August 2012

Metropolitan Region
Scheme Amendment
1218/41

Keralup Stage 1

Report on Submissions
Submissions
Transcript of Hearings

City of Rockingham
Metropolitan Region Scheme
Amendment 1218/41
Keralup Stage 1

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Transcript of Hearings

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Introduction to Metropolitan Region Scheme major amendments

The Western Australian Planning Commission (WAPC) is responsible for keeping the Metropolitan Region Scheme (MRS) under review and initiating changes where they are seen as necessary.

The MRS sets out the broad pattern of land use for the whole Perth metropolitan region. The MRS is constantly under review to best reflect regional planning and development needs.

A proposal to change land use reservations and zones in the MRS is regulated by the Planning and Development Act 2005. That legislation provides for public submissions to be made on proposed amendments.

For a substantial amendment, often referred to as a major amendment (made under section 41 of the Act), the WAPC considers all the submissions lodged, and publishes its recommendations in a report on submissions. This report is presented to the Minister for Planning and to the Governor for approval. Both Houses of Parliament must then scrutinise the amendment before it can take legal effect.

In the process of making a substantial amendment to the MRS, information is published as a public record under the following titles:

Amendment report
This document is available from the start of the public advertising period of the proposed amendment. It sets out the purpose and scope of the proposal, explains why the amendment is considered necessary, and informs people how they can comment through the submission process.

Environmental review report
The Environmental Protection Authority must consider the environmental impact of an amendment to the MRS before it can be advertised. Should it require formal assessment, an environmental review is undertaken and made available for information and comment at the same time as the amendment report.

Report on submissions
The planning rationale, determination of submissions and the recommendations of the WAPC for final approval of the amendment, with or without modification, is documented in this report.

Submissions
This document contains a reproduction of all written submissions received by the WAPC on the proposed amendment.

Transcript of hearings
A person who has made a written submission may also choose to appear before a hearings committee to express their views. The hearings proceedings are recorded and transcribed, and the transcripts of all hearings are reproduced in this volume.
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Submissions

Transcript of Hearings
Report on submissions
1 Introduction

At its July 2011 meeting, the Western Australian Planning Commission (WAPC), resolved to proceed with this amendment to the Metropolitan Region Scheme (MRS) in accordance with the provisions of Section 41 of the Planning and Development Act 2005.

2 The proposed amendment

The amendment proposal was described in the previously published Amendment Report and the description of the proposal is repeated below.

The purpose of the amendment is to transfer approximately 109 ha of Lot 551 Vine Road, Keralup from the rural zone to the urban deferred zone and transfer approximately 5.7 ha of Lot 551 from the rural zone to the other regional roads (ORR) reservation in the MRS.

The amendment also proposes to refine the boundaries of the primary regional roads (PRR), ORR and parks and recreation reservations (and associated Bush Forever overlay) to reflect the as constructed Kwinana Freeway and Paganoni Road interchange in proximity to Lot 551.

The 109 ha area proposed to be rezoned to urban deferred is the area for the proposed first stage of the Keralup housing project. Subsequent stages of development will be located on the eastern side of the Serpentine River.

Stage 1 of the Keralup project is proposed to be zoned urban deferred rather than urban as there are various planning and servicing issues that need to be addressed prior to the land being developed for urban purposes, as discussed later in this report.

3 Environmental Protection Authority advice

The proposed amendment was referred to the Environmental Protection Authority (EPA) for advice on whether environmental assessment would be required. The EPA advised that the proposed amendment does not require formal assessment under Part IV of the Environmental Protection Act. The EPA provided advice and recommendations on the following issues: surface and groundwater, wetlands, remnant vegetation, acid sulfate soils, significant fauna, noise and mosquitoes.

The EPA is of the view that the potential environmental impacts of the amendment can be adequately managed through the planning process.
A copy of the notice from the EPA is in appendix A of the Amendment Report.

4 Call for submissions

The amendment was advertised for public submissions from 4 October 2011 to 20 January 2012.

The amendment was made available free of cost for public inspection during ordinary business hours at:

i) Western Australian Planning Commission, William Street, Perth
ii) Peel Region office (Pinjarra Road, Mandurah) of the Department of Planning
iii) Cities of Perth, Fremantle and Rockingham; and
iv) the State Reference Library, Northbridge.

During the public inspection period, notice of the amendment was published in the West Australian and the Sunday Times newspapers and relevant local newspapers circulating in the locality of the amendment.

5 Submissions

Twenty one submissions were received on the amendment. An alphabetic index of all the persons and organisations lodging submissions is at schedule 1.

Two submissions supported the amendment, five submissions objected to the amendment and 14 submissions contained neutral comments, non-objections or general comments on the amendment.

The main issues raised in the submissions are discussed further in section 7 below – ‘Main issues raised in submissions’. A summary of each submission with WAPC comments and determinations is at schedule 2. A complete copy of all written submissions is contained in this report.

6 Hearings

Section 46 of the Planning and Development Act 2005 provides that each person who makes a submission is to be offered the opportunity of being heard by a committee formed by the WAPC for that purpose. The committee comprised:

. Mr Gary Prattley, Chairman of WAPC.
. Cr Carol Adams, representative of the South-West District Planning Committee.
. Ms Judith Bell, independent member with planning knowledge.

All persons who made submissions were invited to present their submission to the Hearings Committee.
Two hearings (one objecting and one commenting) were requested and these occurred on 28 May 2012.

7 Main issues raised in submissions

7.1 Mosquito Issues

Submissions from the Department of Health, Shire of Murray, City of Mandurah, Peel Preservation Group Inc, Peel-Harvey Catchment Council, Hon. Lynn MacLaren MLC, Department of Environment and Conservation object and/or comment on the need for adequate strategies to manage the potential health impacts of mosquitoes on future residents of the amendment area.

WAPC Response

As a State Government landholding, Keralup forms a key component of the Government's housing affordability strategy and will contribute to ensuring an adequate supply of land to meet anticipated population growth in the southern metropolitan and Peel regions. Keralup represents an opportunity for best practice design and management measures under the control and guidance of Government.

The WAPC recognises the potential impacts of mosquitoes on future residents of Keralup if adequate management strategies are not put in place. The Department of Housing (DoH), as the landowner, has engaged a specialist mosquito control consultancy to prepare a Mosquito Management Strategy and Mosquito Management Plan for Keralup.

A monitoring program has been undertaken to identify mosquito numbers, species and the locations of greatest abundance and activity levels. The management of mosquitoes will involve a combination of chemical control, modifying conditions that support mosquito breeding as well as house and landscape design and public education.

In the short term, measures to manage mosquitoes include increasing the current mosquito chemical control program to include portions of the Serpentine River and Lake Amarillo. The removal of cattle from saltmarsh areas adjacent to the Serpentine River is also proposed, as pockets of water remain within cattle footprints which provide temporary mosquito breeding habitats. This management measure has commenced, with a review of existing fencing infrastructure to prevent cattle from entering saltmarsh areas.

A substantial portion of Keralup east of the Serpentine River (not in the amendment area) is inundated for extended periods of time, however the future development of this land will remove a large portion of mosquito breeding habitat. In the long term, the DoH has advised of the following measures to manage mosquito impacts within Keralup:

- Design of the future stormwater management system (e.g. subsoil drains, infiltration swales, detention basins etc) to avoid/minimise the presence of shallow stagnant water areas.
• Providing mosquito management buffer zones around the main breeding habitats. Ideally the buffer zones would comprise open ground or be sparsely vegetated rather than dense woodland thickets.

• Providing a proactive public education and awareness program to ensure that people living and/or working within Keralup receive relevant information regarding the potential issues associated with a mosquito population area and strategies to reduce the risk of contact (e.g. clothing to cover skin, use of repellent, insect screens to be installed and used at houses, key times of the day/seasons to take additional care etc). Installation of health advisory signs displayed in public open space (POS) areas/main entrance roads identifying current mosquito risk levels.

• Minimising the planting of dense woodland vegetation within POS areas which provides habitat opportunities enabling the protected movement of adult mosquitoes throughout the site. Open ground or sparsely vegetated areas are preferable.

• Improve the biodiversity of the site to create suitable habitat for predatory species.

• Establishment and implementation of appropriate built form design guidelines/building specifications to create a physical barrier between residents and mosquitoes.

• Planting of individual trees along future proposed drainage/multi-purpose corridors to assist with the overall uptake of water from the site.

The DoH has identified various other measures which will need to be considered to confirm their overall suitability, such as direct or in-direct impacts on the hydrology and ecology of the Serpentine River system. State and local government approvals may also be required to implement the above measures which are to be undertaken in the future planning stages such as the Local Planning Scheme amendment and structure planning stages and may require subdivision and development approval conditions.

The WAPC recognises the importance of ensuring that mosquito impacts at Keralup are appropriately managed, so that future residents are not at risk of health and amenity impacts. The DoH advises that it is taking a proactive approach in the management of mosquitoes, and will continue to work with relevant state and local government agencies including the investigation of measures adopted elsewhere in Australia and overseas.

The submissions are noted and no modifications to the amendment are recommended as a result of the submission.

7.2 Water and wastewater provision

The Water Corporation advises that the amendment is remote from the current urban front and existing and planned services. The Corporation has not scheduled funding in its capital investment program to facilitate service provision at this location. Any development of this land ahead of headworks infrastructure is regarded as pioneer development and the cost of extending water, wastewater and drainage infrastructure will need to be borne by the landowner.
Funding would need to be secured to bring forward significant capital projects for water and wastewater to meet the additional demand that would be generated by the development of the land. The Corporation is not able to prioritise the required capital projects to meet the timeframe for the development of this land.

The Minister for Water has written to the Minister for Housing advising of preliminary cost estimates for headworks projects which would have to be funded by the DoH to facilitate the development of Keralup.

The Corporation has scheduled the construction of a new wastewater treatment plant in the East Rockingham locality. It is anticipated that the first module of the plant will be commissioned at the end of 2015 and will serve Keralup.

The WAPC has not proceeded with other rezoning of land to urban or urban deferred or lifting of urban deferment in the area of the proposed East Rockingham wastewater treatment facility. The Corporation raises concerns about the precedent of rezoning the subject land in the East Rockingham wastewater treatment plant catchment.

WAPC Response

The Corporation has advised the DoH that in order to increase the capacity for water and wastewater services in the Golden Bay Wastewater Treatment Plant catchment to service the proposed amendment on an interim basis, until the East Rockingham plant is operative, preliminary cost estimates indicate that approximately $31 million would be required to service the subject land.

However, at this stage the Corporation does not have the necessary funding of capital infrastructure to increase the service delivery in the Golden Bay catchment to service the subject land. The Corporation has also advised the DoH that they would have to fund water and sewerage upgrades and extensions to facilitate the early development of Keralup.

The Corporation has advised that the necessary upgrades, extensions and financial commitments by Government would be required to service the subject land. The DoH is aware of the servicing requirements, financial implications and timeframes to service this land. In these circumstances, the WAPC considers that it is appropriate for the subject land to be zoned urban deferred.

The WAPC does not consider that the proposed amendment would set a precedent for other rezonings within the future East Rockingham wastewater treatment plant catchment. Keralup is identified as a ‘priority project’ in the Department of Premier and Cabinet’s Land Availability Working Group, and will contribute to the State Government’s Housing Affordability Strategy. It is also noted that the DoH is preparing a submission to Cabinet on the delivery of key infrastructure for the development of Keralup.

Therefore, prior to the lifting of urban deferment, the WAPC will require agreement from the Corporation that the land will be serviced by water and wastewater infrastructure.

The submission is noted and no modifications to the amendment are recommended.
7.3 Environmental issues

Submissions from the Peel Preservation Group Inc, Hon. Lynn MacLaren MLC and Peel-Harvey Catchment Council have raised the following issues:

- As some of the land is waterlogged, drainage and the need for fill will negatively impact on the wetlands and hydrology of the Serpentine River.

- Remnant vegetation will be negatively impacted or cleared.

- Acid sulfate soils will impact the site; and

- The amendment should be referred to the Federal Department of Sustainability, Environment, Water, Populations and Communities for consideration under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act).

WAPC Response

- A District Water Management Strategy has been approved by the Department of Water (DoW) for the proposed amendment area. Drainage will continue to be addressed in the future stages of the planning process including the approval of a Local Water Management Strategy at the local structure planning stage and an Urban Water Management Plan at the subdivision stage.

Wetlands within and abutting the proposed amendment area (e.g. the Serpentine River and Bush Forever site 394) are to be retained and protected. Wetlands and associated vegetation will be protected by the implementation of a 50 m buffer from conservation category wetlands and a 30 m buffer from resource enhancement wetlands. These buffers will be set aside as conservation areas to protect the wetlands.

A preliminary concept earthworks design for the subject land has been undertaken to confirm the volume of material available on-site and the amount of material to be sourced off-site. Any shortfall of material will be sourced off-site and not from other locations within the Keralup landholding. Fill volumes will be determined in the future local structure planning and subdivision stages when more detailed investigations occur.

- Remnant vegetation is limited within the proposed amendment area as the land has been primarily cleared for agricultural uses. Scattered remnant vegetation remains which is primarily associated with wetland areas. Areas of vegetation identified as in good to very good condition and better will be retained within POS where possible.

A botanical survey of the amendment area has been undertaken which identified the vegetation as predominantly degraded to completely degraded. The areas of vegetation associated with the Serpentine River and other wetland areas within the subject land will be protected in accordance with wetland management plans to be considered in the future local scheme amendment and structure planning stages and implemented as conditions of subdivision and development approval.

- An initial on-site investigation has been undertaken to determine the likely risk of encountering acid sulfate soils within the proposed amendment area. The majority of the site is classified as having low to medium risk of acid sulfate soils, with only minor areas of higher risk. Whatever the case, detailed acid sulfate soil investigations are typically undertaken prior to detailed planning and an acid sulfate soils management plan will be prepared and implemented if required.
• The DoH has advised that a referral to the Department of Sustainability, Environment, Water, Populations and Communities under the EPBC Act is being undertaken for the proposed amendment and will consider all matters of national environmental significance protected under the EPBC Act, including potential direct and indirect impacts to migratory species and the Peel Harvey Inlet (listed as a Ramsar site).

The submissions are noted and no modifications to the amendment are recommended.

8 Responses and determinations

The responses to all submissions are detailed in this report. The objecting submissions are recommended to be noted. No modifications to the amendment are proposed.

Requirements to be addressed prior to the lifting of urban deferment

The WAPC considers that the following issues are to be addressed prior to the transfer of the amendment area to the urban zone:

1. Agreement from the Water Corporation that the land can be serviced by water and wastewater infrastructure.

2. Confirmation on the width of the future ORR reservation for Vine Road (extension of Paganoni Road).

3. Confirmation that an infrastructure delivery program and governance framework responding to the key development principles of the Keralup land has been established for future implementation.

Regarding mosquito management, the WAPC considers, based on advice received, that the matter can be appropriately addressed in subsequent stages of the statutory planning process (some of which include public submission/consultation requirements).

9 Coordination of region and local scheme amendments

Section 126(3) of the Planning and Development Act 2005 allows for the concurrent amendment of a local planning scheme where land is to be transferred to the urban zone in the MRS. As no land is being zoned urban under the MRS, section 126(3) is not applicable.

10 Conclusion and recommendation

This report summarises the background to major Amendment 1218/41 and examines the various submissions made on it.

The WAPC, after considering the submissions, is satisfied that the amendment as shown generally on figure 1 in schedule 3, and in detail on the MRS Amendment plan listed in appendix 1, should be approved and finalised.
As a State Government landholding, Keralup forms a key component of the Government's housing affordability strategy and will also contribute to ensuring an adequate supply of land to meet anticipated population growth in the southern metropolitan and Peel regions. Keralup also represents both an opportunity and a responsibility for government to demonstrate a high standard of urban design and amenity and the application of best practice management of drainage, mosquito and other environmental issues in the area.

Having regard to the above, the WAPC recommends that the Minister for Planning presents the amendment to His Excellency the Governor for his consideration and approval and subsequently commend the amendment to both Houses of Parliament.
Schedule 1

Alphabetical listing of submissions
## Alphabetical Listing of Submissions

### MRS Amendment 1218/41

### Keralup Stage 1

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Schedule 2

Summary of submissions and determinations
COMMENT

A search of the Register of Aboriginal Sites has been undertaken for the area and Department of Indigenous Affairs (DIA) site 3582 (Serpentine River) is relevant to the amendment. It is also noted that a number of potential heritage sites were identified within the vicinity of the amendment. However, it is possible that there may be sites on the land that have not yet been entered onto the Register of Aboriginal Sites. The Aboriginal Heritage Act (AHA) protects all Aboriginal sites in Western Australia whether they are known to the DIA or not.

The proponent is reminded of section 15 of the AHA which requires the disclosure of places suspected to be Aboriginal Heritage sites. Under the AHA the Aboriginal Cultural Material Committee (ACMC) has the ability to determine an Aboriginal Heritage site.

The proponent will need to act with due diligence according to the nature of the activity undertaken and may require consultation with relevant Aboriginal groups, a search of the Register of Aboriginal Sites and the Aboriginal Heritage Inquiry System or a cultural and heritage survey.

The proponent is encouraged to liaise with the DIA in order to help identify ways to minimise and avoid damage or disturbance of Aboriginal Heritage sites, which will assist to avoid delays in the subsequent planning stages.

Planning Comment:

Comments noted. The proponent has been advised of the above comments from the DIA which relate to the future detailed planning stages.

Determination:

Submission noted.

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COMMENT

The Department of Education has no objection to the amendment.

Planning Comment:

Comments noted.
Submission: 3
Submitted by: Western Power

Summary of Submission:

COMMENT
Western Power raises no objections the amendment and advises that any changes to the existing power system are the responsibility of the developer/s.

Planning Comment:

Comment noted.

Determination:

Submission noted.

Submission: 4
Submitted by: William Vincent Murray

Summary of Submission:

COMMENT
The submission provided comment on the need for additional stations along the Perth-Mandurah railway and associated light rail proposals. In addition, advice was provided in regards to existing and recommended bus services in the south-west corridor of the metropolitan region.

Planning Comment:

Comments noted.

Determination:

Submission noted.

Submission: 5
Submitted by: Department of Mines and Petroleum

Summary of Submission:

COMMENT
The Department of Mines and Petroleum raises no objections to the amendment.

Planning Comment:
Comments noted.

Determination:
Submission noted.

Submission: 6
Submitted by: Department of Water

Summary of Submission:

COMMENT

The Department of Water (DoW) raises no objections to the amendment. The DoW notes that the provision of water and wastewater services will need to be resolved prior to the transfer of the land to the urban zone.

The DoW advises that should alternative water sources be provided, then the existing District Water Management Strategy for Stage 1 will require substantial revision and will need to be undertaken prior to the transfer of the land to the urban zone.

Planning Comment:
Comments noted.

Determination:
Submission noted.

Submission: 7
Submitted by: Main Roads WA

Summary of Submission:

COMMENT

Main Roads WA (MRWA) raises no objections to the amendment. MRWA has provided the following advice:

- Paganoni Road (West of Freeway) should be reviewed to establish how future widening can be achieved.

- A traffic impact assessment for the amendment has been received. However, a traffic impact assessment for a fully developed Keralup is required to establish the overall impacts.
Planning Comment:

The proponent has been advised of MRWA's comments which relate to future stages of the Keralup development and are to be taken into consideration in subsequent stages of the planning process.

Determination:

Submission noted.

Submission: 8
Submitted by: Department of Transport

Summary of Submission:

COMMENT

The Department of Transport (DoT) has liaised with the Public Transport Authority and MRWA and raises no objections to the amendment. The DoT notes the issues raised by MRWA and recommends that they be addressed in subsequent stages of the planning process.

Planning Comment:

Comments noted.

Determination:

Submission noted.

Submission: 9
Submitted by: City of Rockingham

Summary of Submission:

COMMENT

The City of Rockingham supports the amendment subject to the other regional roads (ORR) reservation for Vine Road being satisfactorily justified.

