

LANDS AT BADGEE LAGOON SUSSEX INLET



**Prepared for
Lucas Property Group Pty Ltd
A&C Finkernagel**

Preliminary Concept Plan

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1 INTRODUCTION

1.1 Background

This report is submitted to the Department of Planning (DOP) under Part 3A of the Environmental Planning and Assessment Act 1979 (the EPA Act) as part of the proposed outline and preliminary environmental assessment for the development for urban purposes of a site at Sussex Inlet.

The report has been prepared for Lucas Property Group Pty Ltd and whose subsidiary companies are the owners of the land at Sussex Inlet and A&C Finkernagel who own land adjoining the Lucas land in the Local Government Area of Shoalhaven. The land currently has a number of zonings under the provisions of Shoalhaven IDO 1 and Shoalhaven Local Environmental Plan 1985. These include rural zones, environment protection zones and a village zone. The land is situated on the edge of the existing Sussex Inlet township and discussions have been taking place since the 1980's in relation to the development of the land for urban purposes. The site has an area of approximately 235.9ha and includes the sensitive Badgee Lagoon which is a State recognized wetland.

The site is within the coastal zone and the redevelopment project is subject to the provisions of State Environmental Planning Policy 71 – Coastal Protection. The development of the site would have an investment value of over \$250million and a completed value of over \$500 million. It is intended to prepare a concept plan for the site to enable the development to proceed in subsequent stages.

The purpose of this report is:

to describe the site, outline a preliminary proposed development concept and provide a preliminary environmental assessment to enable the Minister to form the opinion that the proposed project is a major project to which Part 3A of the Environmental Planning and Assessment Act (EPA Act) applies;
enable the DOP to establish the level and scope of the environmental assessment to accompany the Part 3A Application; and
to request the Minister to authorise the proponent to submit a Concept Plan for the proposed development under Part 3A of the EP&A Act.

The site will require rezoning to enable the proposed development to proceed and a letter has been sent to Shoalhaven City Council requesting that they resolve under s54 of the Environmental Planning and Assessment Act to prepare a Local Environmental Plan for the site. A copy of this letter is included in Appendix 1 to this report. It is hoped that the rezoning process can run concurrently with the preparation of the Environmental Assessment Report and the Concept Plan for the site.

1.2 Legal Description of the Site

The site comprises the following:

Lots 123,124 and 125 DP 528699
Lot 5 DP 56283
Lots 144 and 145 DP 755937
Lot 156 DP40207
Lot 2442 DP 1074478
Lot 51 DP 1033684

The above land, apart from Lot 51 DP 1033684, is owned by Taliac and L&T Pastoral which are subsidiaries of Lucas Property Group. Lot 51 DP 1033684 is owned by Alan & Catherine Finkernagel.

1.3 Circumstances Relating to the Site

The site at Sussex Inlet has been identified for urban purposes in the South Coast Regional Strategy and in the Sussex Inlet Settlement Strategy which is supported in the Regional Strategy. Further, the site contains a major State Environmental Planning Policy 14 – Wetlands (SEPP 14) identified wetland which it is proposed to conserve and protect as part of the concept for the site. As a result the development of the site implements strategic regional planning strategies and is of conservation and natural resource importance.

1.4 The Project and Its Cost

The project is for the conservation and protection of the sensitive Badgee Lagoon lands, a residential development including a mix of housing types, the development of seniors housing, the development of an 18 hole golf course and associated facilities, a tourist development and the provision of associated open space and recreation facilities. It is estimated that approximately 1000 residences could be developed on the site. It is expected that the development of the site would have an investment value of over \$250 million and a completed value of over \$500 million. An Economic Report has been prepared in relation to the development of the Lucas land and a copy of this is attached in Appendix 2.

1.5 Relevant Planning Requirements

The current zoning of the site does not permit the development concept presented in this submission although residential development is permissible in the current village zoning. Part of this zoning however, applies to the sensitive Badgee Lagoon area which it is proposed to conserve in the proposal.

It is anticipated that the required environmental studies will be carried out as part of the Environmental Assessment Review for the preparation of the concept plan for the site. The development of this site has been held up for over 20 years while various studies have been carried

out by both the Council and the New South Wales Government. All studies have now been completed and all endorse the development of the site for urban purposes subject to the required environmental studies.

