




## **CONFIRMED MINUTES**

# **ENVIRONMENTAL ADVISORY COMMITTEE MEETING**

**7 SEPTEMBER 2021**

I certify that the minutes of the meeting of the Environmental Advisory Committee held on Tuesday, 7 September 2021 were confirmed on Wednesday, 17 November 2021.

  
\_\_\_\_\_  
Presiding Person

**CONFIRMED MINUTES  
ENVIRONMENTAL ADVISORY COMMITTEE MEETING  
7 SEPTEMBER 2021**

**ATTENTION/DISCLAIMER**

The purpose of this Committee Meeting is to discuss and make recommendations to Council about items appearing on the agenda and other matters for which the Committee is responsible. The Committee has no power to make any decisions which are binding on the Council or the Shire of Mundaring unless specific delegation of authority has been granted by Council. No person should rely on or act on the basis of any advice or information provided by a Member or Employee, or on the content of any discussion occurring, during the course of the Committee Meeting.

The Shire of Mundaring expressly disclaims liability for any loss or damage suffered by any person as a result of relying on or acting on the basis of any advice or information provided by a Member or Employee, or the content of any discussion occurring during the course of the Committee Meeting.

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**ENVIRONMENTAL ADVISORY COMMITTEE  
COMMITTEE ROOM, 7000 GREAT EASTERN HIGHWAY, MUNDARING**

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**1.0 OPENING PROCEDURES**

The Presiding Person declared the meeting open at 6.01pm.

Acknowledgement of Country

Shire of Mundaring respectfully acknowledges the Whadjuk people of the Noongar Nation, who are the traditional custodians of this land. We wish to acknowledge Elders past, present and emerging and respect their continuing culture and the contribution they make to the region.

**1.1 Announcement of Visitors**

Nil

**1.2 Attendance/Apologies**

<b>Members</b>	Cr Amy Collins Cr Simon Cuthbert Mr Darren Murphy Mr Tom Hogarth Ms Larissa Byrne Dr Stephan Millett	Central Ward East Ward
<b>Staff</b>	Angus Money Briony Moran Ruth Broz	Manager Planning and Environment Coordinator Environment and Sustainability Minute Secretary
<b>Apologies</b>	Ms Christine Groom Mr Mark Robertson	
<b>Absent</b>	Mr Robert Ragg Mr Michael Waite	
<b>Guests</b>	Nil	
<b>Members of the Public</b>	Nil	
<b>Members of the Press</b>	Nil	

**2.0 ANNOUNCEMENTS BY PRESIDING MEMBER WITHOUT DISCUSSION**

Nil

### **3.0 DECLARATION OF INTEREST**

#### **3.1 Declaration of Financial Interest and Proximity Interests**

Elected Members must disclose the nature of their interest in matters to be discussed at the meeting (*Part 5 Division 6 of the Local Government Act 1995*).

Employees must disclose the nature of their interest in reports or advice when giving the report or advice to the meeting (*Sections 5.70 and 5.71 of the Local Government Act 1995*).

Nil

#### **3.2 Declaration of Interest Affecting Impartiality**

An Elected Member or an employee who has an interest in a matter to be discussed at the meeting must disclose that interest (*Shire of Mundaring Code of Conduct, Local Government (Admin) Reg. 34C*).

Nil

### **4.0 CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS**

<b>COMMITTEE DECISION RECOMMENDATION</b>		<b>EAC1.09.21</b>	
Moved by	Dr Millett	Seconded by	Ms Byrne

That the Minutes of the Environmental Advisory Committee Meeting held 4 May 2021 be confirmed.

#### **CARRIED 6/0**

**For:** Mr Murphy, Mr Hogarth, Cr Collins, Ms Byrne, Dr Millett and Cr Cuthbert

**Against:** Nil

### **5.0 PRESENTATIONS**

Nil

## 6.0 REPORTS OF EMPLOYEES

### 6.1 Adoption of Waterwise Council Action Plan

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<b>File Code</b>	GV.MTG 6/7
<b>Author</b>	Briony Moran, Coordinator Environment and Sustainability
<b>Senior Employee</b>	Mark Luzi, Director Statutory Services
<b>Disclosure of Any Interest</b>	Nil
<b>Attachments</b>	1. Waterwise Council Action Plan

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#### SUMMARY

Council adopted a five-year Water Efficiency Action Plan in September 2016 (**C9.09.16**). A new water plan is now required in order to maintain Waterwise Council accreditation. This report recommends that the Shire continues to participate in the established Waterwise Council program and adopts a Waterwise Council Action Plan for the next five years.

#### BACKGROUND

Water Corporation and the then Department of Water launched the WA Waterwise Council Program in 2009, to encourage local governments to improve water use efficiency in their facilities and their communities. This followed on from the Shire of Mundaring participation in the International Council for Local Environmental Initiatives (ICLEI) Water Campaign, which had already achieved significant reductions in water use across Shire facilities.

To be endorsed as a Waterwise Council, a local government must fulfil the following steps:

**Criteria 1:** Sign a Memorandum of Understanding to participate in the Waterwise Council Program.

**Criteria 2:** Review water consumption and create a Waterwise Council Action Plan for potable and non-potable water sources for all local government operations and the community.

**Criteria 3:** Ensure appropriate staff complete online waterwise training available from the Water Corporation website.

**Criteria 4:** Progress towards full compliance with groundwater licence conditions including metering regulations and no infringements of water usage issued in the past 12 months.

**Criteria 5:** Report annually to retain endorsement (optional recognition scheme).

There is a standard set of actions required to maintain Waterwise Council status. If enough additional (optional) actions are completed, this may be recognised as achievement of 'Gold' or 'Platinum' Waterwise Council status.