The Vine Road ORR reservation has been informed by the Keralup and Nambeelup Integrated Transport Study. The study recommends that high volume distributor roads have a profile that provides for dedicated transit lanes in the median, to cater for priority bus services or light rail, along with two lanes of traffic each way, a cycle way and verge within which pedestrian facilities will be provided. It also states that the reservation will provide for kerbside parking in centres. The width of the road reservation with kerbside parking was shown to be 48.8 m and 43.8 m without parking.
The City advises that kerbside parking would not be appropriate for this section of Paganoni Road, as it would negatively impact the function of this high capacity road. Therefore, Paganoni Road is not a centre location where kerbside parking is warranted.

It is recommended that the width of the Paganoni Road reservation not be supported without sufficient justification. It is requested that the City be given the opportunity to approve the proposed cross-section for Paganoni Road prior to the MRS Amendment proceeding.

The Council resolved not to support subsequent planning stages until it is satisfied that the following issues have been resolved:

1. The preparation of a binding infrastructure delivery programme that responds to the key development principles for Keralup and is supported by the relevant stakeholders.

2. Confirmation of the proposed land delivery and project governance arrangements in order for various implementation issues to be clarified.

3. The preparation of a local statutory governance framework to guide and regulate the entire proposed Keralup development.

4. A suitable sub-regional planning context within which to consider Keralup.

5. The demonstration that Keralup Stage 1 can function as a self-contained entity.

**Planning Comment:**

The landowner has prepared an indicative cross section for the Vine Road ORR reservation. The design seeks to demonstrate how the ORR reservation is to accommodate the anticipated traffic flows and future services for the ultimate development of Keralup (east of Serpentine River). The 47 m wide reservation width is based on four lanes of traffic and two dedicated public transport lanes. It is also noted that no kerbside parking is being proposed with the ORR reservation.

An integrated transport strategy has been prepared for the entire Keralup District Structure Plan (DSP) area. Sub-regional traffic modelling and the impacts of sub-regional traffic movements are being considered, and the landowner is continuing to work on sub-regional traffic modelling and its implications.

As the land is being zoned urban deferred, there is an opportunity prior to the lifting of urban deferment to further refine the ORR reservation width for Vine Road. If any additional land is identified for road widening purposes, it can remain in the urban deferred zone, to be reserved as ORR reservation in a future MRS amendment, while the balance of the land can be transferred to the urban zone.

In relation to the requirements to be addressed in the subsequent planning stages, the following has been provided:

1 - 3. Prior to the lifting of urban deferment confirmation from the Water Corporation will be required that the site can be serviced with water and wastewater infrastructure.

   It is also noted that prior to the lifting of urban deferment, confirmation will be required on an infrastructure delivery program and governance framework
responding to the key development principles of the Keralup land for future implementation.

4. The South Metropolitan Peel Structure Plan is being prepared by the Department of Planning for the south-west corridor of the Perth metropolitan area. The landowner is also preparing the Keralup DSP for the entire Keralup development.

The above structure plans will provide the context and further detailed guidance for the development of entire Keralup estate and the south-west corridor in general. It is also noted that the development of Keralup has been identified in previous WAPC endorsed district structure plans for a number of years.

5. The WAPC initiated the proposed amendment for Keralup Stage 1 having regard to the size and scale of the site and its future development. The Keralup DSP will provide the more detailed planning framework for the development of the entire Keralup estate.

Determination:

Submission noted.

Submission: 10
Submitted by: Peel Preservation Group Inc

Summary of Submission:

OBJECTION

The Peel Preservation Group (PPG) objects to the amendment. In 1996 and 2006 the PPG objected to the unsuitability of development in this location. Between 35,000 – 90,000 people are proposed to be located at this site and if lots were an average of 650 m², there would be an even greater number of people living here.

The site is located in close proximity to the Serpentine River. Building pads will need at least 1 m of soil and will require the removal of sand from higher areas. This would have serious impacts on the hydrology of the area.

Photographs have been taken indicating water on paddocks in areas further away from (and higher than) the Serpentine River. Drainage will be a problem and all run-off will flow into a compromised river and estuary.

Since 1996, the situation has deteriorated as follows:

- The area of viable wetlands has been decreased.
- The pollution of the Serpentine River is at a dangerous level and will further pollute the estuary.
- It is becoming more difficult to find remnant vegetation.
• The Department of Health has advised of the increasing risk of mosquito borne viruses at these locations. The imposition of mosquito memorials is not an appropriate solution.

Given the surrounding location there is a high probability of acid sulfate soils being present. Groundwater is also likely to be magnesium and iron rich and not potable.

Traffic issues are of concern and have been underestimated, unless a second access to Mandurah Road (with traffic lights) is installed.

Nearby coastal residents raise concern that Keralup residents will access their smaller beaches, which do not have the facilities for additional residents.

Other environmental groups (The Wetlands Conservation Society) also raise concerns regarding the suitability of development at Keralup. Given the irreversible impacts from such a development, it would be better to build a wind farm to provide cheaper green power to the district.

This submission was supported by a Hearing.

Planning Comment:

Refer to Parts 7.1 and 7.3 of the Report on Submissions.

It is not expected that a significant increase in traffic and congestion problems will result from the development of the subject land. However, traffic impacts from the entire Keralup development on the surrounding road network are being considered in conjunction with relevant stakeholders as part of the Keralup DSP and the Southern Metropolitan Peel Structure Plan.

In relation to the potential impact on the nearby beaches from the proposed development, the use and enjoyment of the Peel region's beaches are not exclusive to existing or nearby residents, and are considered an important community asset which can be used by all existing and future residents.

The proposed amendment has been identified in the draft Outer Metropolitan and Peel Sub-regional Strategy as an ‘Urban Expansion Area 2011-2015’. Furthermore, Keralup (under its former name, ‘Amarillo’) has been previously identified for development purposes in the WAPC approved South-West Corridor Structure Plan 1993 and the Inner Peel Region Structure Plan 1997. Changing the use of the site to a wind farm is not considered to be an appropriate or compatible use.

Determination:

Submission noted.

Submission: 11
Submitted by: Department of Environment and Conservation
Summary of Submission:
The Department of Environment and Conservation’s (DEC) comments, summarised, are as follow:

Proposed regional park

The Department of Housing (DoH) has liaised with DEC regarding the potential for it to manage land within Keralup as a regional park. DEC is supportive of the concept, subject to the resolution of funding arrangements for park management. The northern, eastern and southern boundaries of the subject site define the boundary between Stage 1 of the development and the proposed Lower Serpentine River Regional Park.

Native vegetation and flora

The DEC requests that a new flora and vegetation survey of all potentially affected areas be conducted by a suitably qualified environmental consultant, in accordance with the Environmental Protection Authority’s (EPA’s) Guidance Statement No. 51 – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia. The survey should be conducted prior to structure planning. The DEC concurs with the EPA’s advice and recommendations requesting the proponent to prepare and implement an outline development plan and appropriate management plans, including a flora and fauna management plan and a Serpentine River foreshore management plan.

The DEC recommends that remnant vegetation within the subject site be retained and incorporated into future development, where possible. Any proposed clearing of native vegetation requires a clearing permit obtained from DEC, unless of a kind that is exempt in accordance with the Environmental Protection Act 1986.

Native vegetation, in particular the vegetation identified as being suitable foraging habitat for the threatened Carnaby’s black cockatoo should be retained.

Fauna management

Bush Forever site 394 serves as a habitat for a variety of native fauna, which the proposed scheme amendment has the potential to impact upon, as development proceeds. The area contains foraging habitat and possibly breeding habitat for the Carnaby’s black cockatoo. The DEC requests that, prior to any future structure planning, the proponent undertakes a detailed fauna survey in accordance with EPA Guidance Statement No. 56 – Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia.

The proponent should also contact the Commonwealth Department of Sustainability, Environment, Water, Population and Communities to determine their responsibilities under the EPBC Act.

Wetland management and buffers

In accordance with EPA Guidance Statement No. 33 – Environmental Guidance for Planning and Development, the DEC recommends that all reasonable measures are taken to minimise the potential impacts on resource enhancement wetlands and their buffers.
DEC advises that the (adjacent) Serpentine River and floodplain is classified as a conservation category wetland and advice should be sought from DoW in relation to adequate buffers, drainage and impacts from development.

In planning for any future structure plan or subdivision, it should be noted that no drainage infrastructure is to be placed within the adjacent Serpentine River and floodplain, nor is there to be any direct discharge of drainage waters (including road drainage) into the adjacent Serpentine River.

**Boundary interface treatment (future conservation areas)**

The landowner should ensure there is a perimeter road and adequate fencing between the development site and areas retained for conservation. DEC recommends that the width of any perimeter road is adequate to accommodate all road and drainage infrastructure. No vegetation, earth spoil or any other debris is to be stored or disposed of within the boundary of any future conservation area.

**Weed control**

In order to protect the conservation values of the surrounding area, the proponent should ensure that flora species known to be invasive or environmentally damaging are not used in any landscaping as they may spread into the adjacent conservation areas.

**Fire management**

All necessary fire management requirements should be provided for within the subject site, in accordance with the draft *Planning for Bushfire Protection Guidelines* and any other relevant policies. The DEC requests the provision of a perimeter road to provide adequate separation between conservation areas and urban development.

**Midge and mosquito management**

The potential for the subject site to be affected by midge plagues should be considered when determining future subdivision applications. In other cases where urban development is proposed in close proximity to wetlands on the Swan Coastal Plain, information has been provided warning residents of the potential nuisance problems of midges. In addition, the subject site is located in close proximity to mosquito breeding areas. DEC notes that the proponent has prepared a mosquito management strategy and that discussions are continuing between the proponent and the Department of Health in relation to the management of mosquitoes.

**Acid sulfate soil management**

DEC records show a portion of the subject site as having known ‘high to moderate’ risk of acid sulfate soils occurring within three metres of the natural soil surface or deeper. Therefore it is likely an acid sulfate soils management plan will be required. In accordance with EPA recommendations, the proponent is required to prepare and implement management plans, including an acid sulfate soils management plan.

**Possible environmental offsets**

Provided the development of the land within the subject area is considered to be environmentally acceptable, the DEC would be prepared to assist in negotiations with the proponent regarding the possible development of environmental offsets for any residual impacts.
Planning Comment:

Comments noted. Refer to Parts 7.1 and 7.3 of the Report on Submissions.

The proponent has been advised of the DEC’s comments, many of which will be considered in subsequent stages of the planning process such as the local scheme amendment and structure planning stages, and may require subdivision and development approval conditions.

Determination:

Submission noted.

Submission: 12
Submitted by: Water Corporation

Summary of Submission:

OBJECTION

The Water Corporation does not support the amendment as it is remote from the current urban front and from existing and planned services. This land will be costly to service and is distant from existing water and wastewater infrastructure.

The Corporation has not scheduled funding on its capital investment program to facilitate service provision to urban development at this location. Any development of this land ahead of headworks infrastructure is regarded as pioneer development, and the cost of extending water, wastewater and drainage infrastructure will need to be borne by the proponent.

As Keralup is isolated from water and wastewater headworks infrastructure with the capacity to provide services to the site, funding would need to be secured to bring forward significant capital projects for water and wastewater in order to meet the additional demand that would be generated by the development of the subject land. In view of the current constraints on the Corporation’s capital budget, the Corporation is not able to prioritize the required capital projects to meet the timeframe for the development of this land.

The Minister for Water has written to the Minister for Housing advising that a preliminary cost estimate indicates that headworks projects in the order of $30 million would have to be funded by the Department of Housing in order to facilitate the early development of Keralup.

The Water Corporation has scheduled the construction of a new wastewater treatment plant in the East Rockingham locality. It is anticipated that the first module of the plant will be commissioned around the end of 2015 and will serve Keralup.

The Corporation has advised of the risks associated with any increase in demand on the existing Point Peron Wastewater Treatment Plan (WWTP). The Corporation has requested the WAPC to place a moratorium on further urban rezoning, until there is greater certainty regarding the approvals and construction timeframes for the East Rockingham WWTP.
The WAPC has not proceeded with other rezoning of land or lifting of urban deferment in this area. Therefore, the Corporation is concerned about the precedent that would be set if the WAPC supports the proposed rezoning ahead of other privately owned landholdings in the East Rockingham WWTP catchment.

Planning Comment:

Comments noted. Refer to Part 7.2 of the Report on Submissions.

Determination:

Submission noted.

Submission: 13
Submitted by: Hon. Lynn MacLaren MLC

Summary of Submission:

OBJECTION

The submission does not support the rezoning of the land as there are a number of issues which remain unresolved and requests the WAPC defer the amendment to allow the public to consider all aspects of the entire Keralup development.

The submission advises that it is of concern that the proposed West Keralup MRS amendment report is not publicly available as the EPA has set their level of assessment based on this document. The Keralup DSP and the South Metropolitan Peel Structure Plan are to be released for public comment in the second half of 2012, therefore the amendment should be deferred until these documents have been considered by the public.

The following issues are also raised:

1. Bush Forever site 394 is affected by the amendment. While there is a net gain of 6.47 ha, it is unclear what the total impact (including on the Serpentine River and wetlands) will be, given the proposed bridge crossings.

2. It is unclear why the realignment of the Kwinana Freeway is necessary and the associated change to Bush Forever site 394.

3. There will be considerable community concerns if road widening (as suggested by the City of Rockingham) impacts Bush Forever site 395 which includes Paganoni Swamp. Without the Keralup DSP it is impossible to determine the full impacts.

4. Stage 1 of Keralup will be without major community facilities until subsequent stages of Keralup occur. The community at this site may have to wait for a considerable period of time until further stages are developed with community facilities as significant environmental and transport issues are to be resolved. The community should not be forced to be totally reliant on car transport while facilities become available and transport connections are established.

5. No information is provided on the sustainability of the site having regard to social, environmental and economic considerations.
6. Residents will be substantially impacted by mosquitoes.

7. Keralup has been identified in the State Government’s Affordability Housing Strategy as a priority residential project. It is unclear if this is the intent for Stage 1.

Planning Comment:

The WAPC does not consider that the proposed amendment should be deferred pending the release of the draft *South Metropolitan Peel Structure Plan* and the Keralup DSP. The proposed amendment has been identified in the draft *Outer Metropolitan and Peel Sub-regional Strategy* as an ‘Urban Expansion Area 2011-2015’. Furthermore, Keralup (formally known as Amarillo) has been previously identified for development purposes in the WAPC approved *South-West Corridor Structure Plan 1993* and the *Inner Peel Region Structure Plan 1997*.

The proposed amendment is being zoned urban deferred, and no development can occur until the subject land has been transferred to the urban zone. In this regard, the landowner will need to comply with the *Guidelines for the Lifting of Urban Deferment*, which amongst other matters refers to planning for the locality being sufficiently advanced to guide future development.

The MRS amendment documentation provided by the landowner (which remains the property of the landowner) has informed the initiation of the MRS *Amendment Report* which has been referred to the EPA for a level of assessment. The EPA set their level of assessment as ‘Scheme Amendment Not Assessed - Advice Given (no appeals)’. The EPA's level of assessment and advice was publicly available in the advertised *Amendment Report*.

In relation to the other issues above, the following comments are provided:

1. Bridge crossings do not form part of the proposed amendment and will be considered in future stages of Keralup (east of the Serpentine River).

   Bush Forever site 394 has been rationalised to correct an anomaly in the MRS as the Kwinana Freeway is not constructed within the existing primary regional roads reservation at this location. Therefore, this modification does not change the existing on-site situation.

2. Preliminary investigations into the future widening of Paganoni Road has been undertaken to inform the proposed MRS amendment. The widening of Paganoni Road is not required as a result of the proposed amendment.

   The future widening of Paganoni Road is to be addressed as part of the Keralup DSP and the South Metropolitan Peel Structure Plan which will be subject to separate public consultation periods. It is also noted that any road widening will need to be in accordance with relevant State and Federal environmental legislation.

3. A community needs assessment is being undertaken that addresses community related requirements resulting from the overall Keralup development and the resulting internal and external supply required to meet this demand. The provision of community infrastructure for the proposed amendment area will be considered as the population expands, as these types of facilities are triggered when appropriate population triggers are reached.
5. Sustainability has been recognised as a key consideration of the planning and development of Keralup. A sustainability strategy is being prepared for Keralup that will focus on environmental sustainability with reference to social and economic outcomes and provide strategies and actions required at each stage of the planning and development process.


7. The DoH confirms that Keralup will contribute to the State Government's Housing Affordability Strategy.

**Determination:**
Submission noted.

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**Submission:** 14
**Submitted by:** Lindsay Robbins

**Summary of Submission:**

**SUPPORT**

The submitter supports the amendment as follows:

- The amendment promotes the sustainable use and development of land in accordance with the *Planning and Development Act 2005* and the requirements of Parliament.

- It is consistent with *Directions 2031 and Beyond* and the key themes of being responsible and making the best use of land and infrastructure, being part of the strategic urban expansion programme and it is consistent with orderly and proper planning.

**Planning Comment:**
Support noted.

**Determination:**
Submission noted.

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**Submission:** 15
**Submitted by:** Masterplan consultants on behalf of a landowner

**Summary of Submission:**

**COMMENT**

Masterplan consultants on behalf of the Kelliher family raise no objections to the amendment. The Kelliher family own 770 ha of land located in North
Ravenswood/Nambeelup and lodged a submission on the Peel Region Scheme (PRS) in 1999 advising of their intention to urbanise the land.

In December 2003, the former Department of Planning and Infrastructure (DPI) acknowledged the potential rezoning of the southern portion of the subject land (the area between Rogers, Paterson and Old Mandurah Roads). The DPI advised that completion of a number of investigations would be required prior to rezoning the land under the PRS.

In 2005 the DPI advised that any PRS rezoning would need to be contemplated in the context of the review of the Inner Peel Region Structure Plan. Since 2006 the DPI/Department of Planning (DoP) has advised that the WAPC will not accept/contemplate a PRS amendment, pending completion of the strategic planning framework for this location. This has been occurring for six years by the WAPC.

1. It is concerning that the WAPC is advising private landowners that it will not contemplate proposals for rezoning, while concurrently contemplating Government proposals such as Keralup.

2. The subject land is environmentally unconstrained, is in a better strategic location than Keralup and directly abuts existing urban zoned (developed) land and state planning agencies are aware of the landowners’ intention to seek rezoning. It is inappropriate that these agencies do not accept the rezoning of the site, while preferential treatment is provided for a Government landholding.

3. The Keralup rezoning is acknowledged. However, it is noted that there are significant concerns with the development of the eastern portion, while there are landowners with less constrained land. Therefore, consideration of further rezonings east of the Serpentine River should be deferred until other land, such as the Kelliher landholdings, have been considered.

4. The WAPC should advise whether it is prepared to consider private landowner proposals or defer any further consideration of Keralup to ensure equity amongst landowners.

This submission was supported by a Hearing.

Planning Comment:

1 - 3. The proposed amendment has been identified in the draft *Outer Metropolitan and Peel Sub-regional Strategy* as an ‘Urban Expansion Area 2011-2015’. Keralup (formally known as Amarillo) has been identified for development purposes in the WAPC endorsed *South-West Corridor Structure Plan 1993* and the *Inner Peel Region Structure Plan 1997* for a number of years.

Keralup is identified as a ‘priority project’ by the Department of Premier and Cabinet’s Land Availability Working Group. The DoH confirms that the proposed amendment will contribute to the State Government's housing affordability strategy and is preparing a submission to Cabinet on the delivery of associated key infrastructure for Keralup. A DSP is also being prepared which will provide the context and further detailed guidance for development of the entire Keralup project.
The proposed amendment request was accompanied by a range of studies which have been assessed by relevant state government agencies and the City of Rockingham. The WAPC considered all the advice received and the advanced strategic planning context of the site and recommended that the subject land be transferred to the urban deferred zone. The EPA subsequently set its level of assessment as ‘Scheme Amendment Not Assessed - Advice Given (no appeals)’, and provided other advice for consideration in future stages of the planning process.

