

Shire of Harvey District Planning Scheme No. 1 Amendment No. 13

Shire of Harvey

**Report and recommendations
of the Environmental Protection Authority**

**Environmental Protection Authority
Perth, Western Australia
Bulletin 1275
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Environmental Impact Assessment Process Timelines

Date	Progress stages	Time (weeks)
08.05.2006	Remitted by the Minister	-
24.11.2006	Assessment guidance to the Shire of Harvey	28.5
10.12.2007	EPA report to the Minister for the Environment	54

Report Released: 10.12.07
Appeals Close: 24.12.07

Summary and Recommendations

The Shire of Harvey proposes to amend District Planning Scheme No. 1 by rezoning Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) from “Tourist” zone and “Recreation” reserve to “Residential Development” zone, “Tourist” zone and “Recreation and Conservation” reserve and “Modified Water Body”. The land the subject of this scheme amendment comprises an area bounded by the Collie River, the Old Coast Road and the Leschenault Inlet. The land essentially forms the Point Douro peninsula on the north-eastern side of the Collie River Delta.

The Concept Development Plan (See Figure 3) prepared for the residential and water-based development associated with Amendment No. 13 includes:

- residential development;
- a modified water body;
- the creation of tourist related uses;
- a conservation area; and
- recreational use in part of the foreshore area including a boat launching facility.

Section 48D of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposed scheme and on the conditions to which the proposed scheme should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

The Environmental Protection Authority (EPA) formally assessed the Shire of Harvey’s District Planning Scheme Amendment No. 13 in 1997 and released its report and recommendations on the proposed amendment in January 2005. Following consideration of the matters raised in the appeals, the Minister for the Environment determined that certain issues were significant and required further assessment. Amendment No. 13 was remitted to the EPA for further assessment under S48E (1) of the *Environmental Protection Act 1986* in relation to acid sulphate soils and to review the conditions applying to other aspects of the proposed amendment including those relating to altered flood regimes and the general enforceability of the conditions.

This report provides the EPA’s advice to the Minister for the Environment on the key environmental factors, conditions and procedures relevant to the proposed scheme amendment.

Relevant environmental factors and issues

EPA Bulletin No. 1158 released in January 2005 documented a number of environmental factors considered by the EPA as part of its previous assessment of Amendment No. 13. The Minister for the Environment has remitted this scheme amendment to the EPA for further assessment of the following environmental factors and issues which require detailed evaluation in this report:

- Acid Sulphate Soils - the impacts arising from their disturbance;
- Flood Management - the impacts arising from flood waters, scouring and erosion on the surrounding environment; and
- Legal Enforceability of Environmental Conditions.

Conclusion

The EPA acknowledges the significance of several key environmental factors considered as part of this environmental impact assessment process, and that the management of future development will need to be undertaken with care and diligence.

Key outcomes achieved through the Amendment and the EPA's formal assessment process include:

- additional on-site testing and analysis and preparation of a preliminary Acid Sulphate Soil Management Plan, indicating that Acid Sulphate Soils can be managed effectively and will not impact detrimentally on the Point Douro development site or its surroundings. The landowner has also reviewed its proposed construction methods and will now excavate the channel "wet" rather than undertaking dewatering which contributes significantly to acid generation. This will be achieved by sheet piling adjacent to the channel before excavation occurs. The expected outcomes are that impacts of acid generation will be eliminated during construction and that there will be limited on-going management of acid generation required. A Preliminary Acid Sulphate Soils Management Plan has been prepared by the landowner detailing the results of the additional soil investigation and analysis, the proposed construction methods and monitoring. This management plan has been reviewed by the Department of Environment and Conservation (DEC) to its satisfaction. The recommended Ministerial Conditions incorporate Scheme provisions for the preparation of a detailed 'Acid Sulphate Soil Management Plan' to address the specific details of construction;
- one and two-dimensional modelling, indicating that the values of the Point Douro Conservation area will not be impacted detrimentally upon by scouring or erosion during flood events;
- the proposed environmental conditions have been reviewed and modified to ensure their enforceability.

The EPA has also provided 'Other advice' urging Council to ensure that the Deed of Agreement (which is a provision of Amendment No. 13) to include appropriate measures to provide for contingencies to address Acid Sulphate Soils problems if they occur. Such measures should include a financial assurance requirement for the proponent to address specific tasks to be undertaken to manage Acid Sulphate Soils.

In addition the EPA notes the issue of sea level rise due to Climate Change will be relevant to a site such as Point Douro located on a floodplain. It is important to note that sea level rise has been addressed as part of this broader flood management consideration.

The EPA has concluded that the Shire of Harvey's proposal to amend District Planning Scheme No. 1 by rezoning Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) from "Tourist" zone and "Recreation" reserve to "Residential Development" zone, "Tourist" zone and "Recreation" reserve and "Modified Water Body" can be implemented to meet the EPA's objectives provided the conditions recommended in Section 4 and set out in Appendix 2 are imposed, complied with and enforced.

Recommendations

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister notes that the proposed scheme amendment being assessed generally comprises the rezoning of Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) from "Tourist" zone and "Recreation" reserve to "Residential Development" zone,

- “Tourist” zone, “Recreation and Conservation” reserve and “Modified Water Body”;
2. That the Minister considers the report on the relevant environmental factors of acid sulphate soils, flood management and the legal enforceability of environmental conditions as set out in Section 3;
 3. That the Minister notes that the EPA has concluded that the EPA’s objectives can be met, provided there is satisfactory implementation by the Responsible Authority of the recommended conditions set out in Section 4.
 4. That the Minister imposes the conditions and procedures recommended in Appendix 2 of this report.

Conditions

Having considered the Responsible Authority’s commitments and information provided in this report, the EPA has developed a set of conditions which the EPA recommends be imposed if the proposed scheme amendment is approved. These conditions are presented in Appendix 2. Matters addressed in the conditions include the following:

- (a) an Environmental Management Plan for the management of foreshore and conservation reserves, fauna and mosquitoes;
- (b) an Acid Sulphate Soil Management Plan;
- (c) a Water Management Plan for the management of surface and groundwater quantity and quality (including nutrient enrichment scenarios) and management of the proposed “Modified Water Body”;
- (d) a Construction Management Plan;
- (e) a requirement to advertise the Outline Development Plan and Management Plans for a period of at least 4 weeks;
- (f) increase of the foreshore buffer to 50 metres; and
- (g) deletion of that portion of the proposed “Modified Water Body” flowing in a north-easterly direction towards Samphire Bay.

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1. Introduction

The Shire of Harvey, the Responsible Authority, proposes to amend District Planning Scheme No. 1 by rezoning Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7398) from “Tourist” zone and “Recreation” reserve to “Residential Development” zone, “Tourist” zone, “Recreation and Conservation” reserve and “Modified Water Body”.

In July 1988 a previous proposal for the development of a Bunbury Holiday Resort at Point Douro was referred to the Environmental Protection Authority (EPA). The EPA determined that the potential environmental impacts of the proposal were such that it should be a formally assessed under Section 38 of the *Environmental Protection Act 1986* (EP Act) (EPA Bulletin 375, March 1989). That proposal, extending over 21.8ha on Point Douro peninsula, on the north-eastern side of the Collie River delta, included a caravan park and associated camping area, as well as family holiday units, a restaurant, recreational facilities and a boat haven to cater for the launching and temporary mooring of shallow draught recreational boats. The proposal was found to be environmentally acceptable, subject to conditions, and the current zonings and reservations were put in place through Amendment No. 20 to the Shire of Harvey’s Planning Scheme No. 10. The development did not proceed.

In August 1997, following a re-design of the proposal, Council initiated the current Amendment (No. 13). In September 1997, the EPA determined that Amendment No. 13 be formally assessed under Section 48A of the EP Act, requiring the preparation and advertising of an Environmental Review document.