The Shire of Mundaring adopted a five-year Water Efficiency Action Plan in 2016, and has completed annual reporting to maintain Waterwise Council accreditation, with assistance

from the Eastern Metropolitan Regional Council (EMRC). The Shire has been recognised as a Gold Waterwise Council in 2019, 2020 and 2021.

A new water plan is required for the next five years, and the set of standard Waterwise Council actions has been updated. Specific criteria have been set to achieve Gold Waterwise Council status, including a requirement for actions that extend beyond water efficiency and relate to the more holistic Water Sensitive Cities framework.

A draft Waterwise Council Action Plan (attached) has been prepared based on the updated Waterwise Council template, with significant assistance from the EMRC, and input from the Shire's cross-organisational Water Team. Once adopted by Council, this plan will supersede the Water Efficiency Action Plan adopted in September 2016.

## **STATUTORY / LEGAL IMPLICATIONS**

Nil

## **POLICY IMPLICATIONS**

Maintaining the Shire's Waterwise Council status and working to improve water efficiency and the health of waterways are consistent with a range of principles in the Shire's Environmental Sustainability Policy.

## **FINANCIAL IMPLICATIONS**

EMRC will continue to assist the Shire in implementing and reporting on Waterwise Council initiatives as part of the regional sustainability program. The 2021/2022 budget approved by Council includes \$24,000 for water use initiatives, which includes the Shire's annual contribution to the EMRC water program.

Specific initiatives may be undertaken using staff time, recurring budgets for programs or facility maintenance, or routine upgrades. Grant funding may be available for certain projects or initiatives, or business cases may be prepared for significant proposals requiring additional budget allocations in certain years.

## **STRATEGIC IMPLICATIONS**

Mundaring Strategic Community Plan 2020 - 2030

Priority 2 - Natural Environment

Objective 2.2 – Water management that is efficient and sustainable

Strategy 2.2.1 – Maintain waterwise practices to minimise mains and ground water consumption

Strategy 2.2.2 – Encourage community water efficiency and water sensitive design

Strategy 2.2.3 – Manage watercourses appropriately to maintain habitat values

The draft Waterwise Vision (below) reflects the objectives and strategies listed within the Strategic Community Plan 2020-2030:

Water management at Shire facilities is efficient and sustainable;

Watercourses are managed appropriately to maintain habitat values; and

Our community manages water sustainably.

## **SUSTAINABILITY IMPLICATIONS**

Improving water efficiency, community connections to water and the health of waterways across the Shire has social and environmental benefits.

## RISK IMPLICATIONS

<b>Risk:</b> Reputational – loss of Waterwise Council status		
<b>Likelihood</b>	<b>Consequence</b>	<b>Rating</b>
Possible	Minor	Moderate
<b>Action / Strategy</b>		
Continue participation in the Waterwise Council program with an updated Waterwise Council Action Plan		

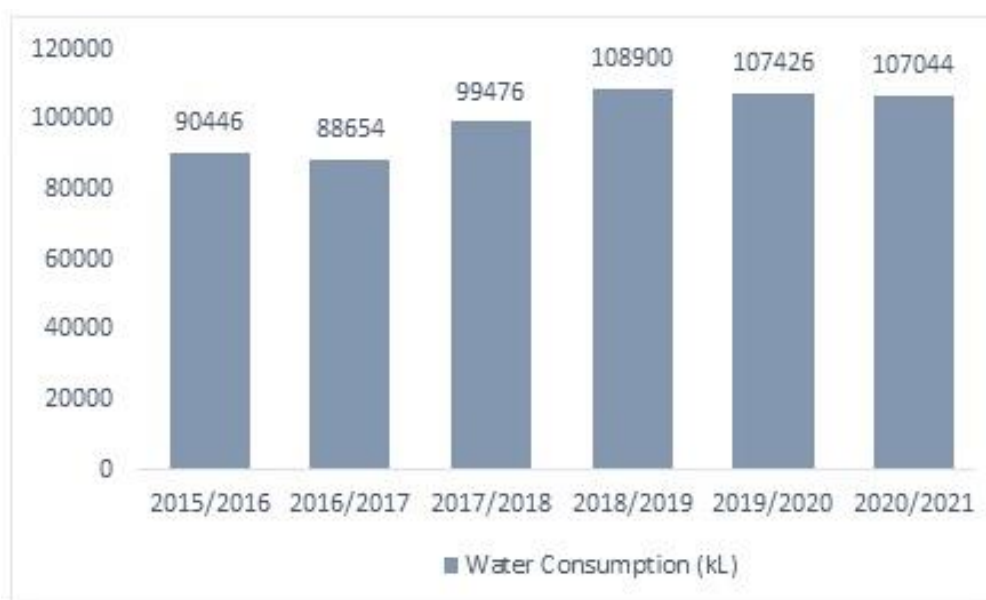
## EXTERNAL CONSULTATION

Continued participation in the Waterwise Council program is consistent with the community expectations expressed during development of the Strategic Community Plan 2020-2030.

## COMMENT

The Water Efficiency Action Plan adopted by Council in 2016 included a target of reducing corporate water use across Shire facilities by a further 10%, from the 2014/2015 level (i.e. 90,446kL). As shown in the Shire water use chart below (provided by EMRC), this target has not been achieved, with water use actually increasing over the last five years. It should be noted that not all Shire irrigation bores are metered, and in some cases an apparent increase in water use actually reflects a change in source from groundwater to more scheme water.

Shire water use (kL) since 2015/2016:



EMRC and Water Corporation staff have advised that many WA Councils have observed a similar pattern, with some common contributing factors being:

- Less opportunities for significant water savings compared to the early years of the ICLEI Water Campaign and Waterwise Council programs;



- The addition of new public facilities and local governments becoming responsible for additional areas of public open space result in increased water use; and
- Scheme water use for irrigation has increased due to less consistent rainfall, including watering for more of the year as well as a lack of recharge of groundwater (reducing the amount available for bore irrigation).