The WAPC notes that the landowner has been consulting with the DPI/DoP for a number of years on the development potential of the subject land. However at this stage, the submitter’s land has not been identified for urban purposes in previous or current strategic planning documents compared to the Keralup site such as the draft Outer Metropolitan and Peel Sub-regional Strategy.

4. No MRS/PRS amendment requests have been received for the balance of Keralup (east of the Serpentine River). However, any proposed region scheme requests would be considered on their merits, having regard to the statutory and strategic planning context of the site.

The WAPC is currently undertaking investigations to identify future urban precincts within the metropolitan and Peel regions. In this regard, a Southern Metropolitan and Peel Structure Plan is to be released for public comment in mid 2013 which will identify future urban precincts in the southern metropolitan and Peel regions. It is therefore recommended that the submitter await the release of this plan for further strategic guidance. Preparation of the plan will include a public consultation process.

Determination:

Submission noted.

Submission: 16
Submitted by: City of Mandurah

Summary of Submission:

COMMENT

The City of Mandurah has advised that without the context of the sub-regional planning framework or draft District Structure Plan the amendment presents as being located in an area that is significantly isolated from existing urban zoned and developed land.

The City recommends that the following be required prior to the transfer of the land to the urban zone:

1. There is a government commitment to the Karnup railway station.

2. Demonstration that urban development will result in an improvement to water quality and health of the Serpentine River and there are satisfactory arrangements for mosquito management.
3. Progression of a satisfactory sub-regional planning context that determines that the land can be developed and serviced for urban purposes as an urban footprint. It should include such items as: employment locations, transport and movement infrastructure and social infrastructure.

4. Demonstration that there is a whole of government approach to delivery of the above commitments.

Planning Comment:

1. The *Public Transport for Perth 2031* document has identified Karnup Station as a stage one project, with construction to be completed within the next five to ten years. The Department of Planning has also established a Steering Committee to progress the planning for an urban Transit Oriented Development at Karnup Station.

   Therefore, it is considered that the *Public Transport for Perth 2031* provides sufficient guidance on the timing of a station at Karnup, and it would not be appropriate to defer the future transfer of the subject land to the urban zone pending any further commitment on this issue.

2. Refer to Parts 7.1 and 7.3 of the Report on Submissions.

3. The proposed amendment has been identified in the draft *Outer Metropolitan and Peel Sub-regional Strategy* as an ‘Urban Expansion Area 2011-2015’. Furthermore, Keralup (formally known as Amarillo) has been previously identified for development purposes in the WAPC approved *South-West Corridor Structure Plan 1993* and the *Inner Peel Region Structure Plan 1997*.

   The subject land is proposed to be transferred to the urban deferred zone and no development can occur until the subject land has been transferred to the urban zone. In this regard, the landowner will need to comply with the *Guidelines for the Lifting of Urban Deferment*, which amongst other matters, refers to planning for the locality being sufficiently advanced to guide future development and the requirement for structure planning to be sufficiently advanced.

4. The Keralup project is identified by the Department of Premier and Cabinet’s Land Availability Working Group as a ‘priority project’, and the Department of Housing is progressing the planning of the site as a priority.

   In addition, DoH is currently preparing a submission to Cabinet that will look to confirm government support for the project and commitment to the delivery of associated key infrastructure at Keralup.

Determination:

Submission noted.

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**Submission:** 17

**Submitted by:** Department of Health

**Summary of Submission:**
The Department of Health does not support the proposed amendment as the risk to public health from mosquito-borne diseases would be unacceptably high. Mosquito management strategies would only be partially effective, at best, and some treatments may be rejected by environmental managers due to adverse impacts on non-target organisms.

The Department of Health along with advice from the local government maintain that despite the best efforts of mosquito management strategies, current and future workers and residents in this location will be at significant risk from mosquito-borne diseases. It is not acceptable to propose development in such a location on the assumption that mosquito management will be achievable and effective.

The location of the Keralup development presents a serious health risk due to its proximity to extensive areas of saltmarsh and freshwater wetlands that regularly breed Ross River virus (RRV) mosquitoes. On-site breeding of mosquitoes (in constructed water bodies and associated water management infrastructure) may be manageable if the appropriate strategies are planned and implemented, with ongoing, dedicated funding and resources.

It will not be possible to effectively manage mosquitoes breeding off-site to acceptable levels for a significant part of most years. This statement is made knowing the difficulty of achieving reliable control elsewhere in the Peel region, despite the existence of a costly, integrated mosquito program undertaken by local governments in collaboration with Department of Health.

This financial year (1 July - 30 December 2011) there have been nine cases of RRV and three cases of Barmah Forest virus (BFV) reported in the City of Rockingham. Last financial year, 31 cases of RRV and seven cases of BFV were reported in the City of Rockingham.

The locality of Greenfields is close to extensive natural mosquito breeding areas along the Serpentine River, and the attack rate would be indicative of what might be expected to occur at Keralup. If the Greenfields figures were applied to the entire Keralup development, approximately 174 cases of RRV would be expected in a year. The proponents of the development and approving agencies must determine whether such a public health impact is acceptable.

The Department of Health consistently recommends against further development within already-existing communities that are known to experience similar mosquito impacts. As Keralup is a new project there is the opportunity to decide against proceeding with it based on potential adverse impacts.

Planning Comment:

Comments noted. Refer to Part 7.1 of the Report on Submissions.

Determination:

Submission noted.
OBJECTION

The Peel-Harvey Catchment Council raises the following concerns:

- Surface and groundwater management.
- The alteration of the area from a nutrient sink to a nutrient source.
- The lower Serpentine River is in very poor condition, additional nutrient sources will have a significant impact, as will the pressure for recreational access and use which will be an expectation of the proposed Keralup residents.
- Mosquitoes will impact on residents who will have an expectation for chemical control, increasing pressure for use of pollutants for mosquito control.
- Setting of a precedent for the whole of the proposed Keralup development, which is not reflective of the land capability of this area.

The rapid and ongoing loss and deterioration of wetlands throughout the Swan Coastal Plain is of concern. The few areas wetlands need to be protected and enhanced rather than continue the trend of clearing and filling, followed by limited capital investment to try to protect the quality of the remaining waterways, including the Ramsar listed Peel-Yalgorup system.

The Peel-Yalgorup system is a wetland of international importance under the Convention on Wetlands (Ramsar, 1971) and is also listed under JAMBA, CAMBA and ROKAMBA. There are 39 migratory species listed under the EPBC Act that are known to visit the Peel-Yalgorup system and numerous listed threatened species and communities. The lower Serpentine has been nominated as an extension to the Ramsar system and the quality of water flowing from the Serpentine has a major impact on the health of the Peel Inlet and Harvey Estuary section of the Ramsar system.

Therefore placing up to 98,000 people at the top of the Serpentine catchment, effectively changing it from a nutrient sink to a major nutrient source, is unacceptable and should be referred to the Commonwealth for consideration under the EPBC Act. The EPBC Act considers nine matters of national environmental significance, including the ecological character of Ramsar sites. Limits of acceptable change for the Peel-Inlet and Harvey Estuary are prescribed for the key components and processes of the wetlands. Any actions that are likely to have an impact on the Peel-Yalgorup system would be considered controlled actions under the EPBC Act.

Reliance on future management plans, offsets and mitigation are ineffective, as demonstrated by the already declining state of all measurable indicators for the Estuary and Rivers, Catchment and Ramsar Assets.

Over-extraction of Peel’s groundwater is already having a detrimental effect on threatened flora and fauna, ecological communities and wetlands throughout the subject...
area, and this impact is likely to be exacerbated in the future by a growing population and drying climate.

**Planning Comment:**

Refer to Parts 7.1 and 7.3 of the Report on Submissions.

It is not considered that the proposed amendment would set a precedent in relation to land capability for the entire Keralup development. Separate MRS and PRS amendments will need to be submitted for the balance of Keralup. These amendments will be assessed by relevant government agencies, such as the EPA, DEC and DoW in order to inform the land’s suitability for development. It is acknowledged that there are land capability constraints affecting the balance of Keralup, and further studies are being undertaken by the landowner to inform the extent and nature of development.

The proposal was considered by the EPA which determined the proposed amendment should not be assessed under Part IV Division 3 of the *Environmental Protection Act 1986*. The EPA is of the view that the potential environmental impacts of the proposed rezoning are of a type that can be adequately managed through subsequent stages of the planning process.

The EPA recommends that the corresponding amendment to the City of Rockingham TPS No. 2, should include scheme provisions requiring the preparation and implementation of an outline development plan and appropriate management plans. The management plans will include mitigation strategies, monitoring and evaluation, performance and compliance reporting and auditing, contingency plans and timing and implementation schedules.

The management plans will be prepared and implemented as a requirement of approval at the appropriate stages of the planning approvals process and the management commitments will therefore need to be implemented in accordance with these plans.

**Determination:**

Submission noted.

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**Submission:** 19

**Submitted by:** LandCorp

**Summary of Submission:**

**SUPPORT**

LandCorp advises:

- The site has been identified as a discrete cell of the Keralup estate and is a cleared parcel of land in close proximity to services and infrastructure.
- The land is less environmentally constrained than the balance of the Keralup estate.
- 1500 dwellings can be developed which does represent a logical first stage of development given the informal level of assessment by the EPA.
• The only issue preventing the zoning of land to urban is the provision of wastewater services which is a limiting factor in the south-west of the metropolitan region. This includes LandCorp’s land in Karnup.

• The resolution of the East Rockingham WWTP issue is of State significance and needs to be resolved to unlock the development potential of the south-west corridor of the Perth metropolitan region.

• The pursuit of development in this corridor will assist in the WAPC in formalising the broader urban development of this area in the upcoming Perth and Peel Structure Plan.

Planning Comment:
Support noted.

Determination:
Submission noted.

Submission: 20
Submitted by: Shire of Murray

Summary of Submission:

COMMENT
The Shire of Murray advises that although the amendment is located within the City of Rockingham, there are broader planning implications for the establishment of a new urban community that could accommodate 90,000 people over the next 40-50 years.

The Shire notes that the DoH is completing a draft Keralup DSP and the Shire sits on the Keralup Project Coordination Group to assist in the assessment of the draft Keralup DSP. However, there does not appear to be a clear indication of State Government commitment or support to deliver the necessary infrastructure to support the proposed development.

The provision of public transport to service the amendment area has not been confirmed, and the provision of a rail station at Karnup remains in doubt. Therefore there is the need for a public transport plan to be developed for the Keralup development.

The Shire acknowledges that a comprehensive range of community facilities will be provided within the Keralup activity centre and appropriate infrastructure funding arrangements will be needed with local government.

The Shire has concerns with the proposed land delivery model and project governance arrangements to be applied to ensure that the first stage of development is sustainable as a self contained entity and that future development can be administered.

The Shire notes that the EPA recommends that a corresponding Amendment to City of Rockingham's TPS No. 2 should include Scheme provisions requiring preparation of an
Outline Development Plan and various management plans. It is queried why no Fire Management Plan or Construction Management Plan have been requested.

Department of Health has advised that the subject land is located in close proximity to areas of saltmarsh and fresh water wetlands which have potential to provide off site mosquito breeding areas. Although a mosquito management strategy is to be prepared, the Shire raises concern on the impact on future residents and the need for increased resourcing to manage the mosquito hazard.

The Shire considers that no decision should be made to lift the urban deferment at a future date until sub-regional planning has been assessed. Some work has progressed on the South Metropolitan and Peel Sub-regional Structure Plan but there are many issues still unresolved or not finalised.

Planning Comment:

Refer to Part 7.1 of the Report on Submissions.

The Keralup project is identified in the Department of Premier and Cabinet’s Land Availability Working Group as a ‘priority project’, and the DoH is progressing the planning of the site as a priority.

In addition, DoH is currently preparing a submission to Cabinet that will seek to confirm government support for the project and commitment to the delivery of associated key infrastructure at Keralup. It is also noted that prior to the lifting of urban deferment, confirmation will be required on an infrastructure delivery program and governance framework responding to the key development principles of the Keralup land for future implementation.

The Public Transport for Perth 2031 plan has identified Karnup Station as a stage one project, with construction to be completed within the next five to ten years. The Department of Planning has also established a Steering Committee to progress the planning for an urban Transit Oriented Development adjoining Karnup Station. Therefore, it is considered that the Public Transport for Perth 2031 document provides sufficient guidance on the timing of a station at Karnup, and it would not be appropriate to defer the future transfer of the subject land to the urban zone pending any further commitment on this issue.

In relation to issues regarding the requirements for fire and construction management plans, such issues are considered in the future planning stages such as the local scheme amendment, structure planning and the subdivision and development approval stages.

The WAPC initiated the proposed amendment having regard to the size and scale of the site and its future development. The Keralup DSP will provide the more detailed planning framework for the development of all of the Keralup estate. However, it is not envisaged that the Keralup DSP and the Southern Metropolitan Peel Structure Plan would need to be finalised prior to the transfer of the land to the urban zone. However, consideration of this issue would be considered on its merits as part of a future planning process.

Determination:

Submission noted.
The South West Aboriginal Land and Sea Council (SWALSC) advised that the amendment was tabled at the Gnaala Booja working party and named applicants. It has been requested that a heritage survey be conducted prior to the amendment being finalised.

**Planning Comment:**

Comments noted.

The landowner has advised that an Aboriginal Heritage Assessment involving members of the Gnaala Karla Booja Native Title Claim Group has been finalised. This assessment has been provided to SWALSC, Department of Indigenous Affairs and survey participant groups. The report identifies three previously registered and three newly recorded Aboriginal sites, located within the entire Keralup estate. The report also recorded an historical Aboriginal camp site near an adjoining property to the north.

The landowner intends that this study will be submitted as part of a Section 18 application under the Aboriginal Heritage Act for consent to use the land for the purpose of developing Keralup.

**Determination:**

Submission noted
Schedule 3

The amendment figure as advertised
Keralup - Stage 1 (Pt Lot 551) - proposed major amendment as advertised

26 July 2011

Legend

- **Existing:**
  - urban zone
  - rural zone
  - parks and recreation reservation
  - primary regional roads reservation
  - other regional roads reservation

- **Proposed:**
  - urban deferred zone
  - parks and recreation reservation
  - primary regional roads reservation
  - other regional roads reservation

Notice of delegation

Bush Forever area addition

Bush Forever area removal
Appendix 1

List of detail plans as advertised
Keralup Stage 1

Proposed Major Amendment

Amendment 1218/41

As advertised

3.2400/1

Detail Plan

1.5698  -  Keralup  Urban Deferred

Land Requirement Plans

1.2186/3  -  Kwinana Freeway – Anstey Road to Lot 514
1.2187/2  -  Kwinana Freeway – Lot 514 to MRS Boundary
1.2897/2  -  Paganoni Road – Mandurah Road to Kwinana Freeway
1.5699  -  Vine Road – Kwinana Freeway to Lot 551

Changes Plans

1.7129  -  Kwinana Freeway – Anstey Road to Lot 514
1.7130  -  Kwinana Freeway – Lot 514 to MRS Boundary
1.7131  -  Paganoni Road – Mandurah Road to Kwinana Freeway
Submissions
Mr Tony Evans  
Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001

Dear Mr Evans

METROPOLITAN REGION SCHEME PROPOSED AMENDMENT 1218/41  
KERALUP STAGE 1

Thank you for your letter 30 September 2011 for the proposed Amendment 1218/41  
Keralup Stage 1 (the Amendment).

The Department of Indigenous Affairs (DIA) has conducted a review of the  
Amendment area and I can confirm that there is one place currently mapped on the  
Register of Aboriginal Affairs (the Register) relevant to the Amendment.

DIA 3582 (Serpentine River)

The Aboriginal Cultural Material Committee (ACMC) assessed this place on the  
information available and determined that it met the criteria under section 5 of the  
Aboriginal Heritage Act 1972 (AHA).

It is also noted that a number of potential Aboriginal heritage sites were identified  
within the vicinity of the Amendment. The AHA protects all Aboriginal sites in  
Western Australia whether they are known to the DIA or not.

The proponent is reminded of section 15 of the AHA, which requires the disclosure of  
places suspected to be Aboriginal heritage sites to the Registrar of Aboriginal Sites.

Under the AHA only the ACMC has the ability to determine whether or not a place is  
a site under the provisions of the AHA. As such it is recommended that all potential  
Aboriginal heritage sites are made known to the ACMC so that it can formally assess  
these places under the AHA.
The proponent need to act with due diligence according to the nature of the activity undertaken and the area in which it is being carried out. It can involve one or all of the following steps:

(a) consultation with the relevant Aboriginal group;
(b) search of the Register of Aboriginal Sites and the Aboriginal Heritage Inquiry System;
(c) a heritage survey; and
(d) cultural heritage

As a general note, if a land use activity is likely to impact upon Aboriginal heritage, it is best that heritage management strategies are implemented early in the land use activity planning process. Early engagement and consultation can help to identify ways to minimise and avoid damage or disturbance of Aboriginal heritage sites. Leaving heritage management to the later stages of project planning might lead to delays whilst obtaining the relevant information and, where necessary, the relevant consents.

If at any time it is likely that the activity will in any way impact on a registered Aboriginal site or suspected Aboriginal site the activity should not commence, or if already commenced, should cease immediately, and Land users should contact the DIA on 9235 8000 or through their website: http://www.dia.wa.gov.au/contact-us/.

Yours sincerely

[Signature]

Christine Lewis
Manager Heritage Advice
6 October 2011
Mr Tony Evans  
Secretary  
Western Australian Planning Commission  
Albert Facey House  
469 Wellington Street  
PERTH WA 6000

Dear Mr Evans

Thank you for your letter dated 30 September 2011 regarding the Metropolitan Region Scheme Amendment 1218/41 Keralup Stage 1.

The Department of Education has reviewed the proposals to transfer land from the rural zone to the urban deferred zone and from the rural zone to the other regional roads reservation.

The Department's current educational facilities in the region can adequately accommodate any expected student increase generated in Stage 1 in the near to medium term.

The Department therefore has no objection to the Proposed Amendment.

Yours sincerely

SHARYN O'NEILL  
DIRECTOR GENERAL  
12 OCT 2011
Western Power wishes to advise the following in respect to the above mentioned proposal.

1. To the best of my knowledge, there are no objections to the changes you propose to carry out for the above-mentioned project.

Please note:

A) Perth One Call Service (Freecall 1100 or visit dialbeforeyoudig.com.au) must be contacted
and location details (of Western Power underground cabling) obtained prior to any
excavation commencing.

B) Work Safe requirements must also be observed when excavation work is being undertaken
in the vicinity of any Western Power assets.

Western Power is obliged to point out that any change to the existing (power) system;
if required, is
the responsibility of the individual developer.

Regards,
Customer Service Officer
Connections Administration
Western Power - Locked Bag 2520, Perth WA 6000 [map]

T: 13 10 87 | F: (08) 9225 2073
E: works.admin.general@westernpower.com.au

Please consider the environment before you print this email.
Planning and Development Act 2005  
Section 41 Amendment (Substantial)  
Form 41  
Submission  
Metropolitan Region Scheme Amendment 1218/41  
Keralup Stage 1  

To: Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
Perth WA 6001

Name: WILLIAM VINCENT MURRAY  
Address: 12 RECREATION Pl, KALAMUNDA  
Postcode: 6076

Contact phone number:  
Email address:  

Submission  
(Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

1. NEW STATION(s)  
2. LIGHT RAIL  
3. NEW STATION(s)  
4. INTERCHANGE  
5. NEW STATION(s)  
6. ADDITIONAL HOUSING

The day the 12.5 and 5.2.2 was extended, Aubin Grove, this could be Light Rail. One day with new station off Freeway.  
1.24 NEW STATION, Railway Rd off Freeway  
and NEW HOUSES SOUTH of Railway Rd To W.A.  
1.35 NEW STATION, Safety Ray Rd, off Freeway with NEW Bus Routes to come TO MORE HOUSES with Light Rail between the old wannanup station and NEW one. 5.64 Route was extended and 5.6.8.  
NEW ROUTE, NEW STATION, KALAMUNDA and extend 5.9.  

