management facilities for the South West Area*" which will also be used in the application to ECan for a Catchment Consent. Council staff have work-shopped the technical aspects of the scheme with ECan staff, who have suggested to the Council that an application using the present ICMP would be appropriate. The conditions under which a catchment consent would be granted and the obligations and responsibilities of each party have yet to be determined. This will be foreshadowed in the process of a Implementation Agreement which the Council and ECan are currently progressing. (Further details in paragraph 27 below) The outcome of the MOU process and the implications for the prospective Catchment Discharge consent will be the subject of a later report to Council.
26. The proposed facilities design is based on "best practice" but it is unlikely to meet the very high water quality standards in the PNRRP. This matter is the subject of the city's submissions on the PNRRP (Ch. 4 Water Quality). This ICMP is being brought before the Council at this time in order to avoid delays to the Area Plan. Since the scheme is "best practice" and it is consistent with the Council's environmental policies, it is appropriate that the city progresses with its implementation (under the present administrative arrangements) and also progresses in parallel the future administrative arrangements of the Catchment Consent. This approach is consistent with the ECan/Council protocol clause "*Continuing to process applications for individual discharges until catchment-wide consents are obtained*".

#### **Christchurch City Council/Environment Canterbury Protocol Implementation Agreement**

27. The new regime under which discharge consents may be granted by ECan to the Council based on an Integrated Catchment Management Plan raises a number of issues and opportunities for both organisations. It was considered appropriate to explore this new regime by way of an agreement that will form an appendix to the "Planning and Consents Protocol for Surface Water Management", so as to move forward with an open and constructive working relationship. This agreement confirms the approach and adds some operational detail to the Planning and Consents Protocol described in paragraph 18. The agreement covers the following topics:

**Points of discharge** - In effect these will be points in receiving waters where the water quality is monitored rather than the thousands of individual physical discharges which currently exist into receiving waters.

**Acceptable quality of discharge** - Maintaining or enhancing the quality of the receiving environments using affordable best practice.

**Monitoring** - Continual monitoring of the points of discharge from a water quality and ecological point of view. Following up on issues when trigger levels are exceeded.

**Determining consent conditions** - Conditions will ultimately be set as a part of the formal process. However the draft conditions to be set by consensus of experts from the Council and ECan.

**Christchurch City Council's liability for discharge quality** - This specifies a number of approaches whereby the Council can demonstrate it is conforming in accordance with a discharge consent and clarifies the Council non-liability for un-consented third party discharges.

**Enforcement** - Commits to co-operative enforcement of third party discharges and prior dialogue at a senior level between the Council and ECan in the event of enforcement being deemed likely in relation to the Council's actions or omissions.

**Pollution response** - Describes a co-operative approach with Council taking a lead role in network waterways and ECan taking a lead role in receiving waters.

**Individuals who wish to operate outside the ICMP and any subsequent resource consent** - Requires ECan to generally support the consents based on ICMPs and treat the Council as an affected party should individuals apply for a consent in an area covered by an ICMP.

**Ongoing Communication** - Environment Canterbury and Christchurch City Council will establish a 'Joint Stormwater Management Issues Working Party' consisting of senior management from both organisations to meet a minimum of twice yearly for the purposes of identifying, discussing and resolving stormwater management issues of strategic importance to both organisations.

### **Interim Global Consent**

28. The Council is progressing a separate Council/ECan interim discharge consent termed a "Global Consent" which will legitimise the current Council infrastructure and allow the Council to authorise discharges from residential hill areas up to 2 ha, residential flat up to 4 ha, and business/commercial up to 2 ha into the Council network without a site specific ECan discharge consent – but still subject to the Council's conditions. This proposal would apply to all areas and be superseded by ICMP-based catchment consents once they come into force. This Global Consent is likely to have a term of seven years by which time it is anticipated that Catchment Consents will be granted for all of the city.

### **Land Areas Required**

29. The ICMP facilities are at the stage of a preliminary design. This means there are clear design principles and so the size of each proposed facility and its current cost estimate is known. The facilities will not be finally designed and detailed until imminent development within the catchment generates the demand (although land areas need to be set aside). This means that technical conditions which may be required under the finalised NRRP and catchment consent can be incorporated into the final design. In the meantime the city must continue with "best practice" and design facilities for future developments according to the best knowledge at the time whether or not there is a Catchment Consent in force.
30. An overview of the facilities location and the likely sequence of facilities construction is shown in Figures 2 & 3 (**attached**). The preliminary scheme will service a catchment area of 2103 ha and the facilities will cover 198.5 ha (just under 10 per cent of the catchment).

31. It should be noted that the Council has already approved the purchase of strategic areas of land in the South West Area. Part of these strategic purchases will serve the needs of this ICMP. This land will be purchased by negotiation as it comes on the market and it will transfer into the City Environment accounts once the works commence. Where a stormwater facility is principally used to service a single development and is within the area of land owned by the developer then the Council may not need to buy the land but the asset will be vested to the Council at the end of the development. If the land is not able to be purchased or obtained by these means then it will need to be designated.

#### **OPTIONS**

32. An alternative approach for surface water management would be to continue to prepare applications for discharge consents on a case-by-case basis. This would be contrary to approach agreed to by the two Councils in the Surface Water Protocol and would have significant processing costs attached to it. In addition it would exacerbate the current situation whereby the city has over 100 existing discharge consents with over 800 consent conditions to comply with.
33. Another alternative would be to leave the design and development of stormwater management in the hands of developers. Such an approach is likely to provide uncoordinated array of minor facilities with high maintenance costs. These facilities would be unlikely to integrate with and complement the Area Plan.