The Shire's Water Team discussed options for an achievable target for the new plan, given that actual reductions in corporate water use may not be realistic in the context of a drying climate and additions to public open space. Additions to sport and recreation facilities, and particularly the creation of new ovals, will add to overall water use.

Turfed areas and sports ovals in particular require significant irrigation to maintain an acceptable playing surface. Options to reduce water requirements for ovals and their surrounds will continue to be investigated (artificial turf may be explored further but it may not be appropriate in many locations due to potential for high surface temperatures contributing to urban heat island effects, or ignition from embers in bushfire prone areas).

The timing of open space additions is not certain and will depend on State Government approvals of Structure Plans and subdivisions, as well as developers acting on those approvals. Although the total additions by 2026 are unclear, some increase in water demand from new public open space and community facilities is expected within the next five years. The Shire can attempt to offset this through water efficiency gains at existing facilities and green spaces. Therefore the recommended five-year target for Shire water use is to maintain corporate water consumption at or below the 2018/2019 level of 108,900kL. The corporate water management goals proposed are:

- Corporate water consumption is maintained at or below 2018/19 level of 108,900kL; and
- Water efficiency is a key consideration in design, construction, maintenance or renovation of Shire facilities.

The 2016 plan included a community water efficiency goal to reduce community water consumption to below 100kL per capita by 2021. Community use is currently below 100kL per capita, however it is expected that water use on larger lots in particular may increase again due to the impacts of a changing, drying climate. In bushfire prone areas, the careful use of water for lawn and landscaping in asset protection zones can help to reduce the risk of house loss during bushfires. Therefore the target recommended for community water efficiency is to maintain community water use under 100kL per capita by 2026. The community water management goals identified are:

- Encourage residents to adopt waterwise practices to keep water use below 100kL per person per year; and
- Provide support for residents, schools and community groups to improve water quality and habitat values of creeks and catchment areas.

Water Corporation recognises that factors like climate change will continue to affect water use. Local governments that continue to complete actions under their Waterwise Council Action Plans can continue to be recognised as Waterwise Councils even if they cannot meet the specific kilolitre targets listed within those plans.

## VOTING REQUIREMENT

Simple Majority

### COMMITTEE RECOMMENDATION

That Council continues to participate in the established Waterwise Council program and adopts the attached Waterwise Council Action Plan 2021.

### ***Preamble to Committee Recommendation***

*Discussion ensued on this subject and it was suggested that a Part 2 be added to the recommendation regarding reviewing and rebaselining water management and water efficiency within the Shire.*

<b>MOTION</b>		<b>EAC2.09.21</b>	
<b>COMMITTEE RECOMMENDATION</b>			
Moved by	Mr Murphy	Seconded by	Mr Hogarth
That Council:			
1. continues to participate in the established Waterwise Council program and adopts the attached Waterwise Council Action Plan 2021; and			
2. request the CEO to review and rebaseline water management and efficiency within the Shire with the view to improving the 2026 Waterwise Council Action Plan			
<b>CARRIED 6/0</b>			
<b>For:</b>	Mr Murphy, Mr Hogarth, Cr Collins, Ms Byrne, Dr Millett and Cr Cuthbert		
<b>Against:</b>	Nil		

The Manager Planning and Environment thanked the outgoing committee for all their hard work and input.

**7.15pm** *Manager Planning and Environment left the meeting and did not return.*

# Waterwise Council Action Plan

Shire of Mundaring  
Draft - 2021





The Waterwise Council Program supports the State Government's vision to create a Waterwise Perth and waterwise communities, recognising that:

*A waterwise Perth is cool, liveable, green and sustainable, a place where people want to live, work and spend their time. It is a city where communities care about and value water, while making best use of its various sources (groundwater, surface water, stormwater, seawater and wastewater).*

Protecting and enhancing catchments provides healthy natural environments, supporting a range of social, ecological and economic benefits.





## Introduction

It has been over 10 years since the Waterwise Council Program was launched by Water Corporation and the Department of Water and Environmental Regulation. The Program was developed to build a cooperative working relationship with local governments to improve water use efficiency in local governments and their communities.

Since the development of the first Water Efficiency Action Plan in 2016, Waterwise Councils have achieved a number of amazing and innovative initiatives to reduce water usage and strive towards developing waterwise communities.

## Criteria to become a Waterwise Council

The Waterwise Council (WWC) Program is free to all local government authorities (LGAs) in Western Australia to join. To be endorsed as a Waterwise Council, a local government must fulfil the following steps:

**Criteria 1:** Sign a Memorandum of Understanding to participate in the Waterwise Council Program.

**Criteria 2:** Review water consumption and create a Waterwise Council Action Plan\* for potable and non-potable water sources for all local government operations and the community.

**Criteria 3:** Ensure appropriate staff complete online waterwise training at <https://www.watercorporation.com.au/Help-and-advice/Business-customers>

**Criteria 4:** Progress towards full compliance with groundwater licence conditions including metering regulations and no infringements of water usage issued in the past 12 months.

**Criteria 5:** Report annually to retain endorsement (optional recognition scheme)

*\* Standard actions for Waterwise Council Action Plans were revised to reflect the broader aim of encouraging Water Sensitive Cities, rather than water efficiency alone.*

## Objectives

The objectives of the Waterwise Council Action Plan are to:

- Assess current water management activities across council operations and the community;
- Identify opportunities to save water;
- Set goals to improve water management outcomes;
- Prepare an action plan and implement water actions to progress towards your targets;
- Provide a process for annual reporting on implementation of water actions;
- Work towards creating waterwise communities beyond water efficiency (recognition scheme)

This plan will be valid for a period of **5 years** and forms the basis of annual reporting requirements.