Turn over to complete your submission  
THEM NEW STATION OFF Freeway and Light Rail TO NEW HOUSES and BUS ROUTES!
Hearing of submissions

Anyone who has made a written submission on the amendment has the opportunity to personally present the basis of their submission to a sub-committee of the WAPC. You do not have to attend a hearing. The comments presented by you in this written submission will be considered in determining the recommendation for the proposed amendment.

For information about the submission and hearings process, please refer to the amendment report and in particular appendix D.

Please choose one of the following:

☑ No, I do not wish to speak at the hearings. (Please go to the bottom of the form and sign)

OR

☐ Yes, I wish to speak at the hearings. (Please complete the following details)

I will be represented by:

☐ Myself – My telephone number (business hours): ........................................

or

☐ A spokesperson

Name of spokesperson: .................................................................
Contact telephone number (business hours): ........................................
Postal address: .................................................................

I would prefer my hearing to be conducted in:

☐ Public (members from the general public may attend your presentation)

OR

☐ Private (only the people nominated by you or the hearings committee will be permitted to attend)

You should be aware that:

• The WAPC is subject to the Freedom of Information Act 1992 and as such, submissions made to the WAPC may be subject to applications for access under the act.

• In the course of the WAPC assessing submissions, or making its report on these submissions, copies of your submission or the substance of that submission, may be disclosed to third parties.

• All hearings are recorded and transcribed. The transcripts of all hearings, along with all written submissions, are tabled in Parliament and published as public records should the Governor approve the proposed amendment. The WAPC recommendations are similarly published in a report on submissions and tabled in Parliament.

To be signed by person(s) making the submission

Signature: ................................................................. Date: ..................

Note: Submissions MUST be received by the advertised closing date, being close of business (5pm) on 20 January 2012. Late submissions will NOT be considered.
Dear Mr Evans

METROPOLITAN REGION SCHEME PROPOSED AMENDMENT 1218/41 - KERALUP STAGE 1

Thank you for your letter dated 30 September 2011 inviting comment on the above Metropolitan Region Scheme Amendment.

The Geological Survey of Western Australia has assessed this proposal on behalf of the Department of Mines and Petroleum with respect to mineral and petroleum resources, geothermal energy and basic raw materials and has no comment to make in this regard.

Yours sincerely

Rick Rogerson
Executive Director
GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

/ November 2011
31 October 2011

Western Australian Planning Commission
140 William Street
Perth, WA 6000

Attn: Anthony Muscara

Dear Anthony,

RE: METROPOLITAN REGION SCHEME PROPOSED AMENDMENT 1218/41
KERALUP STAGE 1

Thank you for the above referral dated 4 October 2011. The Department of Water (DoW) has reviewed the application and offers the following advice.

As specified in the supporting amendment report, the DoW approved the West Keralup District Water Management Strategy in January 2011. As the current proposal appears consistent with the objectives and recommendations of this document at this time, the DoW has no objections to the current proposal.

However, the DoW notes that resolution of the various servicing issues, in particular the provision of potable and wastewater services will be necessary prior to the lifting of the urban deferred zoning of this landholding.

The DoW wishes to bring to the attention of both the Western Australian Planning Commission, and the Department of Housing that should an alternative water servicing arrangement be proposed for this project, then the current West Keralup District Water Management Strategy will require substantial revision. This process could occur as part of the lifting of the urban deferred zoning, however, early engagement with the respective agencies concerned is recommended to ensure the timely resolution of this matter, should the need arise.

If you wish to discuss the above further please contact the undersigned of the DoW's Mandurah Office on (08) 9550 4203.

Yours Sincerely,

[Signature]

Adrian Parker
Program Manager – Urban Water Management
Kwinana Peel Region

Cc: Mr Vernon Langdon – Department of Housing
Dear Anthony

METROPOLITAN REGION SCHEME PROPOSED AMENDMENT 1218/41
KERALUP STAGE 1

Thank you for your letter of 30 September 2011 inviting Main Roads comments on the above proposed Amendment.

I advise that Main Roads has no objections to the rezoning proposed in this amendment.

However, further to our letter of 24 September 2010 – a copy of which is attached for your ease of reference, the following points appear to remain outstanding:

- Pagononi Road (west of the Freeway) should be reviewed to establish how future widening can be achieved.

- The robust traffic impact assessment based on a fully built Keralup development has not yet been received or reviewed by Main Roads. I advise that we have received a traffic assessment for Stage 1 only, however this does not provide sufficient information to address the likely impact on the regional road network of the entire Keralup development.

If you require any further information please contact Planning Information Officer Lynne Wrigglesworth on 9323 4544.

Yours faithfully

Lindsay Broadhurst
MANAGER ROAD PLANNING

enc
24 September 2010

The Secretary
Western Australian Planning Commission
Albert Facey House
469 Wellington Street
PERTH WA 6000

ATTENTION: ANTHONY MUSCARA

Dear Sir

PROPOSED MINOR METROPOLITAN REGION SCHEME AMENDMENT
KERALUP STAGE 1

Thank you for your letter of 26 August 2010 requesting our comments on the proposed minor Metropolitan Region Scheme (MRS) Amendment for Keralup Stage 1.

Main Roads has a number of concerns with this proposal, some relating only to Stage 1 and others that arise from the future Stages 2 and 3 which we believe should be considered as part of this minor amendment.

- Vine Road (ie Paganoni Road east of the Freeway) should be a ‘blue’ road of sufficient width to cater for the anticipated traffic movements and public transport not only from Stage 1 but also from the future Stages 2 and 3. A planning design concept to identify the reservation requirement for this site should be developed.

- Paganoni Road (west of the Freeway) should be reviewed to establish how future widening of this road can be achieved. It is understood that the current reservation assumes that Paganoni Road will be widened to the south. However, this will impact on Paganoni Reserve and is not likely to be environmentally acceptable. Widening to the north is the most likely outcome and this land is mostly zoned rural in the MRS. It is recommended that this amendment to Paganoni Road be included as part of this proposed minor MRS amendment.

While it is acknowledged that a transport assessment has been undertaken for the Keralup area, to date this assessment has not addressed the likely impact on the regional road network based on the development of all three stages. The completion of a robust traffic impact assessment based on a fully built Keralup development is therefore an outstanding issue.

Main Roads also recommends and supports the developer in carrying out a further noise assessment when the final ground levels within Stage 1 are known in order to establish what noise amelioration measures should be undertaken during the construction phase.
You may be aware that the Public Transport Authority is currently looking into the possibility of a 'fast train' running direct to Bunbury along the Kwinana Freeway/Forrest Highway road reserve, and this should also be taken into account when carrying out the traffic impact and noise assessments.

Should Stage 1 be developed in isolation from Stages 2 and 3, consideration needs to be given to a temporary emergency access from this area should Paganoni Road be blocked or closed due to a traffic related incident or bush fire in the surrounding recreational land.

If you require any further information please contact me on 9323 4163.

Yours faithfully

[Signature]
Lindsay Broadhurst
MANAGER ROAD PLANNING
Tony Evans  
Western Australian Planning Commission  
Locked Bag 2506  
Perth WA 6001

DEPARTMENT OF PLANNING  
15 DEC 2011  
FILE RLS/0232

Attn: Anthony Muscara

Dear Tony

Re: MRS Proposed Amendment 1218/41 Keralup Stage 1

Reference made to your letter dated 4th October 2011 regarding the proposed MRS Amendment 1218/41 at the above-mentioned location.

The Department of Transport (DoT) has liaised with the Public Transport Authority (PTA) and Main Roads Western Australia (MRWA) regarding this proposal and provides the following comments.

The DoT notes the concerns provided by MRWA to the WAPC and recommends that their concerns be fully addressed in direct consultation with MRWA at development stage.

The DoT has no objection to the proposed MRS Amendment but would be keen to comment at the future structure planning stage.

Please feel free to discuss this application with Tony Radford if you would like to clarify any of the above information.

Yours sincerely

Robert Campbell  
Director: Travel Demand Management

cc Lynne Wigglesworth  Main Roads Western Australia
Mr T Evans  
Secretary  
Western Australian Planning Commission  
Locked Bag 2506  
PERTH WA 6001  

ATT: Mr Anthony Muscara

Dear Mr Evans

Re: Metropolitan Region Scheme Amendment 1218/41 - Keralup Stage One

I refer to your correspondence dated the 30th September 2011 seeking comments with respect to the above proposal.

The matter was considered by the Council at its ordinary Meeting held on the 13th December 2011, where it resolved to support the proposed ‘Urban Deferred’ zoning of Keralup Stage One, subject to the proposed reservation width for Paganoni Road being satisfactorily justified.

In this regard, the MRS Amendment submission, which was informed by the Keralup and Nambeelup Integrated Transport Study (ITS), recommends that high volume distributor roads (or ‘Integrator A’ roads) have a profile that provides for dedicated transit lanes in the median, to cater for priority bus services or light rail, along with two lanes of traffic each way, a cycle way and verge within which pedestrian facilities will be provided. It also states that the reservation will provide for ‘kerbside parking in centres’. The width of the road reservation, with kerbside parking was shown to be 48.8m and 43.8m without parking.

It is the City’s view that kerbside parking would not be appropriate for the subject section of Paganoni Road, given that it would negatively impact the function of this high capacity road. Also, Paganoni Road is not a ‘centre location’ where the MRS Amendment submission (and ITS) suggests that kerbside parking is warranted.

The proposed width of the road reservation does not match with either profile shown in the MRS Amendment submission. As such, it is recommended that the width of the Paganoni Road reservation not be supported without sufficient justification. It is requested that the City be given the opportunity to approve the proposed cross-section for Paganoni Road, prior to the MRS Amendment proceeding.

The Council also resolved not to support the subsequent planning phases for Keralup until the following matters are satisfactorily resolved:

(i) The preparation of a binding Infrastructure Delivery Programme, that responds to the stated key development principles for Keralup, that is supported by the responsible stakeholders.
(ii) Confirmation of the proposed land delivery and project governance arrangements such that the various implementation issues can be clarified.

(iii) The preparation of a local statutory governance framework to guide and regulate the entire proposed Keralup development.

(iv) A suitable sub-regional planning context within which to consider Keralup.

(v) It be demonstrated that Stage One can function as a self-contained entity.

The matters detailed above have been raised by the Council over previous years in its various dealings with the Keralup proposal. In this regard, the Council has expressed the view that there are fundamental project delivery matters that remain unresolved.

For the Council to have confidence that the project can be satisfactorily implemented, significant progress must be made in the matters raised above. The proponent has undertaken (and is currently undertaking) various studies that seek to ensure that Keralup will be a sustainable community, however, the manner in which many of the Study outcomes will be implemented is unclear.

For example, there are recommendations from studies into Economic Development, Integrated Transport and Community Development (in progress), that rely upon a governance and project delivery framework to which the proponent or State Government is yet to commit.

It is also the case that there is no confirmed sub-regional planning context to consider Keralup within. Although the South Metropolitan Peel Structure Plan process will provide this context, at present certain assumptions are made with respect to the planning parameters around the Keralup site.

The Council has therefore established the above position where it will not support subsequent planning proposals for Keralup until it is satisfied that these essential project delivery, governance and planning context matters have been satisfactorily resolved.

Should you have any enquiries with respect to the above, please do not hesitate to contact Mr Peter Ricci on 9528 0378.

Yours faithfully

R M JEANS
DIRECTOR, PLANNING
& DEVELOPMENT SERVICES
Our Ref: LUP/1460-03, D12/35788

Your Ref: 809-2-28-13 Pt 1(RLS/0208)

Enquiries to: Mr Ricci

18th April 2012

Mr T Evans
Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

ATT: Mr S Radley

Dear Mr Evans

Re: Metropolitan Region Scheme Amendment 1218/41 - Keralup Stage One

Further to the Council's submission dated the 14th December 2011 on the above, please accept the following comments which supplement those previously submitted.

As stated in its submission, one of the matters to which the Council will seek resolution prior to supporting subsequent phases of the planning process for Keralup is the "preparation of a local statutory governance framework to guide and regulate the entire proposed Keralup development".

The manner in which Keralup is governed in a local statutory sense has not be confirmed and is currently being investigated. Given the scale of Keralup and its complexities, it is not possible that Keralup could be adequately governed under the existing framework within Town Planning Scheme No. 2.

It is for this reason that the City wishes to express that it is not appropriate that the WAPC exercise Clause 126 (3-6) of the Town Planning and Development Act 2005 and concurrently zone the land under TPS2. The City requests that the WAPC consider this position in the (unlikely) event that the land is zoned 'Urban' through the consideration of submissions or through the lifting of the 'Urban Deferment'.

In any event, Clause 126 (3-6) can only be applied to zoning and not TPS text amendments. The only existing zone which Keralup Stage One could be included under TPS2 is 'Development' where the TPS requires that the 'Development Area' be included within Schedule 9 of the Scheme, along with special provisions that may apply to the land. Other TPS text amendments would also apply to the land.

I trust that the City's position is clear and that it is respected by the WAPC.

Should you have any enquiries with respect to this advice, please do not hesitate to contact the undersigned on 9528 0378.

Yours faithfully

P RICCI
PROJECT MANAGER, KERALUP
Peel Preservation Group Inc.

Submission 10

Secretary
Western Australian Pla
Secretary
Western Australian Planning Commission

MRS AMENDMENT 1218/41 FOR KERALUP STAGE 1 (1218/41).

Peel Preservation Group is opposed to the above rezoning of approximately 109 ha of Lot 551 and 5.7 ha Vines Road to Urban Deferred for the future development of an extensive subdivision at Keralup.

In 1996 and 2006 PPG protested the environmental unsuitability of development (especially on this scale!) in the area. We do so again. We are aware of a suggested projected populations of between 35,000 and 80,000 – 90,000. We continue to protest that such a development should not be considered. At 650sqm per block over the whole site the population could be much higher over time.

There is deep concern about the choice of this site on the river palusplain (low-lying flats). The plans acknowledge this by admitting to at least a metre of sand fill to some areas before any building “pads” are built and compacted. It is agreed that this is going to require a massive amount of fill. It is very poor (and unimaginative) planning to level the entire site and remove any high ground and push it onto the low areas. We suggest that this may have serious effects on the hydrology of the area and not achieve the desired result.

We have photos taken which show paddocks covered by centimetres of water – these paddocks are further from the river than the proposed area (probably higher) and this winter is still below average rainfall. Drainage is always going to be a problem in such a low lying area and all runoff will flow into the already compromised Serpentine River and on into the estuary.

Environmentally the situation has worsened since the 1996 proposal, in that –

- The area of viable wetlands (the natural drainage and filtration system) is decreasing
- The pollution of the Serpentine River is at a dangerous level now
- Pollution of the river then adds to the pollution of the estuary
- It is becoming more and more difficult to find any “Remnant Bushland”
- There is an increasing risk of mosquito borne viruses for people living in these low lying areas. The Dept of Health has drawn attention to the dangers of serious illness from these viruses. It is not acceptable to opt out of responsibility by placing a “Memorial of Titles” on these blocks.

Judging by the surrounding property Acid Sulphate soils are highly likely to be found. Groundwater is also highly likely to be magnesium and iron rich, thus not potable.

Another area of concern is the traffic – suggest seriously underestimating the effect of morning and afternoon flows unless a second access to Mandurah Road (complete with traffic lights) is installed during construction.

As well as the impact of the traffic itself, there is the concern expressed by residents in adjacent coastal areas. Many feel residents of this new estate will tend to access their closest beach, rather than nearby Mandurah. These smaller beaches do not have facilities (including parking) to accommodate the influx.
Ours is not the only group concerned. The Wetlands Conservation Society newsletter states —
“A previous development proposal was rejected …… because of concerns about the wetlands and the
impacts of polluted runoff into the Peel Estuary. The site is quite unsuitable for urban development……”

We need to consider the irreversible environmental effects of such a wide scale development on such a
sensitive area. The community would be much better served by building a wind farm here to provide cheaper,
green power for the district.

Yours,

Peel Preservation Group Inc.

[Signature]
MRS AMENDMENT 1218/41 FOR KERALUP STAGE 1 (1218/41).
Peel Preservation Group is opposed to the above rezoning of approximately 109 ha of Lot 551 and 5.7 ha Vines Road to Urban Deferred for the future development of an extensive subdivision at Keralup.

SOME RESEARCH TO SUBSTANTIATE OUR POINTS
Dr Kerry Trayler – FOR WATER & RIVERS COMMISSION REPORT NO. RR7 JULY 2000
Managing and enhancing our waterways for the future

Foreword
Many Western Australian rivers are becoming degraded as a result of human activity within and along waterways and through the off-site effects of catchment land uses. The erosion of foreshores and invasion of weeds and feral animals are some of the more pressing problems. Water quality in our rivers is declining with many carrying excessive loads of nutrients and sediment and in some cases contaminated with synthetic chemicals and other pollutants. Many rivers in the south-west region are also becoming increasingly saline.

Human activity can increase the rate of eutrophication of a waterbody through the input of excessive amounts of nutrients. The sandy soils of catchments have a poor capacity to retain nutrients. When fertiliser is added to these soils, the nutrients readily make their way into our waterways through the shallow groundwater. In addition, streamflow tends to be highly seasonal and most estuaries are poorly flushed.

Pollutants enter a waterway through a range of land uses across a catchment. Pollution may be point source (its origin is localised) or diffuse (arising from a wide area) and include nutrients, herbicides, pesticides, petroleum products, heavy metals and hydrocarbons, as well as pathogens (arising from sewage) and litter. Many pollutants may be toxic to riverine life or may alter or influence the life cycle of various organisms. When excessive amounts of nutrients, such as nitrogen and phosphorus enter waterways, they may alter the ecology of these systems.

Reduced connectivity between the river and its floodplain may occur as a result of changes to the natural water regime. This will have important consequences for riverine fauna through the loss of important habitat for small crustacea, wading birds, frogs and fish.

PEEL-HARVEY CATCHMENT 2011 REPORT

Monitoring and research over the past 5 years indicates that many of the catchment’s natural resources are in a state of deterioration. This applies especially to the water quality of the lower reaches of the Serpentine and Murray Rivers, catchment native vegetation, watercourse condition, and the state of the Estuary. The Estuary and lower rivers already receive twice the amounts of nutrient pollution that the ecosystem can naturally assimilate.

The proposed placement of new residential and industrial development on sites which pose high risk of nutrient input into the Estuary, with high water tables and over areas of native vegetation, is of par. A recent summary of available data shows that the condition of the lower rivers is very poor, and the health of the Estuary may be deteriorating once more:

"During the last five or so years, ...., some of the biological indicators of estuarine health point potentially to a gradual reversal of ecological conditions back towards the status of the Estuary that existed immediately prior to the construction of the channel".

(Rogers, Hall & Valesini, 2010).

The levels of nutrients and sediments entering the lower rivers and Estuary is significantly more than its natural capacity, as summarised by the Department of Water:
"Between 1977 and 1988 an average of 1200 tonnes of nitrogen and 140 tonnes of phosphorus annually entered the Peel-Harvey Estuary. The current estimated phosphorus winter load has increased to 145 tonnes per year, which is 49 per cent above the current phosphorus reduction target described in the Water Quality Improvement Plan for the rivers and Estuary of the Peel-Harvey system - phosphorus management."

(Department of Water, 2010b).

This assessment is supported by the recent Science Strategy developed for the PHCC:

"... water quality and environmental problems remain in the rivers and over time have continued to get worse. The lower reaches of the Serpentine River, as an effective ecosystem, could now be described as biologically dead and perhaps not possible to save, and there are indications that the health of the lower reaches of both the Murray and Harvey Rivers are in a parlous biological state." (Rogers, Hall & Valesini, 2010).

