



**Holroyd City**  
*Built Around People*

**DRAFT**

**Water Savings Action Plan  
for Holroyd City Council**

**Endorsed by Council at its meeting of  
21 March 2006  
Updated August 2006**

*Declaration*

I certify that this Savings Action Plan has been prepared in accordance with the Guidelines issued by the Minister for Utilities. I am authorised to submit this Plan, on behalf of the designated user, to DEUS.

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Dennis Trezise  
GENERAL MANAGER

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DATE

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## **1.0 Introduction**

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The Holroyd City Council area is located approximately 25 kilometres from the Central Business District of Sydney. It covers an area of 39.25 square kilometres and at the time of the 2001 census, there was 87,532 people living within the City. The area is bounded on the north by the Great Western Railway and on the east by the Main Southern Railway. Prospect Creek borders the southern portion of the city with Prospect Hill on the west.

Within the Holroyd City Council area, a range of services and facilities are provided by Holroyd City Council, which contribute to Council's water consumption. These services and facilities include:

- 3 swimming pools, 2 of which are operated all year round;
- an estimated 250 parks and 47 playing fields;
- 5 community centres;
- 3 libraries;
- 4 long day care centres, 2 occasional care centres, 6 out of school hours centres and 1 family day care centre;
- 4 youth centres; and a
- 11.4 hectare nature reserve.

In addition to the above services and facilities, Council utilises and maintains an administration building and works depot.

With below average rainfall in the past few years, water consumption and dam storage levels are a critical issue for the Sydney region. The Holroyd City Council area's water supply comes from Warragamba Dam. In October 2003, Level 1 water restrictions were implemented and elevated to Level 2 on the 1 June 2004 and to Level 3 on the 1 June 2005. On 2 October 2003, the day after Level 1 mandatory water restrictions commenced, Warragamba Dam was at 57.7% capacity. At the end of June 2005, Warragamba Dam had dropped to 37.9% of capacity, 7% lower than the previous lowest level Warragamba Dam had reached since its completion in 1960.

Holroyd City Council in December 2003 began strategically looking at its water consumption through a partnership agreement with Sydney Water Corporation as part of the Every Drop Counts Business Program. The Every Drop Counts Business Program enables Council to better understand water need and usage patterns, improve water efficiency and reduce water consumption.

The purpose of this Water Savings Action Plan is to satisfy Council's statutory requirement under the Energy Administration Amendment (Water and Energy Savings) Act 2005 and to improve Council's management of valuable water resources. The objectives of the Water Savings Action Plan are to:

1. Enable Council to develop an understanding of its water management practices
2. Identify and implement cost effective water savings
3. Embed water management into the core business of Council.

## **2.0 Development of the Water Savings Action Plan**

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A cross-council Water and Energy Savings Committee have developed the Water Savings Action Plan. Membership of the committee includes:

- Policy & Environmental Assessment Officer (Chair)
- Manager Works (or delegate)
- Manager Finance (or delegate)
- Manager Children's Services (or delegate)
- Pool Supervisor
- Parks Supervisor
- Building Engineer

The role of the Committee is to:

- Provide information on current practices
- Assist in the development of water saving opportunities
- Provide advice and feedback on appropriate initiatives and resource requirements
- Promote water savings within their work areas

## **3.0 Existing Water Management Initiatives**

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Holroyd City Council joined Sydney Water Corporation's (SWC) Every Drop Counts Business Program in December 2003. Sydney Water Corporation developed the program in a response to its operating licence requiring a reduction water demand by 35% by 2011. The program is structured into 5 steps that aim to identify projects that will reduce water consumption and save money. The 5 steps of the program are:

1. Joint commitment between SWC & Council;
2. Diagnostic assessment to identify critical actions;
3. Improvement Plan;
4. Implementation; and
5. Review Performance.

Council with the assistance of a consultant on behalf of SWC undertook the diagnostic assessment in February 2004. Results from the diagnostic assessment are designed to help Council:

- Measure and rate its water management performance;
- Reduce costs and improve environmental performance;
- Understand how water relates to critical business issues;
- Build effective water management systems;
- Use resources more effectively; and
- Promote good corporate citizenship.

The diagnostic assessment also enabled Council to rate its water management system, providing a benchmarking tool to gauge improvements in performance and comparison against other organisations. Five critical actions for implementation were provided from the diagnostic session. The table below outlines the critical actions for action and Council's response to date.

<b>Critical Action</b>	<b>Response to date</b>
<b>Understanding of performance and opportunities</b> <ul style="list-style-type: none"> <li>•Conduct a ‘water efficiency audit’</li> </ul>	Audits have been undertaken with Sydney Water representatives on Council’s key facilities. A list of tasks for implementing water savings is outlined in this Action Plan.
<b>Metering and monitoring</b> <ul style="list-style-type: none"> <li>•Monitor site water consumption regularly</li> </ul>	Baseline information exists – quarterly data is available from Sydney Water.
<b>Reporting, feedback and control systems</b> <ul style="list-style-type: none"> <li>•Record your overall monthly/quarterly water usage for your water intensive facilities</li> </ul>	Quarterly data is available from Sydney Water. It is proposed to record monthly data for the target facilities upon adoption of this action plan.
<b>Targets, performance indicators and motivation</b> <ul style="list-style-type: none"> <li>•Set overall cost (and/or volume) reduction targets that specifically incorporate water savings</li> </ul>	In July 2004, Council adopted a 10% reduction target by 2006/2007 based on the average of 2000/2001, 2001/2002 and 2002/2003 financial years.
<b>Water supply, quality and reliability</b> <ul style="list-style-type: none"> <li>•Assess the potential for water supply disruptions to cause business loss</li> </ul>	No action to date.

*Table 1: Critical actions identified from the Every Drop Counts Diagnostic Assessment and Council’s Response to date.*

Council will continue to undertake measures to improve its rating from the current 1 star out of potential 5 stars. A 1 star rating acknowledges an understanding of water and wastewater regulatory requirements. Implementation of the actions outlined in this strategy will assist Council in improving its current rating. A second diagnostic session will be undertaken within 12 months of the adoption of this Water Savings Action Plan.

## **4.0 Baseline Water Use**

### **4.1 Overall Water Consumption**

An assessment of Council’s water consumption over the past ten years, shows that there was a steady rise in water consumption in the five years leading up to 2000/2001. Over the past five years, Council’s water consumption has gradually decreased, with consumption in 2004/2005 being below that of 1996/1997. The reason for the gradual decrease in water consumption in the past five years can be attributed to complying with water restrictions, the retrofitting of water efficient devices and the installation of rainwater tanks on new buildings.

**Water Consumption Over the Last 10 Years**

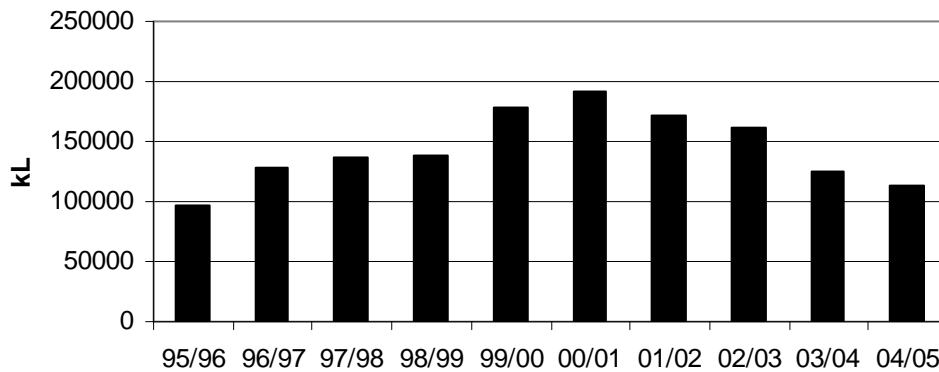


Figure 1: Holroyd City Council Consumption for 10 years ending 30 June 2005

When voluntary water restrictions were introduced in 2002, Council assessed its operations that involved water use and changed some water consuming practices, such as reducing the amount of watering of open spaces and gardens and hardstand areas.

With the introduction of mandatory water restrictions on 1 October 2003, Council again assessed operations to identify actions that have been or will be required to be taken to ensure compliance with the mandatory water restrictions.

Complying with the mandatory water restrictions has impacted on the quality of playing fields and open space areas. A reduction of the quality of playing fields and open space areas also impacts on members of the community that use these facilities. It is anticipated that significant costs will be required to bring these areas back to standard should the water restrictions be lifted in the future.

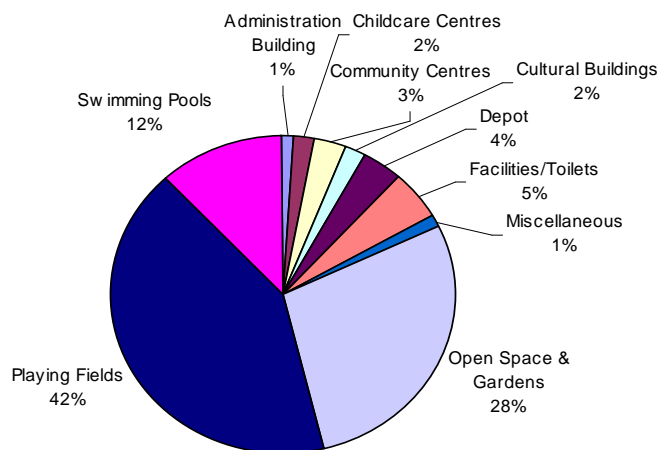


Figure 2 (left) shows a breakdown of average water consumption by premises/facilities type. A significant portion of water consumption is in irrigating playing fields and open space areas. It should be noted that whilst there is a separate category for Facilities/Toilets, many playing fields and open space areas have amenities buildings as well.

Figure 2: Average water consumption by premises type

#### **4.2 Baseline Water Use for Target Facilities**

Using consumption data for the past three financial years, Council's top ten water intensive facilities were identified. These facilities in addition to Council's Administration Building (which includes Merrylands Library), the Depot and Guildford West Children's Centre will be targeted in this plan. These target facilities account for approximately 40% of Council's overall water consumption.

A complete list of Holroyd City Council's Sydney Water Accounts is available in Appendix 1.

#### **Site 1: Central Gardens - Merrylands West**

##### **Business Unit: Central Gardens**

Sydney Water Account Number	4542355
Baseline Start Date	Baseline End Date
01 Jul 2002	30 Jun 2003
Reason for pre-2004 baseline and/or baseline less than 12 months: Water consumption based on normal use prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	24,576 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	24,576 kL
Business Activity Indicators	m2
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	114,000
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.22 kL/m2

**Site 2: Wentworthville Pool - Wentworthville**

**Business Unit: Wentworthville Pool**

Sydney Water Account Number	4529207
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operations prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	9,782 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	9,782 kL
Business Activity Indicators	No of patrons
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	52,279
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.19 kL/No of patrons

**Site 3: Merrylands Pool - Merrylands**

**Business Unit: Merrylands Pool**

Sydney Water Account Number	4539015
Baseline Start Date	Baseline End Date
01 Jul 2002	30 Jun 2003
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operations prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	6,628 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	6,628 kL
Business Activity Indicators	No of patrons
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	71,373
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.09 kL/No of patrons

**Site 4: Guildford Pool - Guildford**  
**Business Unit: Guildford Pool**

Sydney Water Account Number	4546353
Baseline Start Date	Baseline End Date
01 Jul 2002	30 Jun 2003
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operations prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	5,551 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	5,551 kL
Business Activity Indicators	No of patrons
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	103,328
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.05 kL/No of patrons

**Site 5: Ringrose/Monty Bennett Oval - Wentworthville**  
**Business Unit: Ringrose/Monty Bennett Oval**

Sydney Water Account Number	4548842
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operations prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	8,648 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	8,648 kL
Business Activity Indicators	m2
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	43,000
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.20 kL/No of patrons

**Site 6: Darling Street Park - Greystanes**

**Business Unit: Darling Street Park**

Sydney Water Account Number	4528377
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operations prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	3,909 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	3,909 kL
Business Activity Indicators	m2
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	76,640
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.05 kL/No of patrons

**Site 7: Merrylands Park - Merrylands**

**Business Unit: Merrylands Park**

Sydney Water Account Number	4539013
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operations prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	3,357 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	3,357 kL
Business Activity Indicators	m2
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	114,000
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.03 kL/No of patrons

**Site 8: Bathurst Street Park - Greystanes**

**Business Unit: Bathurst Street Park**

Sydney Water Account Number	4522352
Baseline Start Date	Baseline End Date
01 Jul 2002	30 Jun 2003
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operations prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	3,580 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	3,580 kL
Business Activity Indicators	m2
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	57,383
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.06 kL/No of patrons

**Site 9: McCredie Park - Guildford**

**Business Unit: McCredie Park**

Sydney Water Account Number	4546351
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operation prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	3,493 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	3,493 kL
Business Activity Indicators	m2
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	82,000
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.04 kL/m2

**Site 10: Gipps Road Park - Greystanes**

**Business Unit: Gipps Road Park**

Sydney Water Account Number	4837160
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operation prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	11,033 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	11,033 kL
Business Activity Indicators	m2
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	63,000
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.18 kL/m2

**Site 11: Administration Building - Merrylands**

**Business Unit: Administration Building**

Sydney Water Account Number	4538874
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operation prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	2,044 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	2,044 kL
Business Activity Indicators	No of staff
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	20,800
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.10 kL/No of staff

**Site 12: Depot - Guildford**

**Business Unit: Depot**

Sydney Water Account Number	4530050
Baseline Start Date	Baseline End Date
01 Jul 2001	30 Jun 2002
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operation prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	6,348 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	6,348 kL
Business Activity Indicators	No of staff
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	5,200
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	1.22 kL/No of staff

**Site 13: Guildford West Children's Centre - Guildford West**

**Business Unit: Guildford West Children's Centre**

Sydney Water Account Number	4751930
Baseline Start Date	Baseline End Date
01 Jul 2002	30 Jun 2003
Reason for pre-2004 baseline and/or baseline less than 12 months: Based on normal operation prior to water restrictions	
<b>A:</b> Baseline Water Use per annum	984 kL
Is baseline representative of normal Water use	<b>Yes</b>
<b>C:</b> Impact of Variation on Water use (kL per annum)	
<b>D:</b> =(A-C) Baseline Water use corrected for variations	984 kL
Business Activity Indicators	No of children
<b>B:</b> Quantity of Site Business Activity Indicator per annum (Corrected for variations)	5,616
<b>E:</b> =(D / B) Baseline Water Use key performance indicator (KPI)	.18 kL/No of children

## 5.0 Water Management Review

The Senior Management Team and other relevant staff members undertook an assessment of the systems Council currently has in place for managing water. The purpose of the assessment was to acknowledge processes and procedures in place to manage water and to identify improvements for Council's water management. The results of the assessment are shown in Table 2 below.

AREA	REVIEW AREA	RATING				
		Low	Moderate	Minimum Sustainable	Industry Leader	Best Practice
A	Senior Management commitment to, and involvement in water management					
B	Understanding of water savings potential at operations and maintenance levels, and within new capital works					
C	Management of water targets and key performance indicators					
D	Water metering and monitoring					
E	Water management reporting					
F	Water supply management and alternative water supply options such as recycling					
G	Incorporation of water management into operating and maintenance procedures					
H	Accountabilities for water management					
I	Training and awareness procedures					
J	Compliance with legal and/or regulatory requirements					

Table 2: Holroyd City Council Water Management Review (November 2005)

## Water Management Actions

Water Management Action	Mgt Review Area	Responsibility	Start Date	Completion
<b>Identify commitment to water consumption management in Council's Operational Plan</b>	Senior Management Commitment	Director Corporate & Financial Services	01 Jul 06	30 Jun 07
<b>Conduct a water efficiency audit to identify opportunities for improvement</b>	Understanding of water savings potential	Building Maintenance Engineer & PEO	01 Jan 06	31 Mar 06
<i>Steps to delivering action</i>				
- Conduct audit of facilities identified for Water Savings Action Plan				
- Identify and cost opportunities to reduce water consumption				
<b>Identify cost and/or volume targets for water savings/consumption</b>	Water targets and key performance indicators	Senior Management	01 Jul 06	30 Jun 07
<i>Steps to delivering action</i>				
- Identify targets in Council's Operational Plan			01 Jul 06	30 Jun 07
- Review industry benchmarks and review historical water consumption data			01 Jul 06	30 Jun 07
<b>Monitor site water consumption monthly for facilities identified in Water Savings Action Plan</b>	Water metering and monitoring	PEAO	01 Jul 06	30 Jun 07
<i>Steps to delivering action</i>				
- Create spreadsheet to monitor monthly usage of facilities identified in Water Savings Action Plan			01 Jul 06	30 Jun 07

<b>Water Management Action</b>	<b>Mgt Review Area</b>	<b>Responsibility</b>	<b>Start Date</b>	<b>Completion</b>
<b>Monitor site water consumption regularly of II Council sites</b>	Water metering and monitoring	Director Corporate & Financial Services & PEO	01 Jul 06	30 Jun 07
<i>Steps to delivering action</i>				
- Investigate unusual consumption values			01 Jul 06	Ongoing
- Create spreadsheet or identify alternate method to record quarterly usage			01 Jul 06	30 Jun 06
<b>Record overall monthly/quarterly water usage for facilities identified in Water Savings Action Plan</b>	Water management reporting	PEAO	01 Jul 06	30 Jun 07
<b>Investigate opportunity to reuse backwash water from the swim centres</b>	Water supply management	Manager Works & PEO	01 Jul 06	30 Jun 08
<i>Steps to delivering action</i>				
- Conduct feasibility study			01 Jul 06	30 Jun 08
<b>Develop maintenance procedures to regularly inspect Council facilities</b>	Operating and maintenance procedures	Building Maintenance Engineer & PEO	01 Jul 06	30 Jun 08
<i>Steps to delivering action</i>				
- Install signage at Council facilities identifying who to report leaks/damage			01 Jul 06	30 Jun 08
- Develop procedures to identify and repair leaks/damage			01 Jul 06	30 Jun 08
<b>Identify Water Management accountabilities in Council's Operational Plan</b>	Accountabilities for water management	Senior Management	01 Jul 06	30 Jun 07

<b>Water Management Action</b>	<b>Mgt Review Area</b>	<b>Responsibility</b>	<b>Start Date</b>	<b>Completion</b>
<b>Educate staff/community to raise awareness of water efficiency/management</b>	Training and awareness procedures	PEAO	01 Jul 06	30 Jun 08
<i>Steps to delivering action</i>				
- Develop an education strategy to raise awareness of water management for users of Council's facilities			01 Jul 06	30 Jun 08
- Develop an education strategy to raise awareness of water management issues for Council staff			01 Jul 06	30 Jun 08
- Implement and monitor education strategies			01 Jul 07	30 Jun 08
<b>Continue to monitor Council's compliance trade waste agreements</b>	Compliance with legal and/or regulatory requirements	Manager Works	01 Jul 06	30 Jun 10

## 6.0 Technical Reviews

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In accordance with DEUS's Guidelines for Water Savings Action Plans, Council has conducted walk through technical audits of the target facilities due to all facilities using less than 100kL/day and the availability of water efficiency benchmarks through Sydney Water's Every Drop Counts Program.

