NAN HAI PU TUO TEMPLE

Hames Sharley

Development Report

Location: Cactus Canyon Road, Sellicks Beach

Prepared for: Nan Hai Pu Tuo Temple of Australia Inc

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1 Executive Summary

The Nan Hai Pu Tuo Temple of Australia Inc seeks to pursue its mission and objectives under the Buddhist doctrine by building a Buddhist temple and associated buildings and facilities on rural land located 70 kilometres south of Adelaide near Sellicks Beach. The steeply sloping land is situated between South Road and the coast, and is separated from the Sellicks Beach township by a deep ravine known as Cactus Canyon or locally as Snake Gully.

The temple will be of major significance in terms of the hierarchy of Buddhist temples globally and more particularly in the South East Asian region. It will be a key tourist, cultural and educational destination, which will draw to it many local, interstate and international visitors.

The location and siting of the temple as well as its internal layout is closely linked to Feng Shui principles. A Buddhist temple of this prominence must be located so as to align correctly between the mountains and the sea.

The location and siting of the temple is detailed within Figure 1 and 2.

The property is currently used for primary production purposes (undertaken by a neighbouring farmer), recreational purposes (the property provides access to coastal hang gliding) and for spiritual use (four Buddhist nuns currently live in a dwelling on the property which is visited occasionally by Buddhists for counselling and retreat purposes).

The overall development will comprise of:

- Buddhist temple buildings comprising:
  - front shrine;
  - bell tower;
  - main shrine 18 metres high;
  - side shrine;
  - rear shrine;
  - drum tower;
  - pagoda;
- accommodation;
- a Buddha statue;
- Chinese public gardens;
- memorial gardens including a water feature;
- ancillary buildings;
- car parking; and
- on-site vegetable garden and water harvesting for use by the religious order staff and visitors.

The temple will be used for:

- daily visitation;
- workshops;
- special events on religious days;
- conferences;
- education; and
- counselling.

It is anticipated that the temple, when fully functional, will see approximately 300 people visiting each day, with up to 1,000 people expected on special event days (approximately eight during the year).

The visual impact of the development will be minimised by utilising the prevailing topography of the subject land. The siting and location of individual buildings upon the land has been optimised to ensure minimal visual intrusion on the skyline and to minimise the potential visual effect to Main South Road and the Sellicks Beach township. The limited frontage of the site to South Road, coupled with the established and proposed vegetation, will further assist in mitigating any significant visual effect.

As the Buddhist temple will be a site of international significance, and its location is particularly special in terms of its devotion to Feng Shui principles, it is expected to generate a high level of visitor interest. The economic benefits will be derived largely from the tourism sector, which currently is a significant generator of employment and income to South Australia.

The social and cultural elements of this proposal relate to its function as a place of worship, reflection, meditation and learning. This temple will be a special place for many people to visit and enjoy. Locally, the Fleurieu Peninsula will experience an increased number of tourists visiting and enjoying the local environs.

The environmental impacts are positive, as the Buddhist monks and nuns who reside in the temple will slowly rehabilitate the property, in turn leading to improved pasture, increased vegetation, erosion management and control. Stormwater will be captured and reused for food that is grown on the property. Although mains water is available, the monks and nuns will use captured rainwater for domestic use and irrigation purposes.

2 Introduction

2.1 Background and Objectives of the Proposed Development

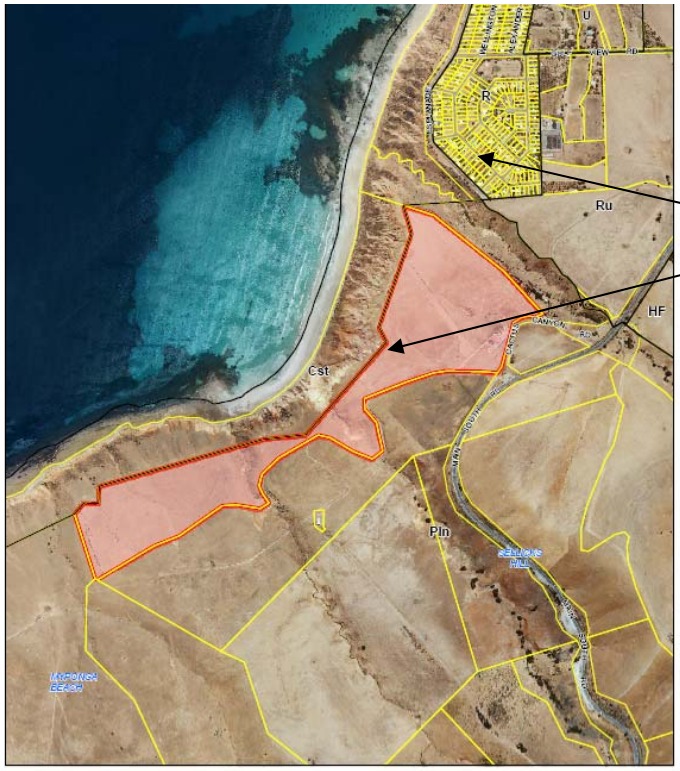
The proposal is to construct buildings for the Nan Hai Pu Tuo temple, including accommodation and gardens. The proposal will comprise the following:

- Buddhist temple buildings;
- pagoda (a tiered tower with multiple eaves);
- accommodation – for religious order staff and retirement accommodation;
- a Buddha statue;
- Chinese public gardens;
- memorial gardens;
- ancillary buildings; and
- car parking.

The subject site is contained within Certificate of Title Volume 5916 Folio 573 and is more particularly described as Allotment 201 in Filed Plan 44979 in the Area named Sellicks Hill in the Hundred of Myponga. The site consists of approximately 55.5 hectares of land, situated between the main highway (South Road) and the coastal reserve. Cactus Canyon, located to the direct north of the site acts as the interface between the City of Onkaparinga and the District Council of Yankalilla, within which the subject land is entirely held.

The property is situated approximately 70 kilometres south of Adelaide. The primary objective of the proposed development is to provide a destination for Buddhist worship and reflection by providing opportunities for daily visitation, workshops, special events and ceremonies.

The location and layout of the site is illustrated on the following page and form Figure 1+2 within Appendix A.



Proposed Nan Hai Pu Tuo Temple, Sellicks Hill – Proposed Location

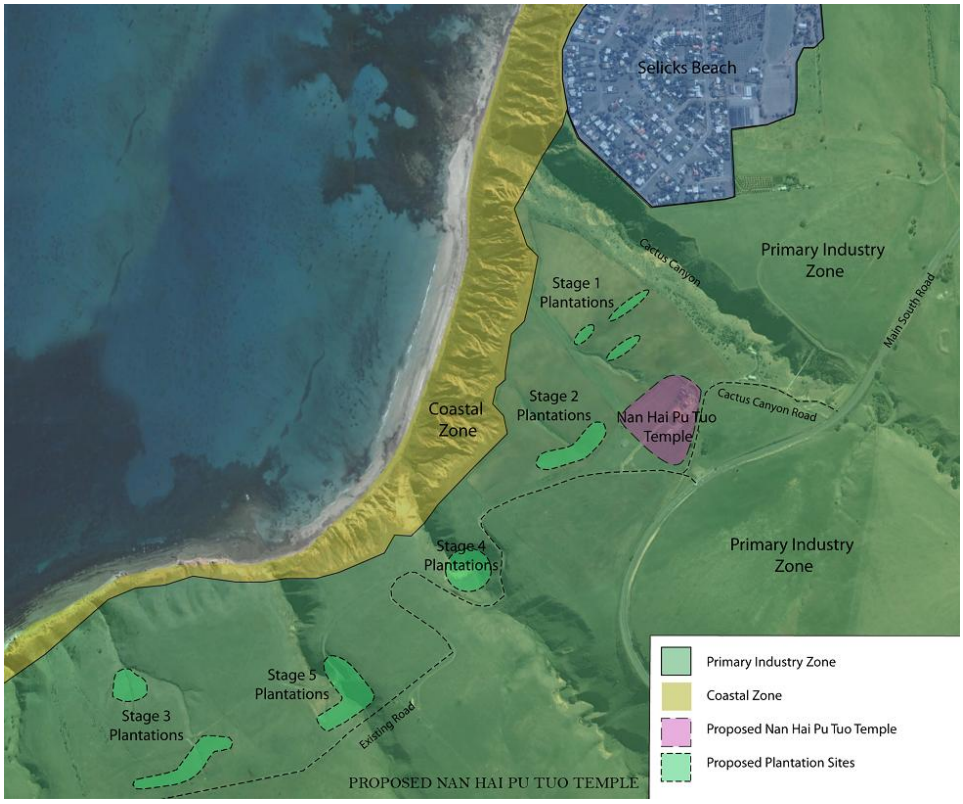
Proposed Location
Cadastre
Zoning

© Planning SA, March 2009.
Cadastre supplied by DEH and is current to 30 June 2008.
Aerial image supplied by DEH (flown 2006).

N

0 100 200 300 400 500 metres

Government of South Australia
Department of Planning and Local Government
SPAR ID: 3021



2.2 Details of the Proponent

The proponent is the Nan Hai Pu Tuo Temple of Australia Inc. The Nan Hai Pu Tuo Temple of Australia Inc is a charitable entity registered in South Australia to enable it to pursue its mission and objectives under the Buddhist doctrine.

2.3 Staging and Timing of the Proposal

The development is proposed in stages as follows:

2.3.1 Stage 1

12 months after issue of consent:

- rear shrine to serve as temporary main shrine with a garden and Buddha statue;
- four people accommodated in shrine with visitor accommodation for a maximum of ten people.

2.3.2 Stage 2

2-3 years after issue of consent:

- main central shrine constructed;
- eight people accommodated in temple with visitor accommodation as before.

2.3.3 Stage 3

3-4 years after issue of consent:

- side shrines, drum tower, front shrine gateway and bell tower constructed.

2.3.4 Stage 4

4-5 years after issue of consent:

- elderly village, pagoda and memorial garden constructed.

2.4 Relevant Legislative Requirements and Assessment Process

In accordance with Section 46 of the *Development Act 1993*, the Minister for Urban Development and Planning can declare a proposal to be a 'Major Development' if it is believed that such a declaration is appropriate or necessary for the proper assessment of the subject development. The declaration also can be made where the proposal is considered to be of major economic, social or environmental importance to the State.

This proposal was declared a "Major Development' by the Minister on 18 December, 2008.

The development application was referred to the independent statutory authority, being the Development Assessment Commission (DAC), who determined that the proponent was to prepare a Development Report (DR), which is the least complex level of assessment for Major Developments.

2.5 Purpose and Description of the Development Report Process

This DR describes the proposed development, what the impacts will be and how the proponent plans to manage these impacts.

The information provided in this DR responds directly to the Guidelines document that has been prepared by DAC and has been published on the DAC's web site www.dac.sa.gov.au, and also the Department of Planning and Local Government website www.planning.sa.gov.au. This DR addresses all of the information required as detailed in the Guidelines document.

The DR will be assessed for Guidelines compliance by the Department of Planning and Local Government staff and released by the Minister for Urban Development and Planning for public consultation.

The Development Report will undergo a public notification period, the duration of such to be determined by the Minister. After such time, public submissions and Agency comments will be forwarded to the proponent for their response. This will be in the form of a Response Document.

2.5.1 Assessment

The Minister (with the assistance of the Department of Planning and Local Government) will undertake an assessment of the documentation comprising the proposal, and will detail that assessment within an Assessment Report.

The Governor will make a decision on the final proposal (on the advice of the Minister and Cabinet) having regard to the Assessment Report and other documentation. This will be notified in the Government Gazette and on the Department of Planning and Local Government website, and notified to appropriate local media.

3 The Main Issues

3.1 Objectives

The objectives of the proposed development are to provide a place for Buddhist worship and reflection through daily visitation, workshops, education, special events and ceremonies.

3.2 Summary of Expected Regional, State or National Costs

The potential costs will be:

- increased regional vehicular traffic on Main South Road to the Fleurieu Peninsula - potentially carrying an additional 1000 people per day on a special events day (approximately 6 per year) and 300 people on typical days;
- the potential visual effect of the proposal, not being typically associated with views of the coastline; and
- the slight departure from the Primary Production Zone's intent within the Yankalilla (DC) Development Plan.

3.3 Summary of Environmental, Economic and Social Benefits

3.3.1 Benefits

The development:

- will be a significant tourist attraction in the region and will bring associated direct and indirect benefits locally and regionally;
- will result in the progressive rehabilitation of the land which is currently eroded and fragile, as the Buddhist approach is to tread gently on the earth and to be sustainable in all practices;
- will increase awareness about the Buddhist faith (including school children) through educational programs, including meditation and yoga practices, that will be run specifically for visitors and schools. These programs emphasise tolerance, respect for society, respect for elders, faith and harmony, which are positive messages that are consistent with the educational syllabus in SA (for example school children currently celebrate harmony day which explores these principles);
- will provide an opportunity for immigrants to partake in a not for profit counselling program whilst also providing a refuge for victims of domestic violence;
- will increase the number and diversity of visitors to the region. It is anticipated that there will be a significant number of devotees to the region, visiting from a variety of cultural backgrounds; and

- will display high quality, cultural design principles, as the temple and associated buildings are influenced by Feng Shui designs. The built form design will be iconic, peaceful and comprise of beautiful structures that will be associated with peace, harmony and tolerance.

3.3.2 Impact if the Development does not Proceed

Should the development not proceed:

- should the development not proceed, South Australia will miss out on a wonderful opportunity to learn from, explore and value the messages of the Buddhist faith;
- the State will lose an opportunity to develop an iconic and beautiful structure located on a site chosen from a range of sites specifically because of the relationship between the sea and the coast. The proposal is also influenced by thousands of years of Buddhist architectural styles and Feng Shui principles;
- the State will forfeit the increased economic revenue associated with the thousands of visitors to the site and local region;
- the land will likely remain in an eroded state and the planned rehabilitation around the environmentally fragile gullies will not take place.

This is a sensitively designed, culturally rich, iconic development that meets objectives not related to profit but related entirely to living and teaching the Buddhist faith. The development will be managed by nuns and monks who practice sustainable approaches that tread gently on the earth. The key impacts relating to traffic, water quality and the perceived visual impact have been addressed through the sensitive built form design, stormwater capture and reuse initiatives and traffic management techniques. These are all detailed further within the Development Report.

4 Description of the Proposal

4.1 Spiritual and Cultural Intent

The proposed temple is part of the Buddhist initiative to establish a series of temples across Australia. The temples aim to encourage and foster the growth of the faith, which is achieved through temple visitation, workshops, an International Buddhism Conference which will be hosted at the temple twice a year, calendar day events, special day events and special focus Buddhist camps. Public visitors to the temple are encouraged to attend. Devotees visit the temple according to the Chinese calendar specific days and weekends (normal worship days). Importantly, it should be noted that unlike traditional church services, Buddhists do not attend all at the one time but spread their attendance over a whole day.

The Buddhist Master (Si Fu) is Venerable Miao Jing, and is the Abbot of the Nan Hai Pu Tuo Temple which belongs to the Mahayana School of Teaching. Si Fu is a very senior member of the worldwide monastery and has been charged with the task of establishing temples in Australia. This temple will be of major significance in the hierarchy of Buddhist temples and will have particular status in the south-east Asian region.

The name Nan Hai Pu Tuo reflects the name of the Pu Tuo Mountain, which is one of the most famous mountains in China and the site of a famous Guan Yin Temple, whose name is derived from the Goddess of Mercy.

4.2 Criteria for Selecting the Site

The intended worldwide significance of this temple has been fundamental in determining the location, siting and configuration of the temple. To this end, the principles and practice of Feng Shui have been a critical influencing factor in the design, as this is paramount for any esteemed Buddhist temple.

Feng Shui refers to wind and water, with its principles being based on the interaction of these elements as they shape the earth's landscapes and influence man's relationship with the built environment. The practice advocates for living as one with the environment and its 'chi' and to avoid inauspicious or negative 'chi' so as to create a harmonious environment which fosters peace, prosperity and success.

The subject site has been selected by virtue of it satisfying a number of critical locational and siting criteria.

This site is one of only two which were considered to be appropriate from a fundamental spiritual perspective. The organisation has been searching for a site for some time and this site's location, orientation, topography and size makes it ideal, and provides the ability to embrace key Feng Shui principles, thus resulting in its spiritual significance being heightened.

The site is considered to provide the correct relationship between the mountains, as a backdrop to the temple, and the sea. This, importantly for the Buddhist faith, engenders a feeling of permanence about the site, and it is noted that all major Buddhist temples incorporate this fundamental relationship.

4.3 Site Details

4.3.1 Location

The subject site is contained within Certificate of Title Volume 5916 Folio 573 and is more particularly described as Allotment 201 in Filed Plan 44979 in the Area named Sellicks Hill in the Hundred of Myponga. The site consists of approximately 55.5 hectares of land, situated between the main highway (South Road) and the coastal reserve. Cactus Canyon, located to the direct north of the site acts as the interface between the City of Onkaparinga and the District Council of Yankalilla, where the subject land is entirely held. The site itself is illustrated in Figure 2.

The property is situated 70 kilometres south of Adelaide. Access to the property is provided from South Road via Cactus Canyon Road. The township of Sellicks Beach is located immediately to the north of the subject site and is separated by a deep ravine known as Cactus Canyon or locally as Snake Gully.

4.3.2 Current Use

The property is currently used for primary production, recreational purposes (hang gliding) whilst also providing permanent accommodation for nuns and occasionally other members of the faith. The ongoing management of the property is progressively establishing its self sufficiency. The nuns grow their own vegetables (they are vegetarian), have planted extensive olive trees which they harvest, have an operational well, and 6 rainwater tanks which harvest approximately 91,000 Litres of water.

4.3.3 Geology

The land is located on the Fleurieu Peninsula immediately to the south of Sellicks Beach and Cactus Canyon. It is within an area which covers a range of geological units including 550 million Cambrian Normanville Group Fork Tree Limestone and Heatherdale Shale. The Fork Tree Limestone is a fine grained massive archeocyatha-rich (fossil) blue grey limestone. It is quarried for road metal in this region. The Heatherdale Shale is a calcareous (upper part) fine-grained siltstone that contains rare Trilobite fossil fragments. Overlying these units are more recent unconsolidated Tertiary and Quaternary sediments.

