

Helena River Catchment Group Action Plan



The Helena River Catchment Group end of year walk through bushland. Photo by EMRC.

Prepared by Eastern Hills Catchment Management Program in consultation with the Helena River Catchment Group.

Acknowledgements

The development of the Helena River Catchment Group Plan 2012 - 2022 would not have been possible without the support of the Helena River Catchment Group and other stakeholders who have provided valuable resources and feedback. Much appreciation goes to the community members and professionals who commented.

The organisations and community members who have supported this document are:

Helena River Catchment Group	Karen Warner
Eastern Hills Catchment Management Program	Renata Zelinova
Perth Biodiversity Project	Victoria Maguire
Perth Region Natural Resource Management	Sonya Kelly
Swan River Trust	Tamara Wilkes - Jones
Shire of Kalamunda	Ryan Hepworth
Shire of Mundaring	Toni Burbidge
City of Swan	Jeremy Manning

Summary

The *Helena River Catchment Group Action Plan 2012-2022* (the plan) proposes practical management actions taking account of the likely cause, remediation, timing and priorities. The plan can be used by Helena River Catchment Group (HRCG) as a guide for on ground rehabilitation activities and as a supporting document in grant funding. It was developed with the involvement of the local community including HRCG, Shire of Kalamunda, Shire of Mundaring, the City of Swan, Eastern Hills Catchment Management Program, Perth Region Natural Resource Management and Swan River Trust.

This plan has been developed with the intention of incorporating both the physical environment and the human interaction within the catchment. Erosion and sediment deposition have been previously identified as management issues along the river. Restoration of fringing vegetation, with its bio-filtering and erosion control functions, is expected to address this issue. Water quality samples are taken at the Department of Water gauging station located near the lower end of the catchment shortly before the river's confluence with the Swan River at Bellevue. Weed invasions are known to occur and actions are already under way to address this. By addressing these facets biodiversity will also be maintained if not enhanced.

The human aspect of this plan addresses the need for an integrated approach by government and community bodies, and an inclusive approach to the different land uses types within the catchment. Increasing the education and awareness of the community is also included in the plan.

The human aspect of this plan addresses the need for an:

- Integrated approach by government and community bodies; and
- Increased and ongoing approach to education and awareness of those local to the catchment.

Acronyms

Units and Abbreviations

ARRC	Australian River Restoration Centre	%	percent
CoS	City of Swan	Ha	hectare
DAA	Department of Aboriginal Affairs		
DAFWA	Department of Agriculture and Food Western Australia	Km	kilometre
DPaW	Department of Parks and Wildlife	m	metre
DER	Department of Environmental Regulation		
DFES	Department of Fire and Emergency Services		
DoP	Department of Planning		
DoW	Department of Water		
DSR	Department of Sport and Recreation		
EAC	Environmental Advisory Committee		
ECMP	Eastern Catchment Management Plan		
EHCMP	Eastern Hills Catchment Management Program		
EMRC	Eastern Metropolitan Regional Council		
HRCG	Helena River Catchment Group		
ICAP	Individual Catchment Action Plan		
LCCAAP	Local Climate Change Adaption Action Plan		
LHA	Lower Helena Association		
LHC	Lower Helena Catchment		
MRPA	Metropolitan Regional Planning Authority (Now WAPC)		
MHC	Middle Helena Catchment		
NRM	Natural Resource Management		
PRNRM	Perth Region Natural Resource Management		
RCCAAP	Regional Climate Change Adaption Action Plan		
RES	Regional Environment Strategy		
SALP	Swan River Trust Alcoa Landcare Program		
SMCCP	Swan-Mundaring Community Catchment Project		
SoK	Shire of Kalamunda		
SoM	Shire of Mundaring		
SWALSC	South West Aboriginal Land and Sea Council		
TCUP	Tree Canopy and Understorey Program		
Trust	Swan River Trust		
UHC	Upper Helena Catchment		
WALGA	Western Australian Local Government Association		
WAPC	Western Australian Planning Commission		
WFS	Wildflower Society (Eastern Hills Branch)		
WSUD	Water Sensitive Urban Design		

Glossary

Climate Change	A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.
Riparian	The area of land bordering the waterway, where the structure, function and composition of the landscape are influenced by the waterway.
Corm	A short, vertical, swollen underground plant stem that serves as a storage organ used by some plants to survive adverse conditions. In contrast bulbs have a short stem with fleshy leaves or leaf bases.
Green stock	Seedlings for planting in rehabilitation or restoration zones.
Rhizomes	A plant stem found underground, often sending out roots and shoots from its nodes.
Species richness	The number of different species represented in a particular area.

Contents

Helena River Catchment Action Plan	i
Acknowledgements	i
Summary	ii
Acronyms	iii
Units and Abbreviations	iii
Glossary	iv
1. Introduction	1
1.1. Vision	1
1.2. Previous Plans	1
1.3. Helena River Catchment	2
1.4. Helena River Catchment Group	6
1.4.1. Past Achievements	6
1.4.2. On-ground operations:	6
2. Focus Areas for the Helena River Catchment Group	9
2.1. Aims	9
2.2. Objectives and Actions	10
2.2.1. Water Quality	10
2.2.2. Flora, Fauna and Fungi	11
2.2.3. Recreational Activities	13
2.2.4. Aboriginal and Historic Cultural Heritage	14
2.2.5. Social and Economic Issues	14
2.2.6. Environmental Education	15
2.2.7. Catchment Group Knowledge	16
3. Monitoring and review	17
Appendix 1 – Past Achievements	18
1. <i>Planning and Development Issues</i>	18
2. <i>Educational Liaison</i>	19
3. <i>Awards</i>	19
Appendix 2 - Supporting Partners and Resources	22
Appendix 3 – Monitoring and Review Form	20
References	24

List of Tables

Table 1: Breakdown of land use within the HRC.	5
Table 2: Timeframe definitions	9
Table 3: Sub-catchment definitions	9
Table 4: Water Quality Objectives and Actions	10
Table 5: Flora, Fauna and Fungi: Objectives and Actions	11
Table 6: Recreational Activities: Objectives and Actions	13
Table 7: Aboriginal and Historic Cultural Heritage: Objectives and Actions	14
Table 8: Social and Economic Issues: Objectives and Actions.....	14
Table 9: Environmental Education: Objectives and Actions.....	15
Table 10: Catchment Group Knowledge: Objectives and Actions.....	16