The Environmental Review was prepared by GHD Consultants for the Shire of Harvey (Shire of Harvey, 2001) and released for a period of three months between 30 October and 31 December 2001. During that period 316 submissions were received from individuals and organisations. The submissions ranged from strong objections through to general support for the proposal.

After considering the matters raised in the appeals, the Minister for the Environment determined that the risks the scheme amendment posed in relation to acid sulphate soils and flood management were significant and should be the subject of further assessment by the EPA. In May 2006, the Minister remitted the proposed scheme amendment to the EPA for further assessment under S48E (1) of the *Environmental Protection Act 1986* in relation to acid sulphate soils and to review the conditions applying to other aspects of the proposed amendment including those relating to altered flood regimes and the general enforceability of the conditions..

In compiling this report, the EPA has considered the relevant environmental factors and issues identified by the Minister for the Environment in remitting the proposed scheme amendment to the EPA, additional information in relation to acid sulphate soils provided by the land owner and specialist advice from the DEC.

Further details of the proposed scheme amendment are presented in Section 2 of this report while Section 3 discusses environmental factors relevant to the proposed scheme amendment. The Conditions and Procedures to which the proposed scheme amendment should be subject, if the Minister determines that it may be implemented, are set out in Section 4. Section 5 provides the EPA’s Other Advice, Section 6 presents the EPA’s Conclusions and Section 7, the EPA’s Recommendations.

References are listed in Appendix 1, and recommended environmental conditions and procedures and the Responsible Authority’s commitments are provided in Appendix 2.

2. The proposed scheme amendment

Lot 5 Old Coast Road Leschenault is located a few kilometres north of Bunbury, on the north - eastern delta where the Collie River enters the Leschenault Inlet Estuary (See Figure 1). The area is prone to seasonal flooding, has been largely cleared, and in the past has been used for grazing and the creation of fish trap channels. Runnels (otherwise known as spinner drains) have been constructed in more recent times, to assist with mosquito control. Unrestricted off-road-vehicle activity has resulted in on-going damage to, and maintenance of, the runnelling, and has generally led to degradation of the site, particularly the south - eastern portion nearest the old coast road.

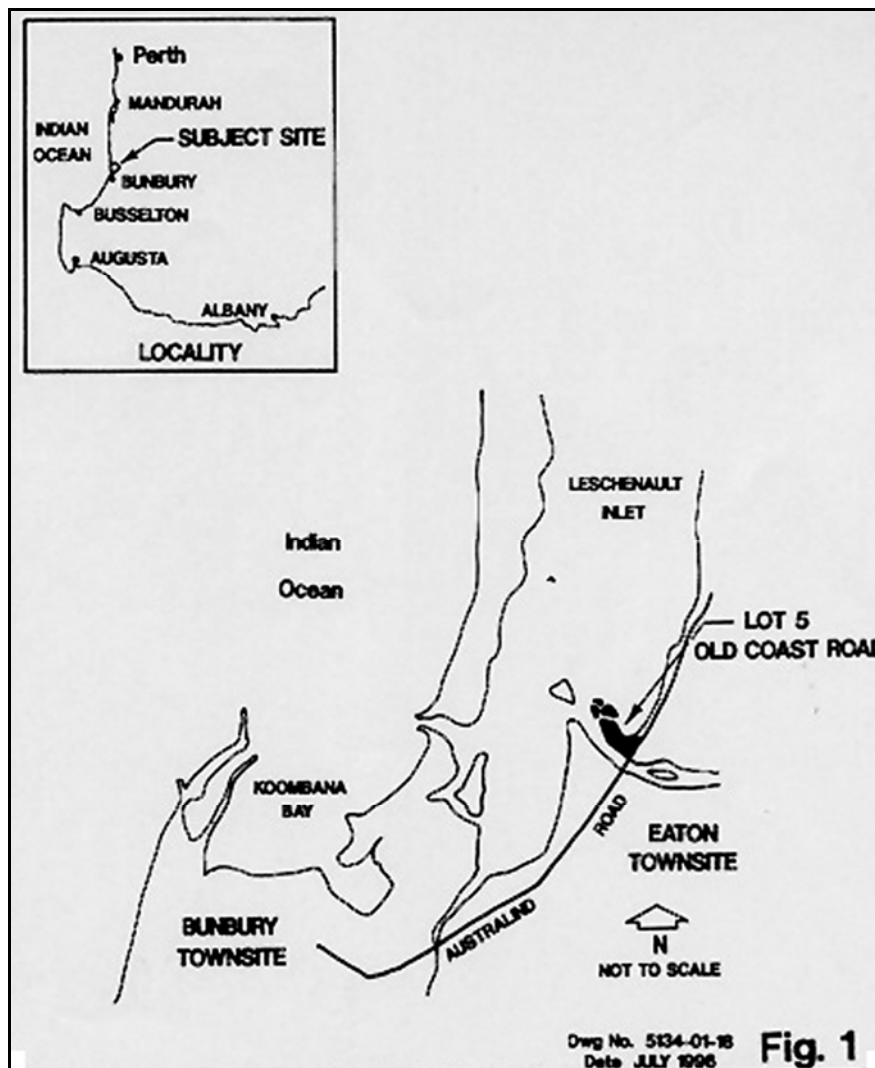


Figure 1: Location of Lot 5 Old Coast Road Leschenault

The site is currently zoned “Tourist” and reserved for “Recreation” under the Shire of Harvey’s District Planning Scheme No. 1. The existing zoning would enable the development of 194 caravan sites; 40-60 camping sites; 46 holiday units; a restaurant; take-away service restaurant; swimming pool and recreation facilities; shop and petrol sales outlet; and a managers residence. A water body is also shown in the maps of the District Planning Scheme.

