

COMPREHENSIVE DISCHARGE REGISTER

CWR NO.12

TITLE: Otara Stream, Flat Bush.

WATER RIGHT/RESOURCE CONSENT No.917723

COMPREHENSIVE DISCHARGE CONSENT No.14/10/Br/7723

EXPIRY DATE: 31 Dec. 2003

CATCHMENT SIZE: 1906 ha.

POINT OF DISCHARGE: Otara Stream, NZMS 260 R11 779697

PEAK DISCHARGE:

94 m³/s (1% AEP). This is based on the ultimate fully urbanised catchment.

PRIMARY DESIGN STANDARD: 20% AEP.

SECONDARY DESIGN STANDARD: 1% AEP.

FLOOR LEVEL RESTRICTION:

1m above 1% AEP, or refer to the Proposed District Plan (Section 9.9.1.2 (c)), **whichever is the more rigorous.**

OTHER CONDITIONS: -

COMPREHENSIVE DISCHARGE CONSENT LEVY: \$394 per ha.*

S.W. QUALITY LEVY: To be determined.*

*Refer to Financial Contributions Register for updated figures.

PROPOSED WORK:

This covers the Ultimate Development Management Option and assumes that the entire catchment will be urbanised. The flow will be restricted by three detention ponds as indicated on the attached maps.	Cost \$ (excluding GST), as at Dec. 1990.
Construction of detention ponds 1 and 3.	1,334,600
Murphys Rd:	
- Duplicate culvert	141,000
- Improve inlet to culvert	25,400
- Construct new culvert	282,000
Ormiston Rd:	
- Duplicate culvert and improve stream channel	137,000
- Construct additional culvert	141,000
Jeffs Rd: Construct additional culvert	141,000
Chapel Rd: Improve waterway underneath and carry out channel improvements to bridge	310,600
Construction of detention pond 4.	2,566,100
Deepen and widen channel	1,061,700

COST:* \$6,754,500 (excluding GST), as at Dec. 1990.

COMMENTS:

<i>Rainfall Data:</i>	This was obtained from NZ Met. Service records for the Otaru Catchment. This data was used to interpolate the 1% AEP rainfall for all storm durations considered. There is a need to re-establish the rainfall gauge for the Otaru Catchment to provide more detailed rainfall records.
<i>Long Term Catchment Monitoring:</i>	An automatic gauging system should be set up at the Hills Rd. bridge to monitor flood flows in the Otaru Stream Flat Bush Catchment.
<i>Erosion Control:</i>	This is considered vital for the open channels in this catchment to ensure that the design flow does not create erosion problems.
<i>Impervious Cover Assumptions:</i>	The following assumptions regarding the percentage of impervious cover were made in calculating the design discharge. Refer to the attached map for the Stages of Development mentioned in this section. This refers both to Existing Zoning under the 2nd Reviewed District Scheme and also Future Possible Development. Stage A: Industrial: 80% impervious cover Residential 1: 50% impervious cover Residential 2: 70% impervious cover Stage B: 60% impervious cover Stage C: 50% impervious cover
<i>Diagrams Included:</i>	Development Stages Main Drainage System: Proposed Open Channels under Ultimate Development. Location of Proposed Detention Ponds

*Refer to Financial Contributions Register for updated figures.