Mosquitoes are an important consideration for those planning the location of new developments. Two mosquito species (Ochlerotatus crouporhynchos and Ochlerotatus vigilax) are known to inhabit the salt marshes that fringe the Peel-Harvey Estuary (URS 2008). These species transit viruses such as Ross River Virus and Barmah Forest Viruses to humans.

According to Rogers et al (2010):

"It seems that natural predators for these mosquito species do not exist or have any significant effect on their larvae in the Peel-Harvey Estuary. The increasing abundance of mosquito larvae in the wetlands is also reported to be an indicator of declining health of water quality and the wetlands."

Planning for new developments should provide minimum setbacks between development and mosquito breeding areas. The design of buffers around wetlands to reduce the impact of mosquito-borne viruses and the management of these wetlands are important considerations for local and state government authorities and land developers. Voluntary guidelines to design wetland buffers are available, such as those drafted for the Western Australian Planning Commission (Western Australian Planning Commission, 2005); however there appear to be limitations in their effectiveness and level of uptake. This may relate to the pressure to maximise land areas allocated to housing, rather than the protection of human health.

Nutrient management and the reduction of nutrients entering the Estuary have dominated environmental research and community and Government action in the Region for over thirty years. It is a significant issue on the coastal Catchment where the soils are nutrient deficient and have been artificially drained to move water off the land quickly and allow development.

Most recently, a suite of studies into the Catchment’s nutrient problems were undertaken between 2003 and 2008 (EPA, 2008) and a Catchment nutrient management model was built to assess Catchment management options (Department of Water, 2010a, unpubl.).

All of this work has led to acceptance by all levels of government and the interested community that phosphorus loads entering the lower rivers need to be reduced by half to return a basic level of environmental integrity to the system and prevent further problems. This 50% target is considered scientifically valid and necessary. It was first enshrined in policy in the early 1990’s in an
Environmental Protection Policy and a Statement of Planning Policy (respectively Government of Western Australia, 1992a and b).

Unfortunately, monitoring over the past two decades indicates that nutrient loads have remained unchanged and are still double what the Estuary and lower rivers can tolerate to maintain basic environmental values (Environmental Protection Authority, 2008). A recent draft analysis by the Department of Water of available water quality data for a number of tributaries to the Estuary is of particular concern.

Research and modelling has shown that existing urban development contributes a disproportionately higher amount of nutrients to the Estuary than grazing or broad-scale agriculture (higher nutrient export per unit area) (EPA, 2008; Department of Water, 2010a, unpubl.). See Figure 3. This counteracts a widespread understanding that replacing rural land with urban land will, as a matter of course, reduce nutrients flowing into the Estuary.

Wetlands, including lakes, sumplands (swamps) and seasonally waterlogged areas, are a feature of the coastal Catchment because of its flat landforms and high water tables. Most of the coastal plain is wetland or palusplain, but it has been significantly drained and cleared. This means that all remaining vegetated wetlands, even those with modified native vegetation, are of significance and should be protected to restore the nutrient-stripping function of palusplain and wetlands.

Much of the land on which development is proposed is constrained by high water tables and flooding, high nutrient export risks, and direct impact on the values of the Ramsar Site.

**Dept of Water** states the region has ‘two of most degraded river systems in the State namely the Murray and Serpentine Rivers’ (Website).

**SHARING SWEET WATER: CULTURE AND THE WISE USE OF PERTH’S WETLANDS - Hill A L, Murdoch Uni.**

In the current thirty year drought (Commander & Hauke, 2005), many companies and people generally, do not remember, are often not well informed, and will seldom consider selecting a house property away from Perth’s wetlands, or in an informed way, design their houses with floor levels sufficiently high, to reduce the risk of flooding, when normal or heavier rainfall returns to recharge our groundwater system. These wetter conditions and a normal recharge period for Perth’s groundwater and wetlands have occurred for sixty of the last one hundred and twenty years (ibid). Even higher groundwater levels can be expected with rising sea levels from climate change.

**LOCAL AND PERSONAL EXPERIENCE**

Until recent (lower rainfall) years farms adjacent to Keralup have been seen waterlogged to a level of several centimetres. A family farm of a PPG member is a further 3.5 – 4 Km further east than Keralup and has frequently been ankle deep in water for days after heavy rains.

An elderly resident of an adjacent farm describes the area a “hungry ground” and states that if topsoil is removed the underlying soil will require huge amounts of fertilizer to make it productive – not suitable for suburban gardens and risking contaminated run-off into the river.

This and another long time resident describe patches of ‘sour ground’ which are rendered unproductive for several years after disturbance. This is almost certainly a description of acid sulphate soil. Bores in the area have discoloured water with strong sulphurous odour. Again an indication of ASS.
MOSQUITO MENACE

The Peel Region has disproportionately high numbers of reported cases of illness from mosquito borne viruses. However many (possibly 50%) go unreported. The risk of illness greatly increases with proximity to wetlands and waterways rendering habitation hazardous.

Prevention treatments are extremely expensive, less effective than hoped and pose a possible long term threat to the environment via the food chain.

There is no way that informing proposed future residents of the mosquito hazard should indemnify developers against possible future litigation. The area is not suitable for housing development.

POSSIBLE ALTERNATE USE

PPG has suggested that this low lying river plain and wetland area should be utilized for a Wind Farm with retention of the wetland areas. This would be a much more productive use of the area and the power produced could be used to supply surrounding areas such as Rockingham, Kwinana as well as parts of the Peel region, including any, more suitable, housing areas to be developed.
Mosquitos have been identified as one of the key environmental issues that impact the proposed Keralup development. As I’m sure you are aware mosquitoes are a natural part of Australian wetlands and tidal salt marshes. They are a food source for frogs, fish, bats and birds. Apart from the impacts of nuisance biting they carry the very real risks associated with the transmission of disease causing pathogens to humans.

Ross River virus (RRV) and Barmah Forest virus (BFV) are responsible for approximately 5000 cases of human disease reported every year in Australia. (Webb and Russell 2012)

The Peel Mosquito Management Group have just completed their most demanding mosquito season to date. The 2011/2012-mosquito season has seen a record number of 26 aerial treatments in order to combat the consistent larval activity. In total 5453 Hectares were treated in comparison to the 3414 Ha for the previous season. Despite the comprehensive management as of the 3rd of May 187 cases of RRV and 31 cases of BFV have been reported in the Peel Region. The impact of this disease in terms of financial and social cost is yet to be determined. Clearly management is not the solution to this serious health issue.

Mosquitoes have been identified as a relevant environmental factor affecting the proposed Keralup development. The Department of Health has expressed concern that mosquito populations on and off site would seriously threaten the health and lifestyle of prospective residents. The Review of the Contiguous Local Authorities Group (CLAG) report states “Government planners at State and local levels appear to be resistant to the need for buffers around wetlands that reflect mosquito dispersal distances” and “clearly, stronger planning mechanisms are urgently needed to restrict development on land that is impacted by mosquitoes or may be in the future”

The Mosquito Control Task Force Report to Cabinet June 1990 made the following conclusions and recommendations:
- “the Health Department has a state-wide charter to ensure the protection of public health”
- “the threat to public health from mosquitoes is a state-wide phenomenon which is likely to become more acute in the future”
- “government involvement is necessary to ensure that a minimal environmental impact occurs from actions taken for mosquito control”

The report goes on to state “the mosquito problem exists because development has occurred close to waterways”

The impacts of climate change necessitate a change in the approach to managing the exposure of the public to mosquitos. Land planning uses need to allow for
higher water levels, new and expanded inundation and the consequent impacts on mosquito breeding in order to avoid escalating mosquito and mosquito-borne disease impacts. (CLAG) Given that the WAPC is already drafting into the State Coastal Planning Policy an increase in the sea level rise from 0.38m to 0.9m and also introducing the application of the Precautionary Principle for land use planning within areas of coastal hazard risk the effects of climate change are clearly significant and need to be carefully considered for the proposed Keralup development. The government’s Health Impacts of Climate Change Adaptation strategies for West Australia predict that the impacts of climate change will have significant effects on human health. The report indicates that vector borne diseases such as RRV and BFV will be come more significant, with the potential for more exotic diseases and vectors to be established. Of concern are events such in May 2000 when the Health Department extended its Australian Encephalitis warning following unprecedented detection of the virus south of the Murchison River. This mosquito borne disease can be potentially fatal.

In summary, the literature states that there is now clear evidence that in most years there is an increased risk of being diagnosed with RRV or BFV disease for people living within 3km of tidal saltmarshes. -Best possible management practices of mosquitos do not appear to be reducing the incidence of these notifiable diseases for populations that have been located close to wetlands. -Climate change will most probably increase the mosquito breeding areas as tide levels increase. -On going chemical control can have a significant impact on fauna. Although there are environmentally sensitive mosquito control agents registered for use in Australia, the broad scale nature of control activities required to effectively reduce mosquito populations are not sustainable. (Webb and Russell, 2012)

Given the severity of mosquito borne diseases and the warnings from many expert sources within the community I fail to understand why the WAPC would knowingly expose future populations to high levels of mosquito activity by placing them in wetlands close to areas of tidal salt marsh such as the proposed Keralup development. In my opinion it would be an immoral act to knowingly place people at risk.

We call upon the WAPC to look at the well-documented evidence and act responsibly when making decisions that can have such significant impacts on the environment and human health.
Submission

Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Attention: Mr Anthony Muscara

Dear Mr Muscara

METROPOLITAN REGION SCHEME AMENDMENT 1218/41 - KERALUP STAGE 1

I refer to the letter dated 30 September 2011 referring the above proposed scheme amendment to the Department of Environment and Conservation (DEC) for comment.

General
The subject site (Part Lot 551 Vines Road, approximately 115 hectare area) is immediately adjacent to Bush Forever Site 394 Lake Amarillo, Serpentine River and Adjacent Bushland, Karnup. Lot 551 Vines Road is also located adjacent to Lot 809 Paganoni Road, which is owned by the Western Australian Planning Commission (WAPC) and managed by DEC as part of Rockingham Lakes Regional Park. Lot 809 contains a Conservation category wetland - Paganoni Swamp, with the Kwinana Freeway separating the subject site from the regional park. The regional park contains regionally significant vegetation including multiple occurrences of priority ecological communities, a significant population of declared rare flora (DRF) and lakes protected under the Environmental Protection (Swan Coastal Plain Lakes) Policy 1992, with that portion on the south side of Paganoni Road included within Bush Forever Site 395 namely Paganoni Swamp and Adjacent Bushland, Karnup. In this context, the following information is provided.

Proposed regional park
The concept of a regional park along the Serpentine River was first discussed in 1990 as part of the Government’s planning strategy for the metropolitan region (Metropplan). More recently, the Department of Housing (DoH) has liaised with DEC regarding the potential for it to manage land within Keralup as a regional park. DEC is supportive of the concept, subject to the resolution of funding arrangements for park management. The northern, eastern and southern boundaries of the subject site define the boundary between Stage 1 of the development and the proposed Lower Serpentine River Regional Park.

Native vegetation and flora
An extensive area of regionally significant remnant vegetation is located within Bush Forever Site 394, which encompasses the Serpentine River and foreshore. DEC records indicate the potential presence of DRF in this area, namely Drackea elatica and Diuris drummondii. It is noted that a Stage 1 Flora and Vegetation Assessment (Coffey Environments Pty Ltd, 2010) was undertaken in November 2005, which is not the optimal time for conducting flora surveys and may not reflect the current situation on site. In addition, the Environmental Scoping Document for the greater area of Keralup (4,000 hectares), which encompasses Keralup Stage 1, "EPA Assessment No. 1755" (Coffey Environments Pty Ltd, 17 February 2010) states "The flora survey was undertaken outside of the normal flowering period for some of the significant species potentially occurring within the study area. A spring flora survey is required to identify any significant species which would not have been identifiable during the November 2005 site visit".

Regional Parks Branch
Level 1, 4-6 Short Street, Fremantle
Phone: (08) 9431 6500  Fax: (08) 9431 6599
Postal Address: PO Box 1535, Fremantle, Western Australia 6959
www.dec.wa.gov.au
DEC therefore requests that new a flora and vegetation survey of all potentially affected areas be conducted by a suitably qualified environmental consultant, in accordance with the Environmental Protection Authority’s (EPA’s) Guidance Statement 51 – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia. The survey, which should be conducted prior to structure planning, should determine the presence or otherwise of declared rare, priority or other significant flora. If such flora and vegetation is present on site, appropriate action should be undertaken to protect it, or to mitigate impacts. DEC concurs with the EPA’s advice and recommendations dated 5 September 2010 requesting the proponent to prepare and implement an outline development plan and appropriate management plans, including a flora and fauna management plan, and a Serpentine River foreshore management plan.

Regardless of the outcomes of the above requested flora and vegetation survey, DEC recommends that remnant vegetation within the subject site be retained and incorporated into future development, where possible. Any proposed clearing of native vegetation requires a clearing permit obtained from DEC, unless of a kind that is exempt in accordance with Schedule 6 or Regulation 5 (Clearing of Native Vegetation Regulations) of the Environmental Protection Act 1986. DEC’s Native Vegetation Conservation Branch should be contacted regarding the possible need for a clearing permit.

The Stage 1 Flora and Vegetation Assessment identified four vegetation types within the subject site, being:

- Cleared Pasture (CP);
- Open woodland of Eucalyptus gomphocephala (EgOW);
- Low open woodland dominated by Melaleuca preissiana, Melaleuca rhaphiophylla, and Eucalyptus rudis (MpMrErLOW); and
- Low woodland to 9m dominated by Melaleuca rhaphiophylla and Melaleuca teretifolia (MrMILW).

The report indicates that the native vegetation on-site is of variable condition, ranging from good to completely degraded.

Native vegetation, in particular the vegetation identified as plant community EgOW, is likely to be suitable foraging habitat for the threatened Carnaby’s black cockatoo (Calyptorhynchus latirostris), which is listed as ‘fauna that is rare or likely to become extinct’ under the Wildlife Conservation Act 1950. Clearing of this vegetation will result in a loss of some foraging habitat for this species. This issue is addressed further under ‘Fauna management’.

In considering this scheme amendment, DEC advises that any future structure plan and/or subdivision be designed so that areas of high conservation value, such as native vegetation that is in good condition; or contains rare, priority or significant flora species; or comprises habitat for threatened fauna such as Carnaby’s black cockatoo, is protected within areas of public open space.

**Fauna management**

Bush Forever Site 394, which encompasses the Serpentine River and foreshore, serves as habitat for a variety of native fauna, which the proposed scheme amendment has the potential to impact upon, as development proceeds. The area is known to serve as foraging habitat and possibly breeding habitat for the Carnaby’s black cockatoo, which is listed as ‘fauna that is rare or likely to become extinct’ (generally referred to as threatened fauna) under the Wildlife Conservation Act 1950. DEC therefore requests that, prior to any future structure planning being finalised, the proponent undertake a detailed fauna survey in accordance with EPA Guidance Statement No. 56 – Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia.

The fauna survey should determine the presence or otherwise of potential foraging or breeding habitat for Carnaby’s black cockatoo and other significant fauna species. If such habitat is present on site, appropriate action should be undertaken to protect it, or to mitigate impacts. Survey detail should be included within the flora and fauna management plan recommended by the EPA.

Carnaby’s black cockatoo is also protected by the Commonwealth’s Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Therefore, regardless of any decision under Western Australian planning or environmental approvals processes, the proponent should contact the
Commonwealth Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) to determine what responsibilities they have under the EPBC Act.

DEC considers that the protection and conservation management of the proposed approximately 750 hectare conservation area (Coffey Environments Pty Ltd, 2010) will result in significant fauna habitat being retained. In which case there should be a clear indication that the proposed conservation area will be reserved for Parks and Recreation and managed for conservation purposes.

DEC concurs with the EPA's advice and recommendations dated 5 September 2010 requesting the proponent to prepare and implement appropriate management plans, including a flora and fauna management plan.

**Wetland management and buffers**
The Keralup Master Plan (Environmental Scoping Document - EPA Assessment No. 1755, Figure 2) shows the protection of the western portion of the mapped Resource Enhancement wetland within the subject site. DEC notes that the eastern portion is proposed to be impacted by development. In accordance with **EPA Guidance Statement No.33**, DEC recommends that all reasonable measures are taken to minimise the potential impacts on Resource Enhancement wetlands and their buffers. These wetlands have the potential to be restored to Conservation category through appropriate management activities including rehabilitation and weed control. If the proponent considers that the mapping of the wetland is inaccurate then advice should be sought from DEC's Wetlands Section.

DEC advises that the adjacent Serpentine River and floodplain is classified as a Conservation category wetland in DEC's **Geomorphic Wetlands Swan Coastal Plain** dataset and is protected under the **Environmental Protection (Swan Coastal Plain Lakes) Policy 1992**. The protection of this watercourse is overseen by the Department of Water (DoW), and therefore advice should be sought from DoW in relation to adequate buffers, drainage and impacts from development. However, DEC requests it to be involved in any discussion regarding the management of the Lower Serpentine River and floodplain as it may be included the proposed Lower Serpentine River Regional Park. DEC notes that the proponent has prepared a district water management strategy for the subject site, which was endorsed by DoW in January 2011.

In planning for any future structure plan or subdivision, it should be noted that no drainage infrastructure is to be placed within the adjacent Serpentine River and floodplain, nor is there to be any direct discharge of drainage waters (including road drainage) into the adjacent Serpentine River.

**Boundary interface treatment (future conservation areas)**
The proponent should ensure there is a perimeter road and adequate fencing (being to the specifications and satisfaction of DEC) between the development site and areas retained for conservation. DEC recommends that the width of any perimeter road is adequate to accommodate all road and drainage infrastructure, and allow for a gently sloping fill batter that meets the natural ground level inside the dedicated road reserve. DEC has encountered unacceptable instances where the perimeter road reserve is too narrow to accommodate all road batters, drainage infrastructure, and footpaths, and therefore the road batters have encroached beyond the road reserve and into the adjoining conservation estate.

Additionally, no vegetation, earth spoil or any other debris is to be stored or disposed of within the boundary of any future conservation area.

**Weed control**
In order to protect the conservation values of the surrounding area, the proponent should ensure that flora species known to be invasive or environmentally damaging are not used in any landscaping, where they may spread into the adjacent conservation areas.

**Fire management**
All necessary fire management requirements should be provided for within the subject site, in accordance with the (Interim) **Planning for Bushfire Protection Guidelines** (Edition 2 – WAPC and Fire and Emergency Services Authority, May 2010) and any other relevant policies. DEC requests the provision of a perimeter road to provide adequate separation between conservation areas and urban
development. Such a hard edge helps mitigate fire risk and provides improved access for fire suppression.

**Midge and mosquito management**
The potential for the subject site to be affected by midge plagues should be considered when determining future subdivision applications. In other cases where urban development is proposed in close proximity to wetlands on the Swan Coastal Plain, information has been provided warning residents of the potential nuisance problems of midges. In addition, the subject site is located in close proximity to mosquito breeding areas. DEC notes that the proponent has prepared a mosquito management strategy and that discussions are continuing between the proponent and the Department of Health in relation to the impact of mosquitoes.

**Acid sulphate soil management**
DEC records show a portion of the subject site as having a known "High to Moderate" risk of acid sulphate soils occurring within three metres of the natural soil surface or deeper. Therefore it is likely an acid sulphate soils management plan will be required. In accordance with EPA recommendations dated 5 September 2010, the proponent is required to prepare and implement management plans, including an acid sulphate soils management plan.

**Possible environmental offsets**
Provided the development of the land within the subject area is considered to be environmentally acceptable by approval authorities, DEC would be prepared to assist in negotiations with the proponent regarding the possible development of environmental offsets for any residual impacts.