The site is situated on an alluvial apron which bounds the western edge of the Mount Lofty Ranges locally identified as the Sellicks Hill Range and defined by the Willunga Fault Scarp. The apron overlies bedrock comprising Cambrian and Pre-Cambrian metasediments dominated by limestones, shales, sandstones and

siltstones. The apron itself was deposited in late Pleistone times during a glacial period of low sea level which together with the uplift of the Willunga Scarp favoured rapid erosion of the uplands to the east. The colder climate and periglacial activity at this time produced vast quantities of frost shattered rubble, which was washed down along with mud and clay by storms and heavy rains to form the alluvial fans.

Today the apron is heavily gullied with erosion exacerbated by the large scale land clearing and land management practices of the pastoral use of the land.

The Willunga Fault Scarp, a product of a major half-graben scissor fault, cross cuts the area in which the site is located. This fault is currently inactive but it is possible that some movement may occur as indicated by slight earthquake activity in the Adelaide region.

4.3.4 Land System

The Southern Hills Soil Conservation Board District Plan notes that this site is within Zone 2 'Hills and High Rainfall' which is described as covering most of the Fleurieu Peninsula and being characterised by a hilly terrain formed from hard rock processes, tertiary sediments or glaciers. Broad valleys are found in some places and small isolated coastal plains occur at Cape Jervis and Normanville. The land is predominantly used for grazing purposes.

The site itself is traversed by four major steep sided gullies along with a number of smaller drainage lines all of which are ephemeral in nature.

4.3.5 Vegetation

Prior to land clearance for horticultural pursuits, the land would have contained native vegetation comprising types of open forest and woodland of messmate (Eucalyptus obliqua) and blue gum (E. leucoxylon) which originally covered most of the region. (Laut et al 1977:44 cited in Wood 1997).

Today, little or no native vegetation remains on land, as it was principally used for pastoral purposes. The dominant vegetation type across the site is the weed horehound (Marrubium vulgare).

4.4 Development Components

4.4.1 Use of the Site

The proposed development comprises two discrete yet interrelated components - the temple and associated elements and the Chinese memorial garden. The temple will also act as a transitional destination for commuters to the southern Fleurieu region. Grazing of the property has ceased and a land management plan will be progressively implemented to restore the land. Particular action will be taken to address the degradation which has progressively taken place as a consequence of historic grazing, overstocking and poor management practices.

The continued use of the southern end of the site for hang gliding may continue providing it has no effect on the proposal.

4.4.2 Compatibility with Neighbouring Uses

Neighbouring land uses comprise of typically low intensity grazing to the south and north, with the coastal reserve located to the north-west. South Road defines the site to the east, however beyond this exists further low intensity grazing land influenced heavily by the Sellicks Hill Ranges. The subject site currently enables the neighbouring farmer to utilise the land free of charge and will continue to do so providing the environmental impact is minimal and land rehabilitation can take place. The Buddhist temple is not inconsistent with the open rural character, given the very low site coverage associated with the development. The use will not be a large noise generator; it will result in significant environmental management improvement and will be used for spiritual, cultural and educational purposes. It is expected that the visitor's behaviour will be in keeping with the temple's tranquillity. Accordingly, it is considered that the proposal will not significantly erode the predominant primary production character that prevails within the locality.

4.4.3 Site Coverage

The proposed development will utilise approximately 10% of the total site area, with building site coverage in the order of 0.25 percent. The remainder of the site will be retained as part of the rural landscape and be managed as an integral part of the property.

4.4.4 Siting

The siting and design of the development components, both at the macro scale across the site and at the detailed level in terms of the interrelationships between different elements, has been undertaken in strict accordance with the principles of Feng Shui. These principles impose limitations on orientation, siting, interrelationships, view corridors and levels of which development, particularly development of such an important spiritual facility, must adhere. The siting and layout is shown in Figure 2.

4.4.5 Development Components

The development can be described in two parts, the first being the main temple site (and associated shrine, statue, pagoda and walkway) situated at the north-eastern end of the property and the Chinese memorial park (and associated pagodas) situated upon the north-western portion of the site.

All components reflect Buddhist architecture which traditionally were designed around dimensions and proportions dictated by sacred mathematical formulae. Following the spread of Buddhism into many countries, Buddhist architecture now presents as a variety of architectural forms. The components of the proposal are discussed below:

4.5 Main Temple

4.5.1 Front Shrine

The front shrine acts as the main pedestrian gateway to the temple and will highlight the first stage of the site, or the beginning of the journey. It will be approximately nine metres in height.

4.5.2 Main Shrine

The main shrine will provide the central focus of the development and will be the principal attraction to visitors of the site. It will be approximately 18 metres high. The temple will likely reflect traditional architectural plan - a square inner space, a surrounding route separated by lines of columns, with a conical or rectangular sloping roof, behind a porch or entrance area, and framed by freestanding columns or a colonnade. A front elevation of its design is shown in Figure 5. The external profile of the main temple has a characteristic mountain shape.

4.5.3 Side and Rear Shrines

The smaller shrines located to the side of the main shrine will cater for minor ceremonies, with the shrine positioned at the rear being principally for the use of the monks and masters. The side shrines will also be utilised for education and instruction facilities, whilst providing opportunities for the purchase of essential incense sticks for offering at the temple, souvenirs and light refreshments. These shrines will measure approximately eleven metres in height.

4.5.4 Pagoda

The pagoda is a traditional and critical element for a Buddhist temple and is the centre piece of the development. It is significant for its transcendental associations. Its relationship to the temple is vital, with strict Feng Shui principles determining its exact location. The pagoda is a tower that symbolises the elements of the universe - earth, water, fire, air and ether, and most importantly, consciousness, which is the ultimate reality. People are able to climb the pagoda for heightened views of the site and environs. The pagoda is made of circular, eight sided or rectangular layers, and will be the tallest element in the temple measuring approximately 35 metres in height.

4.5.5 Statue

The large Budda statue is the spiritual landmark of the overall development and will be the first feature erected on site. The proposed statue is to be made of Bronze which will weather over time to a soft bronze patina. It will be approximately 18 metres high.

4.5.6 Accommodation

Accommodation will be provided in the first instance for the four resident nuns and monks who live at the Temple.

Ultimately the complex will also provide accommodation for a maximum of 20 senior members of the faith who wish to retire to the temple environs.

Occasional devotees who wish to stay on site for retreat purposes will be accommodated in either the units for the staff or in the elderly village, depending on availability of accommodation at the time.

Accommodation will not be provided for general tourists visiting the temple or for those attending to participate in educational or instruction programs. The detailed commentary pertaining to the accommodation is contained within Section 4.8.

4.5.7 Chinese Garden and Memorial Park

The Chinese garden and memorial park will be established as contemplative areas in accordance with traditional design principles. The garden has been located such that it accords with the traditional design principles that dictate the siting and layout of these facilities. A private roadway and walkway/path will link the gardens with the temple.

The site area of the memorial park will be approximately 3,970m² (63m x 63 m) and consist of paved footpath and landscaping areas connected by a grid pattern that links nine pagodas located on the corners of each square "grid". Each pagoda will be approximately 3.5m in height. The layout is illustrated in Figure 10.

4.6 Elevations of the Temple and Associated Buildings

Elevations are shown in the following figures:

- Figure 6 Side Elevation;
- Figure 7 North East Elevation;
- Figure 8 Longitudinal Section; and
- Figure 9 Sections.

4.7 Site Plans, Indicative Floor Plans and Landscaping

Site plans, indicative floor plans and landscaping proposals are detailed in the following figures:

- Figure 3 Temple Site;
- Figure 4 Temple Layout; and
- Figure 10 Memorial Park and Accommodation Layout.

4.8 Accommodation

4.8.1 Accommodation for the Resident Nuns and Monks

There will be four very basic accommodation units provided on site for the nuns who permanently live on site and manage the temple. These nuns already live on site in simple accommodation.

The dwellings will be located adjacent to the pagoda as shown in Figure 3. They will consist of men's quarters and women's quarters.

There will be two distinct accommodation types, as depicted within Figure 10, specifically:

- Type A – comprising of two bedrooms and incorporating a kitchen, bathroom, lounge and dining area within approximately 81m² of floor space; and
- Type B – a single bedroom unit containing a kitchen, bathroom, lounge and dining area within approximately 81m² of floor space.

4.8.2 Accommodation for Retired Monks and Nuns

Ultimately the complex will provide accommodation for a maximum of 20 persons wishing to retire to the temple environs. This facility will provide for senior members of the faith who wish to spend their latter years in the immediate environs of a location which they value as a spiritual place. This is shown as an Elderly Village on Figure 3.

4.8.3 Accommodation for Devotees

Accommodation is also provided for devotees who wish to stay at the temple for retreat purposes. It is anticipated that there will be approximately 20 - 30 devotees who may wish to stay on site for this reason over a year. Devotees will stay in the permanent accommodation for the staff or in the elderly village depending on availability of dwellings at the time.

4.9 Educational and Religious Activities

The temple has a strong community focus and will provide educational activities for school children who may wish to learn more about the Buddhist faith. The timing of these activities is likely to be based on a needs basis depending upon school class requirements and staff availability.

In keeping with the community focus, the temple will also provide counselling services to people seeking guidance and support in their personal lives.

Devotees may visit the site at any time during the temple opening hours for religious activities.

5 Infrastructure Requirements

5.1 Recycling and Waste Management Arrangements

The domestic waste will be sorted into recyclable and waste materials by the religious order staff.

The waste will be collected in large waste bins that are located discretely and safely away from the public, and in accordance with the relevant waste legislation and council requirements.

The waste bins which are provided by a waste contractor will be removed on a regular basis (the frequency will be determined once the temple is operational) by the appointed contractor to the Myponga Waste Recycling Facility.

The Buddhist approach is to tread gently on the earth, and to minimise and recycle waste wherever possible, so recycling will form an integral part of the waste management principles once the temple is operational.

5.2 Existing Public Utility Services

5.2.1 Water

The development can be supplied with water from the Myponga Trunk Main. The Main is parallel to the south eastern boundary of the site and is situated within a range of 100 to 200 metres. Connection may be provided through an existing or new tapping depending on the required location of the connection and the required rate of supply.

5.2.2 Power

Electricity supply to the site is available from an 11 kV overhead line intersecting the development sites. Connection to the allotment is obtainable via a transformer and suitable overhead or underground line.

5.2.3 Gas

Reticulated gas cannot be supplied to the site. The gas supply pipeline running from north to south terminates at Aldinga approximately 5km north from the development site.

LPG gas is available and can be supplied to the site by a number of commercial suppliers.

A suitable LPG gas storage tank and distribution system would need to be installed on site for this energy source to be effective.

5.2.4 Sewerage

There is no reticulated sewerage system in the vicinity of the site. The neighbouring residential area - Sellicks Beach, has septic tanks with individual soakage trenches. Development of any common sewerage system is not planned.

The township of Aldinga which is located north of Sellicks Beach will have a common sewerage system and treatment plant constructed this year. Sellicks Beach which is the town closest to the proposed development, however, is not included in this system.

Accordingly, an appropriate on-site sewerage system will be implemented. This is further discussed within Section 5.3.

5.2.5 Telephone

Telephone lines currently run along Main South Road and are provided to the development site.

5.2.6 Stormwater

No constructed stormwater collection or disposal system exists in the vicinity of the site. The existing creek (Cactus Canyon) to the north of the site is subject to significant scour. The management of stormwater is described in Section 6.3.

5.3 Effluent Treatment and Disposal

The model for effluent treatment and disposal is still being considered. The available options are a septic tank system or a domestic wastewater treatment plant, which are both described below. They are based on the assumption that there will be a maximum of 30 residents and up to 1000 visitors on site at any one time, generating expected flows of 6,900 L/day and 17,500 L/day.

5.3.1 Septic Tank System

A septic tank and soakage trench disposal scheme will incorporate a sewerage collection system, appropriately sized concrete septic tank, and appropriately sized soakage trenches.

Alternatively, two septic tank systems could be installed to deal with the variation in flows (i.e. one for the residential dwellings and one for the visitor area). Advantages of septic tanks and soakage trenches are that they are simple, effective and low maintenance systems that are appropriate to handle fluctuation in flows. They are readily available and are convenient for on-land disposal, utilising below ground infrastructure. The main disadvantage for a septic tank system is that the effluent is unavailable for potential re-use or irrigation purposes.

5.3.2 Domestic Wastewater Treatment Plant (WWTP)

Alternatively a WWTP can treat wastewater to either Class A, which is suitable for in-house re-use (i.e. toilet flushing) or Class B/C, which is suitable for irrigation of parks and gardens. Class C is generally biologically treated water. Class B generally has the addition of a disinfection system (i.e. sodium hypochlorite or UV). Class A generally is highly treated water making it suitable for in-house use.

The installation of a domestic wastewater treatment plant would include a sewerage collection system, a WWTP sized for average flows, holding tank, and irrigation system and/or connections to toilets/urinals.

WWTP's are typically designed to operate under constant flows. The flow characteristics anticipated are variable and therefore a holding tank will be required. The holding tank would be located adjacent to the WWTP and would store additional wastewater until normal operating conditions are experienced. Any irrigation system would need to be in the form of drip irrigation or sub-surface irrigation.

The advantages of a WWTP are that they embrace current best practice management techniques for wastewater treatment, irrigation waste supply, and below ground infrastructure. The disadvantages of a WWTP being that they are more expensive compared to that of a septic tank and soakage trench system, and it requires ongoing maintenance and servicing, as it needs to be managed to handle constant flows.

5.3.3 Public Toilets

Design, location and supply of public toilets, including disabled toilets, will be provided in accordance with AS1428.1-2001 and other relevant Building Code of Australia standards.

6 Managing Environmental Impacts

6.1 Land Management Plan

The proponent is committed to avoid, mitigate, manage and/or control any potentially adverse environmental impacts arising from the development. To this end, the proponent proposes to develop and incorporate a land management plan for the ongoing operation of the temple.

The specific issues affecting the subject site include the following matters, which are to be addressed by this management plan:

- control of plant and animal pests;
- control of wastewater and stormwater runoff;
- management of the land to minimise the threat of fire; and
- management of the change in land use, including the cessation of grazing on the property.

Furthermore, issues of community concern have been identified for the subject land. These matters will also be contemplated by the management plan and include:

- erosion control and reclamation of historic gullies; and
- management of the coast, especially in relation to beaches, dunes and cliffs.

Each of these issues will be addressed throughout this Development Report in terms of the objectives and the necessary actions. As stated earlier, these are proposed measures which are to be refined in consultation with the relevant agencies throughout the detailed design phase of the project.

6.1.1 Resources for Implementation

The administration of this plan will necessitate the expenditure of considerable resources to progressively initiate ongoing management programs for the restoration of the land. The temple will be able to utilise professional services where required for specific tasks together with members of the faith who make their labour available to assist in such programs.

6.1.2 Timeframes for Implementation

As the land will not be managed to generate a productive return, as is the case in farming, the implementation of this program will take place progressively as resources allow. Priority focus will be directed to those areas requiring immediate attention, namely the minimisation of fire risk and the initiation of a weed management program.

6.1.3 Monitoring Programmes

Regular monitoring will be undertaken to check on the progressive regeneration of native grasses on the land, with a yearly review being suggested, in association with frequent monitoring of weed eradication initiatives. Time programmes will be confirmed in consultation with appropriate State authorities and agencies.

6.2 Management of Land to Minimise Threat of Fire

6.2.1 Objectives

The objectives are:

- to minimise the risk to property through the threat of fire;
- to minimise fuel loads during fire season;
- to fulfil the landholders requirements in accordance with the *Fire and Emergency Services Act, 2005*; and
- to ensure the cessation of grazing on the property does not increase the level of fire risk.

6.2.2 Actions

The actions will be:

- make regular inspections of general fire hazard conditions particularly during periods of increased fire risk;
- assess fire conditions and initiate reduction of fuel loads, as necessary, in fire sensitive areas prior to fire season;
- undertake regular slashing programmes to reduce fuel loads during fire seasons and high risk periods;
- establish and maintain fire breaks of minimum 30 metres width to adjoining roadsides through mechanical means (regular slashing);
- ensure there is minimal understorey and potential fuel loads within a distance of 20 metres from buildings;
- establish and maintain adequate water supplies on site, and with appropriate pressure levels, for fire fighting purposes; and
- progressively introduce low fire risk grasses to replace pasture species so as to ensure reduced fuel loads. Native grasses tend to have greater vegetable matter close to ground level thereby reducing vulnerability to fire.

6.3 Stormwater Management Plan

The stormwater management encompasses both the construction and operational stages of the development. Its main objective is to control the potential for erosion on site and to minimise the discharge of runoff from the site.

6.3.1 Initial Modelling

Development of the site will result in some increased runoff compared with the current conditions. The only available watercourse for stormwater disposal would be Cactus Canyon Creek running at the northern boundary of the site. This Creek

contributes very high turbidity water during the heavy rains and any additional flow could worsen the conditions in the marine environment. The Environment Protection Authority (EPA) has expressed concerns over disposal of any extra stormwater into this Creek. Therefore, it is proposed to retain and reuse stormwater collected on site. The water from the drainage system will be diverted to a series of retention basins and then used for irrigation of the extensive landscaping and garden areas. It is intended that there will be no discharge to the external watercourses during average years and the basin volumes will be sufficient to store water during the wet period for the use in summer.

It is estimated at this stage that the basin volumes will be approximately 4,700m³ in total. A series of retention basins has been proposed in order to achieve a more sympathetic result in terms of visual impact and to create a series of water bodies which feature as an integral part of the landscaped setting of the temple. This approach, rather than a single retention basin, will overcome the need for major earthworks on site and minimise the interference with the topography of the subject land.

Calculations were carried out assuming the following criteria:

- catchment area - 6.7 ha - temple site;
- runoff factor - 0.35;
- average annual rainfall - 522 mm;
- watering rate 3l/m2/day in dry period and 1l/m2/day in wet period; and
- evaporation and seepage losses included.

Emergency overflow from the basin will be designed to be diverted to a seepage trench and evenly distributed across the site.

6.3.2 Stormwater Management Design Philosophy

The proposed stormwater management system shall be designed with the following broad objectives:

- manage flood risk and maximise flow mitigation benefits;
- control erosion of the site;
- minimise the discharge of runoff from the site to receiving water bodies (i.e. Cactus Canyon Creek);
- maximise potential for stormwater harvesting and reuse;
- achieve optimum pollutant reduction within the constraints of the site;
- create a visually attractive site that enhances the local environment and is safe for public access;
- provide a system that increases environmental awareness in the wider community;
- minimise maintenance requirements as much as practicable;
- these objectives will be achieved through a combination of conventional drainage practices and Water Sensitive Urban Design (WSUD) features.