A copy of the walk through technical audits for each facility is attached in Appendix 2.

### Site 1: Central Gardens - Merrylands West

□ *Name of assessor & other personnel*

- Bernadette Mackinnon (Policy & Environmental Assessment Officer)
- Luke Harvey (Parks Supervisor)
- Bob Poulter (Building Maintenance Engineer)
- Fernando Ortega (Sydney Water)

□ *Brief description of site and review undertaken*

Covering an area of approximately 11.4ha, Central Gardens is located on the corner of Merrylands Road and the Cumberland Highway in Merrylands West. Central Gardens is regionally important as the size of the park and facilities available attract patrons from a wide area, well beyond the boundaries of Holroyd City Council area.

Central Gardens is also regionally important in terms of the environment as the park contains remnants of Cumberland Plain Woodland association. One of these remnants has been fenced off and is being carefully managed by Council. There is a kiosk; public amenities; wildlife park; a Council sub-depot & nursery/greenhouse; caretaker's cottage; tennis courts; and associated facilities located within Central Gardens.

A walk through technical review was carried out on this site with this assistance of Fernando Ortega from Sydney Water. The review involved the collection of data on all water using fixtures at Central Gardens including the flow rate of taps and the capacity of toilets and urinals, and the frequency of irrigation practices.

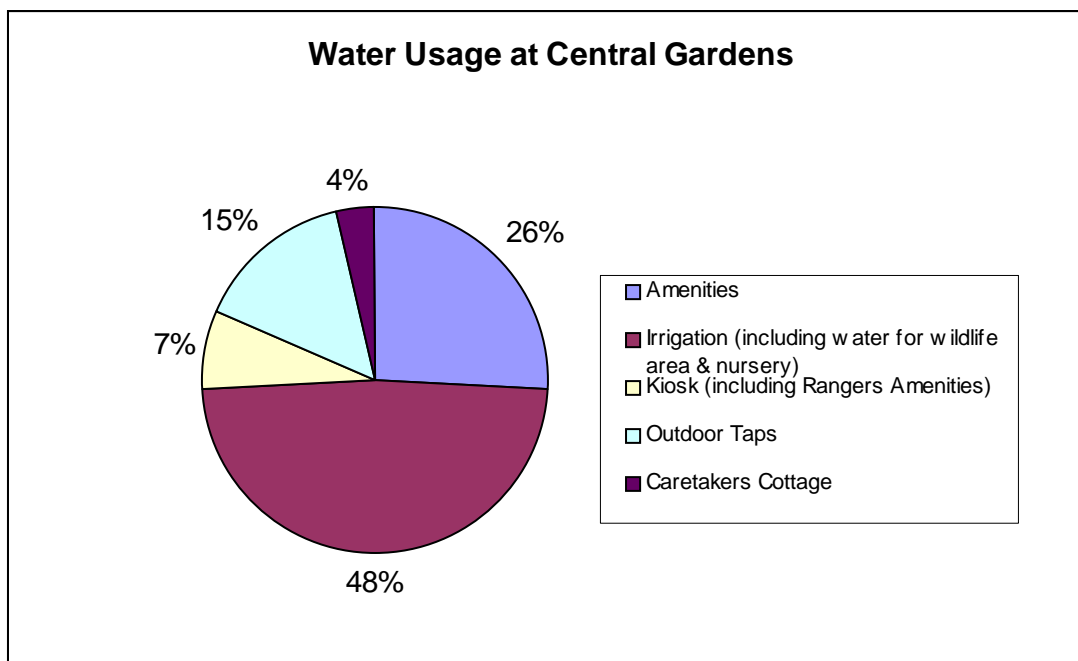
□ *Historical Water Use*

The table below shows the water usage of Central Gardens for the past 8 financial years. In 2003-2004 & 2004-2005 financial years, there was a dramatic decrease in water usage due to the nursery/greenhouse not in operation for these years.

Meter No.	kL							
	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06
EDKB0010	12089	1985	897	2026	2115	1622	1092	1683
EDMF0038	1695	4640	11510	9858	6539	3704	3682	5680
EDGL0046	6299	12750	13949	12652	13317	3736	7364	11359
BDME4865	1798	1707	1609	1871	2605	2639	1499	2314
<b>TOTAL</b>	<b>21881</b>	<b>21082</b>	<b>27965</b>	<b>26407</b>	<b>24576</b>	<b>11701</b>	<b>13637</b>	<b>21036</b>

□ *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Central Gardens. It can be seen that the largest area of water usage at the site is irrigation, which includes the provision of water for animals in the wildlife park and the cleaning of the wildlife park area.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No											
	EDKB0010			EDMF0038			EDGL0046			BDME4865		
	Reading	kL cons	kL/d	Reading	kL cons	kL/d	Reading	kL cons	kL/d	Reading	kL cons	kL/d
26/10/05	730178	-	-	99	-	-	265	-	-	86218921	-	-
2/11/05	733274	310	44	111	12	2	285	20	3	86221736	28	4
11/11/05	735193	192	21	119	8	1	293	8	1	86227462	57	6
23/11/05	736224	103	10	128	9	1	314	21	2	86230064	26	2
30/11/05	737619	139	19	156	28	4	341	27	4	86238737	87	12
7/12/05	740763	315	45	192	36	5	386	45	6	86239917	12	<2

□ *Comparison of Key Performance Indicator (KPI) with industry benchmarks*

The KPI used for Central Gardens is kL/sqm/annum. Central Garden's baseline water consumption is 0.22kL/sqm/annum, which is almost half the industry benchmark of 0.4kL/sqm/annum for Reserves and Parks (Reference: Sydney Water).

## Water Savings Measures

### Site 1: Central Gardens - Merrylands West

Baseline Information		
Total Usage in kL	Quantity of BAI	KPI
24,576	114,000	0.22 kL/m <sup>2</sup>

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Previous Action Over Last Five Years</b>									
Anti-vandal head tap fittings (x7)		1,260							
Retro-fit push taps (basins) (x16)		2,880	143		172				
Retro-fit external taps (x8)		1,440	64		77				
Retro-fit water saving showerheads (x2)	Not applicable		64		77				
<b>Total Previous Action Over Last Five Years</b>		<b>5,580</b>	<b>271</b>		<b>326</b>				
<b>Cost-Effective Opportunities</b>									
Replace single flush cisterns with dual flush cisterns (x12)	Building Maintenance Engineer	2,800	307		368		7.6	01 Jul 07	30 Jun 08
Replace Urinal cisterns with sensor controlled cisterns (x4)	Building Maintenance Engineer	1,600	130		156		10	01 Jul 07	30 Jun 08

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR (%)	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Total Cost-Effective Opportunities</b>		<b>4,400</b>	<b>437</b>		<b>524</b>				
<b>% change resulting from all measures</b>			<b>1.8%</b>						
<b>Summary of Business Unit: Central Gardens</b>									
<b>Total Water Savings</b>		<b>9,980</b>	<b>437</b>		<b>850</b>				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Central Gardens - Merrylands West</b>									
<b>Total Water Savings</b>		<b>9,980</b>	<b>437</b>		<b>850</b>				<i>Does not include Savings achieved from previous actions</i>

## Site 2: Wentworthville Pool - Wentworthville

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Tony Micallef (Pools Supervisor)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

Wentworthville Pool is located on Dunmore Street in Wentworthville. The centre comprises of an outdoor heated 50-metre pool, a wading pool and a junior splash pool in addition to a kiosk and amenities. The centre is open seven days a week September – May and five days a week the remainder of the year, except for July, when the pool is closed for maintenance.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at Wentworthville Pool including the flow rate of taps and shower heads and the capacity of toilets and urinals, and the frequency of backwashing and irrigation practices.

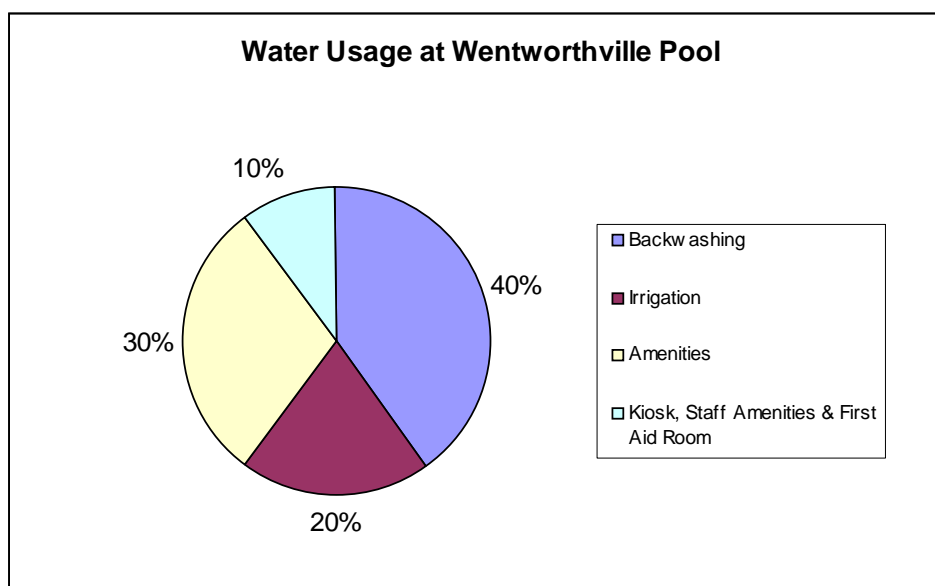
- *Historical Water Use*

The table below shows the water usage of Wentworthville Pool for the past 7 financial years. In 2002-2003, the increase in water usage was due to the pool being emptied for maintenance.

	kL						
Meter No	98/99	99/00	00/01	01/02	02/03	03/04	04/05
HDPD0019	4013	9046	6429	9782	13643	9809	9037

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Wentworthville Pool. It can be seen that the largest area of water usage at the site is backwashing, which is estimated to consume over 4 million litres of water per year, followed by the amenities.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No		
	HDPD0019		
	Reading	kL cons	kL/d
26/10/05	626523	-	-
2/11/05	629457	293	42
11/11/05	630154	70	8
23/11/05	631283	113	10
30/11/05	639697	841	120
7/12/05	642033	233	33

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Wentworthville Pool is kL/No of patrons/annum. Wentworthville Pool's baseline water consumption is 0.19kL/No of patrons/annum, which is higher than the industry benchmark of 0.06kL/No of patrons/annum for Swimming Pools and Leisure Centres (Reference: Sydney Water).

## Water Savings Measures

### Site 2: Wentworthville Pool - Wentworthville

Baseline Information		
Total Usage in kL	Quantity of BAI	KPI
9,782	52,279	0.19 kL/No of patrons

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Previous Action Over Last Five Years</b>									
Anti-vandal head tap fittings		360							
Retro-fit push taps (basins) (x12)		2,160	137		164				
Retro-fit water saving showerheads (x10)		1,300	578		694				
<b>Total Previous Action Over Last Five Years</b>		<b>3,820</b>	<b>715</b>		<b>858</b>				
<b>Cost-Effective Opportunities</b>									
Replace single flush cisterns with dual flush cisterns (x15)	Building Maintenance Engineer	3,450	471		565		6.1	01 Jul 06	30 Jun 07
Replace Urinal cisterns with sensor controlled cisterns (x8)	Building Maintenance Engineer	3,200	153		184		17.4	01 Jul 08	30 Jun 09
<b>Total Cost-Effective Opportunities</b>		<b>6,650</b>	<b>624</b>		<b>749</b>				
<b>% change resulting from all measures</b>			<b>6.4%</b>						

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Potential Cost-Effective Opportunities</b>									
Investigate the reuse of backwash water	Manager Works								
Install inground rainwater tank (10,000L) to Men's Facilities	Building Maintenance Engineer	36,000	98		118				
Install inground rainwater tank (10,000L) to Women's Facilities (incl disabled toilets)	Building Maintenance Engineer	38,000	98		118				
<b>Total Potential Cost-Effective Opportunities</b>		<b>74,000</b>	<b>196</b>		<b>236</b>				
<b>Summary of Business Unit: Wentworthville Pool</b>									
<b>Total Water Savings</b>		<b>84,470</b>	<b>820</b>		<b>1,843</b>				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Wentworthville Pool - Wentworthville</b>									
<b>Total Water Savings</b>		<b>84,470</b>	<b>820</b>		<b>1,843</b>				<i>Does not include Savings achieved from previous actions</i>

### Site 3: Merrylands Pool - Merrylands

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Tony Micallef (Pools Supervisor)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

Merrylands Pool is located on Burnett Street in Merrylands. The centre comprises of an outdoor heated 50-metre pool, a wading pool and a junior splash pool in addition to a kiosk and amenities. The centre is open seven days a week September – May.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at Merrylands Pool including the flow rate of taps and shower heads and the capacity of toilets and urinals, and the frequency of backwashing and irrigation practices.

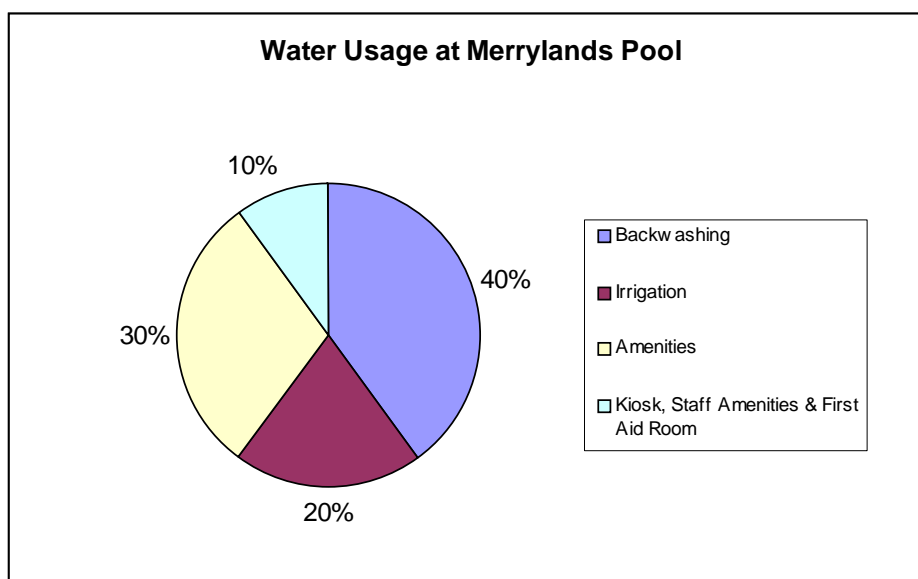
- *Historical Water Use*

The table below shows the water usage of Merrylands Pool for the past 7 financial years. In 2003-2004, the increase in water usage was due to the pool being emptied for maintenance.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
HDQC0010	9119	7812	7703	9139	6628	12516	4956

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Merrylands Pool. It can be seen that the largest area of water usage at the site is backwashing, which is estimated to consume over 3 million litres of water per year, followed by the amenities.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No		
	HDQC0010		
	Reading	kL cons	kL/d
26/10/05	604798	-	-
2/11/05	607861	306	44
11/11/05	608837	98	11
23/11/05	609528	69	6
30/11/05	611309	178	25
7/12/05	613551	224	32

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Merrylands Pool is kL/No of patrons/annum. Merrylands Pool's baseline water consumption is 0.09kL/No of patrons/annum, which is slightly higher than the industry benchmark of 0.06kL/No of patrons/annum for Swimming Pools and Leisure Centres (Reference: Sydney Water).