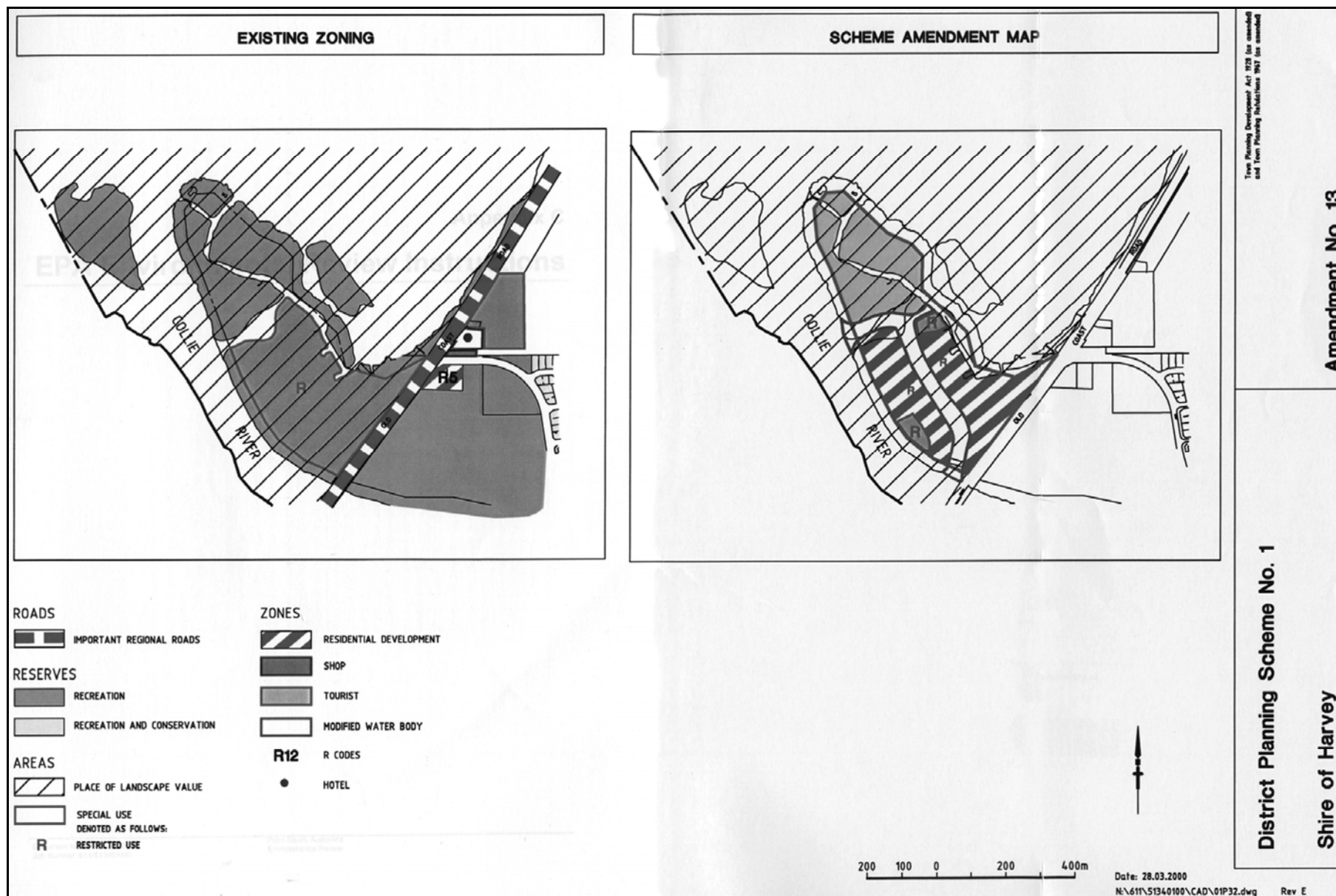


Figure 2: Shire of Harvey District Planning Scheme No. 1 Amendment No. 13

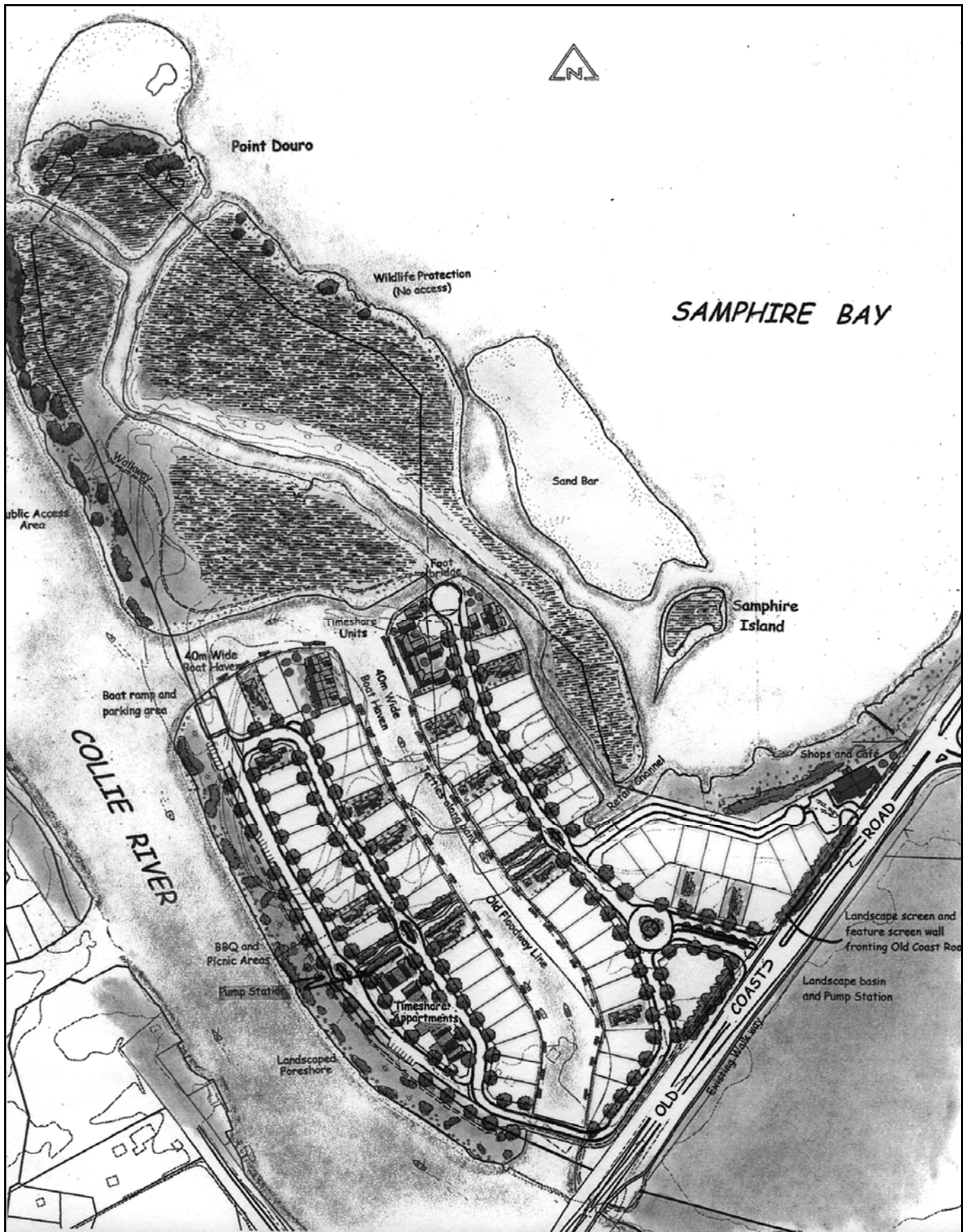


Figure 3: Concept Development Plan (01) as originally proposed under Amendment No. 13

The Shire of Harvey proposes to amend District Planning Scheme No. 1 by rezoning Lot 5 Old Coast Road, Leschenault (pt Loc 23, Plan 7398) from “Tourist” zone and “Recreation” reserve to “Residential Development” zone, “Tourist” zone, “Recreation and Conservation” reserve and “Modified Water Body” (See Figure 2 below).

The Concept Development Plan associated with Amendment No. 13 (See Figure No. 3 above) comprises several components:

- residential development;
- a modified water body;
- creation of tourist related uses;
- a conservation area ; and
- recreational use in part of the foreshore area including a boat launching facility.

The main characteristics of the proposed scheme amendment are summarised in Table 1 below. A detailed description of the proposed scheme amendment is provided in Section 2 of the ER (Shire of Harvey, 2001)

Table 1 - Key characteristics of the proposed scheme amendment

Element	Comment (approximate)	Total area – Original Amendment No. 13
Summary Total land area Total land area set aside for development Total land area for recreation and conservation (including the 30 metre buffer ceded under previous zonings)		29.5 hectares 12.47 hectares 17.03 hectares
Residential and Special Residential Development, including roads ➤ Water front sites ➤ Foreshore Sites ➤ Balance Sites ➤ Retirement village ➤ Short stay accommodation	34 lots 17 lots 22 lots Single site 3 Sites	7.45 hectares
Tourism ➤ Chalets ➤ Managers dwelling/shop ➤ Restaurant	Single site As part of the chalet complex Includes carpark	0.86 hectares

Element	Comment (approximate)	Total area – Original Amendment No. 13
➤ Commercial	Includes carpark	
Water area		
➤ Total area artificial water		3.16 hectares
➤ Relief floodway area		
Drainage		
➤ Drainage basin		1.0 hectares
➤ Open space drainage		
Recreation and Conservation		
➤ Foreshore areas (including 50m buffers)		17.03 hectares
➤ Conservation areas		
➤ BBQs and facilities		
➤ Boat ramp and parking	Includes access road	

Source: GHD, November 2004

Since the release of the ER in 2001, a number of modifications to the proposed scheme amendment have been made by the Responsible Authority. These include:

- modification of the key for Zones and Reservations to change all “Recreation and Conservation” Reserves to “Conservation and Recreation” Reserves;
- deletion of the portion of “Modified Water Body” flowing in a north-easterly direction and discharging towards Samphire Bay, and protection of the proposed conservation area by a combination of vermin proof fencing and “Modified Water Body”;
- the 30 metre foreshore reserve which was previously ceded to the Crown will be increased to 50 metres; and
- the existing foreshore buffer which surrounds the area proposed for reservation as “Recreation and Conservation” is also to be reserved from “Recreation” to “Recreation and Conservation”, which is to be renamed “Conservation and Recreation”.