WSUD is the integration of urban planning and design with the management, protection and conservation of the whole water cycle. WSUD places a strong emphasis on sustainability through the protection of natural systems and water quality, and the reduction of potable water demands. This is in keeping with Buddhist beliefs and underpins the vision for the Nan Hai Pu Tuo Temple.

6.3.3 System Overview and Water Sensitive Urban Design (WSUD)

Stormwater runoff from roof areas will be collected in a conventional gutter and downpipe system and directed to a series of above ground rainwater tanks located north-east of the main shrine and residences. Water from the rainwater tanks will be used to satisfy non-potable domestic water demands (e.g. toilet flushing).

Overflows from the rainwater tanks and stormwater runoff generated by the ground surfaces will be managed by a WSUD system. There are considerable opportunities to incorporate WSUD features into the extensive landscaping on the site. These will be refined during the detailed design process but are expected to include some or all of the following:

Swales

Grassed swales are to be used as an alternative to conventional underground drainage to convey stormwater runoff through the site. The swales promote infiltration resulting in flow attenuation and pollutant removal. It is expected that the use of swales will be predominant throughout the proposed development.

Rain Gardens

Rain gardens are depressed garden beds with highly permeable soil structures that are designed to receive stormwater runoff and remain inundated for short periods of time. Rain gardens are ideally suited to landscapes with raised boardwalks and ephemeral plant species.

Bioretention Swales and Basins

Bioretention swales and basins are low flow environments, vegetated with appropriate plant species and underlain by layers of carefully selected infiltration media (e.g. sands and gravels). Fine sediments and soluble pollutants in the stormwater inflows are removed via filtration and biological processes. Bioretention swales and basins are particularly well suited to service internal roadways, and provide opportunities for the capture and reuse of stormwater.

Street Trees

Street trees can be placed within depressed garden beds that receive stormwater runoff from the kerb and gutter system of the road profile. These limit the need for conventional drainage pits for stormwater capture.

Infiltration Trenches

Below ground infiltration trenches filled with carefully selected infiltration media (e.g. sands and gravels) can be used to dispose of stormwater to the natural soil

profile, thereby attenuating peak flows and the volumes requiring discharge to the receiving water body.

Permeable Paving

There are several proprietary products that allow for stormwater runoff to infiltrate through the paved surface for capture and / or discharge. These include slotted and porous pavers of various shapes, textures and colours. The pavers are trafficable and are well suited for car park applications and other paved areas.

Pollutant Removal

There are a multitude of proprietary products that can be installed or retrofitted to drainage infrastructure to remove pollutants such as litter, sediment and hydrocarbons from stormwater flows.

Overflows from the WSUD system are to be directed to the retention basins at the western extent of the main temple site. These retention basins shall be unlined and will provide for disposal of stormwater via infiltration and evaporation. Harvested stormwater can also be drawn from these basins for irrigation of green space (using drip or subsurface irrigation).

A series of retention basins are proposed in order to achieve a sympathetic result in terms of visual impact, whilst also creating a series of water bodies that feature as an integral part of the landscaped setting. This approach, rather than a single retention basin, will overcome the need for major earthworks on site. In high flow conditions these retention basins will overflow to Cactus Canyon Creek via an underground drain.

6.3.4 Performance Criteria

The overall system shall be designed to prevent discharge to Cactus Canyon Creek during 'average' years. Water balance modelling shall be undertaken during the detailed design phase to confirm that this criterion is achieved. The water balance modelling will take into account site specific data such as catchment details (e.g. civil design and landscaping), historical rainfall records, evaporation, geotechnical investigation results, and seasonal demands for non-potable water.

The WSUD features will be designed to treat stormwater flows up to the 3 month Average Recurrence Interval (ARI) event. Water quality improvement targets for the system such as reductions in Total Suspended Solids (TSS), Total Nitrogen (TN), Total Phosphorus (TP) and heavy metals prior to discharge to Cactus Canyon Creek will be developed in consultation with the EPA during the detailed design phase. Where conventional underground drainage is required a 5 year ARI design standard will be achieved. Safe overland flow paths will be provided for flows up to the peak 100 year ARI event.

6.4 Prevention of Water Erosion on the Site

6.4.1 Objectives

The objectives are:

- to control water flow through the site and minimise water velocity and flow through appropriate measures;
- to ensure planting programmes avoid exposure of the land to erosion processes;
- to identify land which is particularly denuded and progressively initiate remedial measures to arrest further degradation;
- to progressively introduce measures to gradually reverse the existing degradation of the land associated with the gullies on site; and
- to ensure that surface water flow is managed to minimise opportunity for additional erosion of existing gullies and creation of further gullies.

6.4.2 Actions

The actions will be:

- initiate a program to review the land quality and identify areas requiring remedial actions;
- initiate progressive planting programmes to stabilise erosion and use local seed provenance to minimise plant vulnerability to weed invasion;
- initiate an intensive landscape and revegetation planting regime immediately after each stage of construction to minimise soil erosion;
- designing walkways to minimise erosion caused by surface water runoff;
- fence gully formations to exclude usage and encourage indigenous regeneration;
- progressively introduce and maintain vigorous and deep rooted indigenous vegetation to stabilise gullies and guard against further subsurface erosion occurring along the gully margins; and
- establish plantings to act as filters at the edge of gully areas to reduce further erosion by filtering surface water flow.

6.5 Measures to Protect Adjoining Watercourses and Coastal Environments

6.5.1 Objectives

The objectives are:

- to arrest and minimise environmental damage (degradation) caused by pedestrian and vehicular traffic in proximity to the cliffs, especially that associated with the use of the land by hang gliders should the use continue; and

- to progressively implement measures in accordance with environmental programmes initiated by statutory authorities for the coastline in this immediate locality;

6.5.2 Actions

The actions will be:

- in liaison with relevant agencies and user groups identify appropriate recreational carrying capacity or locations and levels of activity appropriate to the land condition;
- maintain and establish the local and regional context of native vegetation and fauna;
- ongoing monitoring to deal with proclaimed plants or animal pests, and to manage the land management issues associated with the change in land use from grazing to a religious temple.

6.6 Control of Plant and Animal Pests

6.6.1 Objectives

The objectives are:

- to progressively eliminate noxious and significant environmental weeds;
- to fulfil the landholders legislative requirements for the control of pest plants and animals;
- to minimise the spread of existing weed species;
- to achieve an annual reduction in area coverage of noxious and environmental weeds; and
- to progressively eliminate animal pests.

6.6.2 Actions

The actions will be:

- investigations to be undertaken to gain an appreciation of the nature and extent of weed infestation across the property;
- implementation of species specific weed control including approved biological controls (if available) and chemical control where approved. Chemical control will only be used when necessary. Personnel administering chemical control will observe personal and environmental safeguards;
- weed control to be complemented by the progressive implementation of replacement native grasses more suited to the soil type and environmental conditions. These species are regenerating and will spread progressively and may be expected, in the context of an overall program, to 'out-compete' weed species;
- preference will be given to mechanical control (slashing) so as to minimise exposure of soil. Upon completion of slashing, vegetation is to be left to serve as mulch and protect against further weed invasion;

- chemical control to be initiated during active growth phase of weed species for the more persistent weed species identified on site;
- utilise minimum tillage techniques when establishing new plantings so as to minimise exposure of soil to invading weed species and erosion;
- initiate regular liaison with authorised officers of local the Animal and Plant Control Board and follow any ongoing feral animal eradication program for the region;
- avoid creation of habitat for rabbits and hares;
- progressively install rabbit and fox proof fencing as appropriate;
- implementation of a vehicle washing program during the construction phase to minimise the risk of introduction of weed species from off site;
- implementation of regular pest control and eradication measures utilising baiting programs for rabbits and trapping for foxes; and
- baiting programs to be followed by ripping and fumigation of rabbit warrens.

6.6.3 Plant Pests

The following plants have been proclaimed within the area covered by the Animal and Plant Control Board for this region. Any of the following proclaimed plants found on a property must be reported to the Board within seven days and this must be undertaken each time a plant reappears:

- Alkali Sida;
- Elodea;
- Mesquite;
- Alligator Weed;
- Khaki Weed;
- Arrowe Head;
- Lagarosiphon;
- Parthenium Weed;
- Dodder;
- Leafy Elodea;
- Sagittaria;
- Perennial Thistle;
- Ragwort;
- Water Hyacinth;
- Salvinia;
- Serrated Tussock;
- Poison Ivy;
- Russ Tree; and
- Parkinsonia.

The following plants are proclaimed and are to be controlled or destroyed:

- African Boxthorn;
- African Rue;
- Bathurst Burr;
- African Feathergrass;
- Blackberry;

- Boneseed;
- African Lovegrass;
- Bridal Creeper;
- Bladder Campion;
- Bulbil Watsonia;
- Broom Cape;
- Broom English;
- Scotch;
- Caltrop;
- Montpelie ;
- Field Bindweed;
- Californian Burr;
- Colomba Daisy;
- Field Garlic;
- Creeping Knapweed;
- Cape Tulips;
- Hoary Cress;
- Cut Leaf Mignonette;
- False Caper;
- Lincoln Weed;
- Gorse Or Furze;
- Horehound;
- Innocent Weed;
- Noogoora Burr;
- Prickly Pear;
- Perrennial Ragweed;
- Onion Weed;
- Skeleton Weed;
- Silver Leaf;
- Salvation Jane;
- Yellow Burr Weed;
- Nightshade;
- Slender Thistle;
- Soldier Thistle;
- Variegated Thistle;
- Three Corner Jack; and
- Pheasant Eye.

6.6.4 Land Management Issues Associated with the Cessation of Grazing Activities

Objectives

The objectives are:

- to ensure that the cessation of grazing does not consequently result in an increased fire risk;
- to initiate restoration of the land which has been denuded as a consequence of overstocking and poor land management practices.

Actions

The actions will be:

- the progressive replacement of pasture species with native grasses indigenous to the area and therefore more suited to the soil type and environmental conditions These species will regenerate and will spread progressively and may be expected, in the context of an overall program, to 'out-compete' weed species;
- progressively encourage low fire risk indigenous grasses to replace pasture species so as to ensure reduced fuel loads. Native grasses tend to have greater vegetable matter close to ground level thereby reducing vulnerability to fire; and
- implementation of fire control and risk minimisation practices.

7 Sustainability

Sustainability, including living with and in harmony with the earth's natural resources is at the core of the Buddhist approach. The detailed design, not yet undertaken, will incorporate energy efficient and sustainable design elements where possible.

7.1 Water

The management of the temple includes the harvesting and reuse of rainwater for the food that is grown on site, and recycling of materials where possible. Section 6.3.3 details the use of Water Sensitive Urban Design (WSUD) in the management of the water resource.

7.2 Power

The roof orientation and pitch will also provide significant opportunity to maximise exposure to direct sunlight and where possible, and with regards to Feng Shui principles, photovoltaic cells will be used.

7.3 Orientation

Where possible, and with regards to Feng Shui principles, the buildings have been sited and designed to have northern exposure and provide adequate natural light and winter sunlight.

7.4 Heating and Cooling

Where possible, having regard to Feng Shui principles, the development will incorporate on site solar hot water systems.

8 Visual Amenity

8.1 Potential Visual Impact

The topographic character of the subject land, coupled with its limited frontage to Main South Road and its location along the cliff tops, acts to minimise the potential visual effect of the proposed development. Views from the south are obscured by the Sellicks Hill group of ranges and views from the north are obscured by the hill adjacent to the main highway near Cactus Canyon.

For the motorist travelling along Main South Road, the temple will be in full view for a relatively short distance of 500-600 metres. Whilst the temple is relatively close to the roadway at this point, the existing and proposed landscaping will act to soften the potential views of the development.

The elements of the temple that will be visually prominent from Main South Road (different views will be seen from different points along the road) are the pagoda and the main temple. The statue, the bell tower and the front and rear shrines are less visually dominant. The heights of all of the temple components are illustrated in Figure 8.

The scale of the proposed development, when viewed from a more distant vantage point of the Sellicks Beach area, is diminished by virtue of the Sellicks Hill group of ranges, which acts as a backdrop. The long distance view from the water or further north from the site is also dominated by the scale of the hills backdrop, thereby positively influencing, and minimising, the proportionate relationship of the proposed development. The visual intrusion of the development into the skyline, and the contrast in colours against this backdrop is reduced to a minor, almost negligible scale. Given the scale of the development against the setting of the site with the backdrop of the hills, the proposed development will not interrupt the skyline, nor will it significantly affect the character of the surrounding topography when view from Sellicks Beach Township.

8.1.1 Illustrating the Potential Visual Impact

An assessment of the potential visual impact arising from the development has been undertaken on the basis of computer modelling of view lines to the development from a number of key vantage points. They assist to demonstrate the potential visual impact of the proposed development.

These are shown in Figures 16 – 22 of this Development Report. They are a series of images that show the view of the temple and associated structures from different vantage points including South Road, Sellicks Beach Township and the coast. Figure 16 shows the location of each view point. The images have been generated by superimposing elevations of the proposed development on photographs taken from key vantage points in the site's environs.

8.1.2 Minimising the Visual Impact

In order to minimise the potential visual impact of the development, the tallest built form element, being the pagoda, has been optimally positioned so as to fully utilise the opportunities afforded by the site's topography. The effect of this component's siting ensures that the potential for adverse visual impact has been minimised. The colours that have been selected are from within the range designated by the Buddhist faith for temple developments, which provide minimal colour contrast against the backdrop of the existing landscape.

The pagoda has been located to avoid major interruption to the skyline and to utilise the background of the hills when viewed from Sellicks Beach. The vertical profile of the pagoda is not unreasonably intrusive in this setting particularly as it will be pleasant in appearance, and the views of the structure for passing vehicular traffic will be brief.

Similarly, other elements of the proposed development have been arranged on the site utilising the setting offered by the prevailing topographic conditions, in turn minimising visual impact.

The development is able to sit comfortably within the profile of the landscape, and will be further assisted by the proposed planting regime that is to be implemented as part of the proposal. This planting regime has commenced, with periphery gum tree plantings having been established for several years. This will ensure immediate screening is available to the built form.

8.2 Relationship of the Proposed Development to Adjacent Land and its Integration in the Local Context

The use and development of this site will result in some modification to the existing physical processes occurring on the land, specifically the treatment of stormwater and the ongoing degradation of the land occurring as a consequence of the use of the land for grazing.

The development of the land will not however result in the removal of this land from agricultural production in the long term. Rather, the land will be rehabilitated and the opportunity will remain for it to revert to agricultural production in the future if so required.

The development and use will not adversely affect the surrounding uses and will not be inconsistent with the agricultural character of the locality.

The nuns who reside at the temple will continue to harvest their own vegetables and capture and reuse rainwater, so as to be as self sufficient as possible.

8.3 Landscape Plan

The landscape proposal for the Nan Hai Pu Tuo Temple is designed as a comprehensive property plan and is included in this Development Report as **Figure 12.**

The landscape objectives are:

- to manage the property as a nature reserve and to prevent further land degradation;
- to encourage and nurture a sustainable coastal environment; and
- to pursue sound land management practices.

The landscape undertaking will embrace eight key principles of land management activity:

1. Regeneration of indigenous flora including native grasses, cessation of grazing, identification and protection of emergent seedlings, weed and pest fauna control.

2. Habitat plantations (approx. 3.4 hectares) on exposed slopes to include planting approximately 8,500 tube stock of local provenance in large mulched swathes, indigenous species tolerant of harsh winds, salt spray and desiccated soils (refer schedule and planting details on the plan).

3. Habitation plantations (approx. 1.3 hectares) on gully slopes to include planting of approximately 3,200 tube stock of local provenance in concentrated masses generally near gully heads, indigenous species tolerant of salt spray but somewhat protected by terrain and benefiting from increased soil moisture (refer schedule and planting details on the plan).

4. Traditional Chinese gardens surrounding the temple to include contemplative landscape setting structured on non-indigenous coastal vegetation.

5. Fire prevention to include 30m wide grass buffer along roadside, annual slashing, adequate water storage and all reasonable care to inhibit the outbreak or spread of fire.

6. Stormwater retention to include a series of retention ponds (levee bank construction), water reused for irrigation, or released slowly into existing drainage channels.

7. Erosion mitigation to include riparian plantations in existing gully heads, sensitive earthworks as appropriate for gully control, controlled release of stormwater from retention ponds, regeneration of indigenous flora.

8. Weed and pest fauna control to include identification of alien species, gradual containment and eradication, ongoing consultation and monitoring with Department for Environment and Heritage (DEH).

It is intended to manage the property as a self-sustaining coastal nature reserve for local flora and fauna. Pedestrian and vehicle movement will be contained within a sensitively constructed network of paths and roadways. The subject site and the surrounding locality will benefit from the implementation of these landscape proposals and the amelioration of historically poor land management practices.

The landscaping immediately adjacent to the buildings and within the courtyard will be of a traditional Chinese character and will be complemented with planting of appropriate native species at the periphery of the temple site. All landscaping associated with the temple will be laid out in a formal and symmetrical pattern in accordance with the traditional design philosophy.

The intended approach with the landscaping regime is to soften the presentation of the buildings to external views, and to ensure that locally indigenous species form the predominant view from the exterior of the site. In particular, the interface of the development and formal gardens with the residential development to the north will be appropriately planted to minimise the visual intrusion of the exotic planting and the buildings having views from Sellicks Beach.

8.4 Construction Materials and Colours

As would be expected with a temple of this significance, all buildings, including walkways and structures within the gardens, will be built in the traditional architectural style. The colours to be used have been selected from a religious based preferred colour palette with a view to achieving both the harmonic balance required for the environment and to maximise the visual integration of the development with its surrounds.

The style of the buildings and materials to be utilised will be typical of Buddhist temples that are influenced in style by the Buddhist culture and Feng Shui Principles. **Figures 13, 14 and 15** show photographs of other temples and provide an appreciation of the temple form and design. These Figures also provide an indication of the colour palette for the temple and demonstrate how they will complement the prevailing landscape character.

The colour scheme to be utilised within the main temple building will be a sandy/ochre roof colour, with mostly red brick walls, with sandy colour inserts.