The site has been identified in the Sussex Inlet Settlement Strategy for urban development providing appropriate environmental studies are carried out. The recent South Coast Sensitive Urban Lands Review which looked only at the actual Badgee Lagoon area also endorsed the current proposals for conservation and development in this area.

The site is located within the coastal zone and is partly in a sensitive coastal location and as the proposed development involves a residential development of up to 1000 lots, is identified in State Environmental Planning Policy Major Projects as a major project. As a result Part 3A of the EPA Act will apply to the future development of the site.

The proposed development of the site will be subject to the following relevant planning controls:

- State Environmental Planning Policy (Major Projects) 2005
- State Environmental Planning Policy Seniors Housing
- State Environmental Planning Policy 71 – Coastal Protection (SEPP 71)
- State Environmental Planning Policy 55 – Remediation of Land
- State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings (SEPP 65)
- State Environmental Planning Policy – (Building Sustainability Index: BASIX) 2004
- State Environmental Planning Policy 11 - Traffic Generating Developments (SEPP 11)
- State Environmental Planning Policy 14 – Coastal Wetlands
- Illawarra Regional Environmental Plan No 1
- The South Coast Regional Strategy
- Report of the independent Review Panel South Coast Sensitive Urban Lands Review
- The Sussex Inlet Settlement Strategy
- Shoalhaven Local Environmental Plan 1985

1.6 Reasons for the Preparation of a Concept Plan

There are several reasons why it is considered that the most appropriate way to progress this matter is with the preparation of a concept plan for the site. These are as follows:

- The site requires the preparation of a Local Environmental Plan to provide the appropriate zoning for the development to proceed and as a result the concept plan will provide a level of detail to assist in the formulation of the planning controls for the site.

- SEPP71 requires the preparation of a master plan before development can be approved on the site.
- It is intended to stage the development and the concept plan will provide the framework for the staged development to proceed
- The site contains sensitive environmental environments which will need to be protected from development. The preparation of a concept plan provides the most appropriate method of developing and implementing these protective mechanisms.
- The proposed development includes several different uses which will be developed under separate project applications within the overall concept plan for the site.

2 PLANNING FRAMEWORK

2.1 Illawarra Regional Environmental Plan No 1

The following matters of relevance are included in this plan:

- Valuable natural environments are to be taken into consideration in future planning
- Urban expansion is to be orderly and efficient
- New residential land is only to be developed where there is adequate infrastructure
- A range of lot sizes should be provided for
- Residential development should not take place on hazard prone lands
- Bushfire risks for urban development are to be minimised
- Planning for the expansion of villages should have regard to whether 50% of the available land of the existing zoned area has been developed and the area should be expanded
- Are services available for the development

2.2 South Coast Regional Strategy

The South Coast Regional Strategy was produced in 2006. It applies to the Local Government Area of Shoalhaven and identified that the South Coast is one of the high growth regions in New South Wales. The strategy aims to:

- Protect high value environments
- Cater for housing demand of up to 45600 new dwellings by 2031
- Ensure new housing meets the needs of future households
- Ensure that future urban development is prioritised to support new housing in and around existing well serviced centres and towns
- Independently review existing zoned land in isolated and sensitive locations
- Only consider additional development sites if demand can be demonstrated and they adjoin a

- major town
- No new towns or villages will be supported
- No new rural residential zones will be supported
- Ensure adequate supply of land to support economic growth
- Prevent development in areas constrained by coastal processes
- Protect cultural and aboriginal heritage

Sussex Inlet is identified as a “town” in the strategy. The strategy identifies that the Shoalhaven area will require an additional 26,300 dwellings over the next 25 years of which 23900 can potentially be accommodated by existing vacant urban land and existing investigation areas. The Sussex Inlet Settlement Strategy is identified as an urban investigation area which is supported by the strategy.

The Badgee Lagoon area (35ha around the lagoon) was identified in the strategy for further investigation by an expert panel.

The draft Strategy provides a framework for the future planning of the area in terms of conservation and sustainability.