3. Environmental factors and issues

3.1 Relevant environmental factors and issues

The Environmental Protection Authority (EPA) formally assessed Shire of Harvey Amendment No. 13 in 1997 and released its report and recommendations on the proposed amendment in January 2005. Following consideration of the matters raised in the appeals, the

Minister for the Environment determined that certain issues were significant and required further assessment. Amendment No. 13 has now been remitted to the EPA for further assessment under S48E (1) of the *Environmental Protection Act 1986*.

This report provides the EPA's additional advice to the Minister for the Environment as requested on several key environmental factors, issues, conditions and procedures relevant to the proposed scheme amendment. It is the EPA's opinion that the following are the environmental factors and other issues relevant to the proposed scheme amendment, which require detailed evaluation in this report:

- a) Acid Sulphate Soils - the impacts arising from their disturbance;
- b) Flood Management - the impacts arising from flood waters, scouring and erosion on the surrounding environment; and
- c) Legal Enforceability of Environmental Conditions.

The land subject to this proposed scheme amendment is within the area of the Shire of Harvey's District Planning Scheme No. 1 Amendment No. 13.

The relevant factors and issues are discussed in Sections 3.2 to 3.4 of this report.

3.2 Acid Sulphate Soils

Description

A series of investigations were undertaken assessing acid sulphate soils at Point Douro (Ng, P, December, 2002). These investigations were carried out in accordance with the then Department of Environment guidelines. The preliminary results indicated that there is a significant acid sulphate soil issue on this site.

Further testing conducted by the Department of Environment's Land and Water Quality Branch (S. Appleyard, pers com., 23 November 2004) supported this finding. These investigations indicate that silty and sandy sediments containing between 0.5% and 1.6% pyrite underlie Point Douro, from a depth of about 1 metre to at least 4 metres. These materials greatly exceed the action criterion of 0.03% pyrite and are highly reactive on exposure to air through either dewatering or excavation.

Assessment

The area considered for assessment of this factor is the Amendment area.

The EPA's environmental objective for this factor is to ensure that ecological functions and environmental values are not adversely affected.

In order to further understand the potential impacts of acid sulphate soils at this location and whether the proposed development can be managed to be environmentally acceptable, the consultant to the land owner has undertaken an additional investigation to characterise the distribution of acid sulphate soils, through detailed soil stratigraphy at 9 locations in the area of the floodway channel, and to determine the soil treatment required to condition the acid sulphate soils (Gutteridge Haskins and Davey, 2006).

The floodway channel is estimated to be 670 metres (m) long, 40 m wide and is 2 m deep below the low water level. It is estimated that approximately 88,700m³ of soil would need to be removed and 16,203 tonnes of CaCO₃ neutralising treatment will be required. The landowner has also reviewed its proposed construction methods and will now excavate the channel "wet" rather than undertaking dewatering which contributes significantly to acid generation. This will be achieved by sheet piling adjacent to the channel before excavation

occurs. The expected outcomes are that impacts of acid generation will be eliminated during construction and that there will be limited on-going management of acid generation required.

A Preliminary Acid Sulphate Soils Management Plan has been prepared by the landowner detailing the results of the additional soil investigation and analysis, the proposed construction methods and monitoring. This management plan has been reviewed by the DEC to its satisfaction.

The recommended Ministerial Conditions incorporate Scheme provisions for the preparation of a detailed 'Acid Sulphate Soil Management Plan' to address the specific details of construction. These requirements preclude any ground disturbing works being undertaken prior to the approval of this management plan by the DEC. The Acid Sulphate Soils Management Plan will be in accordance with the DEC's technical guideline series and the requirements of the Western Australian Planning Commission's *Planning Bulletin No. 64 – Acid Sulphate Soils*.

The EPA urges the Shire of Harvey to seek a financial assurance, under its Deed of Agreement, for the purpose of ensuring adequate completion of all acid sulphate soils works, as well as the preparation of publicly advertised Plans for 'Environmental Management', 'Water Management' and 'Construction Management'. The establishment of the financial assurance should be undertaken in liaison with the DEC.

Summary

Having particular regard to the:

- (a) further site investigations and analysis undertaken and the preparation of a preliminary acid sulphate soils management plan to ascertain the detailed characterisation of the nature of soils and any future management required;
- (b) scheme provisions, supported by recommended Ministerial Conditions, requiring the proponent to prepare an Acid Sulphate Soil Management Plan, as well as prepare publicly advertised Plans for 'Environmental management', 'Water Management' and 'Construction Management'; and
- (c) the provision for the public to comment on the more detailed design and management measures contained in the Management Plans and the Outline Development Plan,

it is the EPA's opinion that the proposed scheme amendment, if implemented, can meet the EPA's environmental objective for this factor, provided that the conditions contained in Appendix 2 are incorporated into the Shire of Harvey's District Planning Scheme No. 1, and also provided that the Responsible Authority administers some form of financial assurance as recommended by the EPA.

3.3 Flood Management

Description

Construction of the "The Cut", a man-made opening to the ocean through Leschenault Peninsula in 1951, resulted in an exchange of marine waters, and an increase in the rate of flushing of the Leschenault Inlet area. The hydraulic characteristics of both the Leschenault Inlet and the lower reaches of the Collie River were changed, and ocean tidal influences now have a greater impact on the floodprone nature of the land.

The 1985 Collie River Flood Study done by the Public Works Department delineates the extent of the 100 year ARI floodplain and floodway at the mouth of the Collie River. The majority of Point Douro will be inundated during major flooding particularly during 100 year

ARI river flooding. The floodway is that part of the 100 year ARI floodplain where proposed development that is considered obstructive to major flows is not acceptable as it would increase flood levels upstream. Whilst the Point Douro development site does encroach into the Collie River floodway, the hydraulic modelling conducted to date has demonstrated that the design of the development including the channel ensures that the existing 100 year ARI flooding regime of the general area is not altered.

The last major river flow in the Collie River was in 1964 and is estimated to be a 40 year ARI event.

The following guiding principles are used to ensure proposed development in floodprone areas is acceptable with regard to major flooding:

- Proposed development has adequate flood protection from a 100 year ARI flood.
- Proposed development does not detrimentally impact on the existing 100 year ARI flooding regime of the general area.

The controlling major flooding regime for the area is riverine flooding rather than ocean tidal flooding with the 100 year ARI flood level in Leschenault Inlet estimated to be 1.90 m AHD. In order to take into account potential wind set-up, wave run-up and sea level rise due to climate change, the proposed scheme provisions and recommended Ministerial conditions will require proposed development to have a minimum habitable floor level of 0.60 metre above the 100 year ARI flood level.

The current proposal includes a 40 metre wide channel approximately 2.0 metres deep to serve as a flood relief channel through the general area. It is proposed that a road bridge will connect the two residential areas.

Assessment

The area considered for assessment of this factor is the Amendment Area.

The EPA's environmental objective for this factor is to ensure that the flow of the Collie River floodwaters is not inhibited.

The Concept Development Plan prepared by Gutteridge Haskins and Davey (Shire of Harvey, 2001) was assessed with regard to the then Water and River's Commission floodplain development guidelines for the Collie River mouth. The plan was considered acceptable subject to the following requirements being satisfied to ensure adequate flood protection:

- the design of the development ensures that the 100 year ARI flood level at the downstream side of the Collie River bridge is no higher than 2.16 metres AHD; and
- future development has a minimum habitable floor level of 0.60 metres above the adjacent 100 year ARI flood level.

Hydraulic calculations show that the first condition should be satisfied by the proposed Concept Development Plan (both the original plan, and as modified during the environmental impact assessment process) and the second condition will be achieved by filling of land for building areas. Both requirements have been incorporated in the recommended Ministerial Conditions for the 'Water Management Plan' and the 'Construction Management Plan'.