The fencing pillars and building pillars are red brick, with fencing infill panels consisting of vertical rails being dark grey in colour.

The colours of the main pagoda will be a golden/ochre on the finial like projections and red brick to the core of the tower. These colours have been selected to blend with the changing landscape in which the temple site sits. Whilst these colours will

be different to the intense green of the winter vegetation growth, the potential contrast will be softened considerably by the existing and proposed vegetation.

More particularly, the management plan for the balance of the site will see the progressive re-introduction and re-establishment of native grasses, and the progressive reduction in the predominance of the pasture grasses, which typically range in colour from season to season.

The underlying intention with the proposed colour scheme and material finishes will be to minimise visual intrusion and create a sense of calmness and serenity associated with Buddhist temples. In accordance with traditional design, other colours of deep jade green, off-white, with highlights of red and gold will be introduced to enliven the imagery and ceremony of this important temple.

9 Traffic, Parking, Vehicle and Pedestrian Movements

9.1 Traffic Generation

The following forecasts of peak traffic movements to and from the site have been based on the expected highest daily usage of the site, namely up to 1,000 persons on a special event day. It is anticipated that people will attend throughout the day on special event days, rather than grouped around a specific time.

Traffic generated by the proposed development is expected to be distributed primarily towards Adelaide. It is anticipated that approximately 75% of all vehicles accessing the temple will enter the site from the north.

9.2 Cars

On the basis that there could be 250 persons arriving or leaving in the peak hours of the day and there being 2.5 persons per car (assuming that there are no coaches servicing the site), then the peak hour traffic movement, on these limited numbers of special event days, would be approximately 100 vehicles per peak hour.

9.3 Buses and Waste Removal Vehicles

It is anticipated that on an average day, approximately 300 people will visit the site. It is expected that in addition to the traffic generated by these visitors to the site, service vehicles will access the site on a regular (weekly) basis. The largest of the service vehicles is likely to be the waste removal vehicle at a maximum length of 12.5m. The largest vehicles likely to access the site are the tourist coaches, these vehicles are generally a maximum of 14.5m in length.

9.4 Proposed Access

The proposed access point is to be located to the north of a section of Main South Road which has an unsealed shoulder and guardrail on its western side. The sight distances to the north and south of the proposed access point, to the north of the existing unsealed access, have been identified through on-site checks and from survey plans. These investigations indicate that the sight distances would be approximately 260 metres to the north and approximately 230 metres to the south.

The Department for Transport, Energy and Infrastructure (DTEI) has recommended that the access should be designed to conform to the recommended Safe Intersection Sight Distance (SISD), as specified in the " Guide to Road Design Part 4A: Unsignalised and Signalised Intersections ". The SISD is the minimum standard which is recommended on a major road at any intersection, in order to provide sufficient distance for a driver of a vehicle on a major road to

observe a vehicle from a minor road approach, then move into a collision situation and decelerate before reaching the collision point. It is generally sufficient to enable cars to cross a major road safely from a side road.

Based on the posted speed limit of 100km/h, and assuming a maximum 4% grade, SISD should be approximately 240 m to the north and 260m to the south. This indicates that there will be adequate sight distance to the north especially following the widening of the eastern side of the pavement, but there will be a need to improve the sight distance to the south.

The design of the right turn lane has been based on the warrants identified in "Guide to Road Design Part 4A: Unsignalised and Signalised Intersections ", in which a channelised right turn (CHR) treatment is recommended, i.e. a protected right turn will be constructed. The provision of the protected right turn lane will result in the widening of the existing benching on the eastern side of Main South Road at this location.

Figure 11 shows the eastern embankment along Main South Road cut back (benched) in order to both widen the road (to permit a protected right turn lane) and to increase the sight distance to 250m. It is important to note that this plan was prepared before the implementation of the southbound overtaking lane which is situated immediately south of the existing junction of Cactus Canyon Road with Main South Road. It is not anticipated that the proposed access point will adversely impact upon the operation of the overtaking lane. The detailed design of the channelised right turn will need to take into account the transition into the overtaking lane.

The plan also includes:

- a sealed 3.5m wide through lane (southbound) to enable southbound traffic to pass a vehicle waiting to turn right into the site (stored in a 3.0m wide lane);
- pavement bars along the centre line of the road included to define the access point to the site;
- a 20m section of sealed access road (maximum grade 1 in 20) to be provided west of the edge of the sealed carriageway of Main South Road;
- the sealing of the western breakdown lane on Main South Road, prior to the proposed access point. This lane will be line marked as a left turn deceleration lane, approximately 200m in length including taper (based on a vehicle decelerating from 100kph to 20kph on a 3% - 4% downgrade); and
- the protected right turn lane which will be approximately 150m in length, including a 50m taper (based on a vehicle decelerating from 100 kph to 0 kph up to a 3% - 4% grade).

Concept cross-sections along Main South Road, to the north and south of the proposed temple access road, have been prepared and used to identify the required widening of the carriageway to incorporate the right turn protected lane. There will need to be substantial cutting of the eastern embankment.

However, during final design, it may be found to be less expensive to widen Main South Road on its western side to the north of the proposed access point, given the lesser amount of cut which would need to be removed from this side of the road. A detailed engineering assessment of the method of widening the cutting to the north of the proposed access point will be required, given the steepness of the face of the cutting and composition of the material to be removed.

While the majority of visitors will be on-site only during the day, adequate lighting should be provided at the junction of the proposed access road and Main South Road, particularly as the access road will not be readily visible from Main South Road. Signage will also be necessary to clearly identify the location of the temple access road. The SA Tourism Commission has indicated that they will assist with signage provision.

9.5 Impacts on Traffic Operations at the Access to Main South Road

The existing traffic flow on Main South Road in the vicinity of the site is approximately 3,900 vehicles per day (DTEI website, November 2009). The peak hour flow on special event days on Main South Road adjacent to the site would be approximately 200 vehicles per hour (vph).

Based on acceptance gaps and follow-up headways at unsignalised intersections, where the critical gap for a driver turning right in to the site would be five seconds and the follow up headway of 3 seconds, there should be only a maximum queue of one vehicle in the protected storage lane (98th percentile confidence level). Even if the average arrival rate was to double during the peak hour (to 200vph) the maximum queue in the right turn lane would still be only one vehicle. The proposed right turn protected lane will have ample capacity to meet such a queuing demand.

Based on the peak exit rate of 100vph, with 75% turning left (towards Adelaide), there will be minimal left turn queuing on the approach to Main South Road. The approach lane is to be five metres wide and drivers will tend to form informal left and right lanes, albeit there will be very few drivers wishing to turn right into Main South Road.

9.6 Parking Demand Generation

The peak parking demand will occur on special event days when up to 1,000 persons could visit the site. While there could be a high percentage of visitors arriving by coach, a worst case situation would be if all were to arrive by car, this scenario has been reviewed below. It is estimated that there could be approximately 400 visitors on-site at any one time, which would result in approximately 160 parking spaces being required (2.5 persons per car).

9.7 Proposed Parking Facilities

The concept plans show that there will be adequate parking for approximately 120 cars and four coaches. In addition it is anticipated that there will be one car parking space per accommodation unit, albeit the elderly residents could be expected to have a low car ownership level. Persons attending camps at the site would be expected to arrive by coach, but there would be adequate parking in the main car park if they were to all arrive by private car.

The proposed parking provision is 40 car spaces less than the peak demand expected if all people visiting the site arrive by car. It would be expected that on special event days when this peak parking demand occurs, at least some of the visitors would arrive by coach. Approximately 2-3 coaches would be required to offset the parking shortfall. In the worst case scenario should visitors not arrive by coach (as anticipated), the additional 40 overflow cars could park in the coach parking area and alongside the access road.

It should be noted that on an average day there are likely to be approximately 300 people attending the site across the day. Assuming an occupancy rate of 2.5 people per vehicle, the 120 proposed parking spaces would adequately cater for the demand.

A concept design of the proposed car and coach parking areas on the western side of the temple development, as illustrated on Figure 12 landscaping property plan, has been undertaken to ensure that the facility can be provided without major cut or fill. The car park can be designed to conform to Australian Standard 2890.1-1993, in respect to grades, bay and aisle dimensions.

The concept design indicates that these should be acceptable in respect to cut and fill sections. Whilst the concept design does not currently show any turn around area for coaches, it is proposed that this area be created to the west of the proposed car parking area with access through the car park. Additional coach parking could also be provided along this turn around route.

9.8 Proposed Internal Roadways

It is proposed to restrict all vehicles to the access road, between Main South Road and the accommodation village or to the car park. No roads are proposed directly to the temple or Pagoda. There will however be an additional private access road provided to the memorial garden.

The proposed width of the access roads to/from the site will taper from 10.0m at Main South Road to 8.0m at the property boundary of the subject site. The primary driveway on the site, at least to the proposed car park, will be 8.0m in width. The roadway could then be reduced to approximately 5.5m in width, since there will only be limited use of the road (access to the accommodation units). The access road to the memorial garden will be a minimum of 5.5m in width.

Preliminary design of the access road indicates that there will be a maximum grade of 1 in 20 for the first 20m section to the west of Main South Road and then a grade of approximately 1 in 12.5, to meet the existing ground level at RL140.00. The road would then follow the natural surface.

The above access road, between the Main South Road and the property boundary would be between 1.0m and 2.0m above the existing natural surface level. It will be necessary to marginally raise the existing tracks, adjacent to the boundary of the site, in order for them to meet the access road level. While these tracks will have a very low traffic volume, it is proposed that they be marginally off-set at their junction with the new access road. This will eliminate an intersection close to Main South Road.

It would be desirable to seal the internal roadway, at least as far as the main car parking area. There will be relatively steep grades along this access road and scouring could occur if the carriageway is not sealed. Sealing of the roadway will also assist in the control of dust.

9.9 Pedestrian and Cyclist Facilities

Pedestrian paths will be provided as shown on the concept plans. It is proposed that these paths be a minimum of 1.5m wide to allow for the volume of pedestrians predicted. Additional paths should be provided from the car and coach parking areas across to the main temple area. Where these paths cross the internal roadway, vegetation should be kept back from the edge of the roadway to ensure drivers can easily see, and be seen by, approaching pedestrians.

While on-site bicycle facilities have not been identified at this time, during the detailed design phase discussions will be held with the DTEI Office for Cycling and Walking, to discuss design and financial assistance for such facilities.

9.10 Conclusion

The proposed access of Main South Road can be provided to the requirements of DTEI. This will necessitate the widening of Main South Road to include a protected right turn lane and to ensure adequate sight distances at the proposed access road. Consideration will need to be given to the integration of the southbound overtaking lane with the proposed CHR treatment.

The forecast traffic volumes will not be significant and can be accommodated within the proposed access point as the volumes along Main South Road are relatively low. The proposed junction has been designed to facilitate safe access to and from the site, with a deceleration lane to assist northbound drivers entering the site and a protected right turn lane for southbound drivers. The proposed access road will be 10.0 metres wide between Main South Road and the property boundary and a 20 metre long near flat storage area will be provided on the approach road to Main South Road.

Given that visitors to the site will arrive and depart throughout the day, there will not be a significant traffic issue on the subject site. The proposed deceleration lanes will provide safe access to the site and the design of the access and internal roads will minimise traffic conflicts.

It is proposed to provide approximately 120 parking bays for visitors and parking for at least 4 coaches. Parking will also be provided for the proposed residential units. This parking will generally satisfy the peak parking demands during the year with possible infrequent occurrences of additional parking during special events should visitors not arrive by coaches and more than approximately 600 visitors are on the site at any one time. Parking would then be required in the proposed coach parking area along and adjacent to the access road. Detailed design of the car parking area will include a coach turn around loop to the west of the car parking.

10 Economic Issues

10.1 Economic impacts

The temple is likely to bring with it a positive economic impact to the immediate locality, region and the State. The benefits are largely related to the tourism industry which is an extremely important component of the states GDP. The combination of direct and indirect figures reveals tourism contributed $4.4 billion to the State's GDP and resulted in over 53,000 jobs (or 3.7% of total jobs in SA).

The economic benefits will accrue in the first instance from the staged construction of the temple and its associated components which will amount to some $20 million injected into the economy for the supply of materials, labour and expertise together with the associated economic multipliers which apply in the construction sector in South Australia.

The ongoing operation of the temple will require the supply of goods and services for the management of the property, the residents of the temple and the associated retirement facility, and the supply of foodstuffs and refreshments for sale at the facility.

On perhaps a more significant level, the temple will, due to its significance in the south east Asian region, attract visitors from other Australian states and overseas. These visitors will contribute to the State's economy through the purchase of accommodation, meals and travel and the flow on components of their visit to the State and region.

It is anticipated that limited supplies for refreshments will be available at the temple so there is likely to only be limited impact on the local settlements through visitors. It is more likely that general tourists to the temple, as opposed to those visiting to worship or partake in education or instruction, will be likely to add on visits to local population centres and in turn generate economic revenue to those centres.

It is likely that visitors will be both from intrastate and interstate as well as from overseas. It is anticipated that the majority of visitors will be people who are already visiting South Australia and who wish to include the temple as one of their destinations. Some devotees, particularly overseas Asian visitors, are likely to make a specific journey to the temple. Hence, whilst not necessarily bringing additional direct contributions to the tourism economy, it is anticipated that visitors will bring indirect contributions. These contributions come from other industries that are not in direct contact with visitors but who produce services and products for the industries that are in direct contact. For example, a visitor purchases a meal from a local hotel; the hotel purchases the raw ingredients from a food supplier who in turn makes their purchase from a farm; the farm employs staff and pays for transport of their product and so on. This represents a series of indirect effects that link tourism to other economy sectors.

10.2 Visitor Numbers

The Table below illustrates the 2009 tourist visitor numbers to SA and the Fleurieu region and compares with the anticipated visitor numbers to the temple.

Table 1 - Illustrating Current Tourist Visitor Numbers to the Region Compared with Anticipated Visitor Numbers to the Temple
(Source SATC 2009)

Intra State	Interstate	Overseas	Total Current	Anticipated Annual Visitation (intrastate, interstate and overseas)
72,200	127,200	314,000	230,900	Total 22,300

It is difficult to predict accurate visitation numbers based on other temples because entry is free and there are no formal visitation records for benchmarking purposes. As a considered estimate however, it is anticipated that the temple will attract approximately 22,300 people per year. As a comparison, the Nan Tien Temple in Wollongong which is also a Buddhist temple that attracts devotees, school children and tourists attracts approximately 30,000 visitors a year (please note this is an informal estimate provided by the Nan Tien Temple).

This indirect positive economic contribution is likely to be related to transport (in particular hire cars, tour bus companies), local retailers, local cafes, food outlets and regional Fleurieu accommodation offers.

Many of the devotees who visit the temple will be Asian. Current figures show that 67,200 Asian visitors came to SA in 2006 - 2007 for tourist reasons (SA Tourism Commission, 2009), but only 35% of them visited the southern areas of McLaren Vale, Goolwa or Victor Harbor (the highest percentage of Asian visitors visited Adelaide, Glenelg and the Barossa Valley). The most common Asian visitor activities included visiting the coast, visiting parks and gardens, and visiting heritage and cultural sites and monuments.

The visitor profile experience of the Wollongong Nan Tien temple as well as the preferred tourist activities for Asian visitors would indicate that the proposed temple will be a significant attractor for Asian (and other) visitors in the region. It is likely that the local Fleurieu region will experience an increase in Asian visitation to that which it currently experiences. This will have positive local economic impacts on the region.

For regional SA, in terms of nature based tourism (which includes cultural activities and is strongly linked to spiritual activities that value the natural surroundings such as the Buddhist temple), the Fleurieu Peninsula has the highest number of nature day trippers with an average of 149,000 day visitors per annum. Again this would indicate that this region would strongly benefit from other tourism attractors such as the temple that will facilitate increased nature based visitor activity to the area.

11 Community Impacts

11.1 Existing Regional Community

The Fleurieu region is very much a rural community influenced by a high proportion of holiday homes, with the provision of services in population settlements, such as Sellicks Beach, reflecting their semi-permanent nature. The area exhibits the following characteristics:

- the community is a relatively aged community and is over represented in the 40 yrs plus age cohort;
- the population is dominated by Australian born and UK born residents with low numbers of persons born in non-English speaking countries and is considerably underrepresented in this area in comparison with the State average;
- the households tend to have lower incomes relative to the State average, perhaps reflecting the aged composition of the community;
- the Fleurieu Peninsula has experienced significant population growth, which has been influenced by the increasing accessibility to the region through the Southern Expressway and, into the future, extension of the Noarlunga railway. The sea change trend also has attracted a higher number of aged residents;
- local residents are predominantly employed in the rural sector and secondly in the recreation and personal services sectors; and
- the area features a higher proportion of households who either own or are purchasing their detached homes, with a considerable proportion of these being occupied on a part time basis as holiday homes.

11.2 Potential Community Impacts

The development and establishment of the proposed temple on this site will not generate an adverse social impact on the local communities. The ongoing operation of the temple will not introduce any change to the ongoing social processes occurring in the locality nor will it accelerate any ongoing processes of change, including positive or negative growth, in the locality.

It is postulated that the only scope for impact will be the perception of some sections of the community that the character of the locality is to experience change, and that such a change will be triggered by the temple's establishment.

This apparent lack of understanding about the proposal, and hence the trepidation of some members of the community about the proposal is understandable. People are always apprehensive about change and the development of a significant temple may be considered such a change. In order to counter this apprehension, there needs to be a concerted program of information dissemination pertaining to the temples operation. This Development Report and the subsequent public consultation process will form part of this communicative process.

It should be stated that this temple will not include a monastery and therefore will be totally accessible to the community. The temple is not intended to raise revenue for the Buddhist faith; rather it has community objectives, being a place for spiritual retreat, for education and learning, and for caring for the elderly Buddhist monks and nuns. The Buddhists are community minded people and go to considerable efforts to participate in the local community and indeed welcome participation by the local community. The temples are not intended to be exclusive, and seek to integrate with local communities.

The other area of impact will be the visibility of the temple when viewed from Sellicks Beach in so far as the view was previously to open grazing land. The degree of impact however must be assessed against the degree of site coverage proposed; the actual visibility of the site and the impact of the perimeter planting proposed to minimise visibility into the site. This is discussed in detail in Section 8 of this Development Report.