## Methodology

- Waterwise journey
- Water use inventory
- Develop water goals and targets
- Table of endorsement actions
- Recognition Scheme





## Contact Details

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## Water Team

Name	Position/Department
Briony Moran	Coordinator Environment & Sustainability
Mark Crowther	Coordinator Parks & Environmental Operations
Eric Gough	Supervisor Turf & Reticulation
David O'Brien	Supervisor Environment & Horticulture
Kathryn Johnson	Natural Areas Project Officer
Steven Trlin	Manager Building & Health
Kirk Kitchin	Manager Recreation & Leisure
Angus Money	Manager Planning & Environment
Liam Noonan	Manager Infrastructure Design
Stewart Winfield	Coordinator Community Facilities
Chris Blankley	Co-ordinator Aquatic Facilities
Bruce McLennan	Building Maintenance Officer
Jolene Wallington	Environmental Officer





## Shire of Mundaring Waterwise Journey

### Waterwise Council Milestones

Milestone	Reporting Year
Endorsement	2015-2020
Gold	2018-2020
Platinum (Council of the Year)	N/A
10 Year Waterwise Council	N/A

### Main Strategic Documents

Below are some key water related strategies and plans that are reference documents for the Shire's waterwise journey so far. These include related policies, local laws, management plans and strategies that relate to creating waterwise communities.

Table 1: Summary of related strategic documents

Main Strategic Document	Link	Notes
Strategic Community Plan 2020-2030	<a href="https://www.mundaring.wa.gov.au/AboutCouncil/StrategicPlans/Documents/Plans/Strategic%20Community%20Plan.pdf">https://www.mundaring.wa.gov.au/AboutCouncil/StrategicPlans/Documents/Plans/Strategic%20Community%20Plan.pdf</a>	The plan identified environmental and water management as a main focus. This includes goals such as reducing community water usage, improving drainage systems and maintaining good waterwise practices.
Environmental Sustainability Policy	<a href="https://www.mundaring.wa.gov.au/AboutCouncil/Policieslocallaws/Council%20Policies/OR-23%20-%20Environmental%20Sustainability%20.pdf#search=Environmental%20Sustainability%20Policy">https://www.mundaring.wa.gov.au/AboutCouncil/Policieslocallaws/Council%20Policies/OR-23%20-%20Environmental%20Sustainability%20.pdf#search=Environmental%20Sustainability%20Policy</a>	This policy consolidates the Shire's strategic position on key environmental issues and provides a basis for future environmental initiatives including water conservation initiatives.
Environmental Management Plan	<a href="http://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Policies/EMRC-141541%20-%20Report%20-%20Shire%20of%20Mundaring%20-%20Environment%20Management%20Plan%20-%202010%20February%202012%20-%20Final%20Draft.pdf">www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Policies/EMRC-141541%20-%20Report%20-%20Shire%20of%20Mundaring%20-%20Environment%20Management%20Plan%20-%202010%20February%202012%20-%20Final%20Draft.pdf</a>	This plan outlines the shire's environmental strategies with six key focus areas, Atmosphere and climate change, biodiversity, heritage, human impact, land and water.







Local Biodiversity Strategy	<a href="https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Local%20Biodiversity%20Strategy%20FINAL%20PDF.pdf">https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Local%20Biodiversity%20Strategy%20FINAL%20PDF.pdf</a>	The focus of this strategy is to help guide the protection and management of bushland, forests, watercourses, granite outcrops and other natural areas to maintain ecosystems and biological diversity.
Water Sensitive Cities Index Report 2018	<a href="https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Water%20Sensitive%20Cities%20Index%20Report%202018.pdf#search=Water%20Sensitive%20Cities%20Index%20Report%202018">https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Water%20Sensitive%20Cities%20Index%20Report%202018.pdf#search=Water%20Sensitive%20Cities%20Index%20Report%202018</a>	This report assesses the Shire's development towards becoming a water sensitive city. The report covers 7 goals and assesses 34 indicators that represent important attributes of a Water Sensitive City.
Sustainable Living Guidelines	<a href="https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Sustainable%20Living%20Guide.pdf#search=Sustainability%20Living%20Guidelines">https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Sustainable%20Living%20Guide.pdf#search=Sustainability%20Living%20Guidelines</a>	This document provides guidelines for the community relating sustainable practices including being waterwise.
Local Climate Change Adaptation Action Plan	<a href="https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/5232_LCCA_AP_brochure_Mundaring.pdf">https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/5232_LCCA_AP_brochure_Mundaring.pdf</a>	Comprehensive region specific strategic adaptation planning
Recreation Facilities Informing Strategy	<a href="https://www.mundaring.wa.gov.au/Recreationleisure/Documents/Shire%20of%20Mundaring%20Recreation%20Facilities%20Informing%20Strategy%20-%20April%202019.pdf#search=recreation%20facilities%20informing%20strategy">https://www.mundaring.wa.gov.au/Recreationleisure/Documents/Shire%20of%20Mundaring%20Recreation%20Facilities%20Informing%20Strategy%20-%20April%202019.pdf#search=recreation%20facilities%20informing%20strategy</a>	Includes the Shire's commitment to waterwise practices within recreational facilities.