## Water Savings Measures

### Site 3: Merrylands Pool - Merrylands Pool

Baseline Information		
Total Usage in kL	Quantity of BAI	KPI
6,628	71,373	0.09 kL/No of patrons

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Previous Action Over Last Five Years</b>									
Retro-fit push taps (basins) (x13)		2,340	188		225				
Retro-fit water saving showerheads (x10)		1,300	787		944				
<b>Total Previous Action Over Last Five Years</b>		<b>3,640</b>	<b>975</b>		<b>1,169</b>				
<b>Cost-Effective Opportunities</b>									
Replace single flush cisterns with dual flush cisterns (x14)	Building Maintenance Engineer	3,250	644		773		4.2	01 Jul 06	30 Jun 07
Replace Urinal cisterns with sensor controlled cisterns (x7)	Building Maintenance Engineer	2,800	307		368		7.6	01 Jul 07	30 Jun 08
<b>Total Cost-Effective Opportunities</b>		<b>6,050</b>	<b>951</b>		<b>1,141</b>				
<b>% change resulting from all measures</b>			<b>14.3%</b>						

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR (%)	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Potential Cost-Effective Opportunities</b>									
Investigate reuse of backwash water	Manager Works								
Install inground rainwater tank (10,000L) to Women's Facilities (incl disabled toilets)	Building Maintenance Engineer	38,000	236		283				
Install inground rainwater tank (10,000L) to Men's Facilities	Building Maintenance Engineer	36,000	102		122				
<b>Total Potential Cost-Effective Opportunities</b>		<b>74,000</b>	<b>338</b>		<b>405</b>				
<b>Summary of Business Unit: Merrylands Pool</b>									
<b>Total Water Savings</b>		<b>83,690</b>	<b>1,289</b>		<b>2,715</b>			<i>Does not include Savings achieved from previous actions</i>	
<b>Summary of Site: Merrylands Pool - Merrylands Pool</b>									
<b>Total Water Savings</b>		<b>83,690</b>	<b>1,289</b>		<b>2,715</b>			<i>Does not include Savings achieved from previous actions</i>	

#### Site 4: Guildford Pool - Guildford

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Tony Micallef (Pools Supervisor)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

Guildford Pool is located on the corner of Guildford Road and Tamplin Street in Guildford. The centre comprises of an outdoor heated 25-metre lap pool, an indoor heater 25-metres pool and a junior splash pool in addition to a kiosk and amenities. The centre is open seven days a week all year round, except for a 2-week period in July, when the pool is closed for maintenance.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at Guildford Pool including the flow rate of taps and shower heads and the capacity of toilets and urinals, and the frequency of backwashing and irrigation practices.

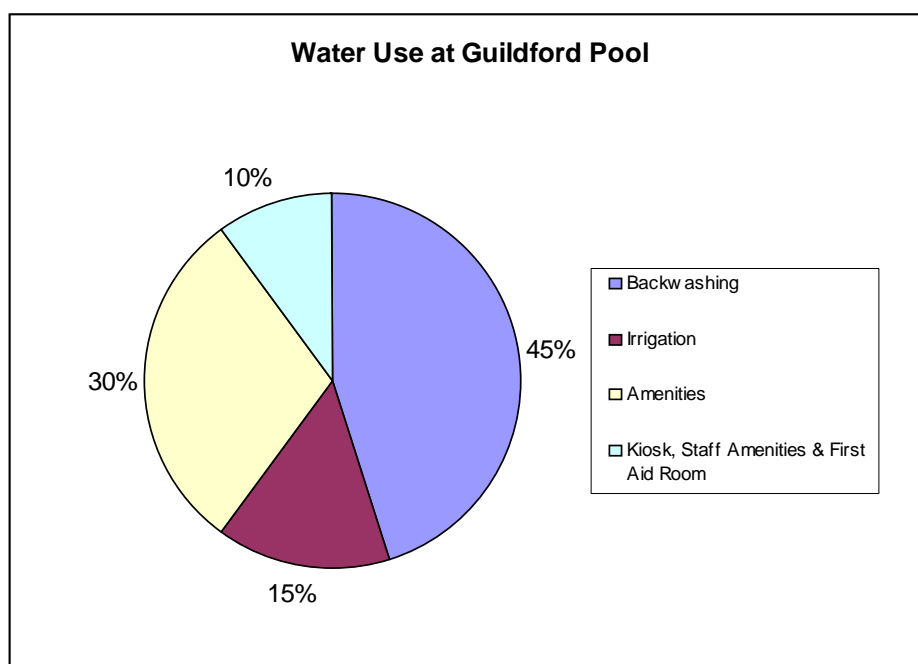
- *Historical Water Use*

The table below shows the water usage of Guildford Pool for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
GDQD0008	4639	4510	3447	6156	5551	3184	4000

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Guildford Pool. It can be seen that the largest area of water usage at the site is backwashing, which is estimated to consume over 3 million litres of water per year.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No		
	GDQD0008		
	Reading	kL cons	kL/d
26/10/05	198125	-	-
2/11/05	200162	104	15
11/11/05	201029	87	10
23/11/05	202510	148	13
30/11/05	203603	109	16
7/12/05	204428	82	12

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Guildford Pool is kL/No of patrons/annum. Guildford Pool's baseline water consumption is 0.05kL/No of patrons/annum, which is below the industry benchmark of 0.06kL/No of patrons/annum for Swimming Pools and Leisure Centres (Reference: Sydney Water).

## Water Savings Measures

### Site 4 : Guildford Pool - Guildford

Baseline Information		
Total Usage in kL	Quantity of BAI	KPI
5,551	103,328	0.05 kL/No of patrons

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Previous Action Over Last Five Years</b>									
Retro-fit push taps (basins) (x2 hot water)		360	45		54				
Retro-fit push taps (basins) (x9)		1,620	271		324				
Retro-fit water saving showerheads (x10)		1,300	1,124		1,349				
<b>Total Previous Action Over Last Five Years</b>		<b>3,280</b>	<b>1,440</b>		<b>1,727</b>				
<b>Cost-Effective Opportunities</b>									
Replace urinal cisterns with sensor controlled cisterns (x2)	Building Maintenance Engineer	800	438		526		1.5	01 Jul 06	30 Jun 07
Replace single flush cisterns with dual flush cisterns	Building Maintenance Engineer	2,100	929		1,115		1.9	01 Jul 06	30 Jun 07
<b>Total Cost-Effective Opportunities</b>		<b>2,900</b>	<b>1,367</b>		<b>1,641</b>				
<b>% change resulting from all measures</b>			<b>24.6%</b>						

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Potential Cost-Effective Opportunities</b>									
Investigate reuse of backwash water	Manager Works								
Install inground rainwater tank (10,000L) to Women's Facilities	Building Maintenance Engineer	36,000	252		302				
Install inground rainwater tank (10,000L) to Men's Facilities	Building Maintenance Engineer	36,000	175		210				
<b>Total Potential Cost-Effective Opportunities</b>		<b>72,000</b>	<b>427</b>		<b>512</b>				
<b>Summary of Business Unit: Guildford Pool</b>									
<b>Total Water Savings</b>		<b>78,180</b>	<b>1,794</b>		<b>3,880</b>			<i>Does not include Savings achieved from previous actions</i>	
<b>Summary of Site: Guildford Pool - Guildford</b>									
<b>Total Water Savings</b>		<b>78,180</b>	<b>1,794</b>		<b>3,880</b>			<i>Does not include Savings achieved from previous actions</i>	

### Site 5: Ringrose/Monty Bennett Oval - Wentworthville

□ *Name of assessor & other personnel*

- Bernadette Mackinnon (Policy & Environmental Assessment Officer)
- Luke Harvey (Parks Supervisor)
- Bob Poulter (Building Maintenance Engineer)
- Fernando Ortega (Sydney Water)

□ *Brief description of site and review undertaken*

Ringrose Park is located on the corner of the Cumberland Highway and the Great Western Highway at Wentworthville. The Park contains two ovals. The main and largest oval is known as Ringrose Oval. The other is Monty Bennett Oval. Although the Park is Council owned land a large portion is leased to the Wentworthville Leagues Club. The Club uses Ringrose Oval for both competitive games and training. The Park also contains cricket nets and several netball courts and amenities buildings and a greenkeeper's shed.

A walk through technical audit of the site was undertaken with the assistance of Fernando Ortega from Sydney Water. The review involved the collection of data on all water using fixtures at Ringrose/Monty Bennett Oval including the flow rate of taps and showerheads and the capacity of toilets and urinals, and irrigation practices.

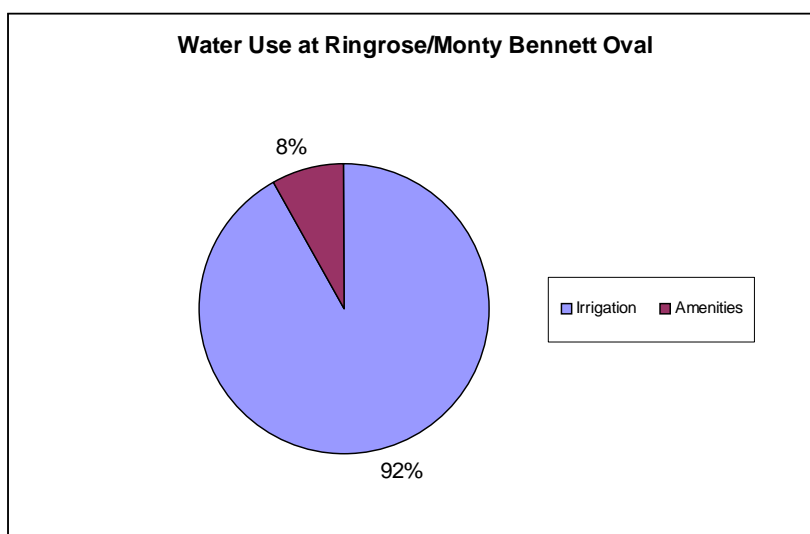
□ *Historical Water Use*

The table below shows the water usage for Ringrose/Monty Bennett for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
DDQD0308	7737	6932	6976	6344	1971	5248	2690
ERVB0087	2292	1958	1635	1598	0	0	2038
65146	0	0	0	0	0	0	0
CDTB0235	178	457	74	160	142	79	110
<b>TOTAL</b>	10207	9347	8685	8102	2113	5327	4838

□ *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Ringrose/Monty Bennett Oval. It can be seen that the largest area of water usage at the site is irrigation.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No								
	ERVB0087			DDQL0038			CDTB0235		
	Reading	kL cons	kL/d	Reading	kL cons	kL/d	Reading	kL cons	kL/d
26/10/05	1173	-	-	4232675	-	-	224206	-	-
2/11/05	1210	37	5	4495773	263	36	225375	9	1
11/11/05	1259	49	5	4582125	86	10	225401	6	<1
23/11/05	1287	28	3	4596443	14	<2	226729	8	<1
30/11/05	1313	26	4	4675902	79	11	229463	4	<1
7/12/05	1332	19	3	4675902	-	-	229553	7	1

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Ringrose/Monty Bennett Oval is kL/sqm/annum. Ringrose/Monty Bennett Oval's baseline water consumption is 0.2kL/sqm/annum, which is a third of the industry benchmark of 0.6kL/sqm/annum for Reserves and Parks (Reference: Sydney Water).

## Water Savings Measures

### Site 5: Ringrose/Monty Bennett Oval - Wentworthville

Total Usage in kL	Baseline Information	
8,648	Quantity of BAI	KPI
	43,000	0.20 kL/m <sup>2</sup>

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Previous Action Over Last Five Years</b>									
Disconnect redundant & leaking water service		400							
Anti vandal head tap fittings (x2)		360							
Retro-fit push taps (basins) (x4)		720	26		31				
Centralised Irrigation System		15,500	1,215		1,458				
Retro-fit water saving showerheads (x4)		520	64		77				
<b>Total Previous Action Over Last Five Years</b>		<b>17,500</b>	<b>1,305</b>		<b>1,566</b>				
<b>Cost-Effective Opportunities</b>									
Retro-fit water saving showerheads (x4)	Building Maintenance Engineer	520	64		77		6.8	01 Jul 06	30 Jun 07
Replace single flush cisterns with dual flush cisterns	Building Maintenance Engineer	1,150	88		106		10.8	01 Jul 07	30 Jun 08
Replace urinal cisterns with sensor controlled cisterns (x2)	Building Maintenance Engineer	800	42		50		16	01 Jul 08	30 Jun 09

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Total Cost-Effective Opportunities</b>		<b>2,470</b>	<b>194</b>		<b>233</b>				
<b>% change resulting from all measures</b>			<b>2.2%</b>						
<b>Potential Cost-Effective Opportunities</b>									
Retro-fit push taps (basins) (x4)	Building Maintenance Engineer	720	26		31				
Install in-ground rainwater tank (10,000L) to Amenities Building	Building Maintenance Engineer	36,000	98		118				
<b>Total Potential Cost-Effective Opportunities</b>		<b>36,720</b>	<b>124</b>		<b>149</b>				
<b>Summary of Business Unit: Ringrose/Monty Bennett Oval</b>									
<b>Total Water Savings</b>		<b>56,690</b>	<b>318</b>		<b>1,948</b>				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Ringrose/Monty Bennett Oval - Wentworthville</b>									
<b>Total Water Savings</b>		<b>56,690</b>	<b>318</b>		<b>1,948</b>				<i>Does not include Savings achieved from previous actions</i>

## Site 6: Darling Street Park - Greystanes

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Luke Harvey (Parks Supervisor)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

Darling Street Park, located on Darling Street Greystanes, consists of 2 playing fields and associated amenities.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at Ringrose/Monty Bennett Oval including the flow rate of taps and the capacity of toilets and urinals, and irrigation practices.

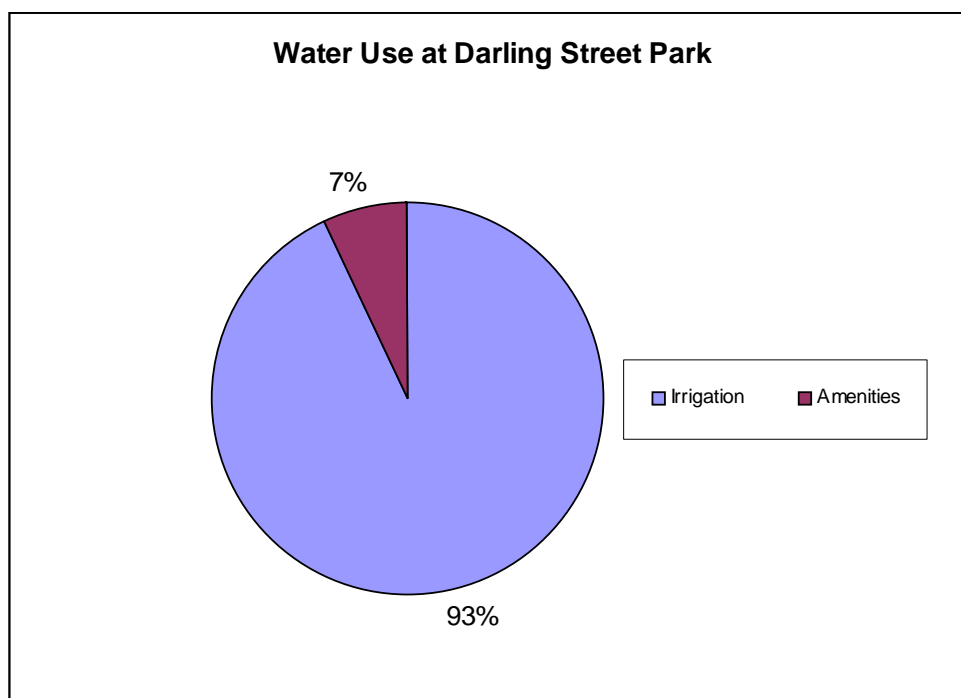
- *Historical Water Use*

The table below shows the water usage for Darling Street Park for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
EDOJ1292	3284	4571	6238	2722	1873	680	3735
EDMH0033	258	496	2746	1182	1567	1	118
CDQB0711	34	19	101	5	1	1992	0
<b>TOTAL</b>	<b>3576</b>	<b>5086</b>	<b>9085</b>	<b>3909</b>	<b>3441</b>	<b>2673</b>	<b>3853</b>

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Darling Street Park. It can be seen that the largest area of water usage at the site is irrigation.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No								
	EDOJ1292			EDMH0033			CDQB0711		
	Reading	kL cons	kL/d	Reading	kL cons	kL/d	Reading	kL cons	kL/d
26/10/05	16570565	-	-	744575	-	-	108256	-	-
2/11/05	16636995	66	9	746314	2	<1	109393	11	<2
11/11/05	16642772	6	<1	748161	2	<1	109773	4	<1
23/11/05	16649334	7	<1	749661	1	<1	109987	2	<1
30/11/05	16687714	38	5	750244	1	<1	110347	4	<1
7/12/05	16743319	56	8	750759	-	-	111266	9	1

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Darling Street Park is kL/sqm/annum. Darling Street Park's baseline water consumption is 0.05kL/sqm/annum, which is significantly lower than the industry benchmark of 0.6kL/sqm/annum for Reserves and Parks (Reference: Sydney Water).