It is acknowledged that the proposed development does not accord with the land use zoning provisions which apply to the site. However, the proposal is not inconsistent with the underlying intent of those controls which logically are underpinned by a desire that the land be managed appropriately and that it not be removed from the potential future use of the land for agricultural production. The proposed development and subsequent management of the land as a nature reserve with a programme of planting and reintroduction and encouragement of native grasses and plant species will accord with the environmental intent of the Development Plan. It is considered that the principles of natural resource management have been embraced to ensure the underlying resource value of the land is protected and indeed enhanced.

The development and ongoing use of the land will not impose any burden on the community as it will be fully self contained, incorporating the installation of the necessary physical infrastructure at the outset.

11.3 Summary of Community Impacts

The anticipated net return to the community is summarised as follows:

- injection of a direct investment of $20 million into the economy through the building of the temple;
- ongoing expenditure by visitors originating interstate and overseas to visit the temple;
- grazing of the property will cease and a land management plan will be progressively implemented to address specific land management issues including the degradation which has progressively taken place as a consequence of grazing, overstocking and poor management practices;
- provision of a confidential, not for profit counselling service for immigrants, whilst also providing a refuge for victims of domestic violence; and

- provision of a facility to meet the needs of an increasing number of followers of the Buddhist faith in South Australia and Australia as a whole.

11.4 Effect on Cultural Heritage Sites

11.4.1 Significance of Site

Investigations were undertaken through site survey and literature review to establish the significance, if any, of the site in total or whether or not there are any individual sites of significance according to Aboriginal tradition, archaeology, anthropology or history. Fieldwork was undertaken with representatives of the Kaurna Aboriginal Community Heritage Association Inc. in attendance.

The heritage report notes that:

"There are no previously registered Aboriginal sites in the present study. Previous research conducted in the study area, has however shown that besides being located in the dunes to the north, sites are also present on coastal cliffs in the region (i.e. to the north of the study area, near Maslin Beach and Ochre Cove, and to the south at Carrickalinga). There is therefore the potential for Aboriginal sites, in the form of stone artefact scatters and hearths, to be present in the study area." (p7).

A total of five sites, all stone artefact scatters/campsites have been identified on the property and recorded as Cactus Canyon Sites 1(CCS1) and 2(CCS2) and Cactus Canyon South Sites 1 (CCSS1), 2 (CCSS2) and 3 (CCSS3).

The sites range in size, with the extent of material contained within CCSS1 occupying the largest area. It is probable that the volume of material extends beyond the bounds of the land under investigation. The sites in general contain a variety of stone artefacts manufactured from quartzite and quartz. Faunal remains were identified at only one site, with CCSS1 comprising fragments of turbo shell (Turbo torquate). A possible hearth feature was also identified at this site.

The bulk of cultural material recorded during the survey is located on relatively flat to low sloping ground with further sparse artefacts occupying the higher slopes adjacent to the recorded sites possibly representing eroded materials. Despite this extended low density scatter of artefacts adjacent to the identified sites it appears that the sites are generally well defined with intervening areas containing no artefacts.

The archaeological report details the criteria used to assess the potential significance of these sites and concludes that the sites are of limited scientific value, although all of the five sites are likely to have social value to the local Aboriginal community. This is due to their close proximity to the coastline to which the Kaurna community has a close association. The report notes the following:

"...the sites recorded during the present survey, and in particular CCS1 and CCSS3, have limited scientific value, due mainly to the fact that they are likely to contain no

deposits to depth and they have been disturbed through ploughing and stock trampling in the past. Thus, the quality of these two sites is low and there is little that they could contribute to a further understanding of the Aboriginal occupation of the area. In addition, due to the fact that similar sites remain outside of the proposed area of impact, CCS1 and CCSS3 have low to moderate value in terms of representativeness. For sites CCS2, CCSS1 and CCSS2, their significance is slightly higher due to the fact that they are closer to the cliff line and so have remained less impacted by the activities of ploughing. They still however appear to contain little depth of deposit, although CCSS1, which contains an intact hearth, offers more scope for research, i.e. radiocarbon dating of the charcoal contained within the hearth and the possible presence of faunal material."

11.4.2 Implications of Development

Parts of Cactus Canyon Site 1 and Cactus Canyon Site 2 will be impacted upon by the proposed development. All other sites remain outside of the area on which development is proposed. Under the *Aboriginal Heritage Act 1988* these sites must be reported to the Minister for Aboriginal Affairs and accordingly site cards recorded during the survey have already been forwarded by the archaeological consultant. Application must also be made to the Minister under Section 23 of the Act prior to any disturbance of a site or feature.

11.4.3 Mitigating Measures to Accommodate Heritage Values

The archaeological consultant has made the following recommendations for the management of the identified sites. These are as follows:

Cactus Canyon Site 1

As part of this site is included in the land where the temple is to be sited, it is recommended that a systematic collection of materials be undertaken prior to any works taking place. The artefacts should be labelled clearly with reference to a grid system to indicate their origins and then placed in the care of the relevant State department until such time as the Kaurna community has the resources to house and curate them in an appropriate manner. The area to be developed should be fenced off in order to avoid inadvertent damage to that part of the site.

Cactus Canyon Site 2

As part of this site is included in the land where the Chinese memorial garden is to be located, it is recommended that a systematic collection of materials be undertaken prior to any works taking place. The artefacts collected should be labelled clearly with reference to a grid system to indicate their origins and then placed in the care of the relevant State department until such time as the Kaurna community has the resources to house and curate them in an appropriate manner. The area to be developed should be fenced off in order to avoid inadvertent damage to that part of the site.

Cactus Canyon South Site 1

This site remains outside the development area. It is recommended that its location should be noted and disturbance of this area in the future avoided. The Minister will be notified of the presence and location of this site in accordance with Section 20 of the Act.

Cactus Canyon South Site 2

This site remains outside the development area. It is recommended that its location should be noted and disturbance of this area in the future avoided. The Minister will be notified of the presence and location of this site in accordance with Section 20 of the Act.

Cactus Canyon South Site 3

This site remains outside the development area. It is recommended that its location should be noted and disturbance of this area in the future avoided. The Minister will be notified of the presence and location of this site in accordance with Section 20 of the Act.

11.5 State or Local Heritage Places

According to the Department of Planning and Local Government SA Heritage Places Database, there is no known State or local heritage places on the site.

12 Construction Impacts

The final process and timing of construction will be detailed following the granting of development approval and with the appointment of the construction contractors.

The timing of construction schedules will be directly related to the staging process as indicated in Section 2.3

12.1 Environmental Management Plan

An Environmental Management Plan (EMP) will be developed prior to construction of the development with its principal aim being to manage and minimise any localised impact that may occur during construction. This will detail mitigation measures for:

- noise;
- dust;
- groundwater;
- stormwater runoff;
- waste disposal and reuse options;
- public safety; and
- transport and storage of construction materials.

12.1.1 Noise during Construction

The siting of the proposed temple is presently a rural environment with little noise generation outside those associated with grazing and the farming of land. Background noise levels are low.

Noise levels during construction will be negligible in terms of the potential off site impacts, with any substantial noise generation being for a short duration only. The nature of the development does not involve significant excavation of the site which is usually the principal noise generator on construction sites.

12.1.2 Requirement for an Environmental Management Plan dealing with Construction and Operational Activities

An EMP identifies detrimental ecological, aesthetic and economic impacts from construction. Adherence to an EMP will typically include less risk of works being undermined by erosion or buried by sediment, improved drainage and reduced site wetness, less dust problems, improved working conditions, reduced down time after rain, less stockpile losses, reduced clean-up costs, earlier works completion, earlier land sales and less chance of impacts on neighbours.

An EMP has not yet been written, and it is expected it will form a reserved matter if an approval is forthcoming. The EMP will be prepared in consultation with the appointed building contractor.

The EMP will outline environmental aspects of concern for the site, as well as their level of risk and environmental protection measures to diminish the identified risk.

It will include documentation of the following (where appropriate):

Management

- responsibilities;
- staging of works;
- communication of EMP requirements;
- informing residents;
- inspections and maintenance;
- associated documents;
- public safety; and
- access, transport and storage.

Noise

- EPA requirements must be adhered to in relation to the level of noise and working hours;
- level of risk to be determined;
- working hours; and
- noise minimisation methods.

Dust

- dust generation must be minimised to ensure there is no health risk or loss of amenity;
- level of risk to be determined
- method of minimising dust generation;
- contingencies; and
- dust suppression initiatives.

Erosion and Sediment

- erosion and sediment must be managed in accordance with current best practice environmental management practices, to prevent sediment-laden water from entering any drainage system or natural waterway;
- level of risk to be determined;
- drainage management;
- sediment traps; and
- dewatering.

Soil Stabilisation

- during construction; and
- post works.

Vehicle and Road Management

- site access;
- cleaning vehicles;
- street cleaning; and
- stockpile protection.

Waste

- litter and waste must be contained on site, before disposal in a responsible manner. Waste generation must be minimised;
- movement of soil;
- contaminant status;
- waste storage and disposal; and
- waste minimisation methods.

Chemicals

- storage and spill management practices must be implemented to ensure that no environmental damage can result from the escape or spillage of chemicals or fuels.

Fuel Storage

- management; and
- refuelling procedure.

Significant Flora and Fauna

- all significant flora and fauna on and adjacent to the site must be protected

Archaeological Heritage

- places, sites and objects of archaeological or heritage significance must be protected.

13 Operational Activities and Impacts

13.1 Noise during Ongoing Operation of the Temple

The elements of the proposed development that have the highest potential for noise generation are the temple bells.

It is considered that these bells will be inconsequential, as they will not be audible outside the temple walls, with the large bell only being sounded in one or two sets of three short rings. The use of the bell in a Buddhist temple is quite different to the use of traditional chiming of bells in Christian churches.

The bell will be rung on Sunday, in addition to the first day of each month and in the middle of each month together with calendar events and special event days. The calendar days refer to important dates commemorating particular stages in the life of Buddha, whilst special events include such occasions as Chinese New Year. Worship days occur on Sundays that are not calendar events or special event days. Similarly, the drum is only struck at certain times to summon people from within the temple grounds or to recognise special event days. As with the sounding of the bell, there are very strict traditions associated with the use of the drum and it is not sounded frequently nor it is sounded beyond a very short duration.

The bell noises consist of one large bell of a very deep rich tone which may be heard outside the temple walls, a large drum in the drum tower together with a number of smaller bells for use within the temple.

Mitigating measures will not be required as the levels of noise to be generated are well within acceptable noise levels and are not likely to be intrusive to the ambient noise levels in the adjoining settlements.

13.2 Hours of Operation

Temple opening hours will be formally decided and communicated once the temple is constructed and they will be publicised on the temple website. It is anticipated that the temple and gardens will be open 6 days a week from 9:00am to 5:00pm. In special circumstances such as festivals and ceremonies, the opening hours may be later.

It is anticipated that visitation rates will be greatest on Sunday being the worship day together with calendar events and special event days. The calendar days refer to important dates commemorating particular stages in the life of Buddha whilst special events include such occasions as Chinese New Year. There are a total of 20 Calendar Event Days in a typical year comprising 14 on either Saturday or Sunday and six on weekdays and a further eight special event days which vary from calendar year as to which day they fall. Attendance levels may be expected to be

greatest on these special event days. The Table below provides a breakdown of the anticipated visitation rates.

Table 2 - Anticipated Visitation Rates

Week Days	Sundays	Special Calendar Days (approx 20)	TOTAL
(assume 50 visitors/day x 3 days a week Tues - Sat) = 7,800 visitors per year	(Assume 52 Sundays minus approximately 22 Sundays which are special calendar days = 30 Sundays x150 visitors day) = 4500 visitors per year	(Assume 500 visitors x 20 special calendar days = 10,000 visitors	22,300 visitors per year

14 Hazards/Risks Relating to Land Contamination

A detailed land contamination analysis has not been undertaken.

Anecdotal evidence suggests that the land has been used for primary production purposes for many years, and it is not believed that there would be any significant land contamination issues associated with the land.

15 Legislation and Policies

15.1 Outer Metropolitan Planning Strategy

The proposal is generally consistent with the Outer Metropolitan Planning Strategy which details the following key strategies that relate specifically to the proposed temple development:

Coastal, Estuarine and Marine Environments

1. *Minimise the discharge of stormwater, pollution and nutrients to coastal and marine environments.*

2. *Ensure development avoids, prevents and/or reduces coastal hazards such as flooding, erosion and the release of acid sulphate soils.*

3. *Minimise the adverse impacts of development on coastal, marine and estuarine environments.*

The proposed development will minimise any impact on the coastal environment, and nearby Cactus Canyon, through adherence to a detailed land management plan and stormwater management plan that is described in this report.

Tourism Facilities

Tourism appeal in the region can be enhanced by sustaining the natural and cultural environment, building upon and encouraging existing products and services, and improving the connections between these areas and activities. Tourism development must protect and contribute to the natural and cultural resources of the region and enhance primary industry activity as an investment in its own future.

1. *Develop new products, attractions and experiences that reinforce the state's tourism market positioning.*

2. *Ensure tourism development is ecologically sustainable.*

As a cultural attraction that is harmonious with the coastal landscape and associated rural activities, the proposed development will bring significant tourism benefits to the State by providing a further cultural destination within the Fleurieu Region.

15.2 Yankalilla (DC) Development Plan

The proposed development is located within the Primary Industry Zone of the Yankalilla (DC) Development Plan (Consolidated – 7 January, 2010). This Zone generally advocates for the continuation of primary industry and related activities. It is acknowledged that the proposed development does not strongly accord with the relevant land use provisions of the Primary Industry Zone.

However, the proposal is not inconsistent with the underlying sustainability intent of the Zone, which is underpinned by a desire that all land be managed appropriately such that the potential for adverse land impacts, such as erosion and pollution, are minimised. The proposed development and subsequent management of the land as a nature reserve with a programme of planting and reintroduction of native grasses and plant species will accord with the sustainability intent of the Development Plan. In addition, the proposal will accord with the principles of natural resource management, and will ensure the underlying resource value of the land is protected and indeed enhanced, whilst protecting the opportunity for the land to revert to primary production in the future if so desired.

The relevant Primary Industry Zone provisions are detailed below with the discussion following:

Primary Industries

Objective 1:	A zone primarily for primary industry, including primary production, on-farm activities related to the harvest and storage of that production and, in appropriate locations, processing of raw products.
Objective 2:	*A zone characterised by a diverse range of primary industries, including livestock grazing, dairy farming, livestock breeding and pasture improvement.*
Objective 3:	*Viticulture, floriculture, orchards and other kinds of horticulture, as well as commercial forestry and land based aquaculture, in suitable areas.*
Objective 4:	*The long-term sustainability of primary industries.*
Objective 5:	*Protection of primary industry from incompatible land uses.*
Objective 6:	*The long-term protection of land and water resources identified as significant for primary industry development.*

The land is currently quite degraded near the gully regions and shows signs of having been overstocked in the past. Given the sites location and topography, it is highly likely that any future use of the land would have to be for primarily grazing, which would act to further exacerbate the current condition of these gully regions. It is considered that the proposed development, with the inherent land management principles, will rehabilitate these areas, and moreover will optimise the overall condition of the land.

The minimal site coverage of built form proposed will also assist in achieving the open rural character of the area. It is also considered that the proposed development will not be incompatible with surrounding primary production land and will not prejudice the long term sustainability of primary production uses within the Fleurieu region.

Soils

Objective 7: *Protection and maintenance of the naturally occurring:*

(a) *physical, chemical and biological properties of soil resources;*
(b) *form and depth of soil profiles; and*
(c) *processes of sediment transfer.*

A land management agreement is proposed in this Development Report which identifies ways in which soil resources of the undeveloped portion of the land will be improved and monitored.

Water

Objective 8: *Protection of the supply and quality of water resources and the maintenance of natural hydrological systems and environmental flows.*

Objective 9: *Management of surface run-off to minimise soil erosion, protect life and property and protect water quality.*

Objective 10: *The construction and management of dams, water diversion mechanisms in watercourses and drainage paths in a manner which protects:*

(a) *the needs of downstream users;*
(b) *water quality and quantity; and*
(c) *ecosystems dependent on these resources.*

The stormwater management plan detailed in this Development Report identifies ways in which the quality of water resources will be protected and the natural hydrological systems and environmental flows as well as the needs of downstream users will be protected.

Air Quality

Objective 11: *Protection of air quality from the adverse impacts of smoke, dust, fumes and odour.*

The proposed development is not expected to result in adverse impacts from smoke, dust, fumes or odour.

Vegetation

Objective 12: *Retention and maintenance of existing native vegetation for its environmental values and functions, including conservation, biodiversity and habitat and minimisation of dryland salinity.*

The landscaping management plan detailed in this Development Report identifies ways in which native vegetation will be valued, protected and enhanced to meet conservation, biodiversity and salinity objectives.

Noise

Objective 13: *Prevention or minimisation of adverse impacts resulting from noise.*

The proposed development is not anticipated to result in adverse impacts from noise. A Buddhist temple is a quiet environment for reflection. Traffic movements in and out of the site are not expected to impact on the closest residential properties.

Hazards

Objective 14: *Prevention of harm to life and property from biological, chemical or fire hazards, energy emissions or explosions.*

The proposed development is not anticipated to result in any biological, chemical or energy emissions or explosions. A bushfire plan will be developed in accordance with CFS guidelines.

Waste

Objective 15: *Effective treatment and management of solid and liquid waste to prevent adverse impacts on:*

(a) *the environment;*
(b) *public and worker health; and*
(c) *the amenity of a locality.*

Objective 16: *Increased opportunities for the reduction, recycling and reuse of waste.*

The treatment of solid and liquid waste will be treated and managed as described in Section 5.3 of this Development Report to meet these objectives.

Built Form and Design

Objective 17: *Development compatible with the environmental qualities, built form and character of the surrounding area and landscape.*

Objective 18: *Development designed and sited to minimise the potential for impacts from primary industry.*

The built form and design of the proposed temple and associated structures has been planned according to Feng Shui principles. By their nature these principles

seek structures that are designed and located in harmony with the natural surroundings, which in this case are the cliffs, the sea and the hills as a backdrop. The colour composition of the proposed structures will be sympathetic to the existing landscape as depicted within Figure 15.

Dwellings

Objective 19: *Residential development only where:*

(a) *it supports legitimate primary industry activities; and*
(b) *the use of a dwelling will not jeopardise the continuation of primary production on adjoining land or elsewhere within the zone.*

The temple development will contain accommodation for nuns, monks and occasional devotees. The dwellings will not jeopardise the continuation of primary production on adjoining land or elsewhere within the zone.