2.3 Independent Review Panel Report South Coast Sensitive Urban Lands Review

The Panel reviewed the planning situation in relation to the 35ha part of the site around Badgee Lagoon. The Panel recommended that the majority of the Badgee Lagoon site is unsuitable for urban development on the grounds of its potential negative impacts on water quality in Badgee Lagoon. However, two small areas in the north western and south western corners were identified as suitable for development in accordance with proposals put forward by the owner subject to best practice water saving urban design and water quality management. Development should provide for a mix of housing types at yields traditional in the area. The land which is unsuitable for development should be zoned Environmental Conservation or National Parks and Nature Reserves. Negotiations should be commenced with the owner to secure dedication of the land for conservation purposes in return for the development of the two identified areas.

2.4 Sussex Inlet Settlement Strategy

The Sussex Inlet Settlement Strategy has been in preparation for over 3 years. It has now been finalised. The strategy identifies the need for additional housing in Sussex Inlet and the preferred option provides for residential development of the subject land subject to a detailed and integrated environmental study process. While it was recognised in the strategy that the development of the site would result in the loss of some vegetation it was considered that there are substantial potential benefits arising from the development of the land.

2.5 Planning History of the Site

Background

When the Shoalhaven Local Environmental Plan 1985 was gazetted, the site was part of an area of land at Sussex Inlet which was deferred from the plan. The area was deferred from the plan as there were proposals at the time to complete a canal subdivision and development similar to that which had taken place on the adjoining land. There were environmental concerns in relation to the wetlands on the site and it was considered that some areas should be protected from development. Shoalhaven City Council resolved to prepare a Local Environmental Plan for the land and requested that a Local Environmental Study should be prepared. This was completed in 1988 but the zoning of the land was not determined. In 1994, a further Local Environmental Study was completed for the site and this was formally submitted to Shoalhaven City Council on 11 December 1996 together with 2 development applications. One was for an 18 lot subdivision on land zoned “Village” and the other was for the construction of canals on the site. A Master plan had also been prepared for the residential development of the site but this required the rezoning of the site. As this matter was being considered by the Council the Minister for Planning gazetted a State Environmental Planning Policy prohibiting the construction of canal estates. The policy did not however apply to applications which had been lodged prior to its gazettal. The Minister had also issued a direction that he was the consent authority for all applications for canal estates.

Although the application for the construction of the canals has never been determined it has become clear that, for environmental reasons, such a development would not be acceptable to the authorities. However, development cannot proceed on the site until the issues relating to the planning of the site are resolved. The site is still partially subject to the provisions of Interim Development Order No 1. (IDO 1)

Current Zoning of the Site

The site is zoned under two planning instruments; IDO 1 and Shoalhaven LEP 1985. The zonings of the site are as follows:

IDO 1

1(a)

1(b)

Village

Shoalhaven LEP

1(b)

1(d)

1(g)

2(c)

6(a)

7(b)

7(d2)

Uncoloured Land

Provisions in the zones are as follows:

IDO 1

Non Urban 1(a)

The controls for this zone state permitted and prohibited uses. As a result any use not specifically prohibited is permissible. Prohibited are dwelling houses, industries shops and stores. Country dwellings are permitted (ie dwellings on 25 acres). As a result of the way the controls are written uses such as hotels, recreation facilities and places of assembly are permitted in this zone.

The minimum subdivision controls relating to the zone relate to country dwellings and residential buildings are prohibited in the zone.

Non Urban 1(b)

The controls for this zone are written in a similar way to those for the 1(a) zone and residential buildings are prohibited. Subdivision controls are the same as in the 1(a) zone.

Village

All uses apart from offensive or hazardous industries are permitted in this zone and there are no subdivision controls.

Shoalhaven LEP 1985

Rural 1(b)

The objectives of this zone are to protect the agricultural potential of rural land. Dwellings are permitted but most other uses, including recreation facilities are prohibited. The minimum subdivision requirement is 40ha in this zone unless Council is satisfied lots of 1-2ha will not affect the agricultural viability of the land.

Rural 1(d)

The objective of this zone is to indicate areas for future urban expansion. Dwelling houses are permitted but recreation facilities are prohibited. The minimum subdivision is as for the 1(b) zone.

Rural 1(g)

The objective of this zone is to identify land liable to flooding. Dwelling houses are permitted but recreation areas are prohibited. Subdivision controls are as for 1(b) and 1(d) but dwelling houses can only be permitted if essential for the proper and efficient management of the agricultural use of the land.

Residential 2(c)

The objectives are to provide for new residential areas. Dwelling houses and residential flat buildings are permitted. There is no minimum lot size. There is a density control on residential flat buildings.