## Water Savings Measures

### Site 6: Darling Street Park - Greystanes

Measure Description	Responsibility	Baseline Information		Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
		Total Usage in kL 3,909	Quantity of BAI 76,640	Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Cost-Effective Opportunities</b>										
Retro-fit water saving showerheads (x4)	Building Maintenance Engineer		520	193		232		2.2	01 Jul 06	30 Jun 07
Replace single flush cisterns with dual flush cisterns	Building Maintenance Engineer		1,380	105		126		10.9	01 Jul 07	30 Jun 08
Retro-fit push taps (basins) (x4)	Building Maintenance Engineer		720	31		37		19.4	01 Jul 08	30 Jun 09
Replace urinal cisterns with sensor controlled cisterns (x1)	Building Maintenance Engineer		400	17		20		20	01 Jul 08	30 Jun 09
<b>Total Cost-Effective Opportunities</b>			<b>3,020</b>	<b>346</b>		<b>415</b>				
<b>% change resulting from all measures</b>				<b>8.9%</b>						
<b>Potential Cost-Effective Opportunities</b>										
Centralised irrigation system	Manager Works		15,500	568		703				
Install in-ground rainwater tank (10,000L) to Amenities Building	Building Maintenance Engineer		34,000	85		102				
<b>Total Potential Cost-Effective Opportunities</b>			<b>49,500</b>	<b>653</b>		<b>805</b>				

Measure Description	Responsibility	Cost to implement (\$)	Water in kL	Energy in GJ	Water (\$)	Other (\$)	IRR	Start Date	Completion Date
<b>Summary of Business Unit: Darling Street Park</b>									
<b>Total Water Savings</b>		<b>52,520</b>	<b>999</b>		<b>1,220</b>				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Darling Street Park - Greystanes</b>									
<b>Total Water Savings</b>		<b>52,520</b>	<b>999</b>		<b>1,220</b>				<i>Does not include Savings achieved from previous actions</i>

## Site 7: Merrylands Park - Merrylands

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Luke Harvey (Parks Supervisor)
  - Bob Poulter (Building Maintenance Engineer)
  - Fernando Ortega (Sydney Water)

- *Brief description of site and review undertaken*

Merrylands Park is located on the corner of Merrylands Road and Burnett Street in Merrylands. The park contains a range of facilities for both active and passive recreational activities, including ovals for rugby league, soccer and cricket, a cycling circuit, tennis courts, basketball courts and amenities blocks, change sheds, kiosks and playground equipment.

A walk through technical audit of the site was undertaken with the assistance of Fernando Ortega from Sydney Water. The review involved the collection of data on all water using fixtures at Merrylands including the flow rate of taps and showerheads and the capacity of toilets and urinals, and irrigation practices.

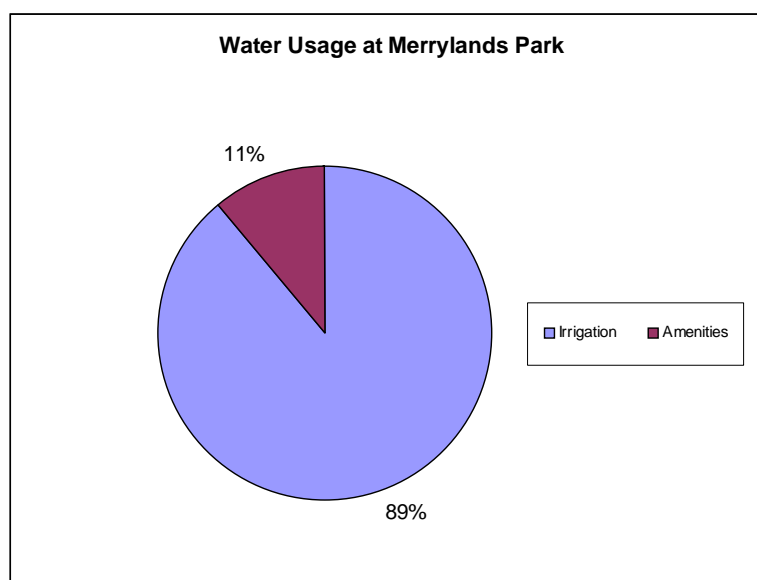
- *Historical Water Use*

The table below shows the water usage for Merrylands Park for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
EDSD0010	5868	6163	6317	2739	425	5340	2016
CDLE0028	19	10	13	83	321	13	18
CDLC0090	167	94	296	417	387	253	1195
DDQC1228	217	0	1	2	150	1	1
EDFG0081	555	187	283	116	256	13	0
<b>TOTAL</b>	6826	6454	6910	3357	1539	5620	3230

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Merrylands Park. It can be seen that the largest area of water usage at the site is irrigation.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No											
	EDSD0010			CDLE0028			CDLC0090			DDQC1228		
	Reading	kL cons	kL/d	Reading	kL cons	kL/d	Reading	kL cons	kL/d	Reading	kL cons	kL/d
26/10/05	8413303	-	-	68890751	-	-	3434419	-	-	154149	-	-
2/11/05	8500243	87	12	68939354	49	7	3450118	16	2	154149	-	-
11/11/05	8567317	67	7	68944931	6	<1	3457244	7	<1	154157	8	1
23/11/05	8570828	4	<1	68954221	9	<1	3463272	6	<1	154163	6	<1
30/11/05	8633994	63	9	69012635	54	8	3478911	16	2	154203	40	6
7/12/05	8638829	5	<1	69015968	3	<1	3483690	5	<1	154292	89	13

Note: There was no changes in the meter reading for meter number EDFG0081 during the monitoring period

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Merrylands Park is kL/sqm/annum. Merrylands Park's baseline water consumption is 0.03kL/sqm/annum, which is significantly lower than the industry benchmark of 0.6kL/sqm/annum for Reserves and Parks (Reference: Sydney Water).

## Water Savings Measures

### Site 7: Merrylands Park - Merrylands

**Baseline Information**

Total Usage in kL 3,357	Quantity of BAI 114,000	KPI 0.03 kL/m <sup>2</sup>
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Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Previous Action Over Last Five Years</b>									
Centralised irrigation system		15,500	504		605				
<b>Total Previous Action Over Last Five Years</b>		<b>15,500</b>	<b>504</b>		<b>605</b>				
<b>Cost-Effective Opportunities</b>									
Retro-fit water saving showerheads (x7)	Building Maintenance Engineer	910	449		539		1.7	01 Jul 06	30 Jun 07
Replace single flush cisterns with dual flush cisterns	Building Maintenance Engineer	3,220	245		294		10.9	01 Jul 07	30 Jun 08
Replace urinal cisterns with sensor controlled cisterns (x4)	Building Maintenance Engineer	1,600	70		84		19	01 Jul 08	30 Jun 09
<b>Total Cost-Effective Opportunities</b>		<b>5,730</b>	<b>764</b>		<b>917</b>				
<b>% change resulting from all measures</b>			<b>22.8%</b>						

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Potential Cost-Effective Opportunities</b>									
Install in-ground rainwater tank (10,000L) to Tennis Court Toilet Block	Building Maintenance Engineer	38,000	38		46				
Install in-ground rainwater tank (10,000L) to Oval Amenities Building	Building Maintenance Engineer	38,000	71		85				
Install in-ground rainwater tank (10,000L) to Toilet Block (Merrylands Road)	Building Maintenance Engineer	38,000	30		36				
Retrofit push taps (basins) (x13)	Building Maintenance Engineer	2,340	72		86				
Install in-ground rainwater tank (10,000L) to Amenities Building	Building Maintenance Engineer	38,000	130		156				
<b>Total Potential Cost-Effective Opportunities</b>		<b>154,340</b>	<b>341</b>		<b>409</b>				
<b>Summary of Business Unit: Merrylands Park</b>									
<b>Total Water Savings</b>		<b>175,570</b>	<b>1,105</b>		<b>1,931</b>				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Merrylands Park - Merrylands</b>									
<b>Total Water Savings</b>		<b>175,570</b>	<b>1,105</b>		<b>1,931</b>				<i>Does not include Savings achieved from previous actions</i>

### Site 8: Bathurst Street Park - Greystanes

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Luke Harvey (Parks Supervisor)
  - Bob Poulter (Building Maintenance Engineer)

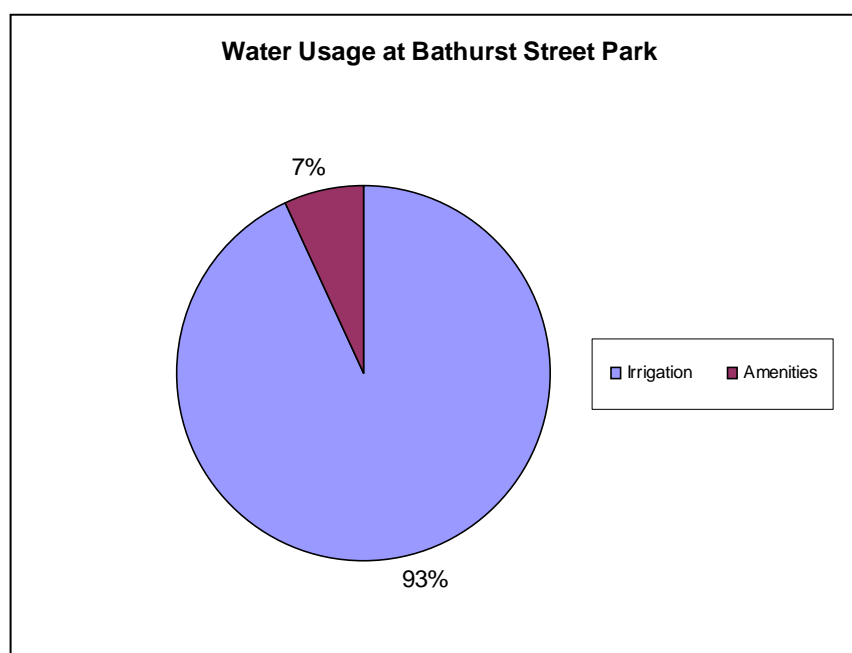
□ *Brief description of site and review undertaken*  
 Bathurst Street Park, located between Bathurst and Ballina Streets Greystanes, consists of 2 playing fields, netball courts, tennis courts and associated amenities.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at Bathurst Street Park including the flow rate of taps and the capacity of toilets and urinals, and irrigation practices.

- *Historical Water Use*  
 The table below shows the water usage for Bathurst Street Park for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
BDNJ3575	1106	696	1714	753	757	835	477
DDKC0045	1330	2684	3387	1617	2823	2086	2743
<b>TOTAL</b>	<b>2436</b>	<b>3380</b>	<b>5101</b>	<b>2370</b>	<b>3580</b>	<b>2921</b>	<b>3220</b>

- *Breakdown of water usage across the site*  
 The chart below shows a breakdown of the water usage at Merrylands Park. It can be seen that the largest area of water usage at the site is irrigation.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No					
	BDNJ3575			DDKC0045		
	Reading	kL cons	kL/d	Reading	kL cons	kL/d
26/10/05	74001533	-	-	170240	-	-
2/11/05	74338876	337	48	176005	58	8
11/11/05	74371922	33	4	181079	51	6
23/11/05	74384411	12	1	189633	86	8
30/11/05	74393476	9	1	192473	28	4
7/12/05	74465548	72	10	218264	258	37

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Bathurst Street Park is kL/sqm/annum. Bathurst Street Park's baseline water consumption is 0.06kL/sqm/annum, which is significantly lower than the industry benchmark of 0.6kL/sqm/annum for Reserves and Parks (Reference: Sydney Water).

## Water Savings Measures

### Site 8: Bathurst Street Park - Greystanes

Baseline Information		
Total Usage in kL	Quantity of BAI	KPI
3,580	57,383	0.06 kL/m <sup>2</sup>

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Cost-Effective Opportunities</b>									
Retro-fit water saving showerheads (x5)	Building Maintenance Engineer	650	385		462		1.4	01 Jul 06	30 Jun 07
Replace single flush cisterns with dual flush cisterns (x12)	Building Maintenance Engineer	2,760	210		252		10.9	01 Jul 07	30 Jun 08
Replace urinal cisterns with sensor controlled cisterns (x3)	Building Maintenance Engineer	1,200	53		64		18.75	01 Jul 08	30 Jun 09
<b>Total Cost-Effective Opportunities</b>		<b>4,610</b>	<b>648</b>		<b>778</b>				
<b>% change resulting from all measures</b>			<b>18.1%</b>						
<b>Potential Cost-Effective Opportunities</b>									
Install in-ground rainwater tank (10,000L) to Amenities @ rear of Hall	Building Maintenance Engineer	38,000	40		48				
Centralised irrigation system	Manager Works	15,500	537		644				
Retro-fit push taps (basins) (x15)	Building Maintenance Engineer	2,700	61		73				

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 Holroyd City Council  
 August 2006

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
Install in-ground rainwater tank (10,000L) to Soccer Amenities Building	Building Maintenance Engineer	38,000	264		317				
Install in-ground rainwater tank (10,000L) to Hall Amenities	Building Maintenance Engineer	38,000	180		216				
<b>Total Potential Cost-Effective Opportunities</b>		<b>132,200</b>	<b>1,082</b>		<b>1,298</b>				
<b>Summary of Business Unit: Bathurst Street Park</b>									
<b>Total Water Savings</b>		<b>136,810</b>	<b>1,730</b>		<b>2,076</b>			<i>Does not include Savings achieved from previous actions</i>	
<b>Summary of Site: Bathurst Street Park - Greystanes</b>									
<b>Total Water Savings</b>		<b>136,810</b>	<b>1,730</b>		<b>2,076</b>			<i>Does not include Savings achieved from previous actions</i>	

### Site 9: McCredie Park - Guildford

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Luke Harvey (Parks Supervisor)
  - Bob Poulter (Building Maintenance Engineer)

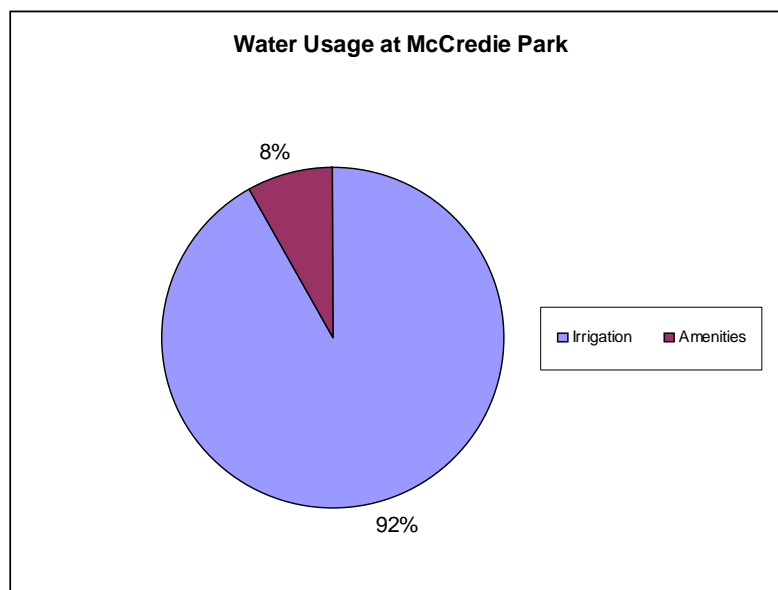
□ *Brief description of site and review undertaken*  
 McCredie Park is bounded by Fowler Road, Guildford Road, Tamplin Road and Dennistoun Avenue in Guildford. The park contains a number of ovals and associated amenities.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at McCredie Park including the flow rate of taps and showerheads and the capacity of toilets and urinals, and irrigation practices.

- *Historical Water Use*  
 The table below shows the water usage for McCredie Park for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
EEHJ0154	0	0	0	0	0	0	0
46117	0	0	0	0	0	0	0
CRUJ0174	850	0	81	2443	0	0	1846
BRQE0498	2061	2409	2517	1050	626	1078	1205
<b>TOTAL</b>	2911	2409	2598	3493	626	1078	3051

- *Breakdown of water usage across the site*  
 The chart below shows a breakdown of the water usage at McCredie Park. It can be seen that the largest area of water usage at the site is irrigation.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No					
	CRUJ0174			BRQE0498		
	Reading	kL cons	kL/d	Reading	kL cons	kL/d
26/10/05	4493	-	-	7221	-	-
2/11/05	4579	9	1	7454	23	3
11/11/05	4851	27	3	7463	1	<1
23/11/05	5073	22	2	7512	5	<1
30/11/05	5927	85	12	7668	16	2
7/12/05	6081	15	2	7793	13	2

Note: There were no changes in the meter reading for meter numbers EEHJ0154 and 46117 during the monitoring period

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for McCredie Park is kL/sqm/annum. McCredie Park's baseline water consumption is 0.04kL/sqm/annum, which is significantly lower than the industry benchmark of 0.6kL/sqm/annum for Reserves and Parks (Reference: Sydney Water).