List of Figures

Figure 1: Eastern Hills Catchment Management Program area.....	3
Figure 2: The Helena River catchment	4
Figure 3: Breakdown of land use within the HRC	5
Figure 4: Land use in the lower and middle Helena River catchment	7
Figure 5: Aerial view of the lower and middle Helena River catchments.....	8

1. Introduction

The *Helena River Catchment Group Action Plan 2012 - 2022* is a result of reviewing the *Integrated Catchment Management Plan 2000 - 2010*. The review was initiated in 2010, and the new plan has been renamed the *Eastern Catchment Management Plan 2012 – 2022* (ECMP). The ECMP is the overarching document that covers the Helena River, Jane Brook, Susannah Brook, Wooroloo Brook and Blackadder Woodbridge Catchment Group areas. See Figure 1 for a map of the five catchments. Three of the five catchments within the ECMP have an associated Individual Catchment Action Plan (ICAP). Both the ECMP and ICAP are living documents that are designed to be updated as new information becomes available or redundant. The aim of these documents is to assist the catchment groups when applying for grant funding and also to help guide restoration activities.

This action plan is a partnership project between Eastern Hills Catchment Management Program (EHCMP) and the Helena River Catchment Group (HRCG). The project has been made possible through funding and in kind support provided by Shire of Mundaring (SoM), City of Swan (CoS), Shire of Kalamunda, Eastern Metropolitan Regional Council (EMRC), Perth Region Natural Resource Management (PRNRM) and the Swan River Trust (Trust). Friends groups and catchment groups are seen as the project custodians with the assistance of the relevant government bodies and the EHCMP Natural Resource Management (NRM) Officers.

1.1. Vision

People understand and value the natural environment of the Helena River Catchment (HRC), and restore, sustain and live in harmony with it. Settlements and houses are complementary to the natural values of the catchment.

1.2. Previous Plans

In 2000, after extensive deliberations, the Helena River Catchment Group (HRCG) released a document entitled *Middle and Lower Helena Catchment: context, vision, issues, objectives and strategies*, which defined the parameters and set out a guide for the HRCG to follow in future years. These principles were subsequently expanded by the HRCG to extend over all the catchment. In 2011, the HRCG decided to review and update this document to guide the group over the next 10 years. Much of this document is based on this information.

1.3. Helena River Catchment

The Helena River headwaters are located in the Darling Plateau; the river passes through the Darling Scarp and Coastal Plain before its confluence with the upper reaches of the Swan River in Guildford. The Helena River flows through three local governments, these being the Shire of Kalamunda, Shire of Mundaring, and the City of Swan. Although the headwaters of the Helena River exist in other councils, this action plan is only concerned with the area contained within Eastern Hills Catchment Management Program boundary shown in Figure 1 as the Eastern Catchment Project Area.

The headwaters of the river can be found in the Shires of Northam, York and Beverley as shown in Figure 2. The area in the catchment above the lower Helena Pumpback Reservoir is a water supply catchment for Perth and the Goldfields region. A large proportion of this area is held within state forest as shown in Table 1 and Figure 3.

Within the catchment are a range of soils from shallow earths, sandy and lateritic gravels on the Darling Scarp, to sandy, gravelly soils on the foothills to the west, and alluvial red earths close to the confluence with the Swan River (Swan River Trust, 2010). Groundwater contribution to the Helena River is considered relatively minor.

The Helena River catchment is the largest catchment in the Eastern Hills Catchment Management Program boundary shown in Figure 1 with an area of approximately 58,095 ha. The different land uses that make up this area are shown in Table 1 and Figure 3.

The Helena River catchment is broken down into three sections;

- Upper Helena Catchment (UHC), above Mundaring Weir
- Middle Helena Catchment (MHC), between Mundaring Weir and the Pipehead Dam
- Lower Helena Catchment (LHC), 4,515 ha between the Pipehead Dam and the confluence with the Swan River.

The boundaries of each of these sections can be seen in Figure 2.

There are relevant actions and objectives associated with each section of the catchment as shown in Part 2 of the Plan.