7(b) Environmental Protection B

The objectives of this zone are to protect wetlands. Agriculture and farming are the only uses permitted in this zone.

7(d2) Environment Protection Scenic Special

The objective of this zone is to identify foreshore land for public acquisition. Agriculture is the only permitted use

in this zone.

Uncoloured Land

Any development requires Council consent

3 SITE DESCRIPTION

3.1 Location

The Lucas land at Sussex Inlet lies on the south western side of the St Georges Basin and includes land around (but not including) Badgee Lagoon itself. The precise area of the site is not known but it covers approximately 235.9 ha between the main road to the Princes Highway (Sussex Inlet Road) to the west and the urban development fronting Suncrest Avenue to the east. To the north is the vegetated area fronting St Georges basin and to the south the existing urban area of Sussex Inlet.



View of the Site From the Golf Course

3.2 Description

The site comprises the following:

Lot 2442 DP 1074478
 Lots 144 and 145 DP 755937
 Lot 5 in DP 568283
 Lots 123, 124 and 125 DP 528699
 Lot 156 DP 40207
 Lot 51 DP 1033684

Badgee Lagoon is a small and shallow tidal backwater adjoining the upper section of Sussex Inlet. The terrain surrounding the lagoon is low – lying with much of it occupied by wetlands. At high tide, Badgee Lagoon measures about 500m in length and 200m in width. It has an area of about 9ha. The area around the lagoon has been identified under SEPP14 as a wetland and this stretches to the south west of the site. To the east of this area is the majority of the site which is proposed for development. In this area there is a nine hole golf course and clubhouse, however, the majority of the site is currently vacant.

3.3 The Wetland

The Badgee wetland area is the lowest elevation in the catchment and acts as a hydrologic sump for all catch-

ment run off and ground water discharge. As such it is almost permanently water logged promoting growth of water loving plants. The eastern part of the wetlands around Badgee lagoon is subject to tidal inundation and ground water levels are at or near ground level.



View of the Wetland Area From The Bridge at Badgee Lagoon

3.4 Vegetation

Native vegetation covers approximately 80% of the site. The remainder includes golf fairways, unsealed tracks, a gravel quarry and other disturbed sites. The vegetation of the area has been described and mapped with the last study of the entire site carried out in 1993. A detailed study of the area around Suncrest Avenue was carried out in 2000.

Vegetation communities in the area comprise mixed eucalypt open forest, scribbly gum woodland, casuarina swamp forest, mellaleuca closed scrub, saltmarsh and mangroves. The 1994 study found that there were no threatened plant species on the site and this was confirmed for that part of the site examined in the 2000 study. There are however, several species which are considered to be of botanical or biogeographic significance at a local or regional scale.

The greatest diversity in the site vegetation is the open forest and woodland communities. However, the wetland communities contain a much greater proportion of species which do not occur in other locally more widespread communities. A significant feature of the site is the continuity of wetland to open forest communities in the Badgee Lagoon catchment.



Vegetation on the Site

3.5 Fauna

Fauna Surveys have also been carried out in the area. The most abundant species in the area is the Eastern Grey Kangaroo. The Sugar Glider and the Brushtail Possum also predominate in the area. No rare or significant terrestrial or arboreal mammal fauna appear to occur on the site.

A vulnerable and rare species of bird was found on the site. The Glossy Black Cockatoo was observed in open forest between Sussex Inlet Road and the mellaleuca scrub wetland. The species is uncommon and rare on the east coast of New South Wales. Other significant species have the potential to occur, but have not been reported on the site, including the Powerful Owl and the Osprey

3.6 Archaeology

The archaeology of the area has also been examined (1994) and it was concluded that the site types most likely to occur on the site are:

- Open camp sites in close proximity to wetlands, creek lines and ground water seepages
- Open camp sites on the ridge adjacent to the shoreline of Jewfish bay
- Scarred trees where remnant native vegetation of a significant age is present
- Estuarine middens along the ridge adjacent to the shoreline of Jewfish Bay.

There were no known mythological and/or ceremonial sites in the vicinity of the study area.

3.7 Site Context

The site lies on the edge of the existing Sussex Inlet Town. There is residential development to the north of the site and to the east and south. The site is close to St Georges basin and to the north close to Jew Fish Bay. Sussex Inlet is generally developed with single unit residential dwellings and there are areas of canal estates where the dwellings have water frontage which were developed in the 1970's and 1980's in the area.