In summary, DEC requests a new flora and vegetation survey and a new fauna survey be prepared to better inform structure planning of the subject site. Also DEC concurs with the EPA's advice and recommendations requesting the proponent to prepare and implement the following plans:

- Outline development plan;
- Local Water Management Plan;
- Flora and Fauna Management Plan;
- Serpentine River Foreshore Management Plan;
- Mosquito Management Plan; and
- Acid Sulphate Soils Management Plan.

It is expected that issues such as interface treatments, access, interpretation, and fire management, control of weeds and feral animals and rehabilitation would be dealt with through the preparation and implementation of the recommended Serpentine River Foreshore Management Plan.

If you have any questions in relation to the above, please don't hesitate to contact Grace Patorniti of this office on telephone number 9431 6500.

Yours sincerely

Brendan Dooley
Manager, Regional Parks Branch

16 January 2012
18 January 2012

Secretary
Western Australian Planning Commission
469 Wellington Street
PERTH WA 6000

Attention: Anthony Muscara

Metropolitan Region Scheme Amendment 1218/41 - Keralup Stage 1

I refer to your letter of 30 September 2011 requesting advice from the Water Corporation on the proposed rezoning of a portion of the Keralup land from "Rural" to "Urban Deferred".

The Water Corporation does not support the rezoning of this land at this time.

The Keralup land is remote from the current urban front and from existing and planned services. In general terms, this land will be costly to service at this time. As the site is distant from existing water and wastewater infrastructure, the Corporation has not scheduled funding on its Capital Investment Program to facilitate service provision to urban development in this location. Any development of this land ahead of the orderly roll-out of headworks infrastructure will be regarded as pioneer development and the cost of extending and augmenting water, wastewater and drainage infrastructure to support the development will need to be borne by the proponent.

Because Keralup is isolated from water and wastewater headworks infrastructure with the capacity to provide services to the site, funding would need to be secured to bring forward significant capital projects for water and wastewater in order to meet the additional demand that would be generated by the development of the land. In view of the current constraints on the Corporation’s capital budget due to the need to meet infrastructure funding commitments elsewhere in the state, the Corporation is not able to prioritize the required capital projects to meet the Department of Housing and Works’ development timeframe for this land.

In this regard, the Minister for Water has recently written to the Minister for Housing advising that a preliminary cost estimate indicates that headworks projects in the order of $30 million would have to be funded by the Department of Housing and Works in order to facilitate the early development of the Keralup land.
The Water Corporation has scheduled the construction of a new, major wastewater treatment plant in the East Rockingham industrial estate. It is anticipated that the first module of the plant will be commissioned around the end of 2015. The ultimate plant will serve a large urban area, including Keralup.

You would be aware that the Corporation has previously advised the WAPC of the difficulties and delays associated with securing a suitable site for the plant, major pipe routes and the various Federal and State environmental approvals. The Corporation has also advised the WAPC of the risks associated with any increase in demand on the existing Point Peron WWTP, which is rapidly approaching its maximum operating capacity. The Corporation has therefore requested the WAPC to place a moratorium on further Urban rezoning in the catchment of the proposed East Rockingham WWTP until there is greater certainty regarding the approvals and construction timeframes for the plant.

To date, the WAPC has not proceeded with any further rezoning of land from "Rural" to "Urban" in this area and has similarly not approved the lifting of "Urban Deferred" zonings over several landholdings in the Baldivis, Singleton and Karnup areas. The Corporation is therefore concerned about the precedent that would be set if the WAPC supports the Department of Housing and Works' Keralup rezoning proposal ahead of other privately owned landholdings in the East Rockingham wastewater catchment.

Furthermore, the rezoning of Keralup from the "Rural" to the "Urban Deferred" zone will not cause the required water and wastewater services to be provided to the land more quickly than is currently the case.

Should you have any queries on any of the above issues, please contact the officer indicated above. Please quote our reference number on any return correspondence.

Steve Hiller
Manager
Development Services
Planning and Capability Group
Submission to Metropolitan Region Scheme Amendment 1218/41 Keralup Stage 1

Name: Hon Lynn MacLaren MLC Member for South Metropolitan Region
Address: 7/142 South Terrace, Fremantle WA 6160
Phone: 9430 7233 Email: southmetro2@mp.wa.gov.au

Submission

Thank you for the invitation to comment on the MRS Amendment 1218/41 for Keralup Stage 1.

I note that the WAPC has designated Stage 1 as a major amendment due to the site being "a new urban front in the metropolitan south-west sub-region" and the gateway for the development of a substantial new town of 90,000 people. Therefore, I believe that this is a highly significant rezoning proposal that requires a very detailed consideration of the sustainability consequences for the creation of this town in the region.

Having considered the Amendment Report and undertaken background research on the proposal, I do not support the proposed rezoning of the area to "Urban Deferred" at this stage as there are a number of matters that need further clarification with regard to the whole Keralup development. I therefore argue that the WAPC should withdraw Amendment 1218/41 until these matters are clarified and the public has the ability to make a more considered judgement on the broader context of the proposal.

Given that this is a major amendment it is concerning that the West Keralup Metropolitan Region Scheme Amendment Report dated 10 May 2011 is not available as background information to how the EPA’s environmental concerns about Stage 1 are being addressed.

In addition, I believe that the rezoning proposal should be deferred until the public has the opportunity to examine the District Structure Plan (DSP) for the whole Keralup land holding and also the Sub-Regional Structure Plan, both of which I believe will be available in the second half of this year.

I raise the following specific matters that I believe require further clarification.

1. Bush Forever site 394 is (has been) impacted by the amendment. While there is a net gain of 6.47 ha with Stage 1, it is unclear what the implications for the total Bush Forever reserve including the Serpentine River and wetlands once the two or three bridges/ crossing roads are built to support future staging.

2. The Amendment Report does not explain why the realignment of the Kwinana Freeway is necessary and the associated change to the Bush Forever 394 boundary. It would appear that current bushland will be lost very close to wetlands and the substituted Bush Forever land is not bushland but bitumen road. The Report does not explain how the impact of...
habitat loss will be managed during the realignment and subsequent rehabilitation of the Freeway reserve.

3. I note also that that the City of Rockingham is concerned that it may be necessary to widen Paganoni Road west of Stage 1 due to the anticipated traffic volumes and this may impact on Bush Forever site 395 which includes Paganoni Swamp. There will be considerable community concern if Paganoni Swamp is impacted in this way. The community has already expressed its opposition to further bushland reserve being taken for road construction. Without the DSP and more information about the impact on adjacent roads such as Paganoni Road, it is impossible to assess the implications for Bush Forever site 395.

4. The Stage 1 development will be without major community facilities (hospitals, tertiary education, cultural and civic facilities) until subsequent stages of the Keralup development are completed. However, I understand that there will be significant environmental issues and unresolved governance matters to be resolved before rezoning can be approved for subsequent stages. This may mean that the Stage 1 community may remain isolated for some time and lacking in facilities that would make it a liveable community. It is concerning that there are no details on public transport plans available in the Amendment Report to give assurance that the Stage 1 community does not have to remain totally dependent on car transport in the short to medium term.

5. The Amendment Report provides no information of substance to verify the sustainability of Stage 1 rezoning and in particular no information on the environmental, social and economic benefits of the rezoning and assurance that the rezoning will result in the creation of a liveable community.

6. I understand that the proximity of this area to wetlands identified as a ‘hotspot’ breeding zone for mosquitos places residents under extreme risk of disease.

7. The Keralup development has been identified in the State Government’s Affordable Housing Strategy as a Priority Residential Project. However, this is not mentioned in the MRS Amendment document, so it is unclear whether Stage 1 will support any affordable housing.

Summary Statement

The WAPC should withdraw Amendment 1218/41 until the abovementioned matters are clarified and the public has the ability to make a more considered judgement on the broader context of the proposal.

The rezoning proposal should be deferred until the public has the opportunity to examine the District Structure Plan (DSP) for the whole Keralup land holding and also the Sub-Regional Structure Plan.

Regards

Hon. Lynn MacLaren MLC
Member for South Metropolitan Region
Greens spokesperson on Planning
17 January 2012
Planning and Development Act 2005
Section 41 Amendment (Substantial)
Form 41

Submission
Metropolitan Region Scheme Amendment 1218/41

Keralup Stage 1

To: Secretary
Western Australian Planning Commission
Locked Bag 2506
Perth WA 6001

Name: Lindsay Robbins
Address: 21/35 Esplanade, Nedlands
Postcode: 6009

Contact phone number: 0408855689 Email address: 167robbins@hotmail.com

Submission
(Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

This submission is made in support of proposed MRS amendment 1218/41, for the following reasons:

1. The rezoning to urban deferred promotes the sustainable use and development of land in the state and is therefore consistent with section 3(1)(c) of the Planning and Development Act 2005 and reflects the will of Parliament.

2. It is consistent with directions 2031 in that it meets the key themes of being
   (i) responsible, making the most efficient use of land & infrastructure (in being next to the Perth/Bunbury Freeway) see Mr Gary Prattley, Chairman, WAPC, in forward to directions 2031 August 2010, and being
   (ii) part of a strategic urban expansion management program, which is a key component of the Outer Metropolitan, Perth & Peel subregional strategic
   (iii) it is a concomitant of orderly and proper planning.

Turn over to complete your submission
Hearing of submissions

Anyone who has made a written submission on the amendment has the opportunity to personally present the basis of their submission to a sub-committee of the WAPC. You do not have to attend a hearing. The comments presented by you in this written submission will be considered in determining the recommendation for the proposed amendment.

For information about the submission and hearings process, please refer to the amendment report and in particular appendix D.

Please choose one of the following:

☑️ No, I do not wish to speak at the hearings. (Please go to the bottom of the form and sign)

OR

☐ Yes, I wish to speak at the hearings. (Please complete the following details)

I will be represented by:

☐ Myself – My telephone number (business hours): ........................................

or

☐ A spokesperson

Name of spokesperson: .................................................................

Contact telephone number (business hours): ......................................

Postal address: .................................................................

I would prefer my hearing to be conducted in:

☐ Public (members from the general public may attend your presentation)

OR

☐ Private (only the people nominated by you or the hearings committee will be permitted to attend)

You should be aware that:

- The WAPC is subject to the Freedom of Information Act 1992 and as such, submissions made to the WAPC may be subject to applications for access under the act.

- In the course of the WAPC assessing submissions, or making its report on these submissions, copies of your submission or the substance of that submission, may be disclosed to third parties.

- All hearings are recorded and transcribed. The transcripts of all hearings, along with all written submissions, are tabled in Parliament and published as public records should the Governor approve the proposed amendment. The WAPC recommendations are similarly published in a report on submissions and tabled in Parliament.

To be signed by person(s) making the submission

Signature.............................................. Date 18-1-2012

Note: Submissions MUST be received by the advertised closing date, being close of business (5pm) on 20 January 2012. Late submissions will NOT be considered.

Contacts: Telephone - (08) 6551 9000; Fax - (08) 6551 9001; Email - mrs@planning.wa.gov.au; Website - http://www.planning.wa.gov.au
Planning and Development Act 2005
Section 41 Amendment (Substantial)
Form 41

Submission
Metropolitan Region Scheme Amendment 1218/41
Keralup Stage 1

To: Secretary
Western Australian Planning Commission
Locked Bag 2506
Perth WA 6001

Submission 15

Name
SCOTT KERR

Address
SUITE 7 5 HASLER ROAD
OSBORNE PARK

Postcode
6017

Contact phone number
9381 5577

Email address
scottk@masterplanwa.com

Submission
(Please attach additional pages if required. It is preferred that any additional information be loose rather than bound)

REFER ATTACHED

turn over to complete your submission
Hearing of submissions

Anyone who has made a written submission on the amendment has the opportunity to personally present the basis of their submission to a sub-committee of the WAPC. You do not have to attend a hearing. The comments presented by you in this written submission will be considered in determining the recommendation for the proposed amendment.

For information about the submission and hearings process, please refer to the amendment report and in particular appendix D.

Please choose one of the following:

☐ No, I do not wish to speak at the hearings. (Please go to the bottom of the form and sign)

OR

☐ Yes, I wish to speak at the hearings. (Please complete the following details)

I will be represented by:

☐ Myself – My telephone number (business hours): 9381 5577

☐ A spokesperson

Name of spokesperson:

Contact telephone number (business hours):

Postal address:

I would prefer my hearing to be conducted in:

☐ Public (members from the general public may attend your presentation)

OR

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To be signed by person(s) making the submission

Signature: Scott Kerr

Date: 18/1/2012

Note: Submissions MUST be received by the advertised closing date, being close of business (5pm) on 20 January 2012. Late submissions will NOT be considered.

Contacts: Telephone - (08) 6551 9000; Fax - (08) 6551 9001; Email - mrs@planning.wa.gov.au; Website - http://www.planning.wa.gov.au
Submission

Metropolitan Region Scheme Amendment 1218/41

Keralup Stage I

1. This submission has been prepared on behalf of the Kelliher Family by Masterplan Consultants. The Kelliher Family are the owners of 770ha located in North Ravenswood/ Nambeelup midway between Mandurah and Pinjarra.

2. The Kelliher Family first flagged its intention to ultimately pursue development of this land for urban purposes in a submission to the Western Australian Planning Commission on the proposed Peel Region Scheme in 1999.

3. In Dec 2003 in discussions with the Department of Planning and Infrastructure (DPI) the potential for rezoning of the Southern portion of the Kelliher land (that part located between Rogers, Paterson and Old Mandurah Roads) was acknowledged. DPI officers suggested that completion of a number of investigations would be required prior to proposing rezoning for this land under the Peel Region Scheme.

4. By 2005 DPI officers where advising that any rezoning proposal would need to be contemplated in the context of the Review of the Inner Peel Region Structure Plan which was then being contemplated by the Western Australian Planning Commission.

5. Since 2006, however, DPI/Department of Planning (DOP), consistent advice on behalf of the Western Australian Planning Commission has been that the WAPC will not accept/contemplate a landowner proposal for rezoning, pending completion of WAPC strategic planning exercises. This has now been 6 years and this work remains ongoing by the Commission.

6. The Kelliher Family are extremely concerned that the WAPC is advising private landowners that it will not contemplate proposals for rezoning while concurrently contemplating such proposals from Government developers/landowners such as currently proposed at Keralup.

7. The Kelliher Landholding is environmentally unconstrained, is in a better strategic location than Keralup and directly abuts existing urban zoned/developed land and State planning agencies are clearly aware of the landowners intention to seek rezoning. Given these facts, the position of these agencies that no rezoning proposal would be accepted/contemplated while concurrently providing preferential treatment to a Government developer/department is inappropriate.
8. The current proposed rezoning is acknowledged, however, significant concerns are noted in reference to that part of the Keralup landholding east of the Serpentine River identified for future stages of rezoning and development, particularly when there are major landowners in the region with less constrained land, in a better location that wish to proceed with rezoning and development.

9. Any consideration of further rezoning/development east of the Serpentine River should be postponed and any such development should only be contemplated in the long term once other more appropriate land such as the Kelliherr Landholdings has been considered.

10. Further the WAPC should indicate its preparedness to consider private landowner driven proposals or defer any further consideration of the Keralup rezoning proposal so that a consistent approach is being applied to both Private and Government Landowners.
19 January 2012

Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Dear Sir/Madam

Metropolitan Region Scheme Proposed Amendment 1218/41
Keralup Stage 1

I refer to the WAPC’s correspondence dated 30 September 2011 requesting comment on the proposed Amendment 1218/41 to the Metropolitan Region Scheme (Keralup Stage 1).

The City of Mandurah previously provided preliminary comment on the proposal in September 2010 when the proposal was to rezone a similar area to ‘Urban’ rather than the proposed ‘Urban Deferred’ zoning.

General Comments: Keralup Project

The City has previously provided informal comment on the draft Amarillo Masterplan in 2007. Primary concerns at that time included:

- provision of district-level active playing fields;
- water quality improvements must be made to the Serpentine River;
- mosquito management;
- environmental assessment (including referral of the proposal under the Environmental Protection and Biodiversity Conservation Act);
- traffic volumes on existing and proposed roads;
- commitments to public transport (including the provision of the Karnup Railway Station);
- access to and availability of employment;
- commitments to community infrastructure.

Since this time, Council has provided its comments on the draft Outer Metropolitan Perth and Peel Sub-regional Strategy. As part of this submission, Council resolved, in part, the following:

1. The City of Mandurah generally supports:

   1.1 the consolidation of urban expansion and investigation sites in areas of existing government infrastructure (inclusive of Keralup) subject to:

   (a) an assessment of the impact on the Peel-Harvey Waterways being undertaken;
   (b) provision and commitments being made for public transport infrastructure; and
   (c) accessible strategic employment locations being identified.

2. The Commission review the draft performance indicators (as cited under Section 6.8 of the Strategy) so as to provide more definitive targets for assessment, including:

   (a) Setting a distance benchmark in relation to proximity to activity and employment centres, regional and local infrastructure (including public transport)
(b) Include a specific indicator for the Peel Sub-Region which ensures that any future urban development does not have an adverse impact upon the health of the Peel waterways.

Therefore, in regards to the above, as part of the overall Keralup project, issues relating to the Peel waterways, public transport infrastructure and strategic employment locations need to be addressed and committed by the State Government.

Proposed Amendment

If viewed without the context of the sub-regional planning framework or any draft District Structure Plan, the proposed amendment to the MRS to rezone 102ha for approximately 1000 lots is located in an area significantly isolated from existing urban zoned land and even more so to existing urban developed land. The closest urban settlements are located at Singleton/Golden Bay to the west, Lakelands to the south and Baldivis to the north with each being more than 5 km away (by road).

With the proposed zoning of ‘Urban Deferred’, the City of Mandurah recommends that specific criteria should be outlined that support the land being transferred to the Urban zone (ie lifting of Urban Deferment). This criteria should include, but not limited to:

- the Karnup Railway Station is committed by the State Government with respect to delivery and budget;
- demonstration that any urban development within the Keralup District Structure plan area results in an improvement to the water quality and the health of the Serpentine River in the vicinity of the development area and downstream; and that there is satisfactory arrangements towards mosquito management;
- progression of a satisfactory sub-regional planning context that determines the land can be developed and serviced for urban purposes as a logical urban footprint for the sub-region, which includes, but not limited to activity centres; employment locations; transport and movement infrastructure; and social infrastructure;
- demonstration that there is a whole of government approach to the delivery and commitments to the above.

I trust this provides satisfactory information for you at this stage. Should you have any enquiries, please contact the undersigned on 9550 3824.

Yours sincerely

[Signature]

Ben Dreckow
Principal Planner, Planning Services
Submission 17

Government of Western Australia
Department of Health

Your Ref: 809-2-28-13 Pt 1
Our Ref: MRS Amendment 1218/41
Contact: Dianne Katscherian
Phone: 9388 4948

Secretary
Western Australian Planning Commission
Locked Bag 2506
Perth WA 6001

Dear Sir/Madam

METROPOLITAN REGION SCHEME AMENDMENT 1218/41 – KERALUP STAGE 1

Thank you for advice received 22 September 2011 requesting comment on the proposed Amendment 1218/41 to the Metropolitan Region Scheme.

The Department of Health has reviewed the proposals and provides specific comments in the attached document.

From a planning perspective, Department of Health modelling currently assumes a level of population increase (to the year 2021) associated with the proposed development of Keralup and as such local health services have been planned accordingly.

Any construction or works associated with the proposed refinement of “boundaries of the primary regional roads, other regional roads and parks and recreation reservations to reflect the as constructed Kwinana Freeway and Paganoni Road interchange in proximity to Lot 551” will need to have due regard for the need to maintain emergency vehicle access.

It is hoped the information provided is of use and can assist in decision making processes for this amendment.