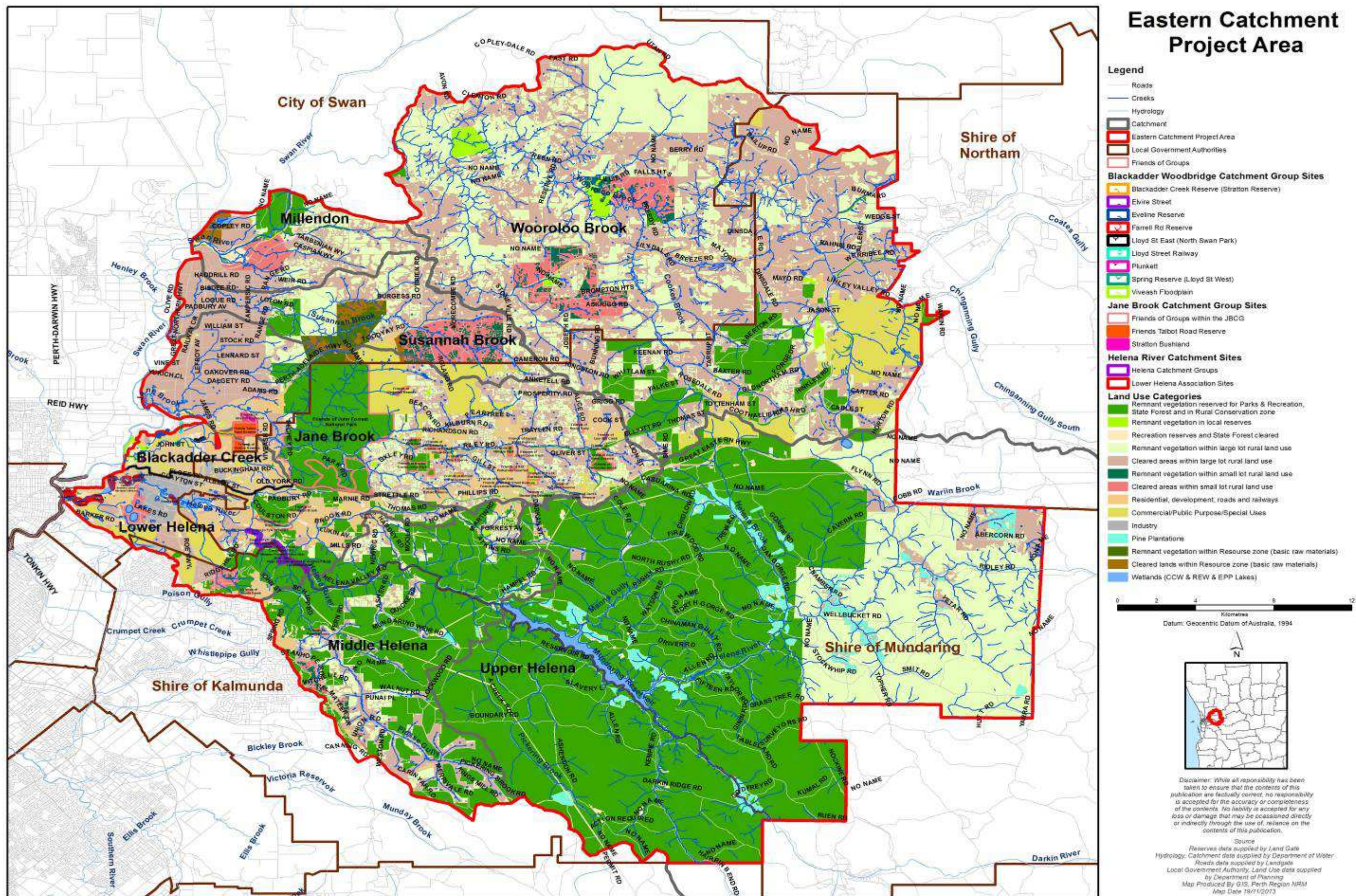


Figure 1: Eastern Hills Catchment Management Program area map.

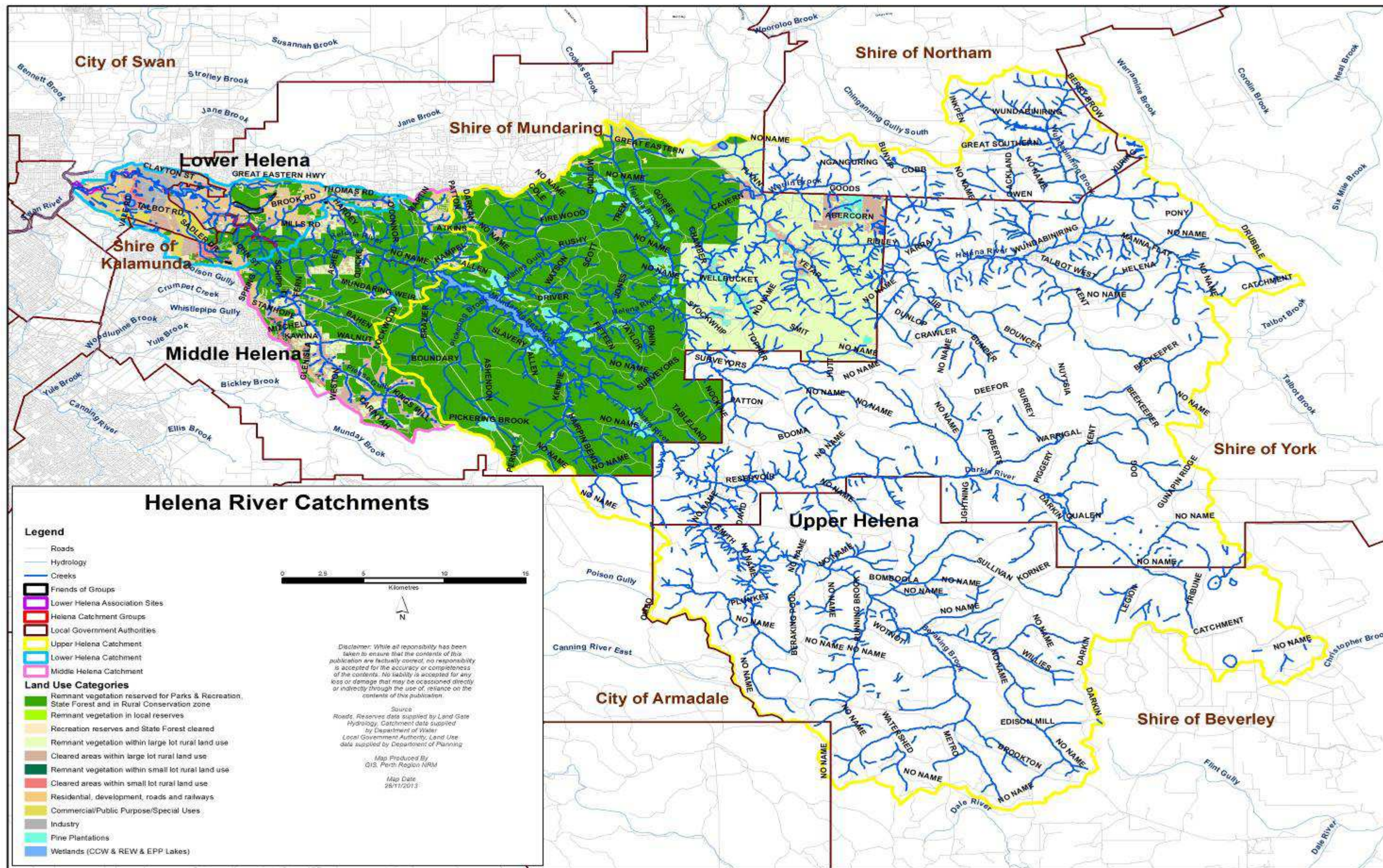


Figure 2: The Helena River catchment including the lower, middle and upper sections. This action plan is only relevant to the Eastern Catchment Project area within the City of Swan, the Shire of Kalamunda and the Shires of Mundaring as shown in Figure 1. Therefore the land use layer does not include the Shires of York, Beverley and Northam.

Table 1: Breakdown of land use within the HRC in hectares (ha) and percent (%).

Type of Land Use		Area	
		ha	%
	Remnant vegetation reserved for Parks & Recreation, State Forest and in Rural Conservation zone	35,328	61
	Remnant vegetation within large lot rural land use	11,415	20
	Cleared areas within large lot rural land use	3,747	6
	Residential, development, roads and railways	2,244	4
	Recreation Reserves and State Forest cleared	1,634	3
	Pine plantations	1,394	2
	Commercial/Public Purpose/Special Uses	924	2
	Wetlands	647	1
	Industry	389	1
	Cleared areas within small lot rural land use	270	<1
	Remnant vegetation within small lot rural land use	74	<1
	Remnant vegetation in local reserves	29	<1
	Total	58,095	100

*these figures have been rounded up to the nearest whole number. Data source: Department of Planning.