## Water Savings Measures

### Site 9: McCredie Park - Guildford

Measure Description	Responsibility	Baseline Information			IRR	Start Date	Completion Date
		Total Usage in kL 3,493	Quantity of BAI 82,000	KPI 0.04 kL/m <sup>2</sup>			
		Cost to implement (\$)	Savings Annual Water in kL      Energy in GJ	Cost Savings Annual Water (\$) Other (\$)			
<b>Cost-Effective Opportunities</b>							
Retro-fit water saving showerheads (x8)	Building Maintenance Engineer	1,040	578	694	1.5	01 Jul 06	30 Jun 07
Replace single flush toilets with dual flush toilets	Building Maintenance Engineer	2,760	315	378	7.3	01 Jul 07	30 Jun 08
Replace urinal cisterns with sensor controlled cisterns (x4)	Building Maintenance Engineer	1,600	105	126	12.7	01 Jul 07	30 Jun 08
Retro-fit push taps (basins) (x8)	Building Maintenance Engineer	1,440	92	110	13	01 Jul 07	30 Jun 08
<b>Total Cost-Effective Opportunities</b>		<b>6,840</b>	<b>1,090</b>	<b>1,308</b>			
<b>% change resulting from all measures</b>			<b>31.2%</b>				
<b>Potential Cost-Effective Opportunities</b>							
Install in-ground rainwater tank (10,000L) to Cricket Amenities Building	Building Maintenance Engineer	38,000	224	269			
Install in-ground rainwater tank (10,000L) to Oval Amenities Building	Building Maintenance Engineer	38,000	127	152			
<b>Total Potential Cost-Effective Opportunities</b>		<b>76,000</b>	<b>351</b>	<b>421</b>			

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Summary of Business Unit: McCredie Park</b>									
Total Water Savings		82,840	1,441		1,729				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: McCredie Park - Guildford</b>									
Total Water Savings		82,840	1,441		1,729				<i>Does not include Savings achieved from previous actions</i>

### Site 10: Gipps Road Park - Greystanes

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Luke Harvey (Parks Supervisor)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

Gipps Road Park consists of an Aussie Rules playing field, an athletics field, baseball field and associated amenities.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at Gipps Road Park including the flow rate of taps and the capacity of toilets and urinals, and irrigation practices.

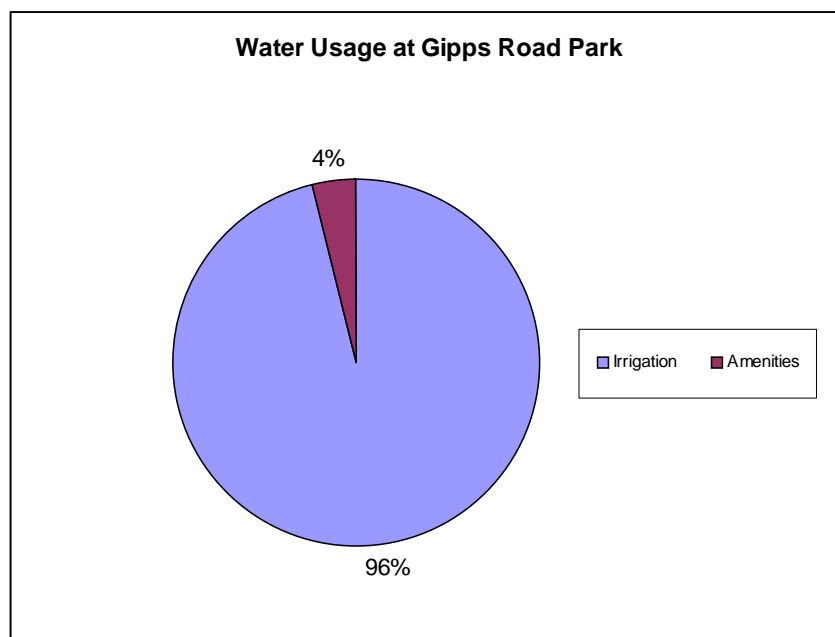
- *Historical Water Use*

The table below shows the water usage for Gipps Road Park for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
ERVB0019	3420	8486	16736	7782	0	0	0
EDJG0047	2792	2904	1190	3251	7789	3938	2991
EDVB0090	590	730	0	0	0	0	2
<b>TOTAL</b>	6802	12120	17926	11033	7789	3938	2993

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Gipps Road Park. It can be seen that the largest area of water usage at the site is irrigation.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No		
	EDJG0047		
	Reading	kL cons	kL/d
26/10/05	913970	-	-
2/11/05	925517	115	16
11/11/05	925764	3	<1
23/11/05	925971	3	<1
30/11/05	926836	9	2
7/12/05	928103	13	2

Note: There were no changes in the meter reading for meter numbers ERVB0019 and EDVB0090 during the monitoring period

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Gipps Road Park is kL/sqm/annum. Gipps Road Park's baseline water consumption is 0.18kL/sqm/annum, which is lower than the industry benchmark of 0.6kL/sqm/annum for Reserves and Parks (Reference: Sydney Water).

## Water Savings Measures

### Site 10: Gipps Road Park - Greystanes

Measure Description	Responsibility	Baseline Information			KPI		IRR	Start Date	Completion Date
		Total Usage in kL 11,033	Quantity of BAI 63,000		0.18 kL/m <sup>2</sup>				
		Cost to implement (\$)	Savings Annual Water in kL	Energy in GJ	Cost Savings Annual Water (\$)	Other (\$)			
<b>Cost-Effective Opportunities</b>									
Retro-fit water saving showerheads (x10)	Building Maintenance Engineer	1,300	289		347		3.7	01 Jul 06	30 Jun 07
Centralised irrigation system	Manager Works	15,500	1,655		1,986		7.8	01 Jul 07	30 Jun 08
Replace single flush cisterns with dual flush cisterns (x9)	Building Maintenance Engineer	2,070	158		190		10.9	01 Jul 07	30 Jun 08
Replace urinal cisterns with sensor controlled cisterns (x5)	Building Maintenance Engineer	2,000	99		109		18.3	01 Jul 08	30 Jun 09
<b>Total Cost-Effective Opportunities</b>		<b>20,870</b>	<b>2,201</b>		<b>2,632</b>				
<b>% change resulting from all measures</b>			<b>19.9%</b>						
<b>Potential Cost-Effective Opportunities</b>									
Retro-fit push taps (basins) (x7)	Building Maintenance Engineer	1,260	46		55				
Install in-ground rainwater tank (10,000L) to Amenities Building	Building Maintenance Engineer	38,000	495		594				
Install in-ground rainwater tank (10,000L) to Amenities Building	Building Maintenance Engineer	38,000	130		156				
<b>Total Potential Cost-Effective Opportunities</b>		<b>77,260</b>	<b>671</b>		<b>805</b>				

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Summary of Business Unit: Gipps Road Park</b>									
<b>Total Water Savings</b>		<b>98,130</b>	<b>2,872</b>		<b>3,437</b>				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Gipps Road Park - Greystanes</b>									
<b>Total Water Savings</b>		<b>98,130</b>	<b>2,872</b>		<b>3,437</b>				<i>Does not include Savings achieved from previous actions</i>

## Site 11: Administration Building - Merrylands

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

The Administration Building is located on Memorial Avenue Merrylands and has a library attached. The Administration Building is open Monday – Friday 8am-4.30pm (to the public) and the library is open Monday – Friday 9.30am-8.00pm, Saturday 9am-4.00pm and Sunday 2.00pm-5.00pm.

A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at the Administration Building including the flow rate of taps and showerheads and the capacity of toilets and urinals, and irrigation practices.

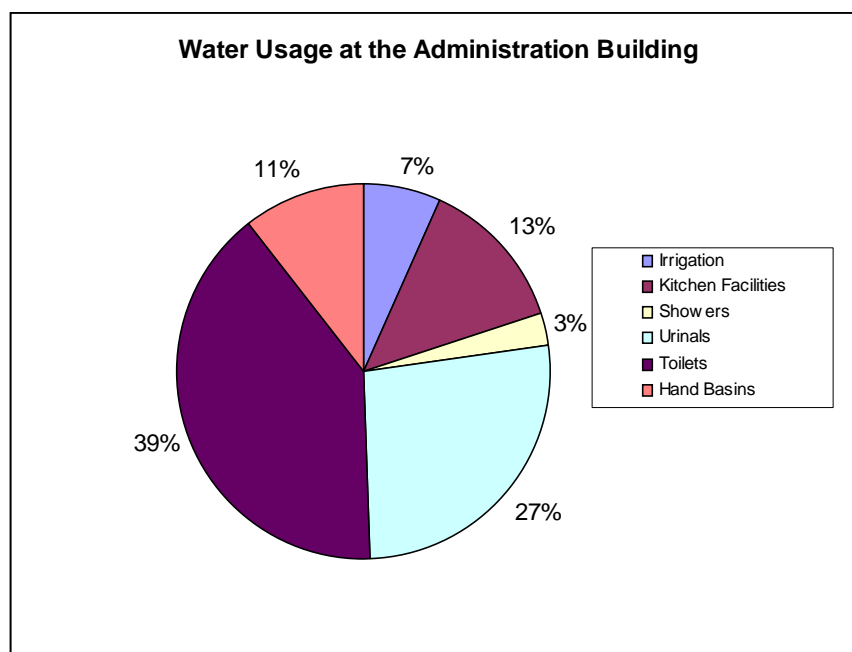
- *Historical Water Use*

The table below shows the water usage for the Administration Building for the past 7 financial years.

	kL						
Meter No	98/99	99/00	00/01	01/02	02/03	03/04	04/05
CDQJ0189	1721	2157	2389	2044	1999	2272	2328

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at the Administration Building. It can be seen that the largest area of water usage at the site is toilets and urinals.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No		
	CDQJ0189		
	Reading	kL cons	kL/d
26/10/05	4873	-	-
2/11/05	4919	46	7
11/11/05	4958	39	4
23/11/05	5010	52	5
30/11/05	5051	41	6
7/12/05	5086	35	5

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for the Administration Building is kL/No of staff/annum. The Administration Building's baseline water consumption is 0.1kL/No of staff/annum, which is slightly higher than the industry benchmark of 0.075kL/No of staff/annum for Civic and Administration Buildings (Reference: Sydney Water).

## Water Savings Measures

### Site 11: Administration Building - Merrylands

**Baseline Information**  
 Total Usage in kL 2,044      Quantity of BAI 20,800      KPI 0.10 kL/No of staff

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Cost-Effective Opportunities</b>									
Replace urinal cisterns with sensor controlled cisterns (x2)	Building Maintenance Engineer	800	175		210		3.8	01 Jul 06	30 Jun 07
Retro-fit water saving showerheads	Building Maintenance Engineer	520	96		115		4.5	01 Jul 06	30 Jun 07
<b>Total Cost-Effective Opportunities</b>		<b>1,320</b>	<b>271</b>		<b>325</b>				
<b>% change resulting from all measures</b>			<b>13.3%</b>						
<b>Potential Cost-Effective Opportunities</b>									
Retro-fit push taps (basins) (x22)	Building Maintenance Engineer	3,960	102		122				
<b>Total Potential Cost-Effective Opportunities</b>		<b>3,960</b>	<b>102</b>		<b>122</b>				
<b>Summary of Business Unit: Administration Building</b>									
<b>Total Water Savings</b>		<b>5,280</b>	<b>373</b>		<b>447</b>			<i>Does not include Savings achieved from previous actions</i>	
<b>Summary of Site: Administration Building - Merrylands</b>									
<b>Total Water Savings</b>		<b>5,280</b>	<b>373</b>		<b>447</b>			<i>Does not include Savings achieved from previous actions</i>	

## Site 12: Depot - Guildford

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

The depot is located on Fairfield Road Guildford and comprises a store, sign workshop, carpenters workshop, mechanics workshop, waste depot (storage of garbage trucks), offices and amenities.

The depot is open Monday to Friday 6am – 3pm. A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at the depot including the flow rate of taps and showerheads and the capacity of toilets and urinals, and vehicle cleansing practices.

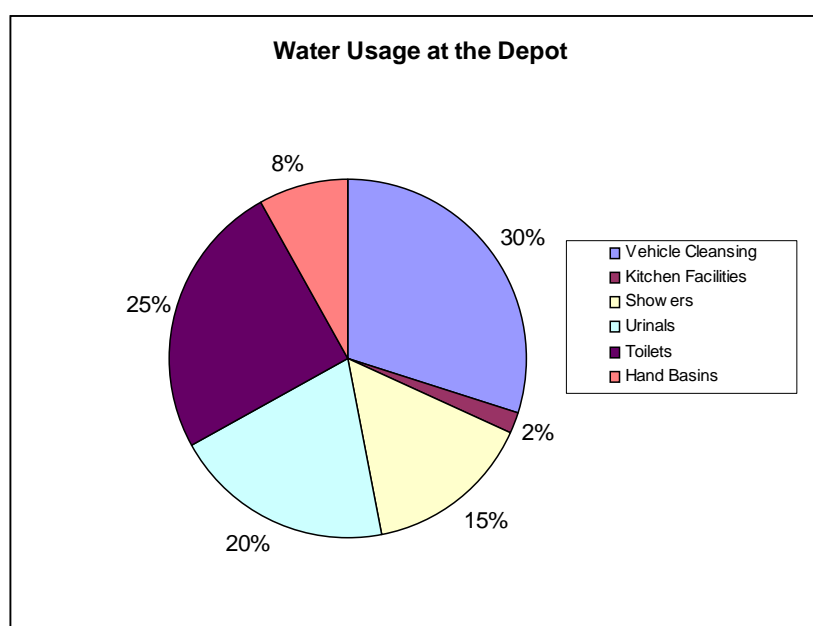
- *Historical Water Use*

The table below shows the water usage for the depot for the past 7 financial years.

Meter No	kL						
	98/99	99/00	00/01	01/02	02/03	03/04	04/05
DDL0040	464	479	601	1189	1068	1004	1465
EDOH1684	3606	3160	3126	2585	2211	1277	780
EDKL0081	2783	2799	2800	2574	2430	1816	1830
<b>TOTAL</b>	6853	6438	6527	6348	5709	4097	4075

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at the Depot. It can be seen that the largest area of water usage at the site is vehicle cleansing and toilets and urinals.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No					
	DDL0040			EDKL0081		
	Reading	kL cons	kL/d	Reading	kL cons	kL/d
26/10/05	938381	-	-	760309	-	-
2/11/05	941194	28	4	764578	43	6
11/11/05	944668	35	4	768932	44	5
23/11/05	947820	32	3	773814	49	5
30/11/05	950961	31	4	778126	43	6
7/12/05	953647	27	4	782294	42	6

*Note: Meter No EDOH1684 was not read as it was unable to be located*

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for the Depot is kL/No of staff/annum. The Depot's baseline water consumption is 1.22kL/No of staff/annum, which is higher than the industry benchmark of 0.04kL/No of staff/annum for Depots (Reference: Sydney Water).

## Water Savings Measures

### Site 12: Depot - Guildford

Measure Description	Responsibility	Baseline Information			IRR	Start Date	Completion Date
		Total Usage in kL 6,348	Quantity of BAI 5,200	KPI 1.22 kL/No of staff			
		Cost to implement (\$)	Savings Annual Water in kL Energy in GJ	Cost Savings Annual Water (\$) Other (\$)			
<b>Cost-Effective Opportunities</b>							
Replace urinal cisterns with sensor controlled cisterns (x4)	Building Maintenance Engineer	1600	552	662	2.4	01 Jul 06	30 Jun 07
Retro-fit water saving showerheads (x4)	Building Maintenance Engineer	780	80	96	8.1	01 Jul 07	30 Jun 08
Retro-fit single flush cisterns with dual flush (x14)	Building Maintenance Engineer	3,220	236	283	11	01 Jul 07	30 Jun 08
Retro-fit push taps (basins) (x17)	Building Maintenance Engineer	3,060	192	230	13.3	01 Jul 07	30 Jun 08
<b>Total Cost-Effective Opportunities</b>		<b>8,660</b>	<b>1,060</b>	<b>325</b>			
<b>% change resulting from all measures</b>			<b>16.7%</b>				
<b>Potential Cost-Effective Opportunities</b>							
Install above-ground rainwater tank (10,000L) to Mechanics Workshop	Building Maintenance Engineer	23,000	534	641			
Install above-ground rainwater tank (10,000L) to Truck Washing	Building Maintenance Engineer	23,000	524	629			
<b>Total Potential Cost-Effective Opportunities</b>		<b>46,000</b>	<b>1,058</b>	<b>1,270</b>			

Measure Description	Responsibility	Cost to implement (\$)	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Summary of Business Unit: Depot</b>									
Total Water Savings		54,660	2,118		1,595				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Depot - Guildford</b>									
Total Water Savings		54,660	2,118		1,595				<i>Does not include Savings achieved from previous actions</i>

### Site 13: Guildford West Children's Centre - Guildford West

- *Name of assessor & other personnel*
  - Bernadette Mackinnon (Policy & Environmental Assessment Officer)
  - Leanne Faddoul (Children's Services Liaison Officer)
  - Bob Poulter (Building Maintenance Engineer)

- *Brief description of site and review undertaken*

The Guildford West Children's Centre comprises a long day care centre for 75 children per day, Monday to Friday 7am – 6pm and an Out of School Hours Service which operates Monday to Friday 6.30am – 9am and 2.30pm – 6.00pm during the school term and 7am- 6pm during school holidays (vacation care). The Out of School Hours Service caters for 50 children.

A walk through technical audit of the site was undertaken. A walk through technical audit of the site was undertaken. The review involved the collection of data on all water using fixtures at the Children's Centre including the flow rate of taps and showerheads and the capacity of toilets and urinals, and irrigation practices.