Concerns that some river flood events could impact upon the mudflat bird habitat in Samphire Bay, due to the north-easterly flowing channel of the "Modified Water Body", have been addressed by removal of that portion of the channel from the Concept Development Plan.

Other concerns related to the greater potential for scouring or erosion of the proposed

“Recreation and Conservation” area as flood waters breakout from the banks during the more frequent river flood events. Additional two dimensional Delft-FLS modelling was undertaken (GHD, 2004) to determine water velocities during the more frequent river flows in association with low tidal events. The modelling indicated that it is possible to design an embankment on the northern bank of the canal such that the flow regime through the channel and across the samphire flats will be similar to existing conditions. Further two-dimensional hydrodynamic modelling will be required through scheme provisions and supported by recommended Ministerial Conditions for the ‘Water Management Plan’ to ensure that a detailed design for the embankment is finalised before construction begins.

The issue raised in the appeals was the enforceability of this condition to ensure that the additional modelling was undertaken. The condition requiring the ‘Water Management Plan’ has been considered as a part of the overall review of the enforceability of environmental conditions. The requirement for further two-dimensional hydrodynamic modelling has been strengthened by utilising appropriate sections in the District Planning Scheme No. 1. This is discussed further in section 3.4 below.

Operation and maintenance of the “Modified Water Body” as a relief flood channel will be covered by scheme provisions in the proposed “Water Management Plan”.

Summary

Having particular regard to the:

- (a) one-dimensional and two-dimensional hydraulic modelling which indicates that issues related to river flooding, and scouring concerns, can be adequately addressed;
- (b) scheme provisions, supported by recommended Ministerial Conditions, requiring the preparation of a ‘Water Management Plan’ which will address detailed design requirements, through further two-dimensional modelling, to ensure that the flow regime across the “Recreation and Conservation” area is similar to existing condition, as well as operation and maintenance of the “Modified Water Body” as a relief flood channel; and
- (c) the provision for the public to comment on the more detailed design and management measures contained in the Management Plans and the Outline Development Plan,

it is the EPA’s opinion that the proposed scheme amendment, if implemented, can meet the EPA’s environmental objective for this factor, provided that the conditions contained in Appendix 2 are incorporated into the Shire of Harvey’s District Planning Scheme No. 1.

3.4 Legal Enforceability of Environmental Conditions

Description

One of the issues raised through the appeals process was the extent to which the conditions proposed were enforceable. The EPA has been requested by the Minister for the Environment to review the recommended conditions to be applied to this amendment to ensure that they are enforceable.

Assessment

The proposed environmental conditions were reviewed in light of the advice provided by the Appeals Convenor’s Office as an outcome of the appeals consideration and the DEC. As a result a number of amendments were made to the proposed conditions to ensure their enforceability.

In the original set of proposed environment conditions, there were significant limits in the efficacy of requiring that management plans are prepared and implemented so as to protect the identified environmental values. The schedule of the scheme text, where the requirement for management plans was previously included, is only intended to identify permitted uses. As the conditions were previously drafted, they included the requirement for certain actions (preparation and implementation of management plans) to be undertaken before land use could be permitted. In this form, the requirement to prepare and implement the management plans could not legally be given effect or enforced.

Utilising appropriate sections in the District Planning Scheme No. 1 and the inclusion of a new schedule of development requirements specific to Point Douro (see Schedule 20 of appendix 2), the preparation and implementation of all management plans is now a legal requirement.

One of the specific concerns raised through the appeals process was in relation to acid sulphate soils. Due to the nature of acid sulphate soils on site it was deemed appropriate to include the requirement for a separate management plan to address this environmental issue. There is also a requirement for approval of this management plan by technical experts within DEC.

In addition, to ensure that the all environmental key issues were monitored by the relevant technical experts the proposed Water Management Plan will also now be approved by the Department of Water. Approval of these management plans by the relevant technical authorities will assist the Responsible Authority in assessing and managing the overall compliance with environmental conditions.

All conditions relating to management plans have been reviewed to ensure that they contain specific targets that can be monitored and legally enforced to ensure protection of the environment.

Summary

Having particular regard to the requirement to:

- (a) utilise an appropriate head power within District Planning Scheme No.1 to ensure that all of the environmental conditions listed for managing the Point Douro Development Site are enforceable;
- (b) draft and implement a specific Acid Sulphate Soils Management Plan to manage this important environmental issue on site;
- (c) ensure that the Water Management Plan and the Acid Sulphate Soil Management Plan are approved by the relevant technical departments; and
- (d) develop specific targets within management plans that can be monitored to ensure enforceability,

it is the EPA's opinion that the conditions are now enforceable.

4. Conditions

Section 48D of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposed scheme and on the conditions to which the proposed scheme should be subject, if implemented. In addition, the EPA may make recommendations as it sees fit.

In developing recommended conditions, the EPA's preferred course of action is to have the

Responsible Authority provide management measures and/or scheme provisions to ameliorate the impacts on the environment. However, these proposed provisions are not always sufficient to ensure that the EPA's objectives will be met.

Having considered the Responsible Authority's environmental management measures, scheme provisions and the information provided in this report, the EPA has developed a set of conditions which are consistent with but replace those environmental management measures in the proposed scheme amendment documentation, if the proposed scheme amendment is approved for implementation.

These conditions are presented in Appendix 2. Matters addressed in the conditions include the following:

- (a) an Environmental Management Plan for the management of foreshore and conservation reserves, fauna and mosquitoes;
- (b) an Acid Sulphate Soil Management Plan
- (c) a Water Management Plan for the management of surface and groundwater quantity and quality (including nutrient enrichment scenarios) and management of the proposed "Modified Water Body";
- (d) a Construction Management Plan;
- (e) a requirement to advertise the Outline Development Plan and Management Plans for a period of at least 4 weeks;
- (f) increase of the foreshore buffer to 50 metres; and
- (g) deletion of that portion of the proposed "Modified Water Body" flowing in a north-easterly direction towards Samphire Bay.

5. Other Advice

The EPA is of the view that some form of financial assurance should be administered in order to guarantee that specific tasks be undertaken to manage the acid sulphate soil problems in the amendment area. However it is inappropriate for the EPA to impose financial assurance requirements upon a third party in this situation: this would best be done by the Shire of Harvey, as initiator of the Amendment and the Responsible Authority for the environmental assessment.

Consequently, the EPA strongly urges Council to ensure that the Deed of Agreement (which is a provision of Amendment No. 13) shall include appropriate measures to address Acid Sulphate Soil problems. Such measures should include a financial assurance requirement for the proponent to address specific tasks to be undertaken to manage Acid Sulphate Soils. Furthermore, provision should be made for continuation of such a measure should there be changes in land ownership. Arrangements for the financial assurance should be to the satisfaction of the Shire of Harvey, on the advice of the DEC.

The major controlling flood regime for the area is riverine flooding and the focus of the assessment is on addressing this point. In addition the EPA notes the issue of sea level rise due to climate change will be relevant to a site such as Point Douro located on a floodplain. It is important to note that sea level rise has been addressed as part of this broader flood management consideration.

6. Conclusions

The EPA acknowledges the significance of several key environmental factors considered as part of this environmental impact assessment process, and that the management of future development will need to be undertaken with care and diligence.