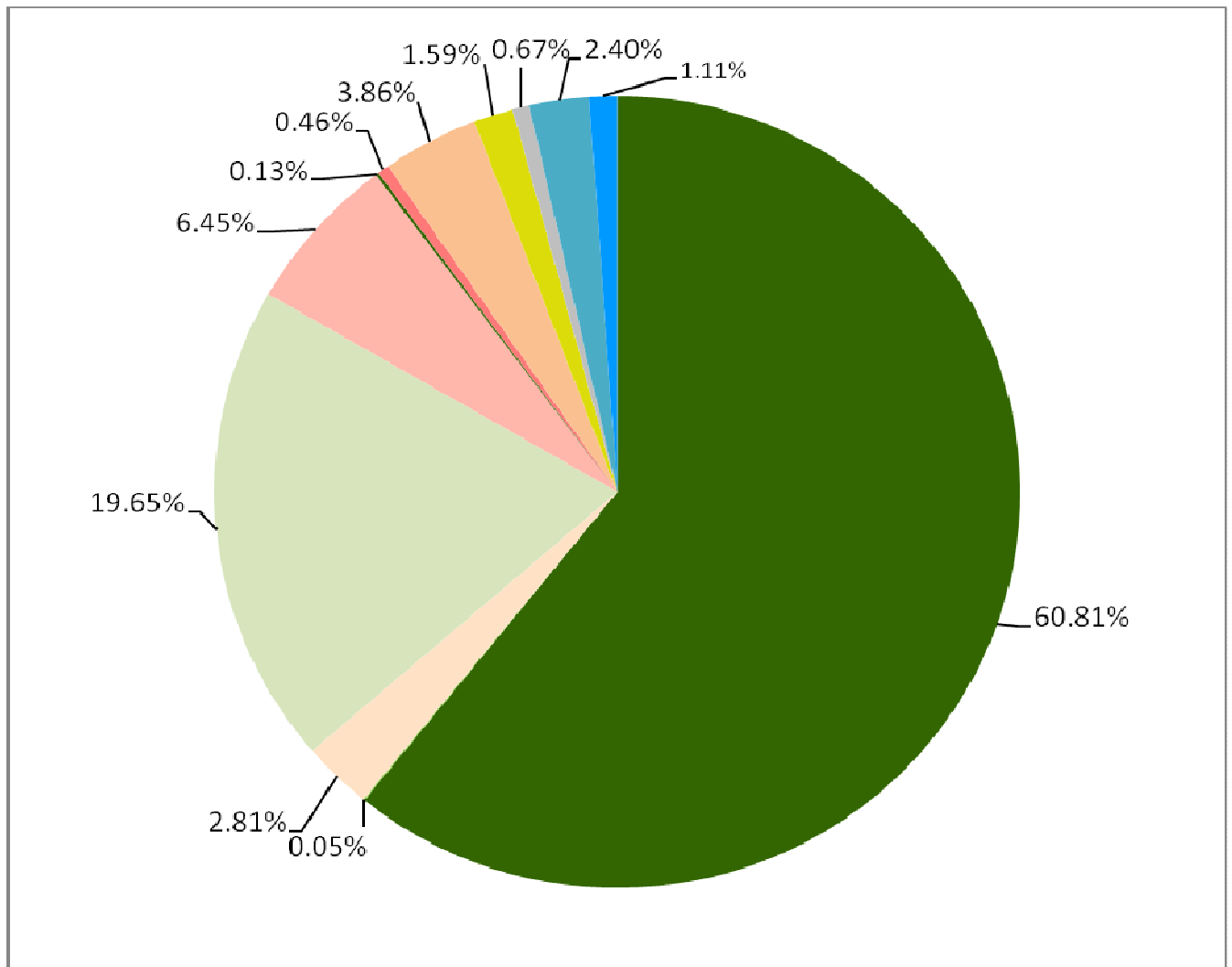


Figure 3: Breakdown of land use within the HRC. Please note this is land use within the Eastern Hills Catchment Program area only. Data source: Department of Planning.

1.4. Helena River Catchment Group

The HRCG was founded in 1997 with the aims of promoting and facilitating biodiversity conservation within the LHC area. This includes the management of land – including that having native vegetation – as well as matters related to water quality within the river itself.

The HRCG works by lobbying, contributing to committees and working groups, acting as liaison point for 'Friends' groups, developing partnerships with other organisations and directly undertaking on-ground work. The HRCG has a core of dedicated committee members, backed up by a large number of associates who are called on for advice or labour when required.

1.4.1. Past Achievements

Since its formation, the HRCG has been involved in numerous planning issues including being directly responsible for the initiation of the Department of Planning's (DPI) *Middle Helena Land Use and Water Planning Study*. The group has also provided support to education institutions including support at a tertiary level. They have organised a number of catchment tours as well as being directly associated with some 20 on-ground projects. For more details see Appendix 1 (Page 18).

1.4.2. On-ground operations:

There have been a number of on-ground operations over the years. Currently HRCG is involved with two large, on-going projects in the LHC:

- Helena River Rehabilitation project (Pipehead Dam to Scott Street) – a 10-year project of weed removal and replanting which entered its final phase in 2012. The project is likely to be completed in 2014. This project won the 'Bush Land and Waterways' section of the WA Environment Awards in 2009.
- Lower Helena River Wetland Restoration Project – rehabilitation of riverbank and floodplain wetlands in Woodbridge and South Guildford, ongoing since 2007. In 2011, with assistance and encouragement from the HRCG, the Lower Helena Association was formed. The group are now incorporated and have since taken ownership over the Lower Helena River Restoration Project.

As an incorporated organisation, the HRCG acts as an umbrella group for smaller 'Friends' groups within the catchment, holding grant monies, ordering seedlings, assisting with working bees and other activities. Current friends groups within the LHC boundaries are;

- Friends of Elder Park
- Friends of Darlington Brook
- Friends of Quenda Creek
- Friends of Tillbrook Park
- Friends of Boya Trail

The Lower Helena Association (LHA) was supported by the HRCG prior to gaining incorporation. The LHA work on land from Military Road, downstream to the confluence with the Swan River.