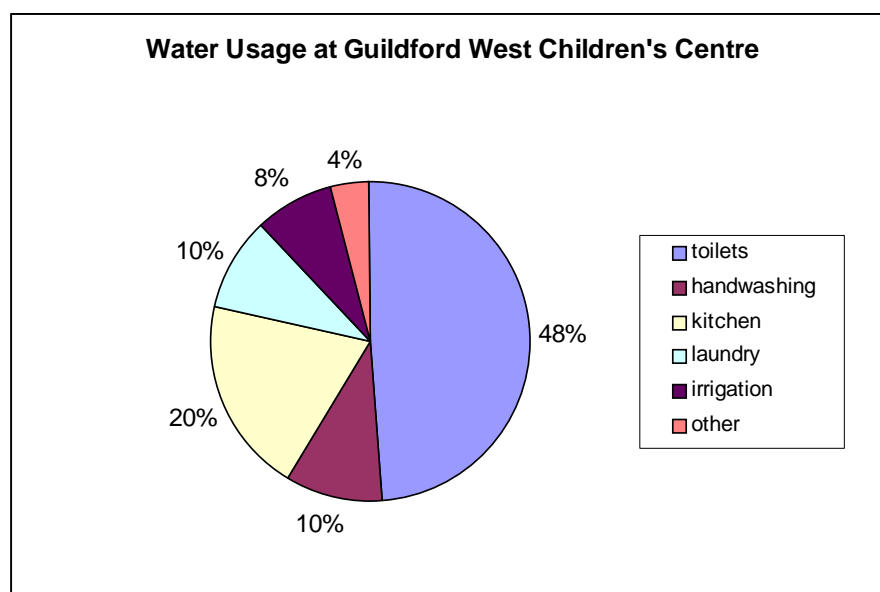
- *Historical Water Use*

The table below shows the water usage for Guildford West Children's Centre for the past 7 financial years.

	kL						
Meter No	98/99	99/00	00/01	01/02	02/03	03/04	04/05
CDOD1799	1000	1148	1131	919	984	891	851

- *Breakdown of water usage across the site*

The chart below shows a breakdown of the water usage at Guildford West Children's Centre. It can be seen that the largest area of water usage at the site is the toilets.



□ *Monitoring and analysis of water use*

Date	Sydney Water Meter No		
	Reading	kL cons	kL/d
26/10/05	7236369	-	-
2/11/05	7247743	11	<2
11/11/05	7253891	6	<1
23/11/05	7259878	6	<1
30/11/05	7262003	2	<1
7/12/05	7267310	5	<1

□ *Comparison of Key Performance Indicator with industry benchmarks*

The KPI used for Guildford West Children's Centre is kL/No of children/annum. McCredie Park's baseline water consumption is 0.18kL/No of children/annum, which is higher than the industry benchmark of 0.04kL/No of children/annum for Childcare Centres.

## Water Savings Measures

### Site 13: Guildford West Children's Centre - Guildford West

Baseline Information		
Total Usage in kL	Quantity of BAI	KPI
984	5,616	0.18 kL/No of children

Measure Description	Responsibility	Cost to implement	Savings Annual		Cost Savings Annual		IRR	Start Date	Completion Date
			Water in kL	Energy in GJ	Water (\$)	Other (\$)			
<b>Cost-Effective Opportunities</b>									
Replace urinal cisterns with sensor controlled cisterns (x4)	Building Maintenance Engineer	1,600	552		662		2.4	01 Jul 06	30 Jun 07
Retro-fit water saving showerheads (x6)	Building Maintenance Engineer	780	80		96		8.1	01 Jul 06	30 Jun 07
<b>Total Cost-Effective Opportunities</b>		<b>2,380</b>	<b>632</b>		<b>758</b>				
<b>% change resulting from all measures</b>				<b>64.2%</b>					
<b>Summary of Business Unit: Guildford West Children's Centre</b>									
<b>Total Water Savings</b>		<b>2,380</b>	<b>632</b>		<b>758</b>				<i>Does not include Savings achieved from previous actions</i>
<b>Summary of Site: Guildford West Children's Centre - Guildford West</b>									
<b>Total Water Savings</b>		<b>2,380</b>	<b>632</b>		<b>758</b>				<i>Does not include Savings achieved from previous actions</i>

## **7.0 Other opportunities for Water Savings**

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Additional water savings can be achieved at other facilities and services provided by Council through the:

- education of Council staff and users of Council facilities to be water wise;
- provision of a system or process in which leaks or damage are reported and rectified;
- installation of rainwater tanks that are plumbed into toilets, urinals and washing machines (where appropriate) and water efficient devices to new and renovated facilities;
- purchasing of water efficient appliances;
- working with tenants of Council owned properties to improve water conservation at these facilities;
- implementation of new water efficient technology as it is developed; and
- implementation of an Energy and Water Performance Contract.

These opportunities will be pursued as resources allow in conjunction with the specific actions outlined in the action plan.

## **8.0 Resourcing the Water Savings Action Plan**

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Over the past five years, Council has implemented various water saving measures including retrofitting water efficient devices to Council's highest water using facilities and installing rainwater tanks that are plumbed into toilets in new or renovated facilities. In relation to the target facilities, over the past five years Council has spent \$52,600 in implementing water saving opportunities, saving 5210kL/pa or 3% of Council's overall water use in 2002/2003. Should Council implement all the cost-effective water saving opportunities identified in this plan, Council would save a further 8612kL/pa or 5% of Council's overall water use in 2002/2003, costing \$82,410.

For Council to achieve the water savings identified and extend these opportunities to other facilities owned and operated by Council, significant consideration needs to be given to providing financial resources and staff to implement the identified actions and any future actions. Some initial funding may be sourced from the existing budget of Council, but such funding alone will not be enough for Council to achieve the water savings.

An alternative financial mechanism that has been successfully implemented for similar programs in a number of local governments is a 'Revolving Fund'. The revolving fund would operate in this instance, by diverting cost savings made through implementing sustainable water conservation initiatives to a special fund. This fund can then be used to invest in future water conservation initiatives. The advantage of this avenue of funding is that it provides a sustainable and cost neutral method for implementing actions.

In addition to the funding opportunities above, Council will need to actively seek funding opportunities such as grants and rebates, government schemes and similar to assist in achieving the Water Consumption Reduction Goals.

## **9.0 Monitoring & Review**

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Monitoring and review are an essential component to provide valuable information regarding the success of a project. Monitoring and reviewing the action plan will ensure that:

- The action plan remains relevant;
- The progress of each action is monitored and outcomes are measured;
- The action plan continues to reflect the Council's intention to reduce water consumption to meet the Water Consumption Reduction Goal; and
- The actions can be reprioritised and/or reviewed to accommodate best practice and/or new technology.

Integral to a monitoring and evaluation program for the Holroyd Water Savings Action Plan will be an annual review of implemented actions. The annual review will be undertaken using the sample assessment outlined in the NSW Governments Guidelines for Water Savings Action Plans and in coordination with Council's State of Environment Reporting process.

**Appendix 1 – List of Sydney Water Accounts for Holroyd City Council**

Prop.No.	Meter No	Property Name	Location of Meter	No.	Street Name	St Type	SUBURB
4521183	BRTH3438	Addlestone Road Carpark	RDE CAR PARK UNDER CARPARK SIGN	4	ADDLESTONE	RD	MERRYLANDS
4521398	BDSG0696	Albert Street Park	PARK.		ALBERT	ST	GUILDFORD
4522177	BRNA0226	Austral Avenue Reserve	IN RESERVE OPP NOLAN CR LEFT OF 25 CHURCH AVE		AUSTRAL	AVE	WESTMEAD
4522264	CDOE0396	Holroyd Apex Park	OPP NO 21 PARK WALK ON.		BADEN	ST	GREYSTANES
4523883	BEFC3158	Bombala Street Park	PARK.		BOMBALA	ST	PENDLE HILL
4524197	BDNM3315	Boyne Avenue Park		14	BOYNE	AVE	MERRYLANDS
4525269	EDOH0773	King Park	OFF CAMBRIDGE STOPP LC 25.29. XO.		CAMBRIDGE	ST	MERRYLANDS
4525550	BDLM1296	Canal Road Park			CANAL	RD	GREYSTANES
4525800	BRHF3900	Carolyn Street Park			CAROLYN	ST	GREYSTANES
4525913	BDMD0921	Cooma Road Park	5 MTRS IN COOMA RD PARK.OPP NO47		CASINO	RD	GREYSTANES
4526065	CDNJ0179	Finlayson Street Park South	PARK RIGHT OF 48 FINLAYSON ST	137	CENTENARY	RD	SOUTH WENTWORTHVILLE
4526697	DDOK0368	MJ Bennett Reserve	OPP NO 3 GOWRIE ST M.J BENNETT RESERVE - XO		GOWRIE	CRES	WESTMEAD
4526761	BTDJ0249	Munal Reserve	RHC LHC OF 34 LOCKWOOD ST		CLARENCE	ST	MERRYLANDS
4526924	BDNF0506	Clyde Street Closure	OPP NO.37		CLYDE	ST	GUILDFORD
4527875	BDPA5685	Cusack Street Park	RDCC CUSACK ST.PARK.		CUSACK	ST	MERRYLANDS WEST
4527946	EDOD0696	Alpha Road Park	OPP RC OF TOILETS OPP NO 95 DAHLIA.		DAHLIA	ST	GREYSTANES
4528037	924259	Daley Street Park	DALEY ST PARK.		DALEY	ST	PENDLE HILL
4528220	BDOK2318	Murray Reserve	OP NO256A BETWEEN WHITE POSTS		DARLING	ST	GREYSTANES
4528423	1107260	Darmenia Avenue Park	LC IN PARK		DARMENIA	AVE	GREYSTANES
4528681	BDTD1200	Daisy Street Park	PARK. W		DAWN	ST	GREYSTANES
4529207	HDPD0019	Wentworthville Pool	L OF MAIN ENTRANCE FOR ACCESS PH:TERRY CROUCH 0405 940 539		DUNMORE	ST	WENTWORTHVILLE
4529210	BDHE0429	Wentworthville Youth Centre	YTH BLDG AT REAR OF RSL AT BLDG R OF F/D POST SRC TO		DUNMORE	ST	WENTWORTHVILLE
4529397	BDGL3528	John Knowles Park	OPP BUBBLER		EDDY	ST	MERRYLANDS
4530347	1120148	SES Building	RHC OF COTTAGE	1	FORAY	ST	GUILDFORD
4530412	CEHG0166	Fowler Road Reserve			FOWLER	RD	MERRYLANDS

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4530508	CDQJ0317	Arnett Park	2MLC	FOWLER	RD	GUILDFORD
4530856	CDLF0045	Fullagar Road Park	OP NO60 FULLAGAR RDG U ELECT BOXTENNIS COURTS	FULLAGAR	RD	WENTWORTHVILLE
4531028	BDOC5191	Widemere Reserve	LC IN WIDEMERE RESERVE.	GARDENIA	PDE	GREYSTANES
4531319	BDKJ1770	Hanbury Street Park	R,BUBBLER. F GREEN SIGN	GERALD	ST	GREYSTANES
4531542	CDOE0404	Greystanes Woodland	8M R C OPP SP	GIPPS	RD	GREYSTANES
4532283	BDQL2174	Gregory Street Park	C OPP 49 GREGORY	GREGORY	ST	GREYSTANES
4532671	CDOD1794	Guildford Shops	L OF FRUIT SHOP IN WALL	367 GUILDFORD	RD	GUILDFORD
4532721	BDTH6293	Chamberlain Park	4M LHC 1P LC OFF GUILDFORD RD CHAMBERLAIN PARK.	GUILDFORD	RD	GUILDFORD
4534692	BDTH0915	OS Young Park	OS YOUNG PARK.	10-16 HUNT	ST	GUILDFORD
4534774	BDFF2435	Brighton Reserve	NEAR SLIPPERY DIP OPP NO 26 IAN HAVE A PLAY AT THIS ONE	IAN	ST	GREYSTANES
4535510	BDLM1287	Josephine Street Park	JOSEPHINE ST PARK.	30-34 JOSEPHINE	ST	MERRYLANDS WEST
4535594	BDMB1390	Junction Street Reserve	@ BASE YELLOW WALL 5M R OF ONE WAY SIGN O/SIDE IN GDN G/L	JUNCTION	ST	GRANVILLE
4535625	BDGJ2443	Old CWA Hall	RHC AT BLD GET MTR READ PHONE 6312836 TO	JUNIA	AVE	TOONGABBIE
4535689	DDQG0657	Tom Uren Park	OPP NO 42 IN PARK. TOM UREN PARK.	IRIS	ST	GUILDFORD
4535876	BEHK0325	Lytton Street Park	PARK AT END OF ST.OPP NO60	KILLEEN	ST	WENTWORTHVILLE
4535944	BDTD5609	Kippax Street Park	AT END OF OLDFIELD STREET NEXT TO NO 2	KIPPAX	ST	GREYSTANES
4535978	BDJF2467	Kookaburra Street Park	RC OPP BUBBLER	KOOKABURRA	ST	GREYSTANES
4536079	BRMB0808	Kootingal Street Park	OPP23 KOOTINGAL ST PARK.	KOOTINGAL	ST	GREYSTANES
4536176	CDQH0047	Lance Cres Park	PARK NEXT 103CR	LANCE	CRES	GREYSTANES
4536315	CDPJ0145	42 Lane Street? Or Wenty Library	@ SP 10M LC BLD. TL XO SP AT WALL.	LANE	ST	WENTWORTHVILLE
4536316	DDL0013	Wentworthville Community Centre & Library	R OF ENT,AT FRONT OF STREET R OF SIGN..HALLS4 HIRE,R OF PATH	LANE	ST	WENTWORTHVILLE
4536776	BDSE0394	Linlee Street Park		LINLEE	ST	GIRRAWEEEN
4536934	BDTE0610	Lois Place Park	RESERVE.	LOIS	PL	MERRYLANDS
4536988	DDOG1090	Long Street Park	C OP F/D OF ANCHOR FOODS.OPP 59 PARK.	LONG	ST	SMITHFIELD
4537318	CEFK0134	Lytton Street Park	2MRC	LYTTON	ST	WENTWORTHVILLE
4537360	BDGE2460	Bridge Road Reserve	NO LOCATION	MACARTHUR	CRES	WESTMEAD
4537591	1109286	McCleenan Park	CSP PK. KNOWN AS MCCLEENAN	MACKLIN	ST	PENDLE HILL

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4538467	BRSB0077	Martin Cres Park	OPP. N.O 22 MARTIN IN PARK		MARTIN	CRES	WOODPARK
4538626	BDOB2473	Moore Park	3M LSG		MATTHEW	ST	MERRYLANDS
4538676	CDLC0102	Dandie Park	2M RC.L OF NO15 PARK.		MAUNDER	AVE	GIRRAWEEEN
4538760	CDQJ0191	Warren Try Reserve	5M LC		MEAKIN	ST	MERRYLANDS
4538874	CDQJ0189	Administration Building	4'LHC OPP RC NO 15 KNOWN AS NO 16		MEMORIAL	AVE	MERRYLANDS
4538976	BRTN3565	Youth Centre	YOUTH CENTRE	289	MERRYLANDS	RD	MERRYLANDS
4538977	BDOJ2427	Youth Centre Offices	RHC	291	MERRYLANDS	RD	MERRYLANDS
4539015	HDQC0010	Merrylands Pool	IN GARDEN PLOT OFF BURNETT ST OPP NO 36 GO THRU MAIN ENT 4 ACC		BURNETT	ST	MERRYLANDS
4539016	BDOL3821	Merrylands Park Toilets	LSG OPP NO42 BURNETT ST MERRYLANDS PARK TENNIS COURTS		MERRYLANDS	RD	MERRYLANDS
4539286	DDOG1183	Greystanes Community Centre	R OF 2ND DW GREYSTANES COMMUNITY CENTRE.	732- 734	MERRYLANDS	RD	GREYSTANES
4539653		Cancelled Rating		74	MILITARY	RD	MERRYLANDS
4539654		Cancelled Rating		1	HAWKSVIEW	ST	MERRYLANDS
4539905	BDOL3767	Banksia Babes	4MLC	1	GOODLET	ST	MERRYLANDS
4540168	BRNM0119	Morris Street Park	PARK.	1	MORRIS	ST	MERRYLANDS
4540317	CDOE0309	Munro Street Park	LC PARK BETWEEN 34 & 38	36	MUNRO	ST	GREYSTANES
4540344	CDNG0022	Murdock Street Park	C		MURDOCK	ST	GUILDFORD
4540527	BDNF0507	Bill Heckenberg Reserve	RC OF NO.28		MYEE	ST	MERRYLANDS
4540716	BRJG1583	The Sometime Centre	3MLDG	54	NEIL	ST	MERRYLANDS
4540783	BROK2287	Yennora Avenue Traffic Isle	NATURE STRIP TRIANGLE GO BACK		NELSON	RD	YENNORA
4541161	BEFB0631	Domain Rooms	3MLC	1	OAKES	ST	WESTMEAD
4541271	BRJJ1751	Toongabbie Meeting Rooms	RC BABY HEALTH CENTRE R OF 10		OCTAVIA	ST	TOONGABBIE
4541272	DDOH0753	Girraween Park	PARK		OCTAVIA	ST	TOONGABBIE
4541449	66202	Old Prospect Road Reserve			OLD PROSPECT	RD	WENTWORTHVILLE
4541805	BRLH1523	Maunder Reserve	MAS CENTRE OPP BUBBLER		O'NEILL	ST	GUILDFORD
4541806	BRKK2656	Warnock Park	C OF TOILETS IN PARK		O'NEILL	ST	GUILDFORD
4541809	BDTD6236	Guildford Baby Health Centre	TOP CNR OF PARK IN FRONT OF CLINIC OPP RHC		O'NEILL	ST	GUILDFORD
4542164	BRJL2669	Maley Park	RC OFF ROBINSON		PALMER	ST	GUILDFORD
4542217	BDHF9385	Devlin Park	UNDER TREE 5P L OF DG BEHIND TREE IN GL		PAMBULA	CRES	WOODPARK
4542481	BDQC2091	Paul Cres Reserve	PARK.	3	PAUL	CRES	SOUTH WENTWORTHVILLE