If you have any queries about the provided information, please contact Dianne Katscherian on 9388 4948 or dianne.katscherian@health.wa.gov.au

Yours sincerely

Stan Goodchild
A/DIRECTOR
ENVIRONMENTAL HEALTH DIRECTORATE

20 January 2012
Metropolitan Region Scheme Amendment 1218/41
Keralup Stage 1

Mosquito-borne Disease Control

The Department of Health WA (DOH) does not support the proposed MRS Amendment as the risk to public health from mosquito-borne diseases would be unacceptably high. Mosquito management strategies would only be partially effective, at best, and some treatments may be rejected by environmental managers due to adverse impacts on non-target organisms.

The DOH along with advice from the local government maintain that despite the best efforts of mosquito management strategies, current and future workers and residents in this location will be at significant risk from mosquito-borne diseases. It is irresponsible and not acceptable to propose a development in such a location on the assumption that mosquito management will be achievable and effective.

The following comments are not only related to the current proposal (Keralup Stage 1 - Amendment Report), but should be noted for every stage of the development, regardless of the development area or number of lots.

As previously stated, the location of the Keralup development presents a serious health risk due to its proximity to extensive areas of saltmarsh and freshwater wetlands that regularly breed enormous populations of Ross River virus (RRV) vector mosquitoes. On-site breeding of mosquitoes (in constructed water bodies and associated water management infrastructure) may be manageable if the appropriate strategies are planned and implemented, with ongoing, dedicated funding and resources. However, it will not be possible to effectively manage mosquitoes breeding off-site to acceptable levels for a significant part of most years. This statement is made knowing the difficulty of achieving reliable control elsewhere in the Peel Region, despite the existence of a costly, integrated mosquito program undertaken by local governments in collaboration with DOH.

So far this financial year (1 July til 30 December 2011) there have been 9 cases of Ross River and 3 cases of Barmah Forest virus diseases reported in the City of Rockingham. Last financial year, 31 cases of Ross River and 7 cases of Barmah Forest virus diseases were reported for the City of Rockingham. Analysis of the number of RRV disease notifications for a suburb similar to the Keralup location is enlightening. Greenfields (in the City of Mandurah) is similarly close to extensive natural mosquito breeding areas along the Serpentine River, and the case attack rate (cases per population) would be expected to be indicative of what might be expected to occur at Keralup. Extrapolating the 2005/06 RRV disease cases for Greenfields to the proposed population of Keralup (90,000 people) indicates that 174 cases of RRV disease would be expected in an outbreak year. The comparable statistics for Collie, a settlement without significant nearby mosquito breeding habitat, is 13 cases of RRV disease. The proponents of the development and approving agencies must determine whether a public health impact of this magnitude is acceptable.

DOH consistently recommends against further development within already-existing communities that are known to experience similar mosquito impacts and unfortunately planning authorities most often fail to heed this advice, perhaps because the proposals relate to already existing settlements. However, Keralup is a ‘greenfield project’ where there is the opportunity to decide against proceeding on the basis of adverse considerations such as unacceptable levels of mosquitoes and a significant public health risk.
19 January 2012

Mr T Evans
Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Attention: Mr Anthony Muscara

By email: mrs@planning.wa.gov.au

Dear Mr Evans

Re: Metropolitan Region Scheme Amendment 1218/41 - Keralup Stage One

Thank you for the opportunity to make a submission on the above proposal. The Peel-Harvey Catchment Council has significant concerns with the proposed Keralup development and is unable to support rezoning of this low lying palusplain from Rural to Urban deferred.

Our concerns include:

- Surface and groundwater management;
- The alteration of the area from a nutrient sink to a nutrient source;
- The lower Serpentine River is in very poor condition already, additional nutrient sources will have a significant impact, as will the pressure for recreational access and use which will be an expectation of the proposed Keralup residents; and
- Mosquitos will impact on residents who will have an expectation for chemical control, increasing pressure for use of pollutants for mosquito control; and
- Setting precedence for the whole of the proposed Keralup site, which is not reflective of the land capability of this area.

The rapid and ongoing loss and deterioration of wetlands [of all classifications, including the palusplain] throughout the Swan Coastal Plain is of great concern. The few areas of wetland that remain need to be protected and enhanced rather than continue the trend of clearing and filling, followed by limited capital investment to try to protect the quality of the remaining waterways, including the Ramsar listed Peel-Yalgorup System.

The Peel-Yalgorup System was listed in 1990 as a Wetland of International Importance under the Convention on Wetlands (Ramsar, 1971) and is also listed under JAMBA, CAMBA and ROKAMBA. There are 39 migratory species listed under the EPBC Act that are known to visit the Peel-Yalgorup System and numerous listed threatened species and communities. The lower Serpentine has been nominated as an extension to the Ramsar system and the quality of water flowing from the Serpentine has a major impact on the health of the Peel Inlet and Harvey Estuary section of the Ramsar system.

Peel-Harvey Catchment Council Inc.
chairman@peel-harvey.org.au
PO Box 3450 MANDURAH EAST WA 6210
Ph 08 9583 5128 Fax 08 9583 3044
www.peel-harvey.org.au
The Science Strategy for the Peel-Harvey Estuary was produced by the Centre for Fish and Fisheries Research and Murdoch University in 2010 and states:

"... water quality and environmental problems remain in the rivers and over time have continued to get worse. The lower reaches of the Serpentine River, as an effective ecosystem, could now be described as biologically dead ...."  [PHCC, 2010]

Therefore, any additional pressure, such as placing up to 98,000 people at the top of the Serpentine Catchment, effectively changing it from a nutrient sink to a major nutrient source, is unacceptable and should be referred to the Commonwealth for consideration under the EPBC Act. The EPBC Act considers nine matters of national environmental significance, including the ecological character of Ramsar Sites. Limits of acceptable change for the Peel-Inlet and Harvey Estuary are prescribed for the key components and processes of the wetlands. Any actions that are likely to have an impact on the Peel-Yalgorup System (including, for example, effects of altered hydrology) would be considered controlled actions under the Act.

Reliance on future management plans, offsets and mitigation are ineffective, as demonstrated by the already declining state of all measurable indicators for the Estuary and Rivers, Catchment and Ramsar Assets (refer Catchment Condition and Priorities, PHCC, 2011).

Over-extraction of Peel’s groundwater is already having a detrimental effect on threatened flora and fauna, ecological communities and wetlands throughout the subject area, and this impact is likely to be exacerbated in the future by a growing population and drying climate.

Thank you again for the opportunity to make a submission. I hope that the above clarifies our position and we would welcome the opportunity to discuss our submission in more detail. If you have any queries please do not hesitate to contact our Executive Officer, Jane O’Malley on (08) 9583 5128 or jane.omalley@peel-harvey.org.au.

Yours Sincerely,

[Signature]

Jan Star, AM
Chairman
Dear Mr Evans

METROPOLITAN REGION SCHEME PROPOSED AMENDMENT 1218/41 - KERALUP STAGE 1

I refer to your letter dated 4 October 2011, seeking comment on the initiated proposed amendment to the Metropolitan Region Scheme 1218/41 – Keralup Stage 1. LandCorp supports the proposed amendment.

As a landowner within this corridor, we offer the following comments. The site has been identified for some time as a discrete urban cell, despite its relative isolation from the balance of Keralup by virtue of the Serpentine River and Bush Forever Reserves to the east; it is a cleared state of land and in close proximity to services and infrastructure.

It is our understanding that the land is less constrained in environmental terms than much of the balance of Keralup, the stand alone neighbourhood of a 1500 dwellings does represent a logical first stage of development given the informal level of assessment set by the Environmental Protection Authority. Based on the Amendment Report the only major issue that is preventing a direct rezoning to ‘Urban’ at this time is the inability to secure suitable wastewater infrastructure, which is a limiting factor in the region and which also impacts on LandCorp’s proposed development at Karnup. From a state perspective the timing of the completion of the East Rockingham WWTP is important and needs to be resolved to unlock the future potential of the South West Corridor.

It is a good initiative for landowners in this corridor to actively support the development agendas as it adds to the momentum to a relatively new and challenging urban front.
The timely pursuit of development in this corridor by a range of land owners will support the planning logic to broader urbanisation in this area, assisting the WAPC in formalising the Strategy proposals in the upcoming Perth Peel Structure Plan – intended for release later this year.

In summary, LandCorp supports the proposal for rezoning to Urban Deferred.

Yours sincerely

Kerry Fijac
**ACTING CHIEF EXECUTIVE OFFICER**

19 January 2012
Our Ref: 5206
Enquiries to: Brett Flugge, Executive Manager Strategic Development

Western Australian Planning Commission
Unit 2b, 11-13 Pinjarra Road
MANDURAH WA 6210

Attention: Cale Luxton

21 December 2011

Dear Sirs

Metropolitan Region Scheme Amendment – Keralup Housing Project – Stage 1

I refer to the above matter and write to advise that a report on this matter was submitted to the Planning, Policy and Strategy Committee meeting held on 13 December and subsequently to the Ordinary meeting of Council on 20 December 2011.

Council subsequently resolved to support comments in the Officer’s report outlining the concerns and deficiencies in the proposed Metropolitan Region Scheme amendment 1218/41 for Stage 1 of the Keralup Housing project.

While the Stage One of the Keralup Development project is entirely located within the City of Rockingham local Government authority boundaries, there are broader planning implications for the ultimate development of the Keralup landholding east of the Serpentine River for the establishment of a new Urban community that could accommodate 90,000 people over the next 40-50 years.

The Shire notes that the Department of Housing is in the process of completing a draft District Structure plan for the whole Keralup landholding which is due to be submitted to the Department of Planning and referred out to Local Government authorities for assessment in early 2012. The Shire of Murray has officer representatives that sit on the DoP Keralup Project Coordination Group to assist in the assessment of the draft Keralup District Structure plan. The Shire of Murray has been liaising closely with City of Rockingham and City of Mandurah strategic planning officers in reviewing issues of mutual concern relating to the impact that the Keralup development project would have on the future economic, social and environmental fabric of these municipalities.

The planning consultants engaged by Department of Housing to prepare the overall Master plan for the Keralup project have outlined a set of key principles and objectives that should be applied for the creation of an innovative and best practice urban design outcomes integrated with high quality public transport networks. There does not appear however at this stage, to be a clear indication of State Government commitment or support towards delivering the necessary community infrastructure provision to support the proposed development and deliver best practice outcomes.

The provision of public transport to service the Stage one urban development phase has not yet been confirmed with doubt still surrounding the provision of a rail station in the Karnup locality to the west of the subject land.
Unless there is specific reference to the formulation of a Public Transport plan for the Keralup project, then there is the risk that the Stage One urban component will become a car dependent dormitory suburb which will severely limit access opportunities for the future community residents in having to travel to places for employment, recreation and leisure activities.

The Shire acknowledges that ultimately it is proposed that a comprehensive range of community facilities will be provided within the Keralup Activity Centre in Stage Two of the project area and appropriate infrastructure funding arrangements will be needed with Local Government in delivery of essential community and major transport services.

The Shire of Murray also shares concerns raised by City of Rockingham as to the proposed land delivery model and project governance arrangements to be applied to ensure that the first stage of development is sustainable as a self contained entity and that future development stages can be administered under a suitable statutory planning framework.

In regard to above issues, Shire officers are providing input to separate sub committees of the Keralup project Coordination Group dealing with Statutory planning mechanisms and governance models in the Economic Development Strategy that need to be refined to provide clearer direction on how the key elements of the Keralup implementation actions can be achieved.

The Shire of Murray notes that the EPA recommends that a corresponding Amendment to City of Rockingham’s TPS No. 2 to rezone West Keralup should include Scheme provisions requiring preparation of an Outline Development Plan and various Management Plans being prepared to satisfaction of DEC and DOW. It is queried why no Fire Management plan or Construction Management Plan have been specified seeing as the Stage One development abuts the sensitive Serpentine River foreshore environment and Paganoni Swamp Reserve.

Department of Health has advised that the subject land comprising Stage one is located in proximity to areas of salt marsh and fresh water wetlands which have potential to provide off site mosquito breeding areas. Although the proponent is required to prepare a Mosquito Management Strategy, the Shire of Murray raises serious concern that this mosquito threat will have on future residents lifestyle quality and amenity, including the need for increased resourcing required to properly manage the mosquito hazard and minimize health risks to an acceptable level.

In a strategic planning sense, the Shire of Murray considers that no decision should be made by WAPC to consider the Lifting of Urban Deferred zoning status until the sub regional planning contextual issues surrounding the Keralup development project have been properly analysed and assessed by Department of Planning, other key Government stakeholders and Local Government authorities. Some work has progressed on the South Metropolitan and Peel sub Regional Structure plan but there are many issues still unresolved or not finalized, not the least being service infrastructure commitments, Public and private Transport network systems, Community Facility and recreation needs assessment and future staging of development relative to land supply and housing targets.
Council resolved to forward a copy of the Shire of Murray’s submission to the Western Australian Planning Commission for its assessment and the City of Rockingham and City of Mandurah for information.

Council further resolved to request Shire officers to report back to Council on the outcome of discussions with the City of Rockingham in its engagement with State Government, for commitments on land delivery models and infrastructure provision to service the entirety of the Keralup project area.

For your information a copy of the report to Council and associated appendices is available on the Shire’s website at www.murray.wa.gov.au.

Should you have any queries concerning this matter, please do not hesitate to contact the undersigned on 9531 7707.

Yours faithfully

[Signature]

Brett Flugge
Executive Manager Strategic Development

s:\planning & development services\pa to dpd correspondence\letters\173_wapc_keralup_20dec2011
27 March 2012

Tony Evans
Secretary
Western Australian Planning Commission
Locked Bag 2506
PERTH WA 6001

Dear Mr Evans

Re: Metropolitan Region Scheme Proposed Amendment 1218/41 – Keralup Stage 1

We refer to your letter dated 4 October 2011.

This matter was tabled before the Gnaala Karla Booja (GKB) Working Party and Named Applicants meeting held on 8 March 2012.

We advise that our clients have requested that a heritage survey is conducted over the proposed area prior to any amendments taking place.

Please contact the writer if you have any queries.

Yours sincerely

Emma Kamara
Legal Officer
South West Aboriginal Land & Sea Council
Transcript of hearings
Recording and Transcription
This transcript is produced from live audio recordings. Whilst every care is taken in its preparation absolute accuracy cannot be guaranteed. No changes are made to grammar and syntax.
Minutes of the Committee hearing submissions on Metropolitan Region Scheme Amendment 1218/41 – Keralup Stage 1

Monday 28 May 2012, 140 William Street, Perth

The composition of the hearings committee was endorsed by the chairman of the Western Australian Planning Commission on 13 March 2012, in accordance with the 27 October 2009 resolution of the Commission.

Chairperson: Gary Prattley
Chairman of the Western Australian Planning Commission.

Members:
Carol Adams
South West District Planning Committee
Judith Bell
Independent with Planning expertise

In attendance:
Anthony Muscara
Department of Planning
Vicki Evans
Department of Planning

Presentations to the Committee commenced at 9.40am.

The proceedings were recorded by ‘Spark & Cannon Pty Ltd’.

The following people made presentations:

1) Mr Scott Kerr (Masterplan Consultants) for submission number 15.
Mr Kerr represented Mr Shane Kelliher.

2) Ms Shirley Joiner, Ms Caroline Knight, Ms Mary Shannon and Mr David Thomas for submission number 10.
Ms Joiner, Ms Knight, Ms Shannon and Mr Thomas represented Peel Preservation Group.

Gary Prattley declared the hearings closed at 10.55am.

Chairperson:

Date: 14/6/2012
Transcripts of public hearings

Monday 28 May 2012
Mr Scott Kerr and Mr Shane Kelliher representing the Kelliher Family

MR PRATTLEY:  Welcome, gentlemen.  Can I declare this hearings committee meeting open and can I acknowledge the traditional owners and custodians of the land on which we are meeting.  I don't know whether you've met all the committee members before.  Obviously all the names are in front of you, so probably do not need to formally introduce them.

MR KERR:  Sorry, I should turn this off first.

MR PRATTLEY:  That's all right.  If you'd like to introduce yourselves for the record?

MR KERR:  Certainly.  Scott Kerr and Shane Kelliher.  We are representing the Kelliher family.  I will just say my piece.

MR PRATTLEY:  Yeah, carry on.

MR KERR:  Thank you.  Yes, representing the Kelliher family, the owners of a large landholding located in North Ravenswood, Nambeelup, midway between Mandurah and Pinjarra.

The Kelliher family first identified its intention to pursue development of its land in a submission on the proposed Peel Region Scheme in 1999.  Subsequently and in particular since 2003, the family has maintained a continuing dialogue with the Department of Planning and Shire of Murray in reference to the potential rezoning of its land for urban purposes.

Over the course of the last 12 to 18 months, the department has advised that it is not prepared to consider any proposal for rezoning and in completion of strategic planning exercises currently under way including preparation of a South Metropolitan and Peel Subregional Structure Plan, which, according to the latest advice we have had from the department, will not be released in draft form until some time in 2013.  Both the Kelliher land and Keralup are within the area included within the referred to structured planning process.

The department has also advised that the preparation of the South Metropolitan and Peel Subregional Structure Plan will be a Department of Planning led exercise and there will be no consultation with or involvement of landowners who will only get the opportunity to provide input when it is advertised for comment.  This is, in fact, despite commitments given to us over a number of occasions over the years that major landowners such as the Kellihers who wish the opportunity to pursue urban zoning would be given an opportunity to be involved in that strategic process.

This contrasts with Keralup, where the landowner is a government department and, as such, had access to the strategic planning process denied to private owners.  Further, whereas as a private landowner, we are told not to submit a rezoning request as it will not be dealt with because strategic planning is not finalised.  Rezoning submission from a government
department whose land is subject to the same review of strategic planning process has not only been accepted but is currently being progressed.

Private landowners have also been advised by the department that any proposal for rezoning of part of their land must be contemplated in the context of any implications not only for the remainder of their land but also for district and regional structuring and until this is undertaken by the strategic planning under way by the Department, no proposal for any part of their land should be submitted. Again, this is in contrast with the request for rezoning of the portion of Keralup before us today, which has been accepted and being considered by the Planning Commission in the absence of the full detail and understanding of the proposal in the context of the remainder of the Keralup land and its district and regional context.

Unfortunately, given this situation, it is difficult for people sitting on this side of the table not to come to the conclusion that the ownership of Keralup by a government agency has resulted in preferential treatment whereby the Department of Housing and Works has had access to strategic planning denied to private owners, whereby the Commission is prepared to consider the rezoning to urban when we were told by the department that it is not prepared to do so for private landowners ahead of completion of various strategic planning initiatives and whereby, rezoning of a portion of the Keralup landholding is being contemplated in the absence of the level of detail in reference to the remainder of the property and its district and regional context stated as necessary for any private proposal.

The Kelliher landholding is at least equal to that portion of Keralup currently proposed for rezoning, is certainly less constrained in a better strategic location than the remainder of the Keralup landholding. Yet, we are consistently advised that state planning agencies are not prepared to contemplate any rezoning proposal. It seems unacceptable that a state government agency can pursue rezoning while private landowners are denied this opportunity.

What we would like to see is some clarification of the position of the WAPC. Will it receive and undertake consideration of a proposal from a private landowner to rezone as it has for the government landowner at Keralup, contrary to the ongoing advice we have been receiving from the Department of Planning that it will not consider such rezoning proposals? I guess if the answer is no, what the reasoning for that is? As I say, if not acceptable for private landowners to submit rezoning proposals, why is Keralup in the first stage now proceeding? That is essentially it.

MR PRATTLEY: I will throw it open to questions. Maybe I can just ask a question. Are you aware that the Keralup site has been identified as a strategic urban investigation site since the early 1990s?

MR KERR: We are aware it has been identified in different ways.

MR PRATTLEY: That in itself distinguishes it from other land, doesn't it?

MR KERR: Well, as I was saying, we are aware that it has been identified in different
documents and draft documents in different ways over a long period of time but that does not place it in any different context than in, for example, our land which also in different documents at different times has been identified as potentially future urban strategic land.

**MR PRATTLEY:** Well, I think the Commission would take a view that it probably does and the government would probably take a view that it does, but I accept your argument.