There are several successful medium density residential developments in the Sussex Inlet area. The golf course provides a community resource and there are demands for some increased tourist development in the area.



Typical Housing in the Area

4 DEVELOPMENT CONTEXT

4.1 Opportunities and Constraints for Development

A preliminary analysis has been carried out of the opportunities and constraints for development of the site and out of this the preliminary urban design principles were developed. The main opportunities and constraints presented by the site are as follows:

Opportunities

- Conservation of the sensitive Badgee Lagoon and adjacent wetland areas
- Provision of increased recreation opportunities for Sussex Inlet
- Provision of a range of additional dwellings adjacent to the existing urban area of Sussex Inlet
- Provision of flood free road access from the existing residential area to the north of Badgee Lagoon through to Sussex Inlet
- Provision of additional tourist facilities in the area
- Dedication of foreshore land to St Georges basin
- Provision of additional open space areas
- Provision of a golf course to provide a bush fire buffer to the town of Sussex Inlet

Constraints

- Sensitivity of the wetland areas
- Existing site flora and fauna
- Bushfire prone areas
- Visual impacts of development

4.2 Concept for the Site

As an initial step in the process of determining the appropriate future development of the Sussex Inlet site, an out-

line concept plan has been prepared. This gives an indication of the possible development of the site and serves as a basis for determining the process and Environmental Assessment Requirements for the site.

The development concept included in the outline concept plan has been developed on the basis of the environmental studies which have already been completed for the site and the current planning policies which apply to the site in relation to bushfire protection and conservation of wetlands and flora and fauna. These matters have all been taken into consideration in the development of the plan and the plan has been based on conservation principles. The major consideration has been that the areas on the site which are of high conservation significance should be retained and dedicated to the Council or to the NSW State Government to ensure their preservation. It is considered that these areas are a significant resource for the area and will provide an educational and recreation facility for the population of Sussex Inlet as well as providing a natural context for the new residential development areas. It is also considered that the careful planning of the area could also provide a tourist facility for Sussex Inlet.

The outline plan provides for the following land uses:

- Conservation/open space
- Residential
- Seniors Housing
- Retail
- Golf Course
- Recreation Facility and Clubhouse
- Tourist
- Medium Density Residential

4.3 Conservation Areas and Principles Adopted

The major determinant of the future development pattern for this area has been the identification of the areas on the site which should be conserved because of the significance of the existing features of the land. These areas were determined on the basis of the studies which have been completed to date in the area. The boundaries of the areas may change as the studies are updated in future studies. The major areas identified are the wetland area around Badgee Lagoon and the area zoned 7(b) Environment Protection in the northern section of the site. These areas include the entire SEPP 14 wetland area and a substantial area around the wetland. This will ensure the continuing healthy functioning of the wetland area. It is suggested that the wetland area could come to be an educational and tourist resource in the Sussex Inlet area as well as providing a visually significant area. The new road proposed into the residential area will be developed for most of its length on one side only allowing views of the wetland area for those travelling to the northern residential areas.

4.4 Residential/Golf Course

The existing 9 hole golf course has been used as the basis for the development of a new 18 hole golf course for the Sussex Inlet area. The design and location of the golf course will be used to provide a buffer between the residential areas and the areas which will remain as bush thus providing protection from the possibility of future bush fires. The course will provide adequate distance between the residential and the bush areas to fulfil the requirements relating to the planning for bushfires.

The golf course will provide an up to date recreation facility for the population of Sussex Inlet and will add considerably to the attraction of the area as a destination for tourists. It will also provide a setting for the future residential development on the fringe of the course.

It is intended that there will be significant water features provided within the golf course area both for visual and conservation purposes.

Further, the water from the sewerage treatment plant which currently goes into the sand dunes will be able to be used to irrigate the golf course.

The residential area will stretch around the golf course providing as many blocks as possible with an outlook to the golf course. This will provide a very attractive residential environment for the future residents of the area and will provide a unique environment for Sussex Inlet.