Friends of Piesse Brook are an incorporated group that operates on 8.25km of private and publically owned land along the Piesse Brook which feeds into the Helena River.

Figures 4 and 5 show the sites for HRCG, LHA and other Friends of groups.

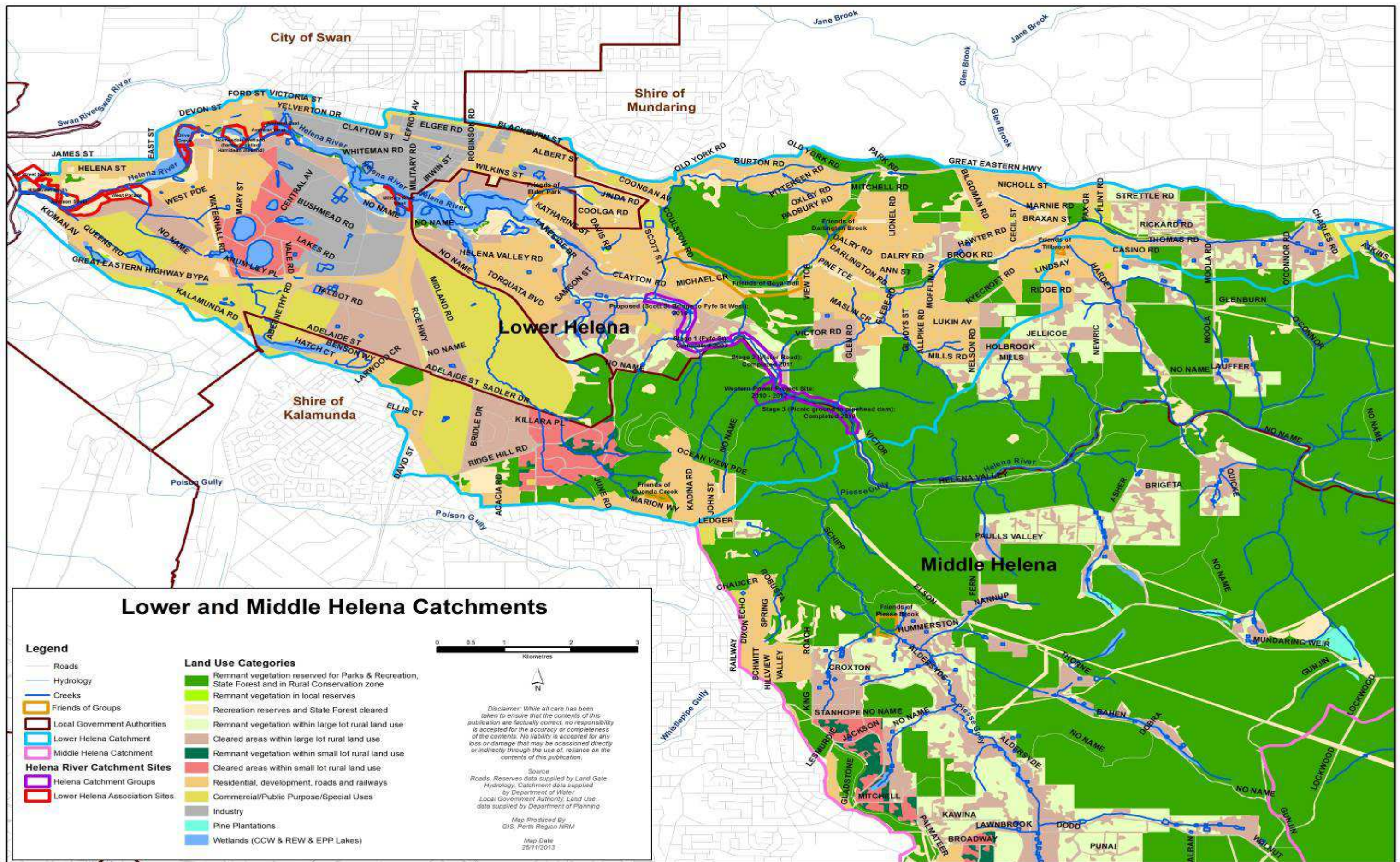


Figure 4: Land use in the lower and middle Helena River catchment sections including restoration sites.

2. Focus Areas for the Helena River Catchment Group

2.1. Aims

A combined effort to maintain and improve or enhance particular areas where possible will result in the overall betterment of the catchment. In developing this plan members of HRCG identified the following seven aims;

1. Support actions which maintain or improve water quality in the catchment including and not limited to the streams and rivers.
2. Support and encourage management of the environment, on all land tenures, so that the native flora, fauna and fungi are maintained and enhanced.
3. Encourage the appropriate management of recreational activities within the catchment so that environmental integrity is maintained.
4. Protect Aboriginal and historic cultural heritage within the catchment.
5. Manage social and economic issues that impact the way people live in and use the catchment.
6. Encourage the provision of environmental education for all ages and interested groups.
7. Encourage catchment group members to keep up to date with relevant issues.

The objectives and actions required to maintain and improve or enhance these areas were developed by the group and are shown in Tables 4 to 10. The timeframes for each action are defined in Table 2. The relevant sub-catchments for each action are defined in Table 3. For further sources of information and possible supporting partners please see Appendix 3 (Page 22).

Table 2: Timeframe definitions

Definition of timeframes for implementing actions

Timeframe	Actions to be completed within
Short	1 – 2 years
Medium	2 – 5 years
Long	5 – 10 years
Ongoing	To occur throughout the implementation of the plan

Table 3: Sub-catchment definitions

Acronym	Definition
UHC	Upper Helena Catchment
MHC	Middle Helena Catchment
LHC	Lower Helena Catchment

2.2. Objectives and Actions

2.2.1. Water Quality

Support actions which maintain and improve water quality in the catchment, streams and river.