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4542608	BRJG1935	Holroyd Sportsground	OPP RC BLDG OFF WALPOLE	XO	1	PEEL	ST	HOLROYD
4542609	GDKA0033	Holroyd Sportsground	LC OF YD R OF HSE 2ND PROP ON RT		3	PEEL	ST	HOLROYD
4542800	CEFM0123	Dog Off Leash Reserve	METER LOCATED OFF PERCIVAL RD OPP 101			PERCIVAL	RD	SMITHFIELD
			2PLC R OF LUNCH SHOP.					
4543039	BRQE3839	Road Reserve	CNR OF MCFARLANE PITT STS OUTSIDE			PITT	ST	MERRYLANDS
			KEBAB SHOP AT SP AT BRICK WALL					
4543113	BDGD1008	Portico Park	OPP COMMONWEALTH BANK IN PARK			THE PORTICO		TOONGABBIE
			BEHIND BUS SHELTER.					
4543114	BDHD2248	Portico Park	BEHIND TOILETS. UNDER ELE BOX			THE PORTICO		TOONGABBIE
4543156	BRJG1718	Lawson Square	OPP NO 32 REAR OF TOILETS OPP BUBBLER			DESMOND	ST	MERRYLANDS
4543432	BRKK2653	Station Entrance	2P R CARPARK AT SP AT RLY FENCE OPP 117			MILITARY	RD	GUILDFORD
			ENTRANCEXO NEAR RAILWAY					
4544297	18218	Roberta Street Park	OPP 188.PARK	ROBERTA ST PARK		ROBERTA	ST	GREYSTANES
4544512	BDTJ1920	Traffic Island	LSP ON ISLAND.			ROSEBERRY	ST	MERRYLANDS
4544668	BRTJ4627	Whyman Park	RC KNOWN AS WHYMAN PARK			ROYAL	ST	MERRYLANDS
4544850	BRKH0786	Ruth Street Park	3 1/2P RC OF KENYON RD			RUTH	ST	MERRYLANDS WEST
4546086	BEHD0045	Friend Park	1M R STEPS GL. 0.5M INP			STATION	ST	WENTWORTHVILLE
4546311	DDQB0399	Tait Street Park	IN FRT OF TOILET BLOCK.	TAIT ST PARK.		TAIT	ST	GREYSTANES
4546352	GDOB0062	Guildford Leagues Club	TO THE RIGHT OF CLUB ENTRY IN LARGE			TAMPLIN	ST	GUILDFORD
			WHITE ENCLOSURE DONT NEED KE					
4546354	GDQD0008	Guildford Pool	ACC THRU MAIN ENT PAST HEATED POOL TO			TAMPLIN	ST	GUILDFORD
			PLANT ROOM & THRU GATE					
4546419	BROF8018	Civic Park	OFF PARKLAND AVE			TARGO	RD	GIRRAWEEEN
4546420	BRTD0518	Old Pendle Hill Baby Health Centre	2MLHC	BABY HEALTH CTR		TARGO	RD	PENDLE HILL
4546483	CDPJ0068	Toongabbie Community Centre	4M R D/E		244	TARGO	RD	TOONGABBIE
4546493	CDLM0044	Keene Park	LC			TARGO	RD	TOONGABBIE
4546660	CDOF1541	Terminal Place Carpark	R OF BUS SHELTER AT FIRE HYDRANT			TERMINAL	PL	MERRYLANDS
4546669	BDFM5710	Thames Street Park	SERPENTINE ST. PARK.			THAMES	ST	MERRYLANDS WEST
4546758	BRMF1423	Kingsway Toilets	L OF ENTRANCE OF GENTS TOILET	INSIDE TOILET ENTRANCE		THE KINGSWAY		WENTWORTHVILLE
4547255	BDOK3977	Memorial Park	6MLC ON WINDSOR			TREVES	ST	MERRYLANDS
4547799	DDQC1243	Daniel Street Park	OPP NO15 DANIEL	R GREEN SIGN.		DANIEL	ST	GREYSTANES
4547968	BEGJ4976	Traffic Island	OPP NO 2 RINGROSE AV	XO GO BACK.		RINGROSE	AVE	GREYSTANES
4548197	BDPG3052	Road Reserve	NEARLY OPP 211 BETWEEN 2 WOODEN POSTS	AT GREEN RAILING BRIDGE		WARREN	RD	SMITHFIELD

4548937	EDPD0063	Pendle Hill Park	LC NEXT TO CALTEX GRG IN PARK		GREAT WESTERN	HWY	PENDLE HILL
4549102	BDLB1191	Bradman Street Park	BRADMAN ST PARKOPP LC NO 64.		WHALANS	RD	GREYSTANES
4549303	DDND0164	Gumnut Grove	KNOWN AS MERRYLANDS LONG DAY CHILD CARE CENTRE	13	WINDSOR	RD	MERRYLANDS
4549400	BRPK0808	Wirrallee Street Park	WIRRALEE PARK		WIRRALEE	ST	SOUTH WENTWORTHVILLE
4687175	BDSE0430	Laneway	IN GARDEN O/SIDE SHOP 2 L OF SP NO 2 MCFARLANE ST		MCFARLANE	ST	MERRYLANDS
4751930	CDOD1799	Guildford West Childrens Centre	50 PALMER ST OPP NO 59OUTSIDE CHILDRENS CENTRE.		PRINCES	ST	GUILDFORD WEST
4774334	EDHH0050	Fraeme Park	RC ON TO PARK.L OF ROAD TUNNEL		REES	ST	MAYS HILL
4837720	CDQB0781	Wenty Children's Centre	CHILD CARE CTR OPP NO 109 DAMIEN AVE	98	DAMIEN	AVE	GREYSTANES
4838090	DDLBO014	Wenty Community Hall	DW OFF VERON ST IN GDN		LANE	ST	WENTWORTHVILLE
4855430	DEGD0016	Cancelled Rating	OPP SIDE 25 FOX ST RDG.		WALPOLE	ST	MERRYLANDS
4880363	BDLC1036	White Gum Reserve	TL RIGHT OF PLAYGROUND IN FORESTGUM PL OPP NO 3		FOREST GUM	PL	GREYSTANES
4884909	BRKK1887	Hassall Street Park	HASSAL ST PARK	33	HASSALL	ST	WESTMEAD
4902059	BRLG2846	Median Strip	OPP 686 MERRYLANDS RD ON MEDIAN STRIP	686	MERRYLANDS	RD	GREYSTANES
4933827	BDMF0891	Part Road Closure	WITHIN IRR PIT		ALEXANDRA	AVE	WESTMEAD
4957188	BRNA0182	Veron Street Park	XO TO TRAFFIC ISLAND OPP 19 VERON ST		VERON	ST	WENTWORTHVILLE
4986376	BDOC1625	Targo Road Reserve	IN PARK L OF 191-193 TARGO RD		TARGO	RD	GIRRAWEEEN
5078846	BDQF5455	Road Reserve	OPP 406 MERRYLANDS RD IN GDN CNR BURNETT AND MERRYLANDS RDS		MERRYLANDS	RD	MERRYLANDS
5136475	BRRB2544		FRC	2A	CUMBERLAND	RD	GREYSTANES
5136892	EDLJ0013	Children's Museum	R OF STAIRS IN GDN		WALPOLE	ST	MERRYLANDS
5236183		Cancelled Rating			BRICKWORKS	DR	MERRYLANDS
4521289*	BROH7244	Gallard Reserve	OPP NO. 59 DAMIEN IN PARK		ADLER	PDE	GREYSTANES
4521289*	1052623	Gallard Reserve	RESERVE OPP LHC HSE NO 56		ADLER	PDE	GREYSTANES
4521289*	932408	Gallard Reserve	OPP NO 59 DAMIEN ST PARK.		ADLER	PDE	GREYSTANES
4521308	BDQB9751	Adler Road Reserve	CROSS OVER TO PARK OPP NO56		ADLER	PDE	GREYSTANES
4522352*	BDNJ3575	Bathurst Street Park	3.75P L C OP NO29		BALLINA	ST	GREYSTANES
4522352*	DDKC0045	Bathurst Street Park	OP NO26 BATHURST PARK.L OF CAR PARK.		BALLINA	ST	GREYSTANES
4522901*	BDJG1077	Belmont Street Park	6'LHC TWO METERS IN PARK L CNR BELMONT ST PARK.	88	BELMONT	ST	MERRYLANDS

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4522901*	BDKC1112	Belmont Street Park	PARK	88	BELMONT	ST	MERRYLANDS
4526050*	EDOC0110	Ted Burge Sportsground	OPPOSITE NO 10 HOLLYWOOD ST NOEL BURGE PAVILION.		CENTENARY	RD	MERRYLANDS
4526050*	CDNJ0147	Ted Burge Sportsground	SERVES NETBALL COURTS GET ON YERE BIKE		CENTENARY	RD	MERRYLANDS
4528377*	EDMH0033	Darling Street Park	R OF DW NO 170 DARLING ST. DARLING ST.PARK		DARLING	ST	GREYSTANES
4528377*	EDOJ1292	Darling Street Park	LC R OF NO41 MACLEAY ST		DARLING	ST	GREYSTANES
4528377*	CDQB0711	Darling Street Park	OP F/D NO155 WALK ON TO DARLING ST.PARK UNDER BUSH AT SP		DARLING	ST	GREYSTANES
4529043*	BDHF6430	Alderson Park	OPP BUBLER.		DOROTHY	ST	MERRYLANDS
4529043*	BDTH6731	Alderson Park	2P R DG		DOROTHY	ST	MERRYLANDS
4529163*	64047	GE Briscoe Reserve	PARK AT END OF BRUCE ST.		DUFFY	ST	MERRYLANDS WEST
4529163*	CDPL0740	GE Briscoe Reserve	NEXT TO 16 DUFFY ST		DUFFY	ST	MERRYLANDS WEST
4529942*	BDJD1242		4 P L SG GIRL GUIDES WALKON	9	ETTALONG	RD	GREYSTANES
4529942*	234567			9	ETTALONG	RD	GREYSTANES
4530050*	DDL0040	Depot	OPP LEACH ST 2.25P RDG NEXT TO FENCE		FORAY	ST	GUILDFORD
4530050*	EDKL0081	Depot	1P RC CAR PARK		FORAY	ST	GUILDFORD
4530050*	EDOH1684	Depot	OFF FORAY 10' RRC TCRT 11P LDE TO COURTS OPP TETRA PARK		FORAY	ST	GUILDFORD
4530717*	DDOK0372	Jones Park	2M L ENTRANCE X OVER		FRANKLIN	ST	MAYS HILL
4530717*	CDPG0431	Jones Park	WALK ON PAST SWINGS MTR R1ST GATE.		FRANKLIN	ST	MAYS HILL
4530717*	DDLE0246	Jones Park	10M LSG OPP 35 BANKS ST RC TOILET BLOCK		FRANKLIN	ST	MAYS HILL
4530990*	EDKH0105	Nemesia Street Park	OPP NO 3		NEMESIA	ST	GREYSTANES
4530990*	BEHE4315	Nemesia Street Park	IN GARDENIA PDE NEXT TO NO 78		NEMESIA	ST	GREYSTANES
4531777*	EDOE0049	Harold Reed Park	HAROLD READ PK.		GIRRAWEEEN	RD	GIRRAWEEEN
4531777*	26993	Harold Reed Park	2M LHC		GIRRAWEEEN	RD	GIRRAWEEEN
4531777*	1U492	Harold Reed Park			GIRRAWEEEN	RD	GIRRAWEEEN
4533832*	CDOH0974	Brewer Cres Reserve	FRONT LEFT OF CENTRE CNR FRANCES & MANSON STS		HAYES	AVE	SOUTH WENTWORTHVILLE
4533832*	910416	Brewer Cres Reserve	IN GARDEN PLOT AT SP		HAYES	AVE	SOUTH WENTWORTHVILLE
4533832*	CDMJ0030	Brewer Cres Reserve	CNR FRANCES ST AND MANSON ST.		HAYES	AVE	SOUTH WENTWORTHVILLE
4534927*	BRND3853	Biscayne Avenue Reserve			IRRIGATION	RD	MERRYLANDS
4534927*	936180	Biscayne Avenue Reserve			IRRIGATION	RD	MERRYLANDS

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4535547*	BDEB0447	Joyce Street Park	OPP RC TAKE AWAYFOOD 1 MTR R OF3GREEN SEAT IN GARDEN AGAINST B/W	JOYCE	ST	PENDLE HILL
4535547*	BRRL1220	Joyce Street Park	OPP PENDLE HILL TRAVEL BH WALL. BUS STOP AREA	JOYCE	ST	PENDLE HILL
4536556*	BDQB9709	Leeton Street Park	OPP NO 26	LEETON	ST	MERRYLANDS
4536556*	BDOF3979	Leeton Street Park	OPP 26 LEETON ST IN PARK	LEETON	ST	MERRYLANDS
4537526*	886114		NEAR SEATS.IN GDN OPP LAST MTR01	30-32 MCFARLANE	ST	MERRYLANDS
4537526*	BRNH1921		15M R OF BUS STOP SHELTER IN FRONT OF BRICK WALL AT SP 1M IN	30-32 MCFARLANE	ST	MERRYLANDS
4539013*	EDSD0010	Merrylands Oval	OP NO28 I GDN C OF C/PK 30 MTRS IN FROM ROAD	MERRYLANDS	RD	MERRYLANDS
4539013*	CDLC0090	Merrylands Oval	RC OF TOILETS ONCNR OFF MERRYLANDS CNR BURNETT ST	MERRYLANDS	RD	MERRYLANDS
4539013*	CDLE0028	Merrylands Oval	OPP CARTWRIGHT ST END OPP NO 20 BURNETT ST.	MERRYLANDS	RD	MERRYLANDS
4539013*	EDFG0081	Merrylands Oval	OP RC NO8 BURNETT INSIDE FENCE.	MERRYLANDS	RD	MERRYLANDS
4539013*	DDQC1228	Merrylands Oval	OFF MERRYLANDS RD OPP NO368 NR OPP HOLDSWORTHY ST	MERRYLANDS	RD	MERRYLANDS
4539240*	DDOG1184	Greystanes Sportsground	OPP NO 10 BOLARO ANE GREYSTANES SPORTS GROUND NEAR BUBBLER	MERRYLANDS	RD	GREYSTANES
4539240*	EDLF0103	Greystanes Sportsground	4 1/2 PAN L D/GATE OPP NO 797 WALK ON OP NO797.PARK.	MERRYLANDS	RD	GREYSTANES
4539240*	BRHF4493	Greystanes Sportsground	RDG OPP NO 44 NEAR RC TENNIS COURTS WALK THRU PARK	MERRYLANDS	RD	GREYSTANES
4540563*	CDQB0633	Mays Hill Reserve	OPP LC TENNIS SHED OPP NO 150770	NAPIER	ST	MAYS HILL
4540563*	CDML0087	Mays Hill Reserve	OFF FRANKLIN ST 3P R OF ENTRANCE PATH 2M IN AT POST WITH SP	NAPIER	ST	MAYS HILL
4541868*	EDOJ0377	CV Kelly Park	OP PALM ST 8P LDG C.V. KELLY PARK.	ORAMZI	RD	GIRRAWEEEN
4541868*	140624	CV Kelly Park		ORAMZI	RD	GIRRAWEEEN
4542355*	EDKB0010	Central Gardens	OPP 100 PATON STCENTRAL GARDENS0 MTR JUST INSIDEFENCE WITH SP.	PATON	ST	MERRYLANDS WEST
4542355*	EDMF0038	Central Gardens	OFF BETTS RD 15P R OF PATON ST GO IN TO READ OFF PATON ST	PATON	ST	MERRYLANDS WEST
4542355*	EDGL0046	Central Gardens	LDG CENTRAL GDNS OFF MERRYLANDS RD	PATON	ST	MERRYLANDS WEST
4542355*	BDME4865	Central Gardens	AT DEAD END THAMES R NO 56 INSIDE FENCE.WALK THRU CENT GRNS	PATON	ST	MERRYLANDS WEST
4542934*	EDNM0178	Holroyd Gardens	R OF DWY TO CAR PARK OFF WALPOLE ST	PITT	ST	MERRYLANDS
4542934*	BDRD6369	Holroyd Gardens	FLC 10M R OF ENTRANCE TO NEW DEVELOPMENT	PITT	ST	MERRYLANDS
4546351*	EEHJ0154	McCredie Park	OPP NO261 OPP RC OF HSE FOWLER ST	TAMPLIN	ST	GUILDFORD