Soils

Principle 6: *Development should not have an adverse impact on the natural, physical, chemical or biological properties of soil resources.*

Principle 7: *On sites of high erosion potential development should minimise the loss of soil from a site through soil erosion:*

(a) *during the construction phase;*
(b) *following commencement of an activity; and*
(c) *at the culmination of an activity.*

Principle 8: *Development should not result in alterations to natural landforms or drainage patterns, such that it will significantly impede natural processes of sediment transfer.*

Principle 9: *Development should not increase soil salinity levels.*

Ongoing land management will result in improved soils and minimise risk of soil erosion. The development is not anticipated to increase soil salinity levels as there will be no large scale irrigation. Construction activities will be managed according to the EMP.

Water

Principle 10: *Development should not compromise the utilisation, conservation or quality of water resources, or the capacity for natural systems to restore or maintain water quality.*

Principle 11: *Development should not result in an over-exploitation of surface or underground water resources.*

Principle 13: *Development should not have an adverse impact on surface or underground water resources.*

Principle 14: *Buildings and any modifications to the landform should not be located closer than 50 metres to a watercourse identified on a current series 1:50 000 SA Government Standard Topographic map.*

Principle 15: *The quality and volume of water leaving a site should be of a physical, chemical and biological condition equivalent to or better than pre-development flow characteristics.*

Principle 16: *Stormwater systems for buildings and ground areas should maximise the potential for stormwater harvesting and reuse, and minimise the impact on natural drainage systems by:*

(a) *preventing soil erosion or siltation;*
(b) *minimising the entry of pollutants; and*
(c) *mitigating peak flows.*

Buildings will be located greater than 50 metres from a watercourse. Stormwater and rain water will be harvested and reused as detailed in this report.

Vegetation and Landscape Character

Principle 22: *Native vegetation, including the full range of tree, understorey and groundcover species, should be retained and managed so as to maintain and enhance its environmental values and functions, including conservation, biodiversity and habitat, and minimisation of dryland salinity.*

Principle 23: *Non-native vegetation should be conserved, and its value and function not compromised by development, where it:*

(a) *has scenic, historical or scientific significance or interest;*
(b) *screens buildings or unsightly views;*
(c) *provides shade or acts as a windbreak; or*
(d) *assists in the prevention of soil erosion.*

Principle 25: *Development should be designed and sited to maintain and enhance the rural landscape and character of an area which:*

(a) *has historical (including archaeological) significance;*
(b) *is of scientific interest;*
(c) *has scenic value or natural beauty;*
(d) *has other heritage significance; or*
(e) *is located adjacent to a designated scenic route.*

No vegetation will be removed or will be compromised. A detailed landscaping plan as described in this report identifies the extent of new landscaping which will be a strong feature of the temple.

Principle 26: *Development should not:*

(a) *increase the potential for, or result in, the spread of proclaimed pest plants or other non-indigenous plants; or*

(b) result in the degradation of remnant native vegetation including native vegetation associated with swamps, bogs, wetlands or watercourses, including as a result of spray drift, compaction of soil, modification of surface water flows, pollution to groundwater or surface water, or changes to groundwater levels.

Pests will be managed according to the land management plan described in this report.

Noise Pollution

Principle 27: Development should take all reasonable and practicable noise reduction steps to prevent or minimise adverse impacts resulting from noise.

Principle 29: The storage of hazardous substances should occur in a manner which prevents land or water contamination and minimises risk to public health and safety.

There will be minimal noise impact as described in this report. There will be no hazardous substances used in this development which may risk public health and safety.

Waste Treatment and Disposal

Principle 30: On-site waste treatment facilities with a capacity of 1400kL/day or greater should be installed with an adequate warning system to detect any malfunctions of equipment or spillage of waste.

Principle 31: Untreated waste should not be discharged to any water body.

Principle 32: On-site waste treatment and the spreading or discharging of treated waste on-site should only occur where:

(a) site conditions, including soil type and permeability, soil nutrient levels, crop selection, soil percolation rates, the slope of land, potential for flooding and site drainage, rainfall and depth to water table have been considered and are conducive to waste being spread or discharged on-site; and
(b) the capacity of the on-site treatment facility is sufficient to accommodate likely daily demands.

Principle 33: The methods for and siting of effluent and waste treatment and disposal systems should minimise the potential for:
(a) environmental harm;
(b) adverse impacts on the quality of surface and groundwater resources;
(c) adverse impacts on public and worker health;
(d) adverse impacts on the amenity of a locality; and
(e) adverse impacts on sensitive land use receptors.

Principle 34: No part of a septic tank effluent drainage field or any other wastewater disposal area is:

(a) located within 50 metres of any bore, well, dam or watercourse that either clearly exists or is identified on a current series 1:50 000 SA Government Standard Topographic map, and any residence on an adjacent property or within 10 metres of any public land (including public roads);
(b) located on any land with a slope steeper than 20 percent (1 in 5);
(c) located on land where the depth to bedrock is less than 1.2 metres;
(d) located on land where the depth to a sub surface seasonal tidal or permanent water table (fresh or saline) is less than 1.2 metres from the ground surface level;
(e) located within 100 metres landward from mean high water mark on the sea shore at spring tide;
(f) located on land likely to be inundated by a 10 year return period flood event for any watercourse;
(g) located in a manner that leads to surface run-off from the wastewater irrigation area at any time; or
(h) located on waterlogged or saline areas.

The wastewater management scheme will be considered further as the detailed design of the proposal eventuates. However the principles that are to be adopted have been described earlier in this report.

Built Form, Design and Siting

Principle 35: *Buildings should be set-back a minimum of 50 metres from every public road, other than adjacent to Main South Road, Yankalilla-Victor Harbor Road, Hindmarsh Tiers Road and Pages Flat Road where buildings should be set-back a minimum of 100 metres.*

Buildings should be designed and sited to:

(a) enhance the environmental qualities, built form and character of the locality;
(b) minimise the need for the excavation or filling of land; and
(c) minimise the need for the removal of existing vegetation; and should be located on land that has a natural gradient which is no steeper than 1 in 4.

The main temple buildings are set back approximately 140 metres from Main South Road and on a natural gradient of approximately 1: 16. The entry statement is located slightly closer, being approximately 90 metres from Main South Road.

Principle 37: *Where practicable, the visibility of buildings from public roads and adjoining properties should be minimised by:*

(a) grouping buildings together;
(b) locating buildings behind natural landforms and existing vegetation; and
(c) the planting of screening vegetation.

Principle 38: *The external materials of buildings and structures should minimise the visual obtrusiveness of buildings by consisting of:*

(a) *a low reflective finish; and*
(b) *colours which are consistent with the colours of the natural rural landscape within the locality.*

Principle 39: *The external form and appearance of buildings and structures which are visible from public roads or nearby dwellings should minimise their visual obtrusiveness by:*

(a) *consisting of a low profile;*
(b) *the use of smaller components by variations in wall and roof lines; and*
(c) *the inclusion of eaves, verandahs and other similar design techniques to create shadowed areas.*

Principle 40: *No building should exceed a height, measured from the lowest point of the building at natural ground level to the highest point of the building, of:*

(a) *7.5 metres, where the site of the proposed development has a natural gradient equal to or flatter than one in six; or*
(b) *9.0 metres, where the site of the proposed development has a natural gradient steeper than one in six.*

A combination of design techniques, including the utilisation of the natural topography as well as the chosen colour of materials and landscape screening will minimise the visual obtrusiveness of the built form. The Buddha statue and the pagoda will be visible in certain locations and are higher than 9 metres.

Dwellings

Principle 41: *Not more than one dwelling should be constructed on an allotment.*

More than one dwelling will be constructed on the allotment, although the dwellings are grouped and attached to the main temple buildings.

Principle 49: *Infrastructure required for development should:*

(a) *be able to be economically provided;*
(b) *be of a sufficient standard, design and capacity to accommodate the proposed development;*
(c) *not have a detrimental impact on the environmental qualities and amenity of the area;*
(d) *minimise the need for the removal of native vegetation;*
(e) *not increase the level of risk to public health; and*
(f) *not compromise the level of service to other existing users.*

Principle 50: *Development should be provided with safe and convenient access which:*

(a) *avoids unreasonable interference with the flow of traffic on adjoining roads;*

(b) accommodates the type and volume of traffic likely to be generated by the development or land use; and

(c) is located and designed to minimise any adverse impact on the occupants of and visitors to neighbouring properties.

Development is provided with safe and convenient access and designed specifically to accommodate the type and volume of traffic likely to be generated.

Principle 51: Sufficient provision should be made on-site for the parking, loading, unloading and turning of all vehicles likely to be generated by the proposed development or land use.

Driveways, access tracks and parking areas should:

(a) follow the natural contours of the land;

(b) be designed and constructed with a minimum amount of excavation and/or fill;

(c) be designed and constructed to minimise the potential for erosion from run-off and not interfere with natural drainage; and

(d) minimise the need for the removal of existing native vegetation.

Sufficient provision is made for on site parking and with minimal construction impact.

15.3 Describe the Proposal's Consistency with the Environment Protection Act, 1993

The proposed development will be managed during the construction and ongoing operation to ensure compliance with all requirements of the *Environment Protection Act, 1993*. This will include noise, emissions, materials, waste, stormwater, air quality and site contamination. Construction will be undertaken to accord with an Environmental Management Plan whilst ongoing operations will be managed by the resident nuns and monks in accord with all statutory requirements including the duty of care principles prescribed by the *Environment Protection Act, 1993*.

16 Sources of Information

16.1 Reference Documents

South Australian Tourism Commission 2005 - 2006 Nature Based Research Tourism Fact Sheet
South Australian Tourism Commission, Tourism and the Economy 2007 - 2008
South Australian Tourism Commission, International Profile, Asia, 2006 - 2007
South Australian Tourism Commission, Overnight Visits to the Region, September 2009-11-25 South Australian Tourism Commission, Regional Profile, Fleurieu Peninsula, 2008
South Australian Tourism Commission, South Australian Tourism Plan 2009 - 2014
www.nantien.org.au
SA Department Planning and Local Government, 2009, Draft 30 Year Plan
State Strategic Plan

16.2 Authorities Consulted

South Australian Tourism Commission
Department Planning and Local Government
Department Environment and Heritage
DTEI

17 Acknowledgements

This Development Report has been submitted by Hames Sharley in association with the following organisations:

- Tonkin Engineering;
- Vivienne Wood & Associates;
- Aspex Building Designers;
- Perrott Lyon Mathieson Architects;
- Carol Frank-Mas & Associates;
- Jensen Planning + Design;
- Murray F Young & associates; and
- Hyder Consulting.

APPENDIX A

Relevant Figures

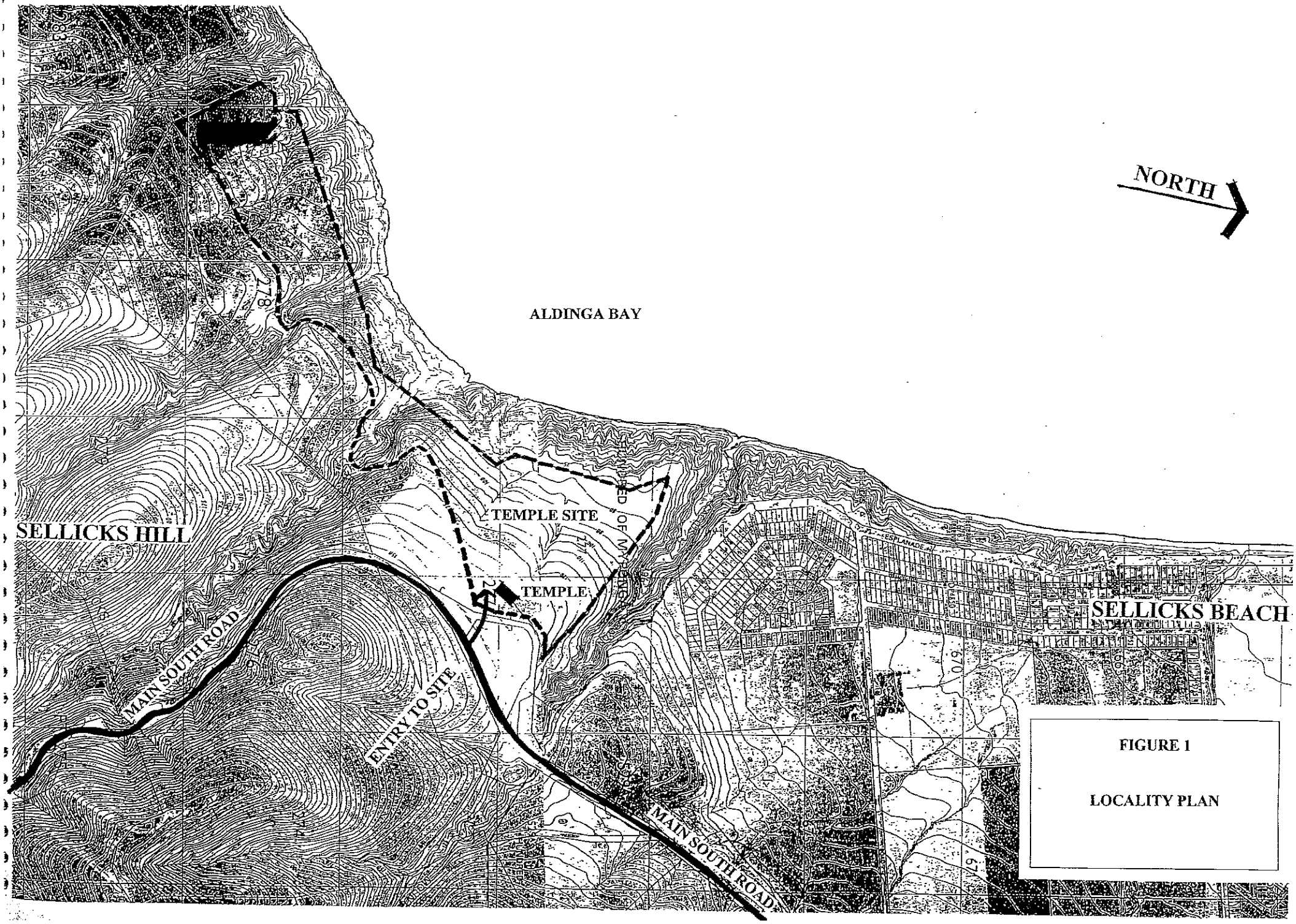
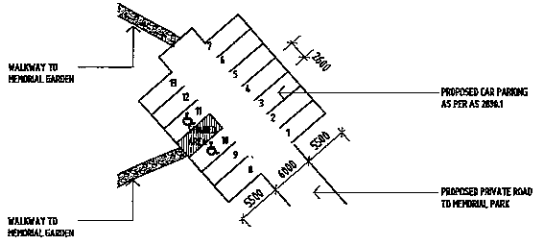


FIGURE 1

LOCALITY PLAN



CAR PARKING PLAN

SCALE 1:500

PROPOSED NAN HAI PU TUO TEMPLE

OVERALL SITE PLAN

SCALE 1:1000

REVISIONS

DATE	REV	DESCRIPTION	BY

residential design
commercial design
industrial design
project managers

aspex

81 KING WILLIAM STREET
KENT TOWN SA 5067
P: 08 8130 3700 F: 08 8132 1109
E: admin@aspexdesigners.com.au

PROJECT:
PROPOSED NAN HAI PU TUO TEMPLE

SITE ADDRESS:
lot 9
SELLICKS HILL

CLIENT:
CRD PROJECTS PTY LTD

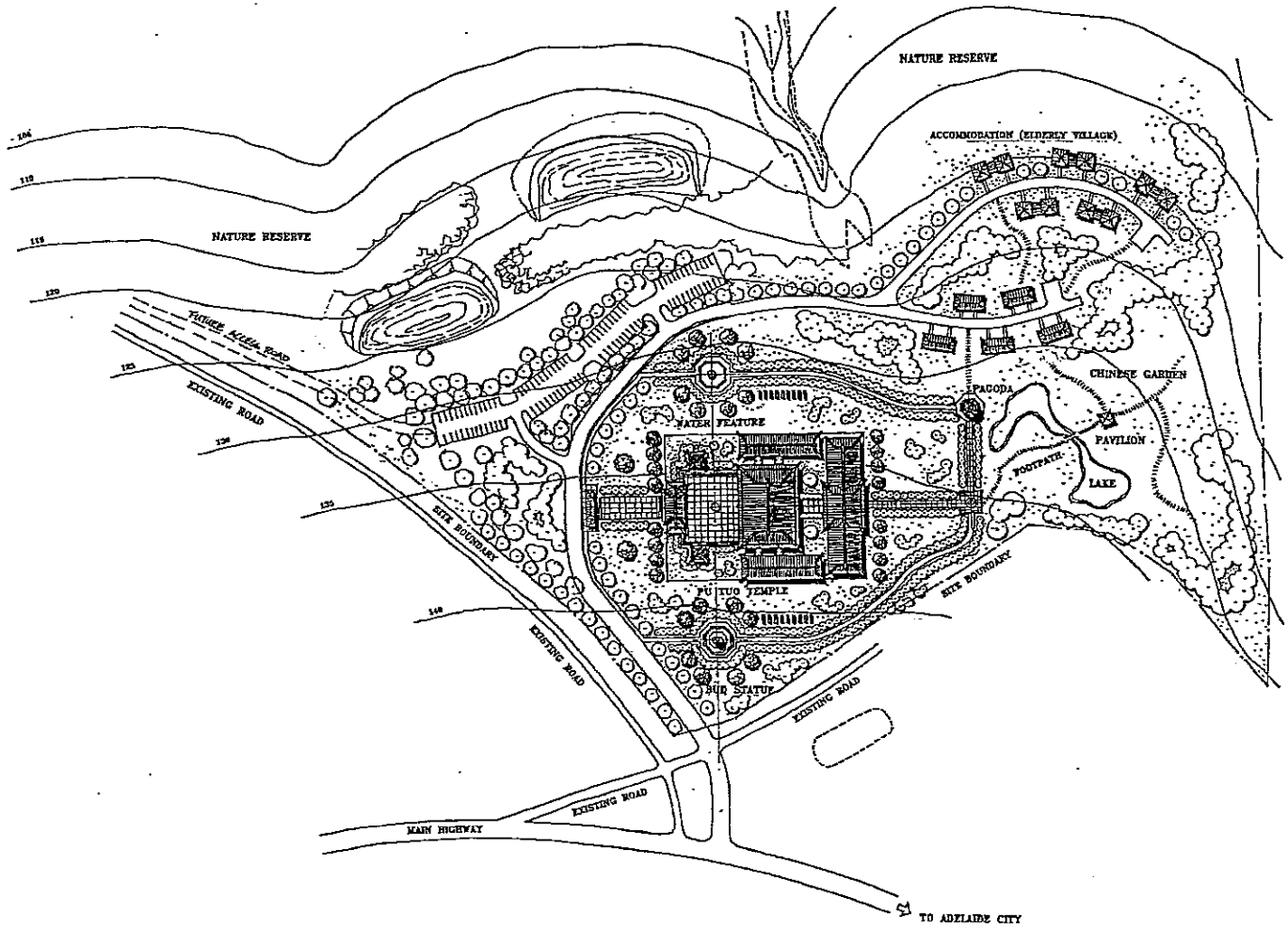
DRAWING TITLE:
OVERALL SITE PLAN

DRAWING NUMBER: PD01 A

DRAWN: GZ DATE: 04.2010

SCALE: 1:1000 JOB NO: CHE 2271

CONTRACTORS NOTE:
CONTRACTORS ARE TO VERIFY ALL DIMENSIONS ON-SITE BEFORE COMMENCING ANY WORK. FIGURED DIMENSIONS SHALL TAKE PREFERENCE OVER SCALED DIMENSIONS, AND ANY DISCREPANCY SHALL BE REPORTED TO THE DESIGNER IMMEDIATELY.