Table 4: Water Quality Objectives and Actions

Objective	Action	Method	Timing	Sub-catchment
1. To prevent negative impacts of planning proposals on the waterway.	1.1 Comment on planning and development issues affecting water quality.	<ul style="list-style-type: none"> Lobby relevant bodies – federal, state and local government. Nominate representatives to appropriate committees. Provide information to assist with planning if required. 	Ongoing	All
2. To prevent pollution entering the waterway.	2.1 Encourage responsible use of synthetic chemicals, including herbicides.	<ul style="list-style-type: none"> Seek grants to facilitate works. Lobby relevant bodies – federal, state and local government. 	Long	All
	2.2 Encourage responsible design, use and maintenance of septic systems.	<ul style="list-style-type: none"> Lobby relevant bodies – federal, state and local government. 	Long	All
	2.3 Encourage buffering of stream courses to limit pollutant input.	<ul style="list-style-type: none"> Include nutrient-stripping buffer areas in revegetation projects where appropriate. 	Long	All
	2.4 Encourage appropriate research.	<ul style="list-style-type: none"> Identify areas in which research is needed. Lobby relevant bodies to provide support for research. Take part in trials where relevant. 	Long	All
3. To support actions which act to minimise erosion and sedimentation of waterways.	3.1 Encourage design of roads, tracks and firebreaks such that they minimise erosion potential.	<ul style="list-style-type: none"> Lobby relevant bodies– federal, state and local government. 	Medium	All
	3.2 Design revegetation projects to include consideration of bank erosion.	<ul style="list-style-type: none"> Ensure this is done in all projects HRCG is involved with. 	Medium	All
4. To enhance water conservation.	4.1 Encourage activities that conserve water within the catchment, rather than those that exploit it.	<ul style="list-style-type: none"> Lobby relevant bodies– federal, state and local government. 	Ongoing	All

Objective	Action	Method	Timing	Sub-catchment
5. To prevent an increase in salinity.	5.1 Oppose activities that could be expected to increase surface soil and water salinity within the catchment.	<ul style="list-style-type: none"> Lobby relevant bodies– federal, state and local government. 	Ongoing	UHC
6. To increase environmental flows.	6.1 Encourage the release of water from storages to maintain environmental flows.	<ul style="list-style-type: none"> Lobby relevant bodies– federal, state and local government. Keep in contact with the Trust regarding environmental flows 	Medium	MHC LHC

2.2.2. Flora, Fauna and Fungi

Support and encourage management of the environment, on all land tenures, such that the native flora, fauna and fungi are maintained and enhanced.

Table 5: Flora, Fauna and Fungi: Objectives and Actions

Objective	Action	Method	Timing	Sub-catchment
1. Maintain and enhance native vegetation.	1.1 Comment on planning and development proposals affecting remnant vegetation.	<ul style="list-style-type: none"> Lobby relevant bodies' e.g. federal, state and local government. Nominate representatives to appropriate committees. Provide information to assist with planning if required. 	Ongoing	All
	1.2 Encourage and/or undertake rehabilitation projects.	<ul style="list-style-type: none"> Seek grants to facilitate works. Undertake on-ground projects where appropriate. Support and assist other groups carrying out on-ground works. 	Ongoing	All
	1.3 Encourage appropriate research.	<ul style="list-style-type: none"> Identify areas in which research is needed. Lobby relevant bodies to provide support for research. Take part in trials where relevant. 	Ongoing	All
2. Control environmental weeds.	2.1 Encourage and/or undertake weed management projects.	<ul style="list-style-type: none"> Seek grants to facilitate works. Undertake on-ground weed management projects 	Ongoing	All

Objective	Action	Method	Timing	Sub-catchment
		where appropriate. <ul style="list-style-type: none"> Support and assist other groups carrying out weed management work. 		
	2.2 Disseminate weed identification and management information.	<ul style="list-style-type: none"> Write articles and/or give talks on weed control. Support and assist other groups by providing weed management advice. Highlight the role of weeds in increasing fire threat. 	Ongoing	All
	2.3 Encourage appropriate research.	<ul style="list-style-type: none"> Identify areas in which research is needed. Lobby relevant bodies to provide support for research. Take part in trials where relevant. 	Ongoing	All
3. Control introduced animals, both feral and domesticated.	3.1 Encourage management and/or research by appropriate bodies.	<ul style="list-style-type: none"> Lobby for feral animal control where appropriate. Offer assistance if relevant. 	Long	All
	3.2 Encourage responsible dog and cat control.	<ul style="list-style-type: none"> Lobby relevant bodies e.g. state and local government. 	Long	All
	3.3 Confine bridle trails to environmentally suitable sites.	<ul style="list-style-type: none"> Lobby relevant bodies e.g. state and local government. Provide information to assist with bridle trail design. 	Long	All
4. Manage dieback and other plant diseases.	4.1 Encourage management and/or research by appropriate bodies.	<ul style="list-style-type: none"> Lobby for relevant research to be undertaken. Take part in field trials and/or offer other assistance if relevant. 	Ongoing	UHC MHC
	4.2 Encourage the use of appropriate disease management actions.	<ul style="list-style-type: none"> Lobby all catchment users where required. 	Ongoing	UHC MHC
5. Manage fire risk.	5.1 Encourage best practice fire management.	<ul style="list-style-type: none"> Liaise with fire authorities to promote best practice. Design regeneration projects to incorporate fire management where possible. Encourage weed control as part of responsible fire management. 	Long	All
6. Address problems caused by loss of locally native flora and fauna species.	6.1 Encourage best practice bushland management by all relevant land managers.	<ul style="list-style-type: none"> Liaise with land managers when required. Support and assist managers by providing advice on all aspects of bush habitat management, including the 'value' of ecosystem services. Liaise with EMRC NRM Officers 	Long	All
	6.2 Encourage the reintroduction of flora and fauna to areas where they once occurred.	<ul style="list-style-type: none"> Liaise with land managers. Encourage research into translocations where appropriate. 	Long	All

Objective	Action	Method	Timing	Sub-catchment
7. Manage development pressure.	7.1 Encourage development that does not compromise biodiversity values.	<ul style="list-style-type: none"> Lobby relevant bodies e.g. federal, state and local government. 	Ongoing	All
8. Advocate for aquatic ecology.	8.1 Encourage water management bodies to provide environmental flows.	<ul style="list-style-type: none"> Lobby relevant bodies e.g. Department of Parks and Wildlife, Department of Water etc. 	Medium	All
	8.2 Revegetate riparian areas.	<ul style="list-style-type: none"> Ensure the appropriate riparian species are chosen when designing revegetation projects. 	Medium	All

2.2.3. Recreational Activities

Encourage the management of recreational activities within the catchment such that they are compatible with environmental integrity.