### Waterwise Achievements

Listed below are some of the Shire's waterwise achievements:

- Bilgoman Aquatic Centre Waterwise Accredited since 2015
- Annual Native Seedlings Program 'Seedlings for Landcare' supports catchment rehabilitation by landcare groups, schools and rural landowners
- Waterwise and Firewise native plant demonstration garden located at Sculpture Park
- Extensive reserve mapping and ecological assessments were undertaken for priority reserves in 2017-2018
- Water Sensitive Cities Index Benchmarking completed
- Developed and adopted Street Tree Policy and Environmental Sustainability Policy







- Established native garden to reduce water use around Bilgoman Aquatic centre
- Purchasing Policy updated to refer to sustainability purchasing principles, including water efficiency as a key consideration in purchasing decisions
- 2019 Local Government Professionals 'Environmental Leadership and Sustainability Award'
- Broz Park Wetland Restoration Project 2020-2021





## Water Use Inventory

Known corporate potable and non-potable water consumption data for the previous financial year is shown in Tables 2 and 3 below. Not all bores are required to be licenced and metered.

**Table 2: Summary of corporate total water consumption over time from potable and non-potable water sources**

Water source	2015/2016 (kL)	2016/2017 (kL)	2017/2018 (kL)	2018/2019 (kL)	2019/2020 (kL)
Potable water	90,446	88,654	99,476	108,900	107,426
Non-potable, licensed groundwater	93,891	76,312	73,457	75,237	111,450
Non-potable alternate water source (Recycled water/stormwater etc.)	N/A	N/A	N/A	N/A	N/A
Total water consumption	184,337	164,966	172,933	184,137	218,876

**Table 3: Top 5 potable and top 5 non-potable water consuming assets**

Account #	Common name	Water use source	2018/19 (kL)	2019/20 (kL)	Notes*
Top 5 potable sites					
9004 600 055	Boya Community Hub and Oval	Scheme	12,879	11,889	
9004 658 548	Parkerville Oval	Scheme	16,377	9,973	Bore malfunction increased scheme water consumption in 2018/19- repaired
9004 697 985	Chidlow Oval	Scheme	7,774	9,200	Extra reticulation for oval extension
9004 684 543	Mundaring Arena and Recreation Ground	Scheme	6,644	8,810	Separate meters on site but under one account
9004 646 782	Glen Forrest Hall and Oval	Scheme	5,711	7,986	Reticulation leaks from community damage, prevention bollards installed.
Top 5 non-potable sites					
GLW 158261	Brown Park	Groundwater	37,789	47,447	Slow leak under paving



GLW 158261	Collier Park	Groundwater	10,758	9,598	
GLW 181379	Broz Park	Groundwater	N/A	8,480	Toilet block addition
GLW 181379	Helena Valley Reserve Entrance	Groundwater	N/A	7,048	181379 new licence
GLW 181379	Grundy Park	Groundwater	N/A	4,520	181379 new licence

**Table 4: Summary of corporate licences to take groundwater**

Licence #	Current Licensed allocation (kL)	Actual metered abstraction 2017/2018 (kL)	Actual metered abstraction 2018/2019 (kL)	Actual metered abstraction 2019/2020 (kL)	Notes*
GWL 111079	5,550	52	883	1,096	
GWL 158261	100,500	78,375	72,103	88,476	
GWL181379	23,250	N/A	1,284	4,746	
GLW 157266	4,800	N/A	N/A	26,141	New licence

### Community water consumption

Annual community water use is the amount of water currently consumed by the community. Water Corporation provides information on scheme water use. Note that not all bores are required to be metered, so data for bore water is not as accurate or comprehensive.

This information helps to recognise the total water cycle to progress towards a waterwise city and can assist with identifying trends and setting targets.

**Table 5: Community potable water use sectors and water consumption over time**

Water use source	2015/2016 (kL)	2016/2017 (kL)	2017/2018 (kL)	2018/2019 (kL)	2019/2020 (kL)
Residential	82,932	79,693	86,219	87,924	88,674
Commercial	4,446,593	3,996,595	4,180,024	4,262,275	4,484,284
Education	148,238	120,408	124,204	144,092	138,366
Total water use	4,730,913	4,271,363	4,243,081	4,350,684	4,711,324



**Table 6: Community non-potable water allocation over time**

Water use source	2015/2016 (kL)	2016/2017 (kL)	2017/2018 (kL)	2018/2019 (kL)	2019/2020 (kL)
Garden bores	298,420	298,420	298,420	298,420	298,420
Licensed, self-supply groundwater users for example schools, sports clubs, industry, construction and horticulture	130,590	130,590	176,109	176,109	176,109
Total water use (kL)	429,101	429,010	474,529	474,529	474,529





## Waterwise Goals

Waterwise urban areas can benefit from sustainable local water management and urban greening while creating resilient and liveable neighbourhoods. Waterwise rural areas can maintain catchment health and habitat connections.

## Waterwise Vision

The Waterwise Vision below is based on the objectives of the Shire's Strategic Community Plan 2020-2030:

- Water management at Shire facilities is efficient and sustainable;
- Watercourses are managed appropriately to maintain habitat values; and
- Our community manages water sustainably.

## Corporate Water Management

The addition of new facilities and areas of Public Open Space over the next five years will result in increased corporate water use. The Shire will seek to offset this by improving water efficiency in existing parks and facilities, whilst maintaining recreational opportunities and landscaping valued by the community.

The Shire's specific corporate water management goals are:

- Corporate water consumption is maintained at or below 2018/19 level of 108900 kL; and
- Water efficiency is a key consideration in design, construction, maintenance or renovation of Shire facilities.

## Community Water Management

Household water use is affected by a range of factors, including a drying climate. Water use for appropriate landscaping around houses can contribute to safer asset protection zones in bushfire prone areas, requiring the Shire to maintain a balanced waterwise and firewise approach.

The Shire's specific community water management goals are:

- Encourage residents to adopt waterwise practices to keep water use below 100kL per person per year; and
- Provide support for residents, schools and community groups to improve water quality and habitat values of creeks and catchment areas.