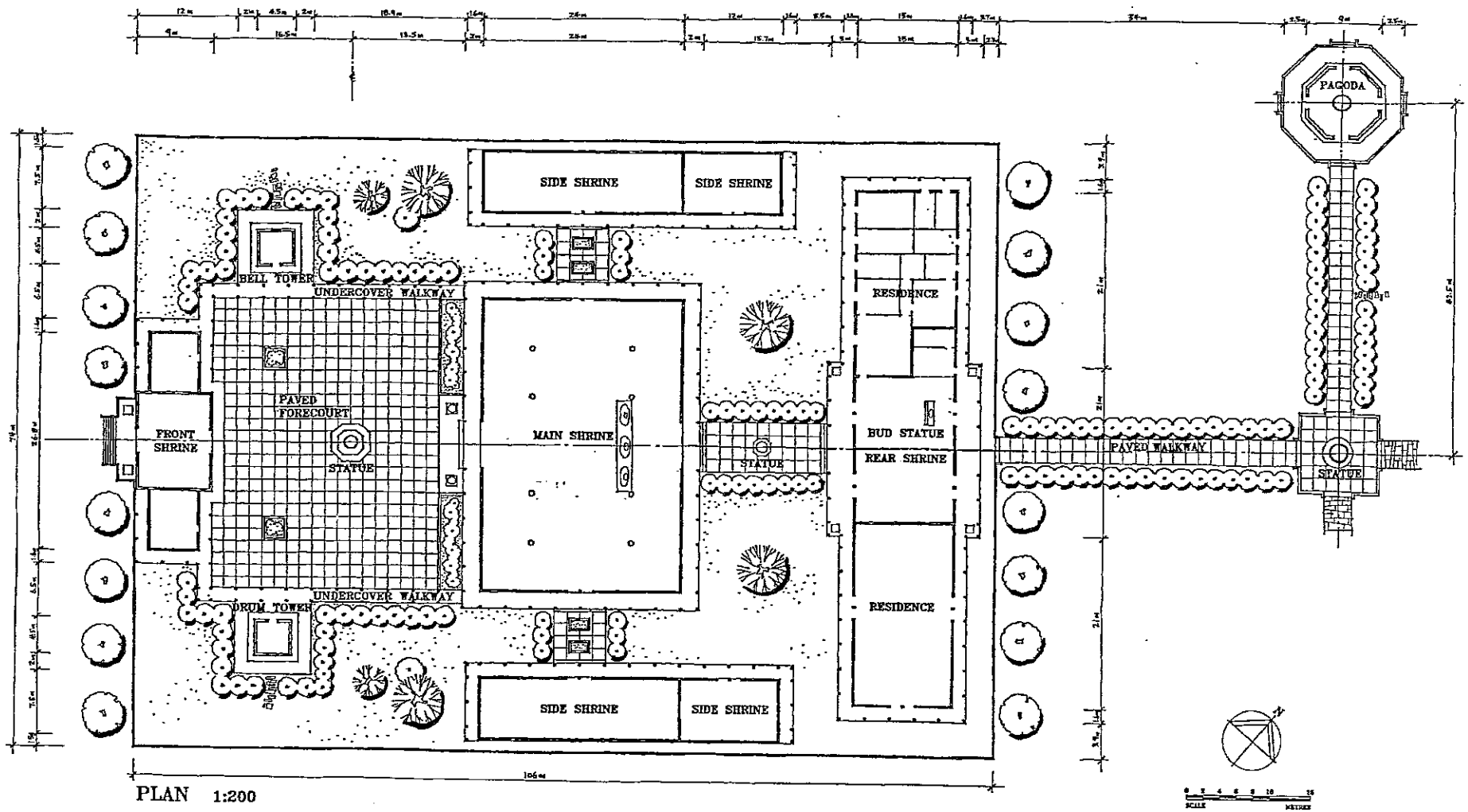


PROPOSED NAN HAI PU TUO TEMPLE

FIGURE 3

TEMPLE SITE

PERROTT LYON MATHIESON



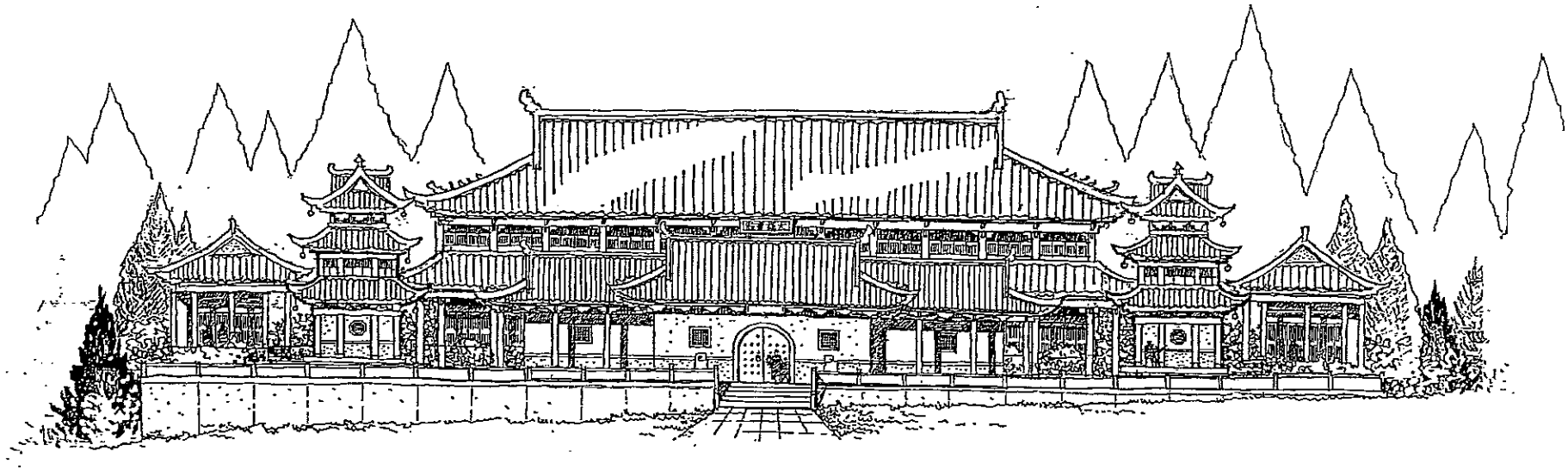
PLAN 1:200

PROPOSED NAN HAI PU TUO TEMPLE

FIGURE 4

TEMPLE LAYOUT

PERROTT LYON MATHIESON



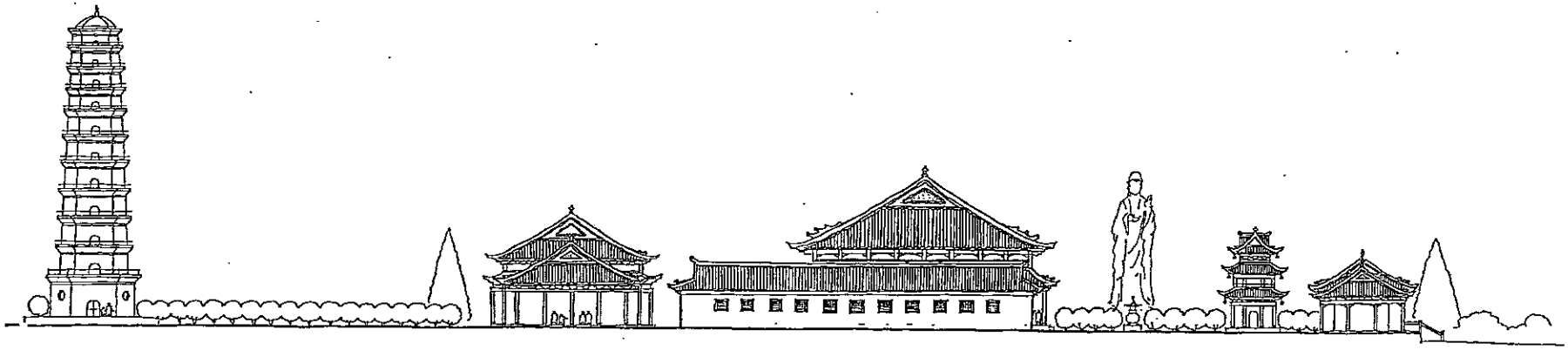
FRONT ELEVATION (SOUTH--WEST) 1:100

PROPOSED NAN HAI PU TUO TEMPLE

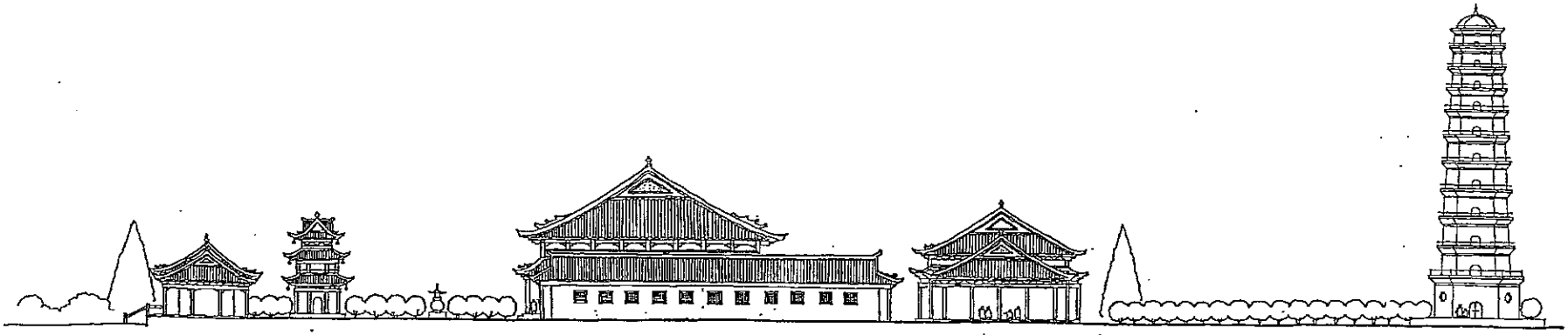
FIGURE 5

FRONT ELEVATION

P E R R O T T L Y O N M A T H I E S O N



SIDE ELEVATION (NORTH--WEST) 1:200



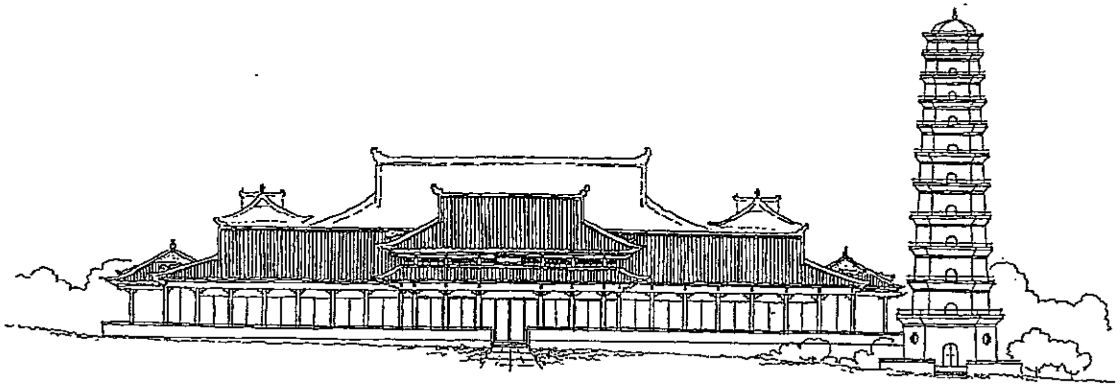
SIDE ELEVATION (SOUTH--EAST) 1:200

PROPOSED NAN HAI PU TUO TEMPLE

FIGURE 6

SIDE ELEVATION

P E R R O T T L Y O N M A T H I E S O N



NORTH / EAST ELEVATION 1:200

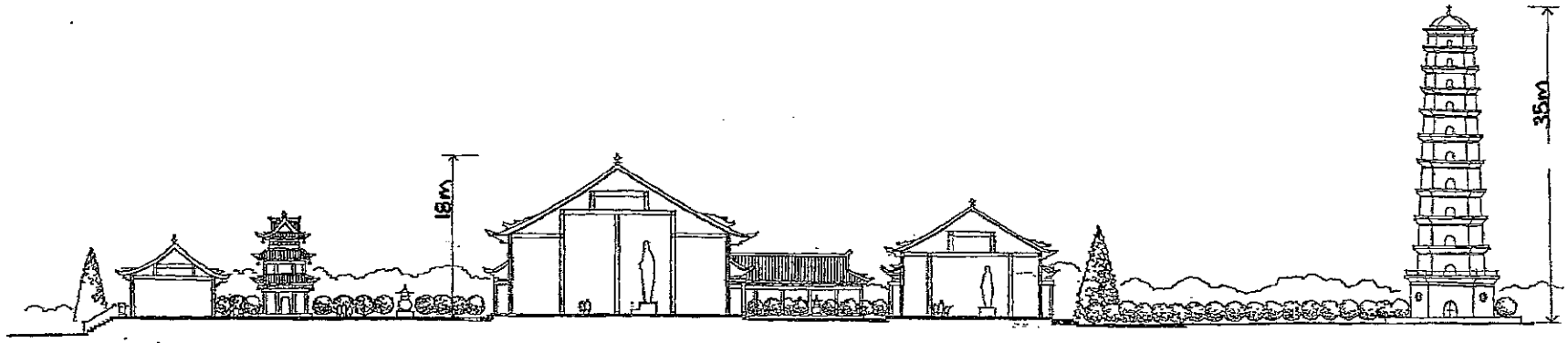
FIGURE 7

NORTH EAST ELEVATION

PROPOSED NAN HAI PU TUO TEMPLE

P E R R O T T L Y O N M A T H I E S O N

SCALE	DATE
1:200	[illegible]
JOB No.	DWG. No.
4016	[illegible]