Table 6: Recreational Activities: Objectives and Actions

Objective	Action	Method	Timing	Sub-catchment
1. To encourage passive recreational activities and minimise activities which cause harm.	1.1 Oppose motorised recreation within the catchment except in specially designated areas.	<ul style="list-style-type: none"> Lobby relevant bodies. Offer to provide information on the ecological values of the catchment if requested. 	Ongoing	All
	1.2 Encourage responsible cycling, including using designated trails.	<ul style="list-style-type: none"> Lobby various bodies. Offer to provide information if requested. 	Long	All
	1.3 Oppose horse riding within the catchment except on designated trails.	<ul style="list-style-type: none"> Lobby relevant bodies. Offer to provide information if requested. 	Long	All
	1.4 Encourage recreation that is in harmony with the environment.	<ul style="list-style-type: none"> Promote recreation within the bushland areas of the catchment that is compatible with the maintenance of biodiversity. Incorporate such recreation facilities within projects if appropriate. Interpretive signage where feasible. 	Ongoing	All

2.2.4. Aboriginal and Historic Cultural Heritage

Protection of Aboriginal and Historic cultural heritage within the catchment.

Table 7: Aboriginal and Historic Cultural Heritage: Objectives and Actions

Objective	Action	Method	Timing	Sub-catchment
1. To protect Aboriginal and historic heritage in the catchment.	1.1 Respect Aboriginal cultural heritage sites.	<ul style="list-style-type: none"> Ensure legal requirements are met and undertake Aboriginal consultation. Ensure this is done in all projects HRCG is involved with. 	Ongoing	All
	1.2 Respect historic cultural heritage sites.	<ul style="list-style-type: none"> Ensure this is done in all projects HRCG is involved with where appropriate. 	Ongoing	All

2.2.5. Social and Economic Issues

Manage other social and economic issues that may affect the way people live in and use the catchment.

Table 8: Social and Economic Issues: Objectives and Actions

Objective	Action	Method	Timing	Sub-catchment
1. Reduce vandalism within the catchment.	1.1 Support all initiatives that would minimise littering and dumping of rubbish.	<ul style="list-style-type: none"> Lobby relevant bodies. Take part in clean-up days if required. 	Ongoing	All
	1.2 Support initiatives that minimise the removal of plants and rocks.	<ul style="list-style-type: none"> Lobby relevant bodies. Consider providing signage at project sites. 	Ongoing	All
	1.3 Support measures to reduce arson.	<ul style="list-style-type: none"> Provide information if requested. 	Ongoing	All

2.2.6. Environmental Education

Encourage the provision of environmental education for all age and interest groups.

Table 9: Environmental Education: Objectives and Actions

Objective	Action	Method	Timing	Sub-catchment
1. Promote the development and dissemination of educational materials.	1.1 Encourage the production of printed material that covers all aspects of living sustainably and maintaining biodiversity.	<ul style="list-style-type: none"> • Offer to assist authors with material. • Offer to publicise or distribute material where appropriate. 	Ongoing	All
	1.2 Encourage presentations from experts to widen knowledge of catchment matters.	<ul style="list-style-type: none"> • Arrange field days or seminars etc, as appropriate • Offer to give talks to interested groups. 	Ongoing	All
	1.3 Encourage displays at public events that highlight catchment issues.	<ul style="list-style-type: none"> • Consider providing displays at local events. 	Ongoing	All
	1.4 Encourage educators to consider incorporating projects in the catchment into their curriculum.	<ul style="list-style-type: none"> • Encourage the use of the catchment as an 'outdoor classroom' for all levels of students and provide assistance where possible and appropriate. • Encourage schools to assist with revegetation projects in their localities. • Provide speakers to assist with catchment management topics. 	Ongoing	All

2.2.7. Catchment Group Knowledge

Encourage Catchment Group members to keep up to date with relevant issues, such as climate change.

Table 10: Catchment Group Knowledge: Objectives and Actions

Objective	Action	Method	Timing	Sub-catchment
1. Maintain and enhance knowledge base with current information.	1.1 Encourage members to keep abreast with current knowledge in all areas of catchment management, including emerging issues.	<ul style="list-style-type: none"> Keep up with emerging issues as knowledge and circumstances change. Encourage members to attend informative seminars, workshops etc. Provide summary reports for members who could not attend. Consider subsidising attendance fees. 	Ongoing	All
	1.2 Encourage the practice of adaptive management as new issues come to the fore including the impacts of climate change.	<ul style="list-style-type: none"> Ensure all projects undertaken by the HRCG are designed to current best-practice standards. Ensure both successes and failures are recorded and publicised, so that others can learn from them. 	Ongoing	All

3. Monitoring and review

The *HRCG Action Plan* can be monitored annually to determine the progress against the plan. Monitoring can be completed in a variety of formats, e.g. report, photos etc. An example of a Monitoring and Review form can be found in Appendix 2 on Page 20. The EHCMP NRM Officer can assist with annual monitoring and review if needed. Reviews can be undertaken by HRCG to include or remove actions as required. A major review will be undertaken by EHCMP in collaboration with HRCG in 2021 – 2022 to identify issues and actions that will need to be included in future plans.

Appendix 1 – Past Achievements

1. Planning and Development Issues

- Lobbying by HRCG persuaded the Department of Planning to initiate the *Middle Helena Land Use and Water Planning Study* which, after a long gestation period, was finally adopted in 2010. HRCG members were involved on the Steering Committee throughout the process. The document provides guidelines for zoning and other land-use planning for the Middle Helena Catchment.
- HRCG has made numerous submissions to the Metropolitan Regional Planning Authority (MRPA) and to local government (Swan, Mundaring or Kalamunda) regarding planning issues, mostly in the LHC. These may be detailed critique of broad scale plans (such as the *Hazelmere Enterprise Area Draft Structure Plan* in 2010) or comment on individual property scale proposals. These submissions cover development proposals; retention of bushland including bush corridors, opposing urban development on the floodplain and supporting Water Sensitive Urban Design. Where necessary, HRCG has supported its position by the attendance of members at planning meetings.
- There has also been discussion at various times with the Commonwealth Government and other bodies regarding the future of the bushland on Bushmead Rifle Range. It is expected that these discussions will continue with the developers that have acquired the land.
- Since its inception, the HRCG has promoted the concept of a 'Helena Valley National Park' including land between Mundaring Weir and the Pumpback Dam. As part of this, the consolidation of reserve land tenure into Department of Parks and Wildlife's (DPaW) management has been supported. On the south side of the valley this has been achieved, while consolidation of land tenure on the north side is undergoing final approvals. All will then be united into what will be called the Beelu National Park.
- In discussion with the Water Corporation regarding pipeline upgrading, HRCG had a major influence on restoration works and weed control offsets in the LHC.
- The HRCG initiated discussions with Western Power concerning weeds and powerline access tracks, leading directly to offset investment by Western Power in weed control in the LHC to complement HRCG's Lower Helena restoration project.
- The HRCG discussed with the Water Corporation the proposals to use thinning to increase water runoff in the UHC, including organising speakers at a meeting, an excursion to Wungong to view trial sites and also being part of an UHC salinity workshop and site visit. It is expected that this issue will be on-going.
- The HRCG considered the impact of logging proposals in the UHC, including organising an inspection with the Forests Products Commission. This issue could well be reactivated.
- The HRCG liaises regularly with DPaW (Perth Hills District) regarding issues within the total catchment.