4.5 Recreation Facility

It is proposed that a new clubhouse be built for the golf course close to the new road adjacent to the conservation area. It is also considered possible that the opportunity could be taken in this area to provide additionally, a major new recreation and tourist facility for Sussex Inlet. It may also be possible to include a small hotel on this site. Recreation facilities suggested for the area could include a swimming pool, gymnasium and sports centre on the site. There would also be car parking provided for the visitors to the clubhouse or the recreation facilities.

4.6 Medium Density Residential

There are two areas of land between the existing Sussex Inlet Road and the proposed conservation area which could be developed for a higher density form of development including some apartments and town houses and some seniors housing. These areas would have a wonderful outlook over the conservation area and the wetland and could, if appropriately designed, provide a very attractive residential area.

4.7 Open Space

There is currently a large open space area provided off Suncrest Avenue. This area has been dedicated to the Council and will probably be used for formal recreation purposes. There will also be areas provided within the residential areas as required when the detailed plans are

developed for these areas. There is also a substantial area around St Georges Basin which could be dedicated for open space/conservation purposes.

4.8 Tourist Facility

It is proposed to develop a tourist facility at the northern end of the site adjacent to Jew Fish Bay. This will also include part of the golf course and will comprise a hotel or other tourist accommodation and associated facilities. The land along the St Georges basin foreshore area will be made available as open space to the community.

4.9 Access

Access to the area will be via a new road from the existing Sussex Inlet road to join to Suncrest Avenue at an existing intersection. New roads will lead off this into the new residential areas. The new road will also provide an edge to the conservation area and enable the area to be visible to the public. The road will also provide direct access to the golf club and recreation facility and car parking area.

The new road to the main road will also provide flood free access to the area.

4.10 Staging

It is proposed that the development of the site will be staged and will proceed in the form of project applications prepared to implement the concept plan proposals. The concept plan will deal with the major environmental issues relating to the site and the future servicing of the overall site. The first stage will include the extension of the golf course to 18 holes and the dedication of the conservation areas. It is intended that the medium density development and land adjacent to the existing residential development at Sussex Inlet will also take place in Stage 1.

5 DEVELOPMENT ISSUES

5.1 Background

There have been two Local Environmental Studies carried out in the Badgee Lagoon area in 1988 and in 1994. These included studies of the hydrology, vegetation, bushfire hazard, fauna, flooding and tidal hydraulics and identified areas on the site where development could take place. Because of the time since the studies were completed it will be necessary to repeat them as part of the development of this concept plan. However, they have provided information for the identification of the major planning issues in relation to the site and the preparation of the preliminary plan for the site.

5.2 Site Zoning

The site zoning would permit residential development on parts of the site but some of these parts are the most environmentally sensitive areas of the site. The area around Badgee Lagoon is currently zoned for residential purposes, however, no development should take place in this area because of the importance of the wetland and the surrounding vegetation. The current zoning of the remainder of the site would not permit urban development and

as a result the zoning will need to be altered to enable development of the site.

5.3 Wetlands

Badgee Lagoon Wetland

Badgee Lagoon and its adjacent wetland were previously much more extensive covering most of the area currently occupied by the Riviera Keys Canal Estate. The wetland therefore represents the remaining area of a major wetland site on the New South Wales south coast both in terms of area and habitat type. However, it still remains a large wetland system with an unbroken transition through a full range of habitat types and salinity gradients including open water lagoon, mangroves and salt marsh. It provides significant habitat for many species of fauna and its value lies in providing a number of distinctive habitats that support important local populations of certain species and may function as a refuge from periodic fires. It is also of value as a fish nursery.

St Georges Basin Wetland

This wetland comprises mangroves and salt marsh and forms part of the complex wetland mosaic in the area. It provides a role in filtering run off from the catchments to St Georges Basin

5.4 Flooding

St Georges Basin has a water surface area of 50 km² and stores large volumes of run off from its contributing creeks. Consequently peak flood levels and discharges in Sussex Inlet are attenuated by St Georges Basin. The lagoon and adjoining wetlands provide a flood storage area for backwater flooding from Sussex Inlet, however, the flood line extends outside the wetland boundary in certain areas.

5.5 Flora and Fauna

The wetland areas on the site have high ecological value and provide habitat for many species. Badgee Lagoon Wetland is mainly *melaleuca ericifolia* shrubland with scattered *M. linariifolia*. Within the wetland itself there is a range of vegetation and weeds are common in the area. Fauna in the wetland is unexceptional with common and abundant species. Birds are the most conspicuous component of the fauna and species include cormorants, Black Swan, Yellow tailed Black Cockatoo, Musk Lorikeet, Crimson Rosella, Grey Fantail, thornbills, White throated Treecreeper, Honeyeaters, Red browed firetail and Pied Currawong. Waterbirds are conspicuous in the shallow waters of St Georges Basin.