The Waterwise Endorsement Action Table (Table 8) lists the set of standard Waterwise Council Corporate and Community actions, with an indication of which services within the Shire are involved and progress to date. Annual progress reporting on these is required to maintain the Shire's Waterwise Council status. Additional actions would be required to achieve Gold Waterwise Council status, and these are listed in Table 9 and Table 10.





## Waterwise Endorsement Action Table

### Waterwise Endorsement Action Table

Table 8: Waterwise Endorsement Action Table

Water Area	Corporate Water Actions	Status (Complete/ In Progress/ To be Completed/ Ongoing)	Department Responsible	Notes
<b>All water sources</b>				
Facilities	Establish a Water Audit Program or similar to closely monitor water use, continually improve water efficiency and identify how to reduce water demand of your top water consuming assets. Demonstrate your plans to implement viable recommendations from your water audits over time.	Ongoing	Water Team	Water Team Meeting Notes 23/10/2020 Mundaring - Sportsground Condition Assessment - Sports Turf Technology Mundaring - Irrigation Assessments - February 2020
	Implement maintenance processes to detect, report and repair leaks within all council assets.	Ongoing	Buildings Assets	Leak detection is included during inspections and leaks are reported or repaired. Water use and anomalies continue to be monitored using Azility.
Monitoring	Implement tracking and monitoring of assets' water use over time using industry standards for benchmarking top water consuming sites.	Ongoing	Water Team	Continued use of Azility (or equivalent service) to track and monitor water use, and annual water data analysis and snapshot produced by EMRC.
Education	Establish a Water Management Team to foster a culture of Waterwise Champions within the council including providing behaviour change programs, workshops or initiatives that will encourage waterwise practices at the office and at home.	Ongoing	Environment	The Water Team is established and membership was recently revised.



## Waterwise Endorsement Action Table

Irrigation	Establish and/or maintain a baseline water budget for every irrigated public open space asset. Demonstrate how you monitor and adjust the baseline water budget in response to weather conditions and or landscape planting changes.	Ongoing	Parks	Groundwater allocation from DWER provides a baseline
	Provide evidence that demonstrates irrigation systems are performing at best practice and are audited to identify poorly performing fixtures or schedules.	Ongoing	Parks	Mundaring - Irrigation Assessments - February 2020
Landscaping	Landscaping policies and/or plans to include low water use plants, waterwise mulch, hydrozoning and soil amendments.	Ongoing	Water Team	All new landscaping installed by Shire staff follows these practices
WSUD	Use local planning framework to implement water sensitive urban design in new land developments and infill developments.	Completed	Planning	Principles of Water Sensitive Urban Design for residential subdivision and development are incorporated directly into the Local Planning Scheme
Quality	Proactively reduce pollution and litter near local waterways through community groups, council programs or similar.	Ongoing	Operations; Environment	Shire staff and volunteer groups remove litter from Shire reserves
<b>Potable water sources</b>				
Facilities	Procurement policies incorporate internal requirements to install better than the minimum Building Code of Australia WELS ratings for water efficiency for water fixtures,	Ongoing	Building Assets	The Shire's Purchasing Policy now includes sustainability purchasing principles, requiring water efficiency to be a key consideration in purchasing decisions.





## Waterwise Endorsement Action Table

	fittings and appliances for all new buildings AND external requirements to use Smart Approved WaterMarked and Waterwise Approved products and services where possible.			Water efficiency requirements for fittings and fixtures are written into tender documents and requests for quotation for buildings.
Monitoring	Scheme water meters (and any sub meters) are read on a regular basis and recorded. Usage anomalies are investigated and leaks repaired in a timely manner.	Ongoing	Parks; Recreation and Leisure	Flow meters are being investigated to provide more detailed water use for specific sites
<b>Non-potable water sources</b>				
Monitoring	Progress towards metering the take of water from all licenced groundwater bores using correctly installed and approved water meters.	Ongoing	Parks	Licenced groundwater bores are monitored and use reported as required
	Develop a process to record your metered water take for each licensed groundwater bore at the end of each calendar month and submit recordings via <a href="#">Water Online</a> to manage all of your water licensing and metering requirements.	Ongoing	Parks	Bore use reporting will transition to Water Online system
	Maintain all meters in good working order and notify the DWER as soon as possible of detecting a malfunction of the water meter.	Ongoing	Parks	Malfunctions are reported when noted





## Waterwise Endorsement Action Table

Water Area	Community Water Actions	Status (Complete/ In Progress/ To be Completed/ Ongoing)	Department Responsible	Notes
Education - efficiency	Engage with household and business ratepayers to promote water efficiency, waterwise gardens and how to be a responsible garden bore owner.	Ongoing	Environment	<a href="https://www.mundaring.wa.gov.au/Resident Services/Environment/Documents/Sustainable%20Living%20Guide.pdf">https://www.mundaring.wa.gov.au/Resident Services/Environment/Documents/Sustainable%20Living%20Guide.pdf</a>
	Provide information on the installation and local regulation of non-potable water supply (e.g. grey water systems and rainwater tanks)	Ongoing	Environment	<a href="https://www.mundaring.wa.gov.au/Resident Services/Environment/Documents/Sustainable%20Living%20Guide.pdf">https://www.mundaring.wa.gov.au/Resident Services/Environment/Documents/Sustainable%20Living%20Guide.pdf</a>
	Engage with local schools on water efficiency and sustainability programs, including encouraging schools to participate in the <u>Waterwise Schools Program</u> .	Ongoing	Environment	<a href="https://www.mundaring.wa.gov.au/Resident Services/Environment/Documents/Environmental%20Education%20Directory%202020.pdf">https://www.mundaring.wa.gov.au/Resident Services/Environment/Documents/Environmental%20Education%20Directory%202020.pdf</a>
Education – catchment health	Promote community connectivity to water through waterwise events at local lakes, rivers or natural areas adjacent to watercourses.	Ongoing	Parks; Environment	<a href="https://www.mundaring.wa.gov.au/News/Pages/Broz%20Park%20Wetland%20Restoration%20Project%20announced.aspx">https://www.mundaring.wa.gov.au/News/Pages/Broz%20Park%20Wetland%20Restoration%20Project%20announced.aspx</a>



## Waterwise Recognition Scheme

### Criteria for Gold Waterwise Council Status

As part of the Waterwise Council Program, local governments may seek to be endorsed as a Gold Waterwise Council. This recognises a higher level of achievement and is based on meeting or exceeding set criteria.