Key outcomes achieved through the Amendment and the EPA's formal assessment process include:

- additional on-site testing and analysis and preparation of a preliminary Acid Sulphate Soil Management Plan, indicating that Acid Sulphate Soils can be managed effectively and will not detrimentally impact on the Point Douro development site or its surroundings. The landowner has also reviewed its proposed construction methods and will now excavate the channel "wet" rather than undertaking dewatering which contributes significantly to acid generation. This will be achieved by sheet piling adjacent to the channel before excavation occurs. The expected outcomes are that impacts of acid generation will be eliminated during construction and that there will be limited on-going management of acid generation required. A Preliminary Acid Sulphate Soils Management Plan has been prepared by the landowner detailing the results of the additional soil investigation and analysis, the proposed construction methods and monitoring. This management plan has been reviewed by the DEC to its satisfaction. The recommended Ministerial Conditions incorporate Scheme provisions for the preparation of a detailed 'Acid Sulphate Soil Management Plan' to address the specific details of construction;
- one and two-dimensional modelling, indicating that the values of the Point Douro Conservation area will not be detrimentally impacted upon by scouring or erosion during flood events;
- the proposed environmental conditions have been reviewed and modified to ensure their enforceability.

The EPA has also provided 'Other advice' urging Council to ensure that the Deed of Agreement (which is a provision of Amendment No. 13) to include appropriate measures to provide for contingencies to address Acid Sulphate Soils problems if they occur. Such measures should include a financial assurance requirement for the proponent to address specific tasks to be undertaken to manage Acid Sulphate Soils.

The EPA has concluded that the Shire of Harvey's proposal to amend District Planning Scheme No. 1 by rezoning Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) from "Tourist" zone and "Recreation" reserve to "Residential Development" zone, "Tourist" zone and "Recreation" reserve and "Modified Water Body" can be implemented to meet the EPA's objectives provided the conditions recommended in Section 4 and set out in Appendix 2 are imposed and enforced.

7. Recommendations

Section 48D of the *Environmental Protection Act 1986* requires the EPA to report to the Minister for the Environment on the environmental factors relevant to the proposed scheme and on the conditions and procedures to which the proposed scheme should be subject, if implemented. The EPA is also required to have regard for the principles set out in section 4A of the *Environmental Protection Act 1986*. In addition, the EPA may make recommendations as it sees fit.

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister notes that the proposed scheme amendment being assessed generally comprises the rezoning of Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) from "Tourist" zone and "Recreation" reserve to "Residential Development" Zone, "Tourist" zone and "Recreation" reserve and "Modified Water Body".
2. That the Minister considers the report on the relevant environmental factors and

principles of acid sulphate soils, flood management and the legal enforceability of environmental conditions as set out in Section 3.

3. That the Minister notes that the EPA has concluded that the EPA's objectives can be met, provided there is satisfactory implementation by the Responsible Authority of the recommended conditions set out in Section 4.
4. That the Minister imposes the conditions and procedures recommended in Appendix 2 of this report.

Appendix 1

References

Australian and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand, 2000. *Australian and New Zealand Guidelines for Fresh Water Quality 2000*. National Water Quality Management Strategy Paper No. 4, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand, Canberra.

Australian and New Zealand Environment and Conservation Council and the Agriculture and Resource Management Council of Australia and New Zealand, 2000. *Australian Guidelines for Water Quality Monitoring and Reporting*. National Water Quality Management Strategy Paper No 7, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand, Canberra.

Department of Environment and Conservation acid sulphate soils series of technical publications:

Draft identification and investigation of acid sulphate soils, 2006

General guidance on managing acid sulphate soils, 2003

Guidance for groundwater management in urban areas on acid sulphate soils, 2004

Is my house built on acid sulphate soils? (Draft, 2004)

Preparation of an acid sulphate soils management plan, 2004

Proposed framework for managing acid sulphate soils, 2004

Treatment and management of disturbed acid sulphate soils, 2004

Department of Environment and Conservation, Perth, Western Australia

Department of Water 2004 - 2007, *Stormwater Management Manual for Western Australia*, Department of Water, Perth, Western Australia.

Environmental Protection Authority, 2005. *Shire of Harvey District Planning Scheme No. 1 Amendment No. 13 – Point Douro – Bulletin 1158*. January 2005, Perth, Western Australia.

Gutteridge Haskins & Davey Pty Ltd, 2004. *Point Douro 2D Hydronamic Modelling: Report*, September 2004, Perth, Western Australia.

Gutteridge, Haskins & Davey Pty Ltd, 2006. *Point Douro Development ASS Management Plan Report*, August 2006, Perth, Western Australia.

Ng, P, 2002. *Point Douro: Acid Sulphate Soil Assessment Report*. Repared by Gutteridge, Haskins and Davey Pty Ltd for land owner Peter Ng and the Shire of Harvey, December 2002, Perth, Western Australia.

Shire of Harvey, 2001. *Point Douro Australind: Scheme Amendment No. 13 to Town Planning Scheme No. 1, and Section 48 Environmental Review*. Prepared by Gutteridge, Haskins and Davey Pty Ltd for Shire of Harvey, October 2001, Perth, Western Australia.

Western Australian Planning Commission, 2007. Planning Bulletin No. 64 – Acid Sulphate Soils, Western Australian Planning Commission May 2007, Perth, Western Australia.

Appendix 2

Recommended Environmental Conditions

**STATEMENT THAT A SCHEME MAY BE IMPLEMENTED (PURSUANT
TO THE PROVISIONS OF DIVISION 3 OF PART IV OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**SHIRE OF HARVEY DISTRICT PLANNING SCHEME NO. 1
AMENDMENT NO. 13 (POINT DOURO)**

Scheme purpose: To rezone Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) and portions of Crown Reserve 26585 zoned modified water body as shown in the District Planning Scheme No. 1 Amendment No. 13 Scheme Amendment Map from “Tourist” zone and “Recreation” reserve to “Residential Development” zone, “Tourist” zone, “Conservation and Recreation” reserve and “Modified Water Body” (Figure 4).

Responsible Authority: Shire of Harvey

Responsible Authority Address: PO Box 500, HARVEY WA 6220

Assessment Number: 1654

Report of the Environmental Protection Authority: Bulletin 1275

Subject to the following conditions, there is no known environmental reason why the Amendment No. 13 to the Shire of Harvey’s District Planning Scheme No. 1 to which the above report of the Environmental Protection Authority relates should not be implemented:

**CONDITIONS TO BE INCORPORATED INTO THE SCHEME BY MODIFICATION OF
THE SCHEME TEXT**

1. 4.7 - Additional and Restricted Uses

Modifying the specific provisions in ‘Clause 4.7 – Additional and Restricted Uses’ point 4.7.4 of Town Planning Scheme No 1 by deleting point 4.7.4 and including after point 4.7.3 the following:

1.1 Point 4.7.4

A person shall not use or develop any land, building or structure thereon in a Restricted Use Area except for the use and purpose set against such land in Schedule 8.

1.2 Point 4.7.5

A person shall not use or develop any land, building or structure on Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) and portions of Crown Reserve 26585, being Restricted Use Areas, except for the use or purpose set against such land in Schedule 8 and in accordance with the development requirements set out in Schedule 20.

2. Schedule 8 – Restricted Uses

Modify the specific provisions in ‘Schedule 8 – Restricted Uses’ of Town Planning Scheme No 1 relating to *R12* Old Coast Road Australiand, Leschenault Location 23, Lot 5 by deleting from the “Only Use Permitted” column

1. Development in the Tourist Zone shall be in accordance with a development plan approved by the Council and Environmental Protection Authority.
2. No activity or development shall occur on the land zoned “Recreation” other than in accordance with a management plan approved by the Leschenault Inlet Management Authority.

And instead inserting

Residential development zone, Tourist zone, Conservation and Recreation zone and Modified Water Body

3. Insert “Schedule 20 - Development Requirements for Restricted Areas - Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) and portions of Crown Reserve 26585” following Schedule 19. Insert into “Schedule 20 - Development Requirements for Restricted Areas - Lot 5 Old Coast Road, Leschenault (Pt Loc 23, Plan 7938) and portions of Crown Reserve 26585” the following specific provisions:

1. Conservation and Recreation Reserve

No activity or development shall occur on the land reserved for Conservation and Recreation other than in accordance with a management plan to be prepared and implemented by the proponent and approved by the Shire of Harvey (Council).