**MR KERR:** Well, I mean, we are not going to debate the merits of that at this particular hearing, but, again, the reasons as to why it was identified is probably more to do with the fact that it is government owned than any better strategic reasons, certainly in comparison, and not just to our land, to other landowners in the that region that have identified their land over that same period.

**MR PRATTLEY:** Questions from other members of the panel?

**MS BELL:** I suppose just a general question that I wanted to ask, you've mentioned that landowners are not allowed to be involved in the strategic planning process and obviously the department is fully aware of your landholding, and what is proposed, and the reasons for it. How else do you think you could contribute to that process? I am just interested to know.

**MR KERR:** Well, I can only go back to the history of, particularly, the last 10 years where on several occasions, I can quote some examples or I can send the information, if you want, but on several occasion where we've met, I go to one in December 2006, we've met with then Martin Richardson, then director of the department, where we were given a commitment that he would, as part of what - I think it was termed then - the Growth Management Strategy that evolved into other things that they were going to involve landowners as part of that process and specifically gave a commitment so that the major landholders in that southern area, their land would be taken in and they would be given an opportunity to address some of the criteria so it was considered as part of the development of that draft document rather than just a draft document that has been put out.

Likewise, with the start of this South Metropolitan Subregional Structure Plan, we had a meeting with department officers in December, November, something like that, 2010, where the same view was expressed. Subsequent meetings to then, we have been clearly told that they have been now directed as to be a department led exercise only. If you are a government agency, you'll have some involvement in that process. Everyone else can just make a comment when it comes out at the end of the day. It wasn't just us, there was plenty of other landowners and everyone is promoting their own interest. We understand that.

I guess our point of view is that if you've got a level playing field and everyone is playing to the same rules then what would come out of the end of the process is the most appropriate locations. We are happy to stand and fall in a debate on that. We don't get the opportunity to do that and then we see, in this instance, this being progressed, which is why we're here.

**MS BELL:** Thank you.
CR ADAMS: I don’t have a specific question but I can certainly understand your submission, where you are coming from.

MR PRATTLEY: I haven’t been involved in those discussion, but I am aware that just about every parcel of land in the top half of the Peel region there has got owners that want to develop it.

MR KERR: I understand.

MR PRATTLEY: I think, and I’m thinking here because I wasn’t involved in that decision, that rather than everybody running off and spending a lot of money addressing the criteria, the decision has been to address it on a whole basis and do that initial count of the constraints. While the detailed Subregional Structure Plan is still going to take a little while to deliver, we do anticipate, in the second half of this year, releasing a footprint for Perth at 3.5 million, which will, at the highest level, identify the parcels of land that we think have potential for urban development with a population of 3.5 million. There will be some progression towards that in the near future.

MR KERR: Yes, I understand that. Look, there is a fair degree of frustration and that goes back to, again, meetings with the department in 2003 where there was acknowledgment of the worth, if I can put it that way, for rezoning at least part of the Kelliher landholding where we were directed to go away and do some additional work to prove that up and then come back. That then got taken over by what was commencing as a review of the Inner Peel Region Structure plan that moved into other things.

Throughout this consistent period, we have come back and been told, “Come back,” or, "Do this, come back, do this." and every time we do that, there is something else that comes up and the review is being reviewed by another review and then we see other amendments being progressed. I appreciate it is in the MRS and it’s in Rockingham but you cannot obviously contemplate an initial first stage at Keralup in isolation from the rest of Keralup and the wider issues.

All we are saying is either that should not be progressed, it should be playing by the same rule as the rest of us or the rest of us should not be told that we cannot progress where we want to go with things as well. We just have not initiated a landowner proposal to date because we have been trying to operate within this system and I appreciate what you’re saying, and the system is going to give us something later this year, and then another draft next year.

MR PRATTLEY: We are trying to resolve those issues as quickly as possible.

MR KERR: Yes.

MR PRATTLEY: Okay. Well, is there anything you want to add?

MR KELLIHER: Only to say that, in a nutshell, we are not here to oppose Keralup; we are
simply here to say that we want the same rules to apply, the same opportunities. We've got land that we want to get on and develop, and get on with it. It is as simple as that.

**MR PRATTLEY:** I understand that. Yep. Okay. Well, thanks very much for your input and contributions, and thanks for attending the hearing. We will certainly give due consideration to the points you raised in determining this matter. Thank you.

**MR KERR:** All right. Thank you.

**MR KELLIHER:** Thank you for your time.
Ms Shirley Joiner, Ms Caroline Knight,  
Ms Mary Shannon and Mr David Thomas  
representing the Peel Preservation Group Inc

**MR PRATTLEY**: Welcome, I am Gary Prattley, chairman of the Commission. Mayor Carol Adams and Judi Bell are other members of the committee. So I will hand over to you to address us and then ask you any questions arising from that, if you are happy with that.

**MS JOINER**: Yeah, that sounds fine GAry. I will probably do most of the talking, but we are a team and if somebody else wants to say something, I hope you will not mind.

**MR PRATTLEY**: No, not at all.

**MS JOINER**: That is fine, because we are group, group of environmentalists from Peel. What I have given you, and you may have these, because this is what I am going to speak about, there is a copy of our submission and also a copy of some of the technical data - - -

**MR PRATTLEY**: That's probably the same as - - -

**MS JOINER**: The top one is, the second one is not.

**MR PRATTLEY**: Okay.

**MS JOINER**: There is additional information on the bottom just because we feel that we wanted to show you that we were not just talking off the top of our heads; there was technical backing for many of the points that we make. Caroline has done some research on the mosquito issue, which is probably very serious; more so in her case because she is suffering from Barmah Forest virus at the moment.

We feel that this area is just too low lying to be developed well. Drainage is a problem. Everything will be draining into the river, which worries us tremendously. The river is in a bad state. Some of that technical information there is talking about the state of the Serpentine River and it really is in a bad state. We are getting algae, fish kills, all sorts of things like that. That needs to be vastly improved and we do not feel that having development of this sort and drainage into rivers is going to help that.

It is very low lying. We are well aware of the area. My family farms are about three kilometres away and even that has been, when we were having more rain, has been ankle-deep in water on occasions for several days. This Keralup situation is even closer to the river and more low.

There was discussion in one of the proposals by one of the developers to drag down the soil from the top and fill up the bottom. It is not good planning. Just to flatten everything out is not an ideal way of doing it. Another developer is talking about - how many tonnes a
day? Have you got a better memory for heads? But bringing in so many tonnes of soil, I do not know where it was going to come from.

**MR THOMAS:** It was close to a million tonne, I think.

**MS JOINER:** Yeah. It was an impossible amount of fill. The other point about that is that it very probably is acid sulfate, certainly areas will be. My brother has got a patch that my mum and dad call "sour ground". They're, as I say, a little further away from the river but definitely a patch of acid sulfate on the family farm, so there will be. So then we're going to have to bring in a lot of limestone, so then we'll just increase the quarry that is causing all sorts of problems and there's not an every-ending supply of limestone to settle the sulfate acid down.

The other thing is that this area is not particularly fertile. It has been grazing land, most particularly, but it is not particularly fertile and it is the sort of area that, if you scratch off the top soil and drag that away, what is underneath is very poor ground. Mum called it “poor ground”. "Hungry soil," was her exact words. She said, "You'll need a lot of fertilizer," which also will add to the pollution situation because people will need to fertilize their gardens or bring in lots of top soil. There will be a lot of difficulties there.

We are talking about stuff like polluted soil, pollution draining into the river and ultimately into the estuary. The estuary is likewise in trouble. We built the Dawesville Cut to try and help it but in actual fact it is getting back to that same situation. There's a little bit of that in those papers I gave you. The same situation where the algae is again building up in the estuary.

The next point we would all make very strongly is that we have not had a good rainfall year and a series of rainfall years for a long time. Our rainfall in Mandurah has actually dropped quite considerably and the same in Keralup. It is all the same general area. If we go back to having decent rainfall, which could well be, I mean, it is certainly happening on the east coast at the moment and if we get the rainfall on the west coast that the east coast's getting, we will have flooding. This will be flooded and if we get that combined with a sea level rise, which is definitely happening, we cannot deny sea level rise is happening, 0.38 of a metre up to a higher estimation over the next decade. This is also so low lying that would be an ongoing problem.

**MR PRATTLEY:** The Commission works on 0.9.

**MS JOINER:** Yeah. Well, that's right.

**MR PRATTLEY:** The Commission policy is 0.9, so we do - - -

**MS JOINER:** Yeah, that's right.

**MR PRATTLEY:** - - - consider that as a - yes.

**MS JOINER:** You might like to take one of those and hand it across. This is one of the
developer’s drawings of how he will have everything with this nice little river in the middle and so forth. There's a couple of them; the other ones are clearer. Better printer. That is how the developer thinks he will deal with the low lying areas but I actually feel he has not realised how low he has got.

Our next problem is a loss of natural vegetation. Now, some of this area is not vegetative, but down by the river is and that is the area they are trying to include in their development. I realise that it does not involve the piece that we are actually talking about at the moment. That is a little further way and I understand that but all of our discussion concerns the fact that the next step, the step that we are talking about now probably is the least serious, but the next step, and that is the problem with planning, the fact that one bit gets approved and then they push for the next bit.

The wetlands are an extremely important part of this area. Even down across to my brother's farm there is a small natural swamp and this is quite naturally wetlands. We are losing our wetlands at an amazing rate. The wetlands really are the lungs of our area; we need to maintain them. As I said, near the river, there is actually some good vegetation, a little bit further away, it is a bit sparse.

I've mentioned acid sulfate soils. There is certainly a very strong chance of being quite considerable chunks of that, and the poor water quality in the bores. Dave used to live out in that area for a while and I certainly know and guess one of his bores, in particular, is - well, we call it “coffee water” because that's what it looks like. It smells like sulphur and it is virtually undrinkable to humans. The cattle will, once it's been exposed to the air in the trough, they will drink, but it is certainly not going to be the kind of water that people are going to use, even on their gardens. It will not be good for gardens.

That is about what I would like to say. I do not know whether a couple of you others have anything else they would like to add.

MR THOMAS: The only thing that I would add to that is that if this development goes ahead and then the industrial development happens south of it, there is going to be a lot of extra pressure on the river and it is already dead at the bottom end now, so it is going to dead all the up if they are not careful.

MR PRATTLEY: Yep, I understand your concern about that.

MS KNIGHT: I've just got some notes in relation to the mosquito issue because I think that's quite a significant one.

MS JOINER: Yes.

MS KNIGHT: I'll just read this before I give it to you. Mosquitoes have been identified as one of the key environmental issues that impact the proposed Keralup development. I am sure you are aware that mosquitoes are a natural part of the wetlands and tidal salt marshes. They are food sources for frogs, fish, bats and birds. But apart from that, the
nuisance biting, they carry the very real risk associated with the transmission of diseases causing pathogens to humans, Ross River virus and Barmah Forest virus are responsible for approximately 5000 cases of human disease reported each year in Australia. That's from Webb and Russell 2012.

The Peel Mosquito Management Group have just completed their most demanding mosquito season to date. This season, 2011-2012 mosquito season has seen a record number of 26 aerial treatments in order to combat the consistent larval activity. In total, 5453 hectares have been treated in comparison with 3414 last year. Despite this comprehensive management, as of 3 May, there were 187 reported cases of Ross River virus and 31 cases of Barmah Forest virus that have been reported in the Peel region.

Not only have you got this disease but there is also the financial and social cost of these diseases, which have yet to be determined. Clearly, management is not a solution. I notice in the report that management has been identified as the only way to deal with it, but Peel is managing it as best as it can and it's not on top of it.

MS JOINER: Not at all.

MS KNIGHT: Not at all. It is an ongoing problem. The Department of Health has expressed concern about the mosquito population on and off site and that it would seriously threaten health and lifestyle of respective residents. The review of the Contiguous Local Authorities Group, CLAG, report states:

"Government planners at state and local level appear to be resistant to the need for buffers around wetlands that reflect mosquito dispersal distances. Clearly, stronger planning mechanisms are urgently needed to restrict development on land that is impacted by mosquitoes or maybe in the future."

The Mosquito Control Task Force report to Cabinet in 1990 made the following conclusions and recommendations:

"The Health Department has a statewide charter to ensure the protection of public health. Threat to public health from mosquitoes is a statewide phenomenon, which is likely to become more acute in the future and government involvement is necessary to ensure that minimal environmental impacts occur from actions taken for mosquito control."

The report goes on to state:

"Mosquito problems exist because development has occurred close to waterways. The impact of climate change necessitate a change in the approach of managing exposure of the public to mosquitoes. Land planning uses need to allow for higher water levels, new and expanding inundation and the consequent impacts of mosquito breeding in order to avoid escalating mosquito and mosquito-borne impacts."
Given that the WAPC is already drafting into the State Coastal Planning Policy and increasing sea level rise from 0.38 metres to 0.9, and also introducing the application of precautionary principle for land use planning within the areas of coastal risk. The effects of climate change are clearly significant and need to be carefully considered for the proposed Keralup development.

The government’s health impact on climate change adaptation strategies for Western Australia predict that the impacts of climate change will have significant effects on human health. The report indicates that vector-borne diseases, such as Ross River virus and Barmah Forest virus will become more significant with the potential for more exotic diseases and vectors to be established. Of concern are events such as in May 2000 when the Health Department extended its Australian encephalitis warning, following unprecedented detection of the virus south of the Murchison River. This mosquito-borne disease can be potentially fatal. This is probably my biggest concern, is the fact that things are moving in closer and they are the serious diseases on top of the already existing Barmah Forest and Ross River.

In summary, the literature states:

*There is now clear evidence that in most use there is an increase of risk of being diagnosed with Ross River virus or Barmah Forest virus disease for people living within three kilometres of tidal salt marshes. The best possible management practices of mosquitoes do not appear to be reducing the incident of these notifiable diseases for populations that have been located close to wetlands. Climate change will most probably increase the mosquito breeding areas as tidal levels increase.*

*Ongoing chemical control can have significant impact on fauna. Although there are environmentally sensitive mosquito control agents required for use in Australia, the broad scale nature of controlled activities required to effectively reduce the mosquito populations are not sustainable.*

That is also from Webb and Russell.

Given the severity of mosquito-borne diseases and the warnings from many expert sources with the community, I fail to understand what WAPC would knowingly expose future populations to high levels of mosquito activity by placing them in wetlands close to areas of tidal salt marshes such as the proposed Keralup development. In my opinion, it would be an immoral act to knowingly place people at risk. We call upon the WAPC to look at the well documented evidence and act responsibly in making decisions that could have a significant impacts on the environment and human health.

**MR PRATTLEY:** Thank you.

**MS JOINER:** Just as a matter of interest, out of our 12 committee members, two of them
have either Ross River or Barmah Forest. And there are lot of people just plain not presenting to the doctors because they think, "I've probably got that, there's nothing to do about it." I think it's under reported. In fact, some suspect under reported to 50%. It's only the really unwell people that are really badly, very badly affected that have presented for help.

**MS KNIGHT:** I think it's misleading to think that management is the solution because Peel is currently doing best practise.

**MS JOINER:** They're tearing their hair out. We're having really bad - - -

**MS KNIGHT:** To have those numbers already in the season is an indication that management is not the answer.

**MR PRATTLEY:** Okay. Thank you. Questions from committee members?

**CR ADAMS:** Just going to ask, so that is 187 Ross River and 31 reported Barmah Forest virus in a 12 month period?

**MS KNIGHT:** So far, yeah. So far this season.

**CR ADAMS:** Yeah. So that is early days.

**MS KNIGHT:** Yes. Those figures are available from the Health Department.

**CR ADAMS:** Okay.

**MR PRATTLEY:** Judi? No?

**MS BELL:** I didn't have any questions.

**CR ADAMS:** Who was the developer that you say he provided this - that's just a concept plan by - - -

**MR PRATTLEY:** Judi That is the Department of Housing.

**CR ADAMS:** That is the Department of Housing's concept.

**MS JOINER:** Yeah.

**CR ADAMS:** Okay.

**MS JOINER:** The other thing we throwing into the ring because we think it's not a frivolous thing, we were thinking that maybe this area would be a good place to put a wind farm. We are very short of power. The low lying land is not going to be the least bit affected by that kind of development. We think it might be more useful than houses.
MR PRATTLEY:  I'll note your comment on that. That is not a decision that the Commission can make, though.

MS JOINER:  Obviously, but I think alternate use, if maybe there's an alternate use out there.

MS KNIGHT:  I think that is the reason why, in the past, human populations haven't lived around swamp regions. I think this move towards pushing people into those areas is exposing them to risk.

MR PRATTLEY:  Unfortunately, on the Swan Coastal Plain, most land we've got left to develop is low lying. I mean, it is an issue we have to confront.

MS KNIGHT:  It is an issue, but I do not think the notifications on peoples' titles are the solution to the - and knowingly placing people in areas of risk goes against precautionary principles and it goes against - - -

MR PRATTLEY:  We get your message on that. Thank you.

MS JOINER:  We have made mistakes in Mandurah, in particular, you know, put people down in the caravan parks and things, near the river, and they've regretted it. Once people have bought into the area, it is very hard then to - - -

CR ADAMS:  Talking about your wetland area, is that part of a chain for migratory birds?

MS JOINER:  Yes, it is.

CR ADAMS:  Does it form part of the Beeliar or is it further - - -

MS JOINER:  The Rockingham Lakes carries on down as far as Marlee Reserve. That's Marlee Lakes, which is where Caroline and Dave live, that's Black Swan and Marlee about the lowest and the further south of the chain. It continues on from the Rockingham Lakes, that chain. And, yes, we have filled them in at (indistinct) I'm afraid.

CR ADAMS:  Your mother must have been a very wise woman. I loved the saying "sour ground". I've never heard of sour ground.

MS JOINER:  Yeah. Well, mum and dad's had - - -

CR ADAMS:  I've not heard of "hungry soil" and the "coffee water".

MR THOMAS:  Those are very common terms in farming - - -

MS JOINER:  My parents - - -
MR THOMAS: - - - Across the country

MS KNIGHT: They describe exactly what the science has been.

CR ADAMS: That's right. Yes.

MR THOMAS: And as far as the bore water, the sulphur smell on it, you have to aerate it before we can do anything with it.

MS JOINER: My mum is 88 and dad is 94, and they are still alive, so - - -

MR PRATTLEY: The whole area has been mapped for acid sulfate soils at this first stage has little problem with that, but it is an issue that has to be considered.

MS JOINER: That's right.

MR PRATTLEY: Okay. Thank you very much for attending and for presenting your views, and for additional information. We'll put that into the record.

MS JOINER: When we put in a submission, there really isn’t room to - well, we can, but we really - it's a lot to put into just a simple submission and I think the people reading the submissions would think you must get pages and pages of stuff to read, so we kept our submission fairly - - -

MR PRATTLEY: My hair hasn't gone grey yet.

MS JOINER: That's Anthony's job is it? We tried to keep fairly succinct, but there is reason behind what we say. We're not just making it up.

MR PRATTLEY: Yeah, I appreciate that.

CR ADAMS: I think it's also good when you've personally presented as well.

MS JOINER: Yeah.

CR ADAMS: Very much so.

MS JOINER: We are very interested in the area and we know there is a problem of where to put people. We realise that.

MR PRATTLEY: Life's not simple, unfortunately.

MS JOINER: No, it is not, unfortunately.

MR PRATTLEY: But we do appreciate your concerns and we'll certainly have regard to them.
MS JOINER: Thank you very much.

MR THOMAS: It must be getting time where you may want to consider moving satellite towns away from the (indistinct).

MR PRATTLEY: Some people would say we are already doing that. That is certainly part of the issue.

MS JOINER: Yes, we all like to be near the coast but it's not always wise and we are finding that we are losing coastline at an amazing rate now. So, you know, we are living in interesting times, to use the saying.

MR PRATTLEY: Thank you very much.