Shire of Mundaring has previously attained Gold Waterwise Council Status. To maintain this, the Shire would be required to complete three compulsory or 'standard' actions, plus make progress on five additional actions that contribute towards Water Sensitive City goals.

The actions that **must be completed** to achieve or maintain Gold endorsement are:

1. Have all **Aquatic Centres** endorsed as a [Waterwise Aquatic Centre](#);
2. Have a Waterwise **Verge Policy or Guideline** in line with Water Corporation's [Waterwise Verge Best Practice Guidelines](#); and
3. Have an established cross-functional **Water Management Team**.

**Table 9: Updates on compulsory Gold waterwise actions**

Gold Compulsory Action	Update
All Aquatic Centres endorsed as Waterwise	Bilgoman Aquatic Centre achieved Waterwise re-endorsement <a href="https://www.mundaring.wa.gov.au/News/Pages/Second%20year%20of%20gold%20for%20Shire%20in%20Waterwise%20Program.aspx">https://www.mundaring.wa.gov.au/News/Pages/Second%20year%20of%20gold%20for%20Shire%20in%20Waterwise%20Program.aspx</a>
Waterwise Verge Policy or Guidelines	Waterwise verge guidelines were discussed at Water Team meeting in August 2021 and a draft is being prepared. These Guidelines will build on native vegetation measures within Street Trees and Roadside Conservation Policies adopted in 2017 and 2018. <a href="https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Bush%20Verges%20Brochure%20-%20online%20PDF%20version%20-%20Feb%202019.pdf#search=verge%20policy">https://www.mundaring.wa.gov.au/ResidentServices/Environment/Documents/Bush%20Verges%20Brochure%20-%20online%20PDF%20version%20-%20Feb%202019.pdf#search=verge%20policy</a>
Established cross-functional Water Management Team	Water Team continues to hold meetings to discuss water performance, actions and planned improvements.

Gold actions will need to demonstrate a willingness to strengthen governance arrangements, build community capital, and invest in multifunctional adaptive infrastructure. These actions and others to support high quality and connected open spaces, protecting and enhancing the ecological values of urban landscapes, and recreating a more natural water cycle will assist the Shire to progress beyond water efficiency and towards a waterwise community.



## Waterwise Recognition Scheme

### Water Sensitive Cities Goal Areas

The Australian [Cooperative Research Centre for Water Sensitive Cities](#) developed the [Waterwise Sensitive Cities Index](#) to benchmark cities and regions against a range of goals and indicators. These indicators show where cities and regions currently are on the journey to becoming a Water Sensitive City (WSC).

To maintain Gold Waterwise Council endorsement the Shire would also need to report progress on five or more of the optional actions listed in Table 10, including at least one action addressing each of these WSC goals:

1. Improve Productivity and Resource Efficiency;
2. Increase Community Capital; and
3. Improve Ecological Health.

See Figure 1 for an overview of the Water Sensitive Cities goals and indicators. For more information on the development of this framework, visit <https://watersensitivecities.org.au/> or contact [WEpartnership@watercorporation.com.au](mailto:WEpartnership@watercorporation.com.au).

## Waterwise Recognition Scheme



**Figure 1: Water Sensitive Cities Goal Areas and Indicators**

Ensure good water sensitive governance	Increase community capital	Achieve equity of essential services	Improve productivity & resource efficiency	Improve ecological health	Ensure quality urban space	Promote adaptive infrastructure
Knowledge, skills and organisational capacity	Water literacy	Equitable access to safe and secure water supply	Maximised resource recovery	Healthy and biodiverse habitat	Activating connected green - blue space	Diversify self-sufficient fit-for-purpose water supply
Water is key element in city planning and design	Connection with water	Equitable access to safe and reliable sanitation	Low GHG emission in water sector	Surface water quality and flows	Urban elements functioning to mitigate heat impacts	Multi-functional water infrastructure
Cross-sector institutional arrangements and processes	Shared ownership, management & responsibility	Equitable access to flood protection	Water-related business opportunities	Groundwater quality and replenishment	Vegetation coverage	Integration and intelligent control
Public engagement, participation and transparency	Community preparedness and response to extreme events	Equitable and affordable access to amenity values of water-related assets	Low end-user potable water demand	Protect existing areas of high ecological value		Robust infrastructure
Leadership, long-term vision and commitment	Indigenous involvement in water planning		Benefits across other sectors			Infrastructure and ownership at multiple scales
Water resourcing and funding to deliver broad societal value						Adequate maintenance
Equitable representation of perspectives						



## Waterwise Recognition Scheme

### Gold Waterwise Council Action Table

Optional, additional Gold Waterwise Council actions have been identified for each Water Sensitive Cities goal area.