In considering and approving any management plan for land reserved for Conservation and Recreation, Council shall have regard to advice from the Department of Environment and Conservation (DEC), the Leschenault Inlet Management Authority (LIMA) and the Department of Water (DoW).

2. Subdivision and Development

Subdivision and development shall be in accordance with Point Douro Development Concept Plan No. 2 (Figure 4).

No subdivision or development shall occur unless an Outline Development Plan (ODP) is prepared by the proponent, approved by Council and endorsed by the Western Australian Planning Commission (WAPC).

3. ODP Preparation and Implementation

The ODP will be prepared in accordance with the provisions of the management plans referred to in point 5 below and will reflect the development envisaged by the Point Douro Concept Development Plan No.2 (Figure 4).

The proponent shall prepare and implement the ODP and the management plans referred to in point 5 below and submit them to Council for approval. Prior to approval of the ODP and the management plans, Council shall advertise the draft ODP and the accompanying management plans for public comment for a period of not less than four (4) weeks in accordance with the provisions of Clause 6.7.3 of the Town Planning Scheme No1.

In considering and approving the ODP and accompanying management plans, Council shall have regard to advice from the DEC, LIMA and DoW.

All management plans are to implemented in accordance with the provisions of those approved management plans.

Upon approval of the ODP and accompanying management plans by Council, and endorsement by the WAPC, all subdivision and development shall be in accordance with the approved ODP and management plans.

The Outline Development Plan shall identify and address:

- a) subdivision and development in accordance with the Point Douro Concept Development Plan No.2 and the management plans referred to in point 5.
- b) the development of land for conservation and recreation purposes;
- c) the alignment and construction of access roads, pedestrian paths, cycle paths, footbridge and infrastructure corridors so as to minimise physical impact to the wetlands, subject to advice from the DEC and LIMA;
- d) mechanisms to mitigate potential nuisance from mosquito breeding and to reduce the opportunity for additional mosquito breeding areas being created;
- e) use and development within land designated for floodway;
- f) proposed methods to supplement existing vegetation and increase fauna habitat, particularly in areas of degraded remnant vegetation; and
- g) proposed methods of incorporating requirements and obligations addressed in the accompanying management plans.

In considering and approving or endorsing the ODP, Council and the WAPC shall have regard to advice from DEC, LIMA and DoW.

5. Management Plans

The following management plans are to be prepared and implemented in accordance with the specifications set out below for each management plan:

- Environmental Management Plan;
- Acid Sulphate Soils Management Plan;
- Water Management Plan; and

- Construction Management Plan.

Environmental Management Plan

The proponent shall prepare and implement an Environmental Management Plan for the amendment area shown in Figure No. 2.

The Environmental Management Plan shall be prepared in accordance with the specifications set out below and having due regard for advice provided by the Council and DEC.

Prior to the approval of the Environmental Management Plan by Council, the Environmental Management Plan will be released with the Outline Development Plan for public comment.

The Environmental Management Plan shall include measures relating to:

1. management of foreshore and conservation reserves, addressing:
 - a) interface treatments between the development and adjacent areas, including vermin-proof fencing, roads and pathways;
 - b) management of human pressures;
 - c) management of public access, including to the mouth of the Collie River;
 - d) hydrological impacts;
 - e) measures to address algal blooms, including scums and potential turbidity;
 - f) resolution of tenure, responsibilities and ongoing environmental management of recreation and conservation reserves, such that a suitable entity or entities, with adequate financial and technical resources and authority, will ensure that the objectives set out in the “Environmental Management Plan”, will be achieved;
 - g) retention of remnant vegetation and the re-vegetation of foreshore buffers with naturally occurring local species, which are to be propagated from material sourced from within a five kilometre distance of the site and from the same landform unit;
 - h) water management to reduce mosquito breeding habitat.
2. terrestrial fauna and waterbird protection, addressing:
 - a) measures for protection of native terrestrial fauna and waterbirds, their food resources and all associated habitats (roosting, nesting, feeding and mating), including limitation of human access to sensitive areas, control of vehicles by physical barriers, control of feral animals, measures to ensure rotting macroalgae remains within the ecosystem, sign-posting and public education to increase awareness of the sensitivity of the conservation areas;
 - b) location and design standards and specifications of the vermin-proof fencing;
 - c) conformity with the System 6 objectives, particularly for locality numbers C66 and C67;

- d) evaluation of feasibility of construction of walking trail(s) and bird-watching hide(s), and, if feasible, their construction;
 - e) measures to encourage waterbirds and other native fauna into the conservation and foreshore zones once construction is completed.
3. management of disease vector and nuisance insects, specifically mosquitoes, in accordance with the *Environmental Protection Authority's Guidance No. 40 – Management of Mosquitoes by Land Developers*, and on the advice of the Department of Health (DoH), addressing:
- a) mechanisms to ensure that there is no further creation of mosquito breeding areas and detailed design of water management to reduce mosquito breeding habitat in such a manner that the role which these areas play in maintaining waterbird abundance and diversity is recognised;
 - b) mechanisms to mitigate potential nuisance from mosquito breeding;
 - c) no intensification of the mosquito control program as a direct consequence of the proposed residential development and associated activities;
 - d) memorials on titles or section 70A notification under the *Transfer of Land Act 1893*; and
 - e) education of residents with respect to the elimination or minimisation of additional breeding areas for disease vector and nuisance insects.

Acid Sulphate Soils management Plan

The proponent shall prepare and implement an Acid Sulphate Soil Management Plan for the amendment area as shown in Figure No. 2.

The Acid Sulphate Soils Management Plan shall be prepared in accordance with the specifications set out below and with the approval of the DEC.

Prior to the approval of the Acid Sulphate Soils Management Plan, the Acid Sulphate Soils Management Plan will be released with the Outline Development Plan for public comment.

This Plan shall include addresses:

- 1. the management of acid sulphate soils in accordance with the Acid Sulphate Soil technical guidelines as published by the DEC and following the requirements of the WAPC's Planning Bulletin No.64 – Acid Sulphate Soils.

Water Management Plan

The proponent shall prepare and implement a Water Management Plan for the amendment area as shown in Figure No. 2.

The Water Management Plan shall be prepared in accordance with the specifications set out below, with approval of the DoW and the DEC.

Prior to the approval of the Water Management Plan by Council, the Water Management Plan will be released with the Outline Development Plan for public comment.

This Plan shall include measures relating to:

1. management of surface and ground water quantity and quality, addressing:
 - a) a monitoring and sampling analysis plan for the ambient waters and the “Modified Water Body” shown in Figure No. 2. This plan will adhere to the following guidelines:
 - ANZECC & ARMCANZ (2000): *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. National Water Quality Management Strategy Paper no. 4. Australian and New Zealand Environment and Conservation Council / Agriculture and Resource Management Council of Australia and New Zealand and;
 - ANZECC & ARMCANZ (2000): *Australian Guidelines for Water Quality Monitoring and Reporting*. National Water Quality Management Strategy Paper No 7, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand, Canberra.
 - b) connection to reticulated sewerage;
 - c) contingency measures, established with the Water Corporation to cater for emergency overflows of sewage or pump station failure;
 - d) all residential and commercial development to be located outside the Collie River floodway and with minimum habitable floor levels of 0.60 metre above the adjacent 100 year Annual Recurrence Interval flood level;
 - e) management of drainage, incorporating best management practices in accordance with DoW’s *Stormwater Management Manual for Western Australia (2004-2007)*, to maintain surface and groundwater quality within the development area relative to pre-development conditions, maintain the total water cycle balance, minimize runoff, water-logging, nutrient export and enhance nature conservation;
 - f) alignment of roads, pathways and any other infrastructure to minimise impacts on surface and groundwater;
 - g) contingency measures to avoid or ameliorate the effects of nutrient enrichment and potential toxic and nuisance phytoplankton or macroalgae blooms and their scums or wrack on water quality;
 - h) minimising groundwater use, through measures such as minimising grassed area and landscaped open spaces, and the use of local grass species such as *Sporobolus virginicus* (salt couch);
 - i) monitoring of soil nutrient levels to determine appropriate rates of nutrient application;
 - j) the use of slow release fertilisers in public areas;
 - k) encouraging and educating residents to minimise fertiliser application and to use native plant species in their gardens, preferably those found