Vegetation in other areas of the site comprises tall forest, blackbutt and turpentine. Large areas of the site have been cleared and it currently supports a nine hole golf course. The eastern Grey Kangaroo and the Red necked wallaby are concentrated in areas adjacent to the mowed grass especially around the golf course. Small skinks are common in leaf litter.

5.6 Marine Ecology

Badgee Lagoon is used by fish and prawns as a nursery habitat. The presence of fresh/brackish water species, such as gudgeons, in the lagoon indicates that freshwater bodies draining into the lagoon probably contain populations of these and other freshwater species. Badgee Lagoon is significant as an unusual small shallow tidal lagoon bordered by a wetland. It provides a suitable nursery and feeding area for many species of fish.

5.7 Geology and Contamination

Badgee Lagoon was formed as a result of sea level changes over the Quaternary Period over the last million years. The most recent sea level change was 15,000 years ago following the last ice age. Since that time the basin has been infilling both from erosion of the surrounding lands and by sediment in feed from the coast. There are three major sediment levels in the lagoon and up to 5m of clayey soils occupy the bed of the wetland. The remainder of the site is clay and sand. Acid sulphate soil potential in the area is low.

5.8 Bushfire Hazard

The area is in the medium to high fire hazard and as a result stringent bushfire planning will need to take place. The area has a history of fires, the most recent was in 2003 when the entire site was burnt. The development of the site and the provision of the 18 hole golf course will have a positive impact and will provide a buffer to the existing Sussex Inlet township in terms of bushfire protection.

5.9 Access, Traffic and Parking

There is currently only one access road into Sussex Inlet, Sussex Inlet Road, from the Princes Highway. It is proposed, as part of the proposed development, that a new access road will be constructed into and through the site from the current main access road into Sussex Inlet. This will provide an alternative flood free access to the village through the development. The road will connect to Suncrest Avenue.

5.10 Heritage and Conservation

Limited studies have been carried out in relation to Aboriginal sites in the area. Sites have been identified in the area close to the foreshore of Jewfish Bay. It is likely that there might be other sites in the area and the area will need to be surveyed to establish this.

5.11 Visual Issues

Any development of this area is unlikely to have a major visual impact as the site is mainly not visible from the public areas around the site. There are some possible future development areas where the site is adjacent to the road and special care will need to be taken with the design of the development in these areas. Views and vistas through the area and from the lagoon area and the waterfront will be assessed and guidelines established for future development.

5.12 Provision of Utilities

Utilities in the area will need to be amplified for the development proposal and the provision of a sewerage system for the site will augment the existing system and improve the current situation. Water saving urban design will be implemented in the proposed development and effluent will be reused to irrigate the golf course.

5.13 Social and Economic Issues

Sussex Inlet is currently adversely affected because of the lack of available land for housing in the area. Studies for the production of the Sussex Inlet Settlement Strategy have taken a long time to complete and as a result there have been few land releases in the area over the past few years.

Sussex Inlet has a thriving retail area and there are extensive community facilities in the town. There is a primary school in Sussex Inlet and the nearest High schools are at Vincentia or Bomaderry.

An economic study has been prepared for the development proposal and a copy of this is included in Appendix 2 to this report.

6 SUMMARY AND CONCLUSIONS

Lucas Property Group Pty Ltd and A&C Finkernagel propose to develop a golf course residential and tourist development at Sussex Inlet and provide for the conservation of significant wetland and other areas on the site.

The concept has been described in this report and the key issues that will have to be addressed in the planning and design of the proposed development are as follows:

- Wetland conservation
- Flooding and Hydraulics
- Planning controls for the site
- Site conditions
- Social and economic impact
- Building design and visual impact
- Landscape
- Flora and fauna
- Bushfire hazard
- Coastal protection
- Stormwater management
- Utility services
- Water sensitive urban design
- Access, traffic and parking

It is considered that the information provided in this report is sufficient to enable the Director General to establish the level and scope of the environmental assessment required for the Part 3A process.