**Table 10: Gold Waterwise Council – Water Sensitive Cities Action Table**

WSC goal	2020 – 2025 Gold Actions	Status (Complete/ Ongoing/ To be Completed)	Department Responsible	Update (including evidence if available)
Good Water Sensitive Governance	Support relevant Parks staff to complete <a href="#">Irrigation Australia's Irrigation Efficiency Course</a>	Ongoing	Parks	Key staff have completed irrigation efficiency training. The irrigation course forms part of the Irrigation Trade Qualification.
Good Water Sensitive Governance	Encourage local developments and infill projects to be accredited under Green Star Developments, EnviroDevelopment, One Planet Living or Living Community Building Challenge. All of these programs allow a development to become endorsed as a <a href="#">Waterwise Development</a> .	To be completed	Planning	New action recommended by Water Corporation
Increase Community Capital	Increase community capacity to improve water quality and habitat values of creeks and catchments, by providing information, advice, and appropriate native plant species	Ongoing	Parks; Environment	Information is made available through free <a href="#">environmental publications</a> (booklets and information sheets) as well as <a href="#">talks and workshops</a> , and short <a href="#">videos</a> . Landcare and revegetation efforts are supported by free Seedlings for Landcare (for schools, reserves and rural zoned land).
Increase Community Capital	Increase community capacity to understand and act to minimise erosion and sediment runoff into watercourses	Ongoing	Environment	Erosion and sediment control <a href="#">information sheet</a> prepared in 2021 with input from Department of Primary Industries and Regional Development. <a href="#">Creekline Restoration Workshop</a> held May 2021





## Waterwise Recognition Scheme

Achieve equity of essential services	Provide equitable access to flood risk information and protection measures	Ongoing	Planning; Infrastructure	Flood prone areas are mapped and specific provisions made for development via a Special Control Area in Part 6 of <a href="#">Local Planning Scheme No. 4</a> . Stormwater drainage improvements and maintenance are completed each year. Participation in regional EMRC Flood Awareness community education campaign - <a href="#">Understanding and managing flood risk</a>
Improve Productivity & Resource Efficiency	Investigate options to require or encourage waterwise elements in display homes and landscaping	To be completed	Environment; Planning	'Display Home/Land Sales Centre' has been listed as a defined land use requiring development approval under <a href="#">Local Planning Scheme No. 4</a>
Improve Ecological Health	Participate in development of water sensitive urban design guidelines appropriate for managing stormwater and flows into natural watercourses in the Perth Hills	In progress	Water Team	Initial Shire staff WSUD issues workshop with New Water Ways held on 26 May, followed by meeting with staff from other Perth Hills local governments at EMRC on 18 June 2021.
Improve Ecological Health	Work together with local residents, Friends Groups and Catchment Groups to improve freshwater ecosystems	In progress	Parks; Environment	Natural Areas Project Officer appointed in July 2021 to assist volunteer groups with grant applications, project planning and implementation. Free Seedlings for Landcare program includes riparian species.
Ensure quality urban space	Progress towards upgrading or retrofitting local drainage sumps and infrastructure to improve for community accessibility, amenity and environmental improvement outcomes using Water Sensitive Design techniques.	Ongoing	Parks	Infrastructure Services and Parks staff maintain drainage areas and infrastructure across the Shire. Service levels are outlined in the Shire's <a href="#">Corporate Business Plan</a> . For more information on WSUD techniques, visit <a href="https://www.newwaterways.org.au/resources/case-studies-fact-sheets/wsud-fact-sheets/">https://www.newwaterways.org.au/resources/case-studies-fact-sheets/wsud-fact-sheets/</a>







## Waterwise Recognition Scheme

Ensure quality urban space	Parks, landscaping and street trees contribute to urban amenity and mitigate urban heat impacts	Ongoing	Parks	Parks staff maintain parks and landscaped areas across the Shire. <a href="#">Street Tree Guidelines</a> include waterwise species.
Promote adaptive infrastructure	Use climate change projections to plan for expected changes to extreme temperatures and weather events	To be completed	Environment; Infrastructure	Shire of Mundaring requests for updated climate information led to online meeting between DWER, EMRC and staff from member councils about WA Climate Science Initiative on 2 August 2021

## Management of Endorsement



Endorsement of Waterwise Council Action Plan		
Shire of Mundaring:		
a)	Will implement the water management measures stated in the Waterwise Council Action Plan and ensure employees and contractors assist in implementing actions.	
c)	Acknowledges that the Water Corporation and / or Department of Water and Environmental Regulation may comment on the Action Plan and/or request additional information relating to the Action Plan.	
d)	Acknowledges that the Water Corporation and Department of Water and Environmental Regulation will monitor the Action Plan and failure to meet requirements of the program may result in the withdrawal of Waterwise endorsement.	
e)	Will submit an annual report, in accordance with the Waterwise Endorsement Action Table, detailing progress made on the Action Plan in order to maintain endorsement as a Waterwise Council.	
Name		
Position		
Signature		Date
Water Corporation and Department of Water and Environmental Regulation Acceptance of the Waterwise Council Action Plan		
Water Corporation and Department of Water and Environmental Regulation has reviewed and accepted the Action Plan. With acceptance of this Action Plan, Shire of Mundaring will be eligible for endorsement/ re-endorsement as a Waterwise Council.		
Water Corporation		
Name		
Position		
Signature		Date
Department of Water and Environmental Regulation		
Name		
Position		
Signature		Date

Please submit your endorsed Waterwise Council Action Plan to [WEpartnerships@watercorporation.com.au](mailto:WEpartnerships@watercorporation.com.au).

For any questions, contact [WEpartnerships@watercorporation.com.au](mailto:WEpartnerships@watercorporation.com.au) or call (08) 9420 2114





## **7.0 URGENT BUSINESS (LATE REPORTS)**

Nil

## **8.0 CLOSING PROCEDURES**

### **8.1 Date, Time and Place of the Next Meeting**

The next Environmental Advisory Committee is to be held on a date to be determined

### **8.2 Closure of the Meeting**

The Presiding Person declared the meeting closed at 7.19pm.