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4546351*	BRQE0498	McCredie Park	OPP 48 TAMPLIN ST 10 PL DW XO TO MCREDEIE PARK	TAMPLIN	ST	GUILDFORD
4546351*	46117	McCredie Park	T/R T/L ON L OPP C AMENITIES CLOCK OPP NO48 TAMPLIN ST TR TL ON	TAMPLIN	ST	GUILDFORD
4546351*	CDQK0126	McCredie Park	OPP 259 FOWLER ST WALK ACROSS PKNEXT TIME PICK UP READ WHEN DOIN	TAMPLIN	ST	GUILDFORD
4547036*	BDRC3543	Toongabbie Reserve	FRONT RIGHT CNR IN PARK CNR TARGO & TOONGABBIE RD	20 TOONGABBIE	RD	TOONGABBIE
4547036*	755047	Toongabbie Reserve	1MLC	20 TOONGABBIE	RD	TOONGABBIE
4547647*	BDOM4665	Vernon Street Park	FRONT CENTRE VERNON STREET	VICTOR	ST	GREYSTANES
4547647*	BRJL1019	Vernon Street Park	R S/PTH @SP BUB	VICTOR	ST	GREYSTANES
4547647*	BDMB1245	Vernon Street Park		VICTOR	ST	GREYSTANES
4547958*	BDGC2734	Young Park	NEAR DRINKING FOUNTAIN OPP LEOPOLD RD	WALPOLE	ST	MERRYLANDS
4547958*	BRMG0743	Young Park	FRONT CENTRE NEAR BUBBLER OPP LEOPOLD RD	WALPOLE	ST	MERRYLANDS
4548842*	DDQL0038	Ringrose/Monty Bennett Oval	OPP NO 37 SMITH ST INSIDE FENCE WALK ON TL SMITH ST .	GREAT WESTERN	HWY	WENTWORTHVILLE
4548842*	CDJE0191	Ringrose/Monty Bennett Oval	BACK OF RINGROSE PARK G W H END R OF DW AT NETBALL COURT	GREAT WESTERN	HWY	WENTWORTHVILLE
4548842*	EDNK0044	Ringrose/Monty Bennett Oval	LC OF OVAL R OF 410 OPP TILE SHOP OTHER SIDE HWY.	GREAT WESTERN	HWY	WENTWORTHVILLE
4548842*	65146	Ringrose/Monty Bennett Oval	RDE NETBALL CRTS	GREAT WESTERN	HWY	WENTWORTHVILLE
4786925*	CDQB0668	Monterey Street Park	OPP 106 CENTENARY RD	CENTENARY	RD	SOUTH WENTWORTHVILLE
4786925*	CDQB0695	Monterey Street Park	OPP NO 45 IN PARK MONTEREY ST.	CENTENARY	RD	SOUTH WENTWORTHVILLE
4837160*	EDGL0053	Gipps Road Park	RSG OPP TARLINGTON PL.	GIPPS	RD	GREYSTANES
4837160*	EDJG0047	Gipps Road Park	27.5P LDG OPP JAX TYRES TRAFFIC LIGHTS.PARK.	GIPPS	RD	GREYSTANES
4837160*	EDOH1232	Gipps Road Park	OP LC B/HI FNCE OP NO5 HYLAND	GIPPS	RD	GREYSTANES
4909020*	XRLB0514			W0753 STANDPIPE		VARIOUS
4909020*	YRLC0172		THANG MAR 98409840 LIVECC 2546W	W0753 STANDPIPE		VARIOUS
4909020*	XRPK0017			W0753 STANDPIPE		VARIOUS
4909020*	XRNM0019		THANG MAR 9846-8687\98409840 LIVERPOOL CC 2546W	W0753 STANDPIPE		VARIOUS
4909020*	XRNM0006		THANG MAR 9846-8687\98409840 LIVERPOOL CC 2546W	W0753 STANDPIPE		VARIOUS
4909020*	XRLB0160		THANG MAR 98468687 167 FAIRFIELD RD GUILDFORD WEST LIVE 2546W	W0753 STANDPIPE		VARIOUS
4909020*	XRLB0221		THANG MAR 9846-8687 LIVERPOOL CC 2546W	W0753 STANDPIPE		VARIOUS
4909020*	YRLC0139			W0753 STANDPIPE		VARIOUS

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4909020*	YRLC0240			W0753	STANDPIPE	VARIOUS
4909020*	YRLC0100	THANG MAR 9846-8687 2546W	LIVERPOOL CC	W0753	STANDPIPE	VARIOUS
4909020*	YRLC0248			W0753	STANDPIPE	VARIOUS
4909020*	XRLB0060	THANG MAR 9846-8687\98409840 CC 2546W	LIVERPOOL	W0753	STANDPIPE	VARIOUS
4909020*	YRNI0004	THANG MAR 9846-8687\98409840 2546W	LIVERPOOL	W0753	STANDPIPE	VARIOUS
4909020*	XRNL0034	THANG MAR 9846-8687 98409840 CC 2546W	LIVERPOOL	W0753	STANDPIPE	VARIOUS
4909020*	XRNL0026	THANG MAR 9846-8687\98409840 CC 2546W	LIVERPOOL	W0753	STANDPIPE	VARIOUS
4909020*	YRNJ0010	PAUL POLANSKI 9846- 8688\98409840LIVERPOOL CC 2546W		W0753	STANDPIPE	VARIOUS
4909020*	XRNM0010	THANG MAR 9846-8687 2546W	LIVERPOOL CC	W0753	STANDPIPE	VARIOUS
4909020*	YRNM0012	THANG MAR 9846-8687 2546W	LIVERPOOL CC	W0753	STANDPIPE	VARIOUS
4909020*	YRPB0007	THANG MAR 98409840	LIVECC 2546W	W0753	STANDPIPE	VARIOUS
4909020*	YROJ0010			W0753	STANDPIPE	VARIOUS

## Appendix 2 – Results of Walk Through Technical Audits

### Site 1: Central Gardens - Merrylands West

FACILITY	FIXTURE	NO OF DEVICES	FLOW RATE
Tennis Court Amenities	Single Flush Toilet	6	11 L/min
	Dual Flush Toilet	1	3/6 L/min
	Urinals	1	15 L/min
	Handbasins	4	11 L/min
	Showers	4	20 L/min
	Taps	4	16 L/min
Ranger's Hut Amenities	Single Flush Toilet	2	11 L/min
	Handbasins	2	11 L/min
	Taps	2	20 L/min
Open Theatre Amenities	Single Flush Toilet	12	3/6 L/min
	Urinals	2	15 L/min
	Handbasins	6	16 L/min
	Showers	2	20 L/min
	Taps	2	20 L/min
Staff Depot	Showers	2	20 L/min
	Handbasins	2	16 L/min
	Dual Flush Toilet	2	3/6 L/min
Kiosk	Handbasins	1	11 L/min
	Kitchen Sink	1	9 L/min
	Taps	1	20 L/min
Wildlife Park Amenities	Dual Flush Toilet	7	3/6 L/min
	Single Flush Toilet	5	11 L/min
	Urinals	2	15 L/min
	Handbasins	6	16 L/min
Other	Taps	15	20 L/min
	Bubblers	11	

**Site 2: Wentworthville Pool - Wentworthville**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Men's Amenities	Single Flush Toilet	4	11 L/min
	Dual Flush Toilet	2	3/6 L/min
	Urinals	2	15 L/min
	Handbasins	6	11 L/min
	Showers	4	20 L/min
	Taps	4	20 L/min
Women's Amenities	Single Flush Toilet	4	11 L/min
	Handbasins	4	11 L/min
	Showers	4	20 L/min
	Taps	4	20 L/min
Disabled Amenities	Dual Flush Toilet	1	3/6 L/min
	Handbasins	1	11 L/min
	Showers	1	20 L/min
	Taps	1	20 L/min
Staff Amenities	Showers	1	20 L/min
	Handbasins	1	11 L/min
Kiosk	Handbasins	1	11 L/min
	Kitchen Sink	1	9 L/min
	Taps	1	20 L/min
First Aid Room	Kitchen Sink	1	9 L/min
Clubhouse	Single Flush Toilets	2	11 L/min
	Handbasins	2	11 L/min
	Kitchen Sink	1	9 L/min
Plant Room	Dump Shower	1	20 L/min
	Kitchen Sink	1	9 L/min
	Tap	1	20 L/min
Irrigation	Handheld Watering		
Other	Taps	11	20 L/min
	Bubblers	4	

**Site 3: Merrylands Pool - Merrylands**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Men's Amenities	Single Flush Toilet	4	11 L/min
	Dual Flush Toilet	3	3/6 L/min
	Urinals	2	15 L/min
	Handbasins	6	11 L/min
	Showers	5	20 L/min
	Taps	2	20 L/min
	Cleaners Sink	1	15 L/min
Women's Amenities	Single Flush Toilet	4	11 L/min
	Dual Flush Toilet	1	3/6 L/min
	Handbasins	5	11 L/min
	Showers	5	20 L/min
	Taps	2	20 L/min
Disabled Amenities	Dual Flush Toilet	1	3/6 L/min
	Handbasins	1	11 L/min
	Showers	1	9 L/min
Staff Amenities	Showers	1	9 L/min
	Handbasins	1	11 L/min
	Dual Flush Toilet	2	3/6 L/min
Kiosk	Handbasins	1	11 L/min
	Kitchen Sink	1	9 L/min
First Aid Room	Kitchen Sink	1	9 L/min
	Handbasins	1	11 L/min
Clubhouse	Kitchen Sink	1	9 L/min
Plant Room	Dump Shower	1	20 L/min
Irrigation	Buckner System (hasn't been used since October 2003)		
Other	Taps	6	20 L/min
	Bubblers	1	

**Site 4: Guildford Pool - Guildford**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Men's Amenities	Single Flush Toilet	2	11 L/min
	Dual Flush Toilet	1	3/6 L/min
	Urinals	1	15 L/min
	Handbasins	3	11 L/min
	Showers	3	20 L/min
	Taps	1	20 L/min
	Cleaners Sink	1	15 L/min
Women's Amenities	Single Flush Toilet	3	11 L/min
	Handbasins	3	11 L/min
	Showers	3	20 L/min
	Taps	2	20 L/min
	Cleaners Sink	1	15 L/min
Staff Amenities	Showers	2	9 L/min
	Handbasins	2	11 L/min
	Single Flush Toilet	2	11 L/min
Kiosk	Handbasins	1	11 L/min
	Kitchen Sink	1	9 L/min
First Aid Room	Kitchen Sink	1	9 L/min
Clubhouse	Kitchen Sink	1	9 L/min
	Single Flush Toilet	1	11 L/min
	Handbasins	1	11 L/min
Plant Room	Dump Shower	1	20 L/min
Irrigation	Buckner System (hasn't been used since October 2003)		
Other	Taps	7	20 L/min
	Bubblers	2	

**Site 5: Ringrose/Monty Bennett Oval - Wentworthville**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Monty Bennett Amenities	Single Flush Toilet	4	11 L/min
	Urinals	1	15 L/min
	Handbasins	4	11 L/min
	Taps	2	20 L/min
Ringrose Amenities	Single Flush Toilet	8	11 L/min
	Urinals	2	15 L/min
	Handbasins	8	11 L/min
	Showers	4	20 L/min
	Taps	2	20 L/min
Greenkeeper's Shed	Dual Flush Toilet	1	3/6 L/min
	Handbasins	1	16 L/min
	Showers	1	20 L/min
	Kitchen Sink	1	9 L/min
Ringrose Clubhouse	Handbasins	4	16 L/min
	Dual Flush Toilet	2	3/6 L/min
	Kitchen Sink	2	9 L/min
	Taps	2	20 L/min
	Commercial Dishwasher	1	
Other	Taps	6	20 L/min
	Bubblers	2	

**Site 6: Darling Street Park - Greystanes**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Amenities	Single Flush Toilet	6	11 L/min
	Urinals	1	15 L/min
	Handbasins	4	11 L/min
	Taps	6	20 L/min
	Showers	4	20 L/min
	Taps	6	20 L/min

**Site 7: Merrylands Park - Merrylands**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Rugby Clubhouse	Dual Flush Toilet	5	3/6 L/min
	Urinals	2	15 L/min
	Handbasins	6	11 L/min
	Kitchen Sink	1	16 L/min
Velodrome Amenities	Dual Flush Toilet	2	11 L/min
	Handbasins	2	16 L/min
	Showers	2	20 L/min
	Taps	1	20 L/min
Canteen	Kitchen Sink	1	9 L/min
	Kitchen Sink	2	16 L/min
Soccer Amenities	Dual Flush Toilet	6	3/6 L/min
	Single Flush Toilet	4	11 L/min
	Urinals	1	15 L/min
	Handbasins	8	11 L/min
	Showers	4	20 L/min
	Taps	1	20 L/min
Amenities (Cnr M'lands & Burnett)	Handbasins	2	11 L/min
	Single Flush Toilet	3	3/6 L/min
	Urinals	1	15 L/min
	Taps	2	20 L/min
Other	Taps	15	15 L/min
	Bubblers	2	

**Site 8: Bathurst Street Park - Greystanes**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Amenities	Single Flush Toilet	12	11 L/min
	Urinals	3	15 L/min
	Handbasins	15	11 L/min
	Taps	4	20 L/min
	Showers	5	20 L/min

**Site 9: McCredie Park - Guildford**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Amenities	Single Flush Toilet	12	11 L/min
	Urinals	4	15 L/min
	Handbasins	8	11 L/min
	Taps	4	20 L/min
	Showers	8	20 L/min

**Site 10: Gipps Road Park - Greystanes**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Amenities	Single Flush Toilet	9	11 L/min
	Urinals	5	15 L/min
	Handbasins	7	11 L/min
	Showers	10	20 L/min
	Kitchen Sink	2	9 L/min
Other	Taps	6	20 L/min
	Bubblers	2	

**Site 11: Administration Building - Merrylands**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Level 1	Laboratory Sink	1	12 L/min
	Records Kitchen Sink	1	9 L/min
	Handbasins	2	11 L/min
	Dual Flush Toilets	2	3/6 L/min
	Showers	2	15 L/min
	Cleaners Sink	1	12 L/min
Level 2 Offices	Kitchen Sink	1	12 L/min
	Dual Flush Toilets	4	3/6 L/min
	Urinals	1	15 L/min
	Handbasins	4	11 L/min
Level 3 Offices	Kitchen Sink	3	12 L/min
	Dual Flush Toilets	6	3/6 L/min
	Urinals	1	15 L/min
	Handbasins	6	11 L/min
Foyer & Committee Rooms	Kitchen Sink	1	12 L/min
	Dual Flush Toilets	4	3/6 L/min
	Handbasins	4	11 L/min
GM/Mayor's Office	Kitchen Sink	1	9 L/min
	Handbasins	2	11 L/min
	Dual Flush Toilets	2	3/6 L/min
	Showers	2	15 L/min
Library	Dual Flush Toilet	5	3/6 L/min
	Handbasins	5	11 L/min
Other	Taps	5	15 L/min

**Site 12: Depot - Guildford**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Admin & Store	Kitchen Sink	1	9 L/min
	Tap	1	15 L/min
	Bubbler	1	
	External tap (with flow restrictor)	2	10 L/min
Carpenter's Bldg	External tap (with flow restrictor)	1	10 L/min
Kitchen	Kitchen Sink	3	12 L/min
	Water Cooler	1	
	Ice Maker	1	
Men's Toilets	Single Flush	6	11 L/min
	Urinals (automated)	2	15 L/min
	Handbasins	9	11 L/min
	Showers	4	20 L/min
Ladies Toilets	Dual Flush Toilet	2	3/6 L/min
	Handbasins	2	11 L/min
	Cleaners Tap	1	15 L/min
	Shower	1	15 L/min
Signwriter's workshop	Kitchen Sink	1	9 L/min
	External tap (with flow restrictor)	1	10 L/min
Fuel Bowsers	External tap (with flow restrictor)	1	10 L/min
Works Truck Store	External tap (with flow restrictor)	1	10 L/min
Truck Washbay	External tap (with flow restrictor)	5	10 L/min
Mechanics Workshop	External tap (with flow restrictor)	1	10 L/min
	Tap	1	15 L/min
	Water Cooler	1	
	Handbasins	6	11 L/min
	Washing Machine	1	
	Dual Flush Toilet	3	3/6 L/min
	Showers	1	20 L/min
	Showers	2	9 L/min
	Urinals	1	15 L/min
	Kitchen Sink	2	9 L/min
Garbage Depot	Tap	8	15 L/min
	Bubbler	1	
	Single Flush Toilet	2	11 L/min
	Dual Flush Toilet	1	3/6 L/min
	Urinals	1	15 L/min
	Handbasins	6	11 L/min

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
	Kitchen Sink	2	9 L/min
	Showers	4	20 L/min

**Site 13: Guildford West Children's Centre - Guildford West**

<b>FACILITY</b>	<b>FIXTURE</b>	<b>NO OF DEVICES</b>	<b>FLOW RATE</b>
Children's Centre	Single Flush Toilet	6	11 L/min
	Handbasins	9	11 L/min
	Laundry Sink	1	15 L/min
	Washing Machine	1	
	Shower	1	15 L/min
	Craft Prep Sinks	2	15 L/min
	Bottle Prep Sink	1	15 L/min
	Kitchen Sinks	2	11 L/min
	Dishwasher	1	
	OOSH Centre	Single Flush Toilet	4
Handbasins		3	11 L/min
Craft Prep Sink		1	15 L/min
Kitchen Sink		1	11 L/min
Dishwasher		1	
Other	Taps	5	20 L/min