- in the local area; and
- 1) preventing or minimising any decline in water quality during construction.
2. management of the proposed “Modified Water Body” as shown in Figure No. 2, addressing:
- a) appropriate canal design and associated residential, tourist and commercial development so that the environmental values of ‘aquatic ecosystems’ and ‘recreation and aesthetics’ set for receiving waters are not jeopardised, and comply with the following guidelines:
 - ANZECC & ARMCANZ (2000): *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. National Water Quality Management Strategy Paper no. 4. Australian and New Zealand Environment and Conservation Council / Agriculture and Resource Management Council of Australia and New Zealand and;
 - ANZECC & ARMCANZ (2000): *Australian Guidelines for Water Quality Monitoring and Reporting*. National Water Quality Management Strategy Paper No 7, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand, Canberra.
 - b) detailed design of the proposed “Modified Water Body” to ensure that the 100-year Annual Recurrence Interval flood level at the downstream side of the Collie River Bridge is no higher than 2.16 metres AHD;
 - c) detailed design of the embankment on the northern bank of the proposed “Modified Water Body”, using further two-dimensional hydrodynamic modelling to extend the modelling already undertaken (Gutteridge Haskins & Davey Pty Ltd, September 2004), with the aim of ensuring that the flow regimes across the proposed “Conservation and Recreation” reservation are similar to the existing conditions;
 - d) appropriate treatment of banks and ongoing maintenance to prevent scouring and erosion from boat traffic and river flood events;
 - e) extension of treatment of banks and ongoing maintenance upstream and downstream from the entrance in the Collie River;
 - f) resolution of responsibilities for the operation, environmental management and ongoing maintenance of the “Modified Water Body”, such that a suitable entity or entities, with adequate financial and technical resources and authority, will ensure that the objectives set out in this “Water Management Plan” will be achieved;
 - g) for a period of twelve months prior to construction of the canal, quarterly monitoring of water and sediment to establish baseline data in the location of the canal and the adjacent Collie River;
 - h) monitoring of water quality as outlined in the previous section relating to management of surface and ground water quantity and quality, and similarly rigorous monitoring of sediment quality, at quarterly intervals, until at least two years following the completion of residential and tourist development, and canal construction;
 - i) a contingency plan which shall be implemented if the results of the sediment quality monitoring have exceeded the recommended targets

- set as part of the Water Management Plan; and
- j) annual monitoring of the depth of the canal, for a period of five years following commencement of construction of the canal, and thereafter at intervals to be reviewed and approved by the DoW to ensure adequate flushing, retention of an adequate floodway, safe navigable depths, and measures for maintenance as required in 'e)' above."

Construction Management Plan

The proponent shall prepare and implement a Construction Management Plan for the amendment area as shown in Figure No.2 which ensures the protection of remnant vegetation, fauna and their associated habitats, and water quality during construction.

The Construction Management Plan should be prepared in accordance with the specifications set out below having due regard for the advice provided by Council and the DEC.

Prior to the approval of the Construction Management Plan by Council, the Construction Management Plan will be released with the Outline Development Plan for public comment.

This Plan shall include:

- a) measures for the avoidance or minimisation of clearing and vegetation disturbance;
- b) the protection of foreshore buffers and the "Conservation and Recreation" reservation, by use of exclusion fencing or other necessary means;
- c) excavation to approximately – 2.0m AHD, after ensuring that technical issues of flood mitigation and acid sulphate soils are addressed, and maintenance to navigable depth of approximately –2.0m AHD, including the entrance channel;
- d) sufficient level of clean fill material to enable residential and other buildings to achieve a minimum habitable floor level of 0.60 metre above the adjacent 100 year ARI flood level;
- e) stabilisation of banks;
- f) the control and monitoring of dust, noise and smoke;
- g) the control of potential for silt plumes in the aquatic environment;
- h) rehabilitation, if necessary, of the existing runnelling used for mosquito control;
- i) the inclusion of environmental protection specifications in all construction-related contracts and sub-contracts; and
- j) allocation of responsibilities and timing for staging and implementation of construction stages."

6. Agreements

Prior to Amendment No. 13 being forwarded to the Minister for Planning and Infrastructure for approval, a Deed of Agreement shall be entered into between the proponent and Council.

The Deed of Agreement shall provide for on-going maintenance, infrastructure contributions, bond monies, environmental monitoring and bank guarantees.

This Deed of Agreement shall also identify a suitable entity or entities, with adequate financial and technical resources and authority, whom will ensure that the objectives of the management plans referred to in Point 5 above will be achieved.

7. Modify Schedule 13 “Interpretations” by including after the *interpretation “Mobile Home Park”* a new interpretation of “*Modified Water Body*” : an area of land modified in such a way as to allow entry of a natural water body or course that functions as a private recreational boating or ornamental purpose”.

8. Introduce "Modified Water Body (Table 39)" under the "Non Urban Zones:" heading of Clause 4.1.1 of Town Planning Scheme No.1 text.

9. Include in Schedule 14 “Precinct Area 1 – Leschenault” Pt Lot 5 Old Coast Road, Australind (Pt Douro) is intended to be development for low density residential, low/medium density tourist accommodation and conservation purposes. Development will only be considered which can demonstrate that it will not have a significant adverse impact on the landscape or environmental attributes of the locality as determined through the formal rezoning and environmental review process.

Any proposed development which cannot demonstrate that it will not have a significant adverse impact on the landscape or environmental attributes of the locality will likely be required to undergo rezoning and a detailed formal environmental review pursuant to the *Environmental Protection Act 1986*.

10. Introduce new Table 39 to Clause 4.2 “Zoning and Development Tables” of Town Planning Scheme No. 1 text, titled “Zoning and Development Standards - Modified Water Body” as follows:

Table 39

ZONING & DEVELOPMENT STANDARDS		MODIFIED WATER AREA
POLICY STATEMENT		
Intended for the establishment of modified waterways that function as a private recreational boating or ornamental purpose.		
DEVELOPMENT STANDARD		
NOTE: The following standards will apply to this zone.		
LAND USE CATEGORIES		OTHER REQUIREMENTS
		Development shall be in accordance with an Outline Development Plan or any variations agreed by the Shire of Harvey (Council) and approved by the Western Australian Planning Commission
RECREATION & COMMUNITY FACILITIES	P	
CANAL WATERWAYS , MOORINGS AND JETTIES	P	
CANAL WALLS, RETAINING WALLS & FENCES	P	

CONDITIONS TO BE INCORPORATED INTO THE SCHEME BY MODIFICATION OF SCHEME MAPS

1. Modification to Key for Zones and Reservations

- 1.1 Modify “Recreation and Conservation” Reserves to “Conservation and Recreation” Reserves.

2. Conservation and Recreation Area and Foreshore Buffer

- 2.1 The foreshore buffer surrounding the area proposed for reservation as “Recreation and Conservation” shall also be reserved as “Conservation and Recreation”
- 2.2 The foreshore buffer surrounding the area to be developed shall be increased from 30 metres to 50 metres (Figure 5).

3. Modified Water Body

- 3.1 The area designated as “Modified Water Body” shall be changed to delete that portion of the channel flowing in a north-easterly direction and discharging towards Samphire Bay.

Figures Attached

Figure 1: Concept Development Plan No. 2 generally outlining future development

Figure 2: EPA’s recommendation for a 50m foreshore buffer. (noting that development outlined in Figure 1 will need to be modified to be contained within the new 50m foreshore buffer).



Figure 1: Concept Development Plan No. 2 generally outlining future development



Figure 2: *EPA's recommendation for a 50m foreshore buffer. (noting that development outlined in Figure 1 will need to be modified to be contained within the new 50m foreshore buffer).*