2. Educational Liaison

- Provided support for three tertiary student projects.
- Students from Polytechnic West have contributed to on-ground work on many projects over the years.
- Worked on various projects with Glen Forrest Primary School, Guildford Primary School, Helena College, Helena Valley Primary School, Swan Christian College, and Woodbridge Primary School.
- HRCG members have given talks and led school excursions with a caring for bushland theme. The group has provided signage and stood surety for the management of grant funds.
- School students have taken part in bushland management and replanting days.
- Material has been provided to assist with school projects.
- HRCG fully funded the initial stage of Helena Valley Primary School's "Bushland Rehabilitation" project.

3. Awards

- HRCG won the 'Bush Land and Waterways' section of the WA Environment Awards in 2010 for the project *Helena River Rehabilitation project (Pipehead Dam to Scott St)*.
- HRCG given an 'Award of Recognition' by the Perth Region NRM in 2010 for work undertaken over the years.

Appendix 2 – Monitoring and Review Form

Name of the site: _____

What timeframe is this review considering: _____

What work was undertaken in this period: _____

What fauna (bird, mammals, reptiles) was seen at the site? * represents new species to the site: _____

Photo monitoring

Photo from the start of timeframe.

Photo from the end of timeframe

Other information (issues, solutions, relevant information, points of interest etc.): _____

[illegible]

Appendix 3 - Supporting Partners and Resources

This appendix is a source of further information and can be added to at any time.

Organisation	Description	Contact Detail or Resource Links
Australian River Restoration Centre	Established to support people involved in river management and restoration. The site provides people with access to resources, information, stories, workshops and conferences.	http://australianriverrestorationcentre.com.au/resources/
Department of Aboriginal Affairs	One of the key functions of the organisation is to preserve and protect Indigenous heritage.	http://www.daa.wa.gov.au/
Department of Parks and Wildlife	Has the lead responsibility for protecting and conserving the State's environment on behalf of the people of Western Australia. The department has a "Get Involved" section on their website for school programs.	http://www.dpaw.wa.gov.au/
Department of Planning	Has statewide responsibility for the planning for future communities Documents of interest: State Planning Policy 2.5 Agriculture and Rural Land Use Planning State Planning Policy 2.7 Public Drinking Water Source Policy State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan State Planning Policy 2.9 Water Resources	http://www.planning.wa.gov.au/
Department of Sport and Recreation	Provide support to recreation activities through grants.	http://www.dsr.wa.gov.au/trailsfunding
Eastern Metropolitan Regional Council	The environmental services team delivers a variety of services and programs throughout Perth's Eastern Region focusing on conservation of natural resources, management of impacts and community involvement.	http://www.emrc.org.au/environmental-services.html
Department of Fire and Emergency Services	Western Australia's leading hazard management agency performs a critical role coordinating emergency services for a range of natural disasters and emergency incidents threatening life and property.	www.dfes.wa.gov.au
Lotterywest	Helps community organisation by providing funding in many categories. Conserving cultural heritage Conserving natural heritage	http://www.lotterywest.wa.gov.au/grants
Perth Region Natural Resource Management	Perth Region NRM Inc. is a community-led regional organisation responsible for coordinating and delivering natural resource management (NRM) in the Perth Region. Grants are available through PRNRM	http://www.perthregionnrm.com

Organisation	Description	Contact Detail or Resource Links
Shire of Kalamunda Shire of Mundaring City of Swan	The local governments of the Helena River Catchment provide various services to individuals and the community as a whole including, building and planning, environmental and ranger services, infrastructure and works. Individual councils have additional services for their constituents such as trees to residents and the environmental/sustainability advisory committees	http://www.kalamunda.wa.gov.au http://www.mundaring.wa.gov.au http://www.swan.wa.gov.au
South West Aboriginal Land and Sea Council	A native title representative body which works in the interests of the Noongar People.	http://www.noongar.org.au/index.php
Swan River Trust (to merge with DPaW)	A state government agency that protects manages and enhances the Swan Canning Riverpark by working in partnership with government and the community.	http://www.swanrivertrust.wa.gov.au
West Australian Planning Commission	Is the statutory authority with statewide responsibilities for urban, rural and regional land use planning and land development matters. The WAPC responds to the strategic direction of government and is responsible for the strategic planning of the State.	http://www.planning.wa.gov.au/
Wildflower Society of Western Australia	The Society aims to know, grow, conserve and enjoy West Australian plants and provides an extensive network of knowledge.	http://members.ozemail.com.au
Wildlife Friendly Fencing	A project raising awareness of the impact of fencing on Australian wildlife, and developing guidelines for good practice.	http://www.wildlifefriendlyfencing.com/WFF/Home.html

References

EMRC. 2004. *Sub-Catchment Implementation Plans: Helena River Catchment Region*. Perth, Western Australia.

Helena River Catchment Group. 2011. *Review of HRCG Objectives and Strategies; Achievements 1997 – 2011*. Perth, Western Australia.

Helena River Catchment Group. 2011. *Review of HRCG Objectives and Strategies; Notes and Consolidation Sheet*. Perth, Western Australia.

Helena River Catchment Group. 2000. *Priority Actions for the Helena River Catchment Group*. Perth, Western Australia.

Swan River Trust. 2010. *Helena River Catchment Nutrient Report 2010 Update*. Perth, Western Australia.