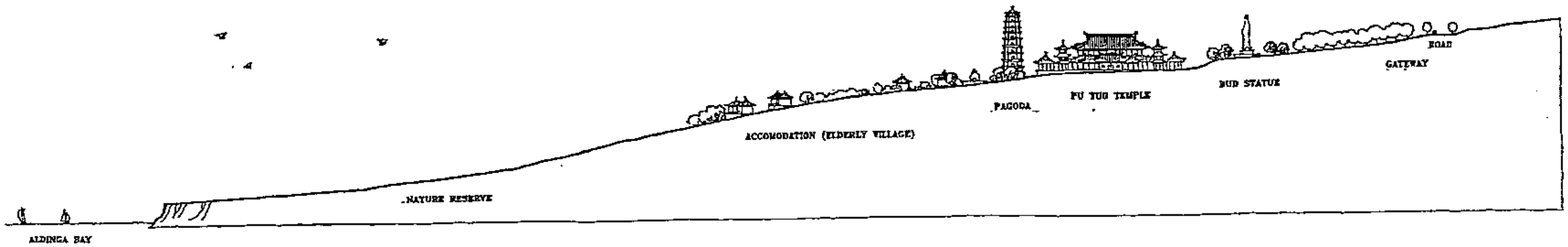
LONGITUDINAL SECTION 1:200

PROPOSED NAN HAI PU TUO TEMPLE

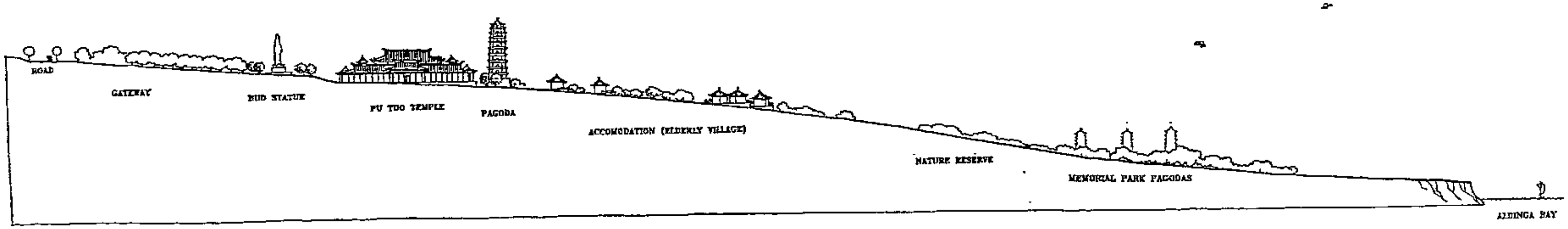
FIGURE 8

LONGITUDINAL SECTION

P E R R O T T L Y O N M A T H I E S O N



SECTION A–A 1:1600



SECTION B–B

0 10 20 30 40 50 75 100
SCALE METRES

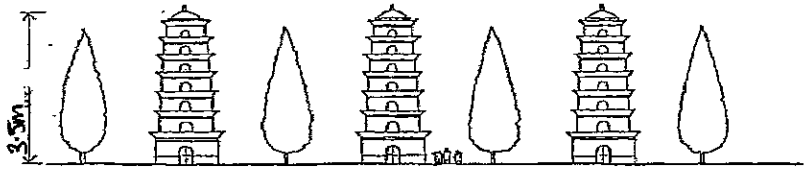
PROPOSED NAN HAI PU TUO TEMPLE

FIGURE 9

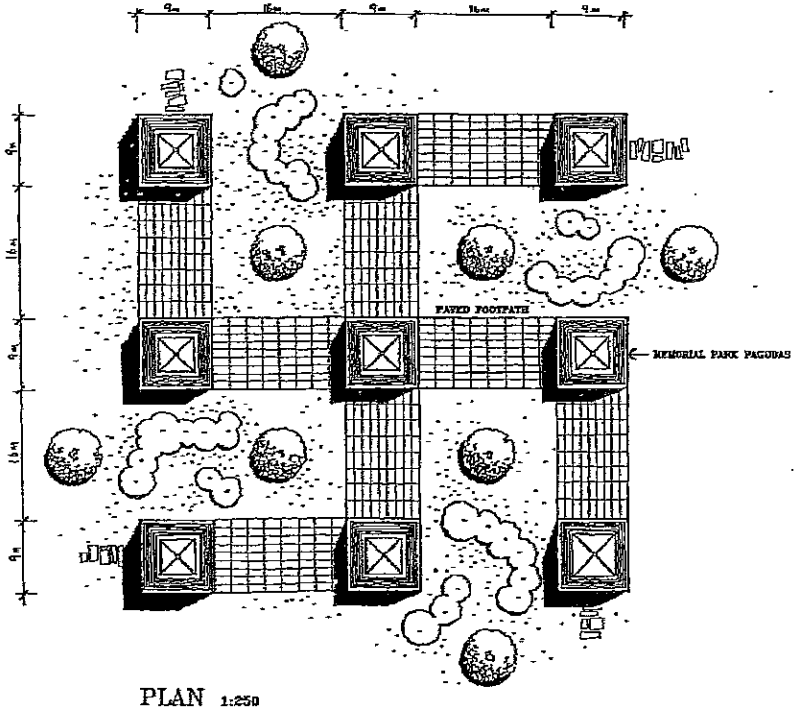
SECTIONS

P E R R O T T L Y O N M A T H I E S O N

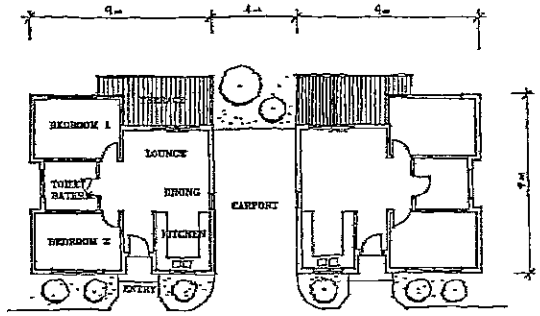
SCALE:	DATE:
1:1600	[illegible]
JOB No.	DWG. No.
4016	[illegible]



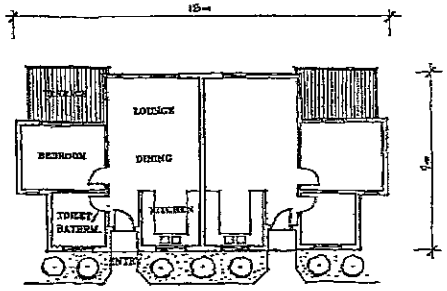
ELEVATION 1:250



PLAN 1:250



ACCOMMODATION TYPE 'A' PLAN 1:100
(TWO BEDROOM)



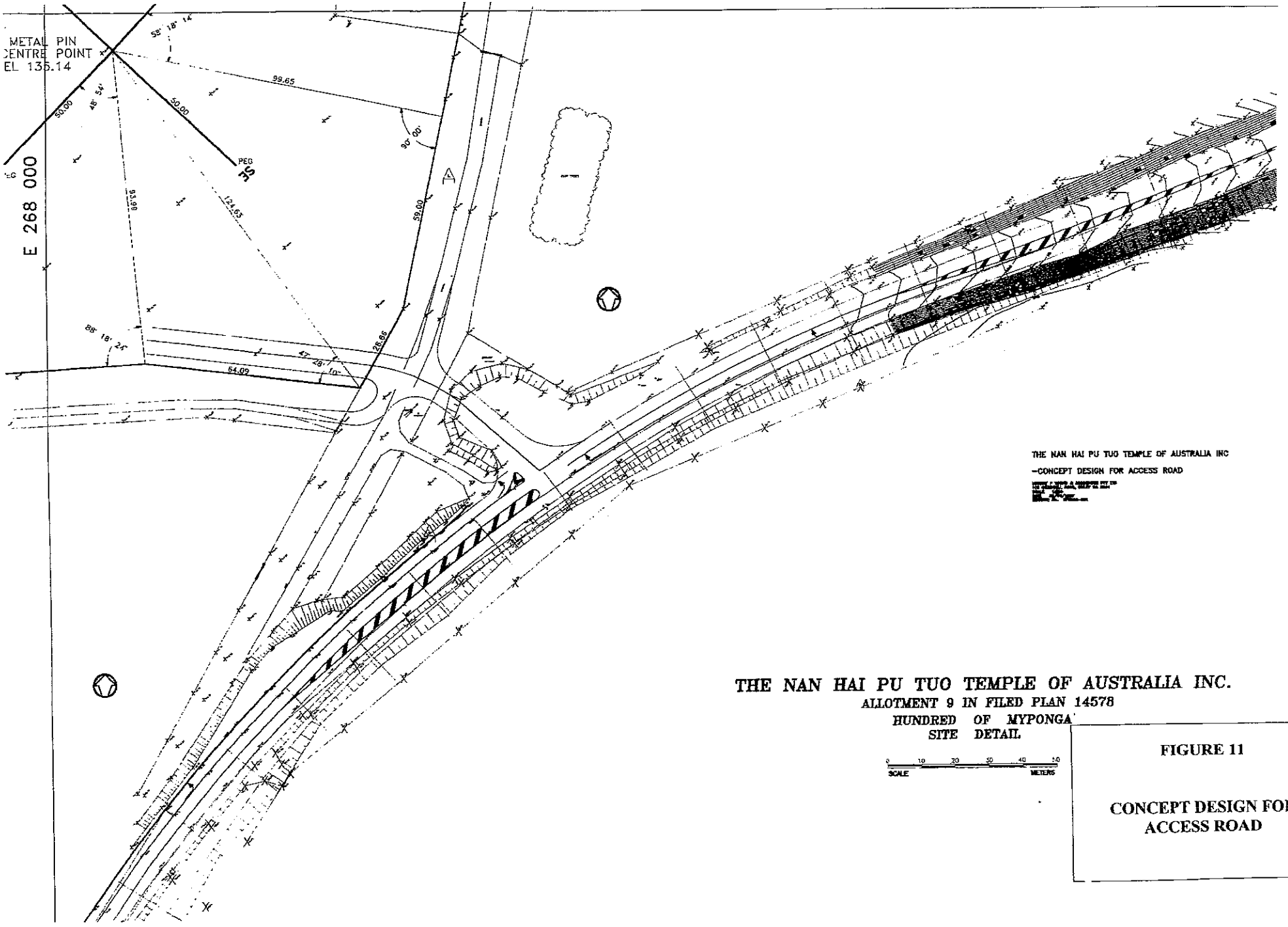
ACCOMMODATION TYPE 'B' PLAN 1:100
(ONE BEDROOM)

PROPOSED NAN HAI PU TUO TEMPLE

FIGURE 10

MEMORIAL PARK AND ACCOMMODATION LAYOUT

P E R R O T T L Y O N M A T H I E S O N



THE NAN HAI PU TUO TEMPLE OF AUSTRALIA INC.

ALLOTMENT 9 IN FILED PLAN 14578

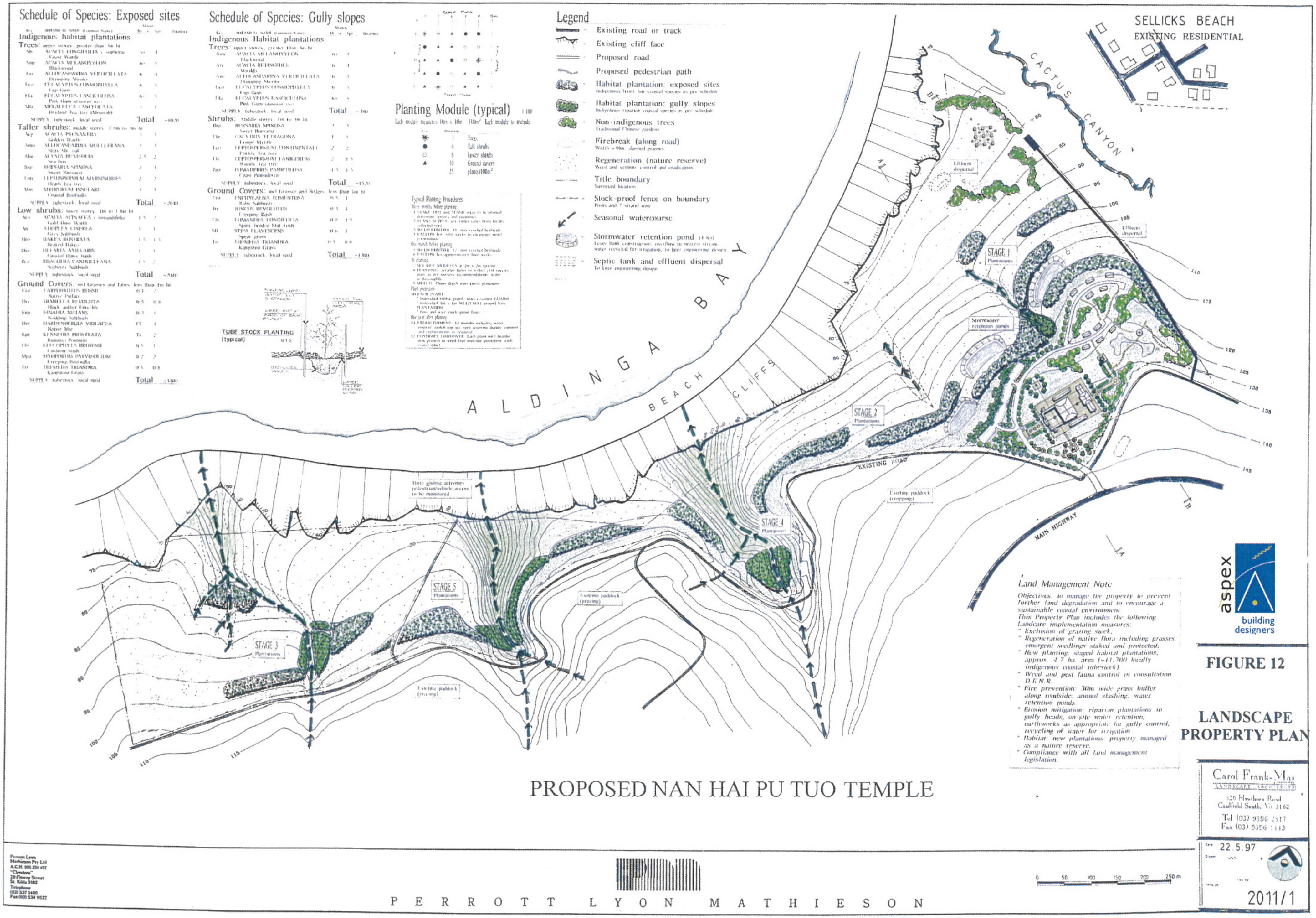
HUNDRED OF MYPONGA

SITE DETAIL

SCALE 0 10 20 30 40 50 METERS

FIGURE 11

CONCEPT DESIGN FOR ACCESS ROAD



Schedule of Species: Exposed sites
Indigenous habitat plantations
Trees:
Taller shrubs:
Low shrubs:
Ground Covers:
Schedule of Species: Gully slopes
Indigenous Habitat plantations
Trees:
Shrubs:
Ground Covers:
Planting Module (typical)
TUBE STOCK PLANTING (typical)
Legend
Existing road or track
Existing cliff face
Proposed road
Proposed pedestrian path
Habitat plantation: exposed sites
Habitat plantation: gully slopes
Non-indigenous trees
Traditional Chinese gardens
Firebreak (along road)
Regeneration (nature reserve)
Title boundary
Surveyed location
Stock-proof fence on boundary
Seasonal watercourse
Stormwater retention pond
Septic tank and effluent dispersal
To later engineering design
SELLICKS BEACH
EXISTING RESIDENTIAL
CACTUS CANYON
ALDINGA BAY
BEACH CLIFFS
STAGE 1
STAGE 2
STAGE 3
STAGE 4
STAGE 5
EXISTING ROAD
MAIN HIGHWAY
Land Management Note
Objectives: to manage the property to prevent further land degradation and to encourage a sustainable coastal environment.
This Property Plan includes the following Landcare implementation measures:
* Exclusion of grazing stock;
* Regeneration of native flora including grasses emergent seedlings staked and protected;
* New planting: staged habitat plantations, approx. 4.7 ha. area (~11,700 locally indigenous coastal tubestock).
* Weed and pest fauna control in consultation D.E.N.R.
* Fire prevention: 30m wide grass buffer along roadside; annual slashing; water retention ponds.
* Erosion mitigation: riparian plantations in gully heads; on site water retention; earthworks as appropriate for gully control; recycling of water for irrigation.
* Habitat: new plantations: property managed as a nature reserve.
* Compliance with all land management legislation.
aspex
building designers
FIGURE 12
LANDSCAPE PROPERTY PLAN
Carol Frank-Mas
LANDSCAPE ARCHITECTS
526 Hawthorn Road
Caulfield South, Vic 3162
Tel (03) 9596 2517
Fax (03) 9596 1113
22.5.97
2011/1
0 50 100 150 200 250 m
PROPOSED NAN HAI PU TUO TEMPLE
PERROTT LYON MATHIESON

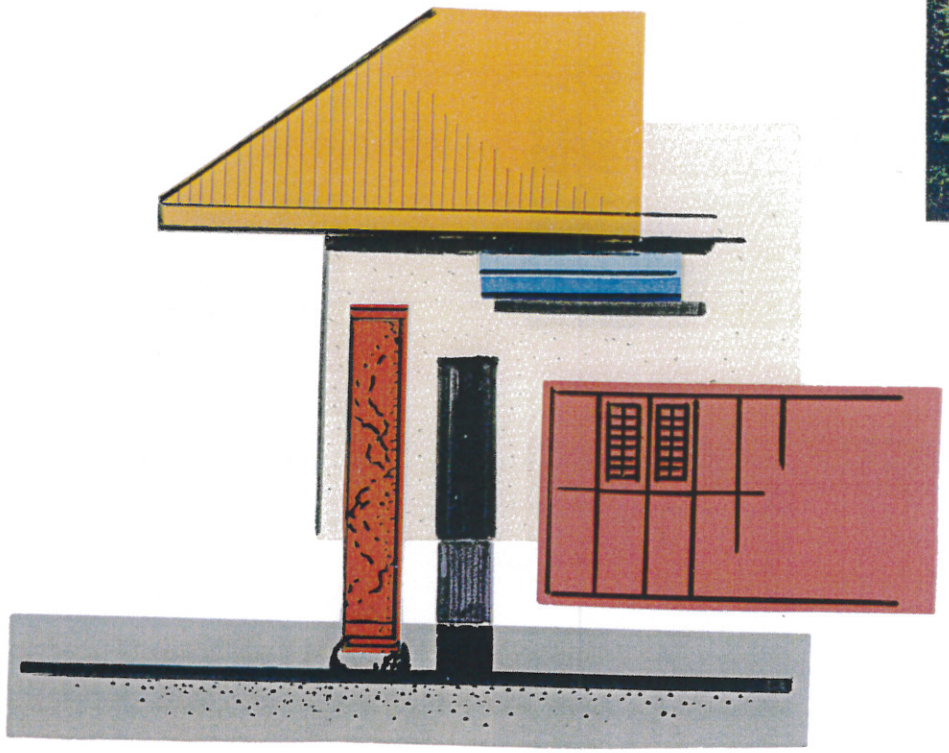


FIGURE 13

COLOUR SCHEMES FOR PROPOSED TEMPLE

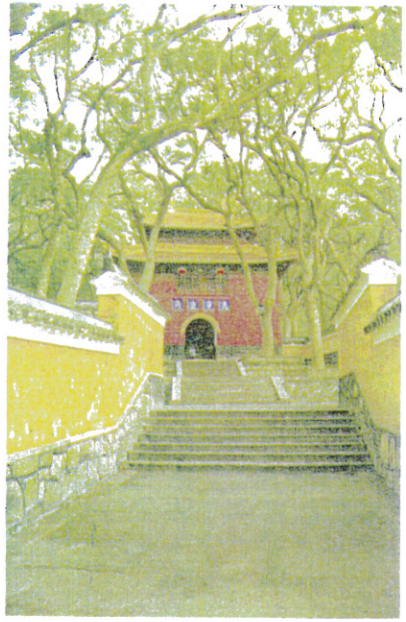


FIGURE 14

COLOUR COMPOSITION OF THE EXISTING LANDSCAPE IN SPRING AND AUTUMN

FIGURE 15

COLOUR COMPOSITION AND EXISTING LANDSCAPE

ADELAIDE
PERTH
SYDNEY
BEIJING

NAN HAI PU TUO TEMPLE CONCEPT DESIGN

SITE PLAN FIGURE 16 REV.A June 2010 31164 SK 00

Hames Sharley

NAN HAI PU TUO TEMPLE CONCEPT DESIGN

VIEW 1 - BEFORE

FIGURE 17

REV.A June 2010

31164

SK 01

ADELAIDE
PERTH
SYDNEY
BEIJING

Hames Sharley

NAN HAI PU TUO TEMPLE CONCEPT DESIGN

VIEW 1 - AFTER

FIGURE 18

REV.A June 2010

31164

SK 02

ADELAIDE
PERTH
SYDNEY
BEIJING

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NAN HAI PU TUO TEMPLE CONCEPT DESIGN

VIEW 2 - BEFORE

FIGURE 19

REV.A June 2010

31164

SK 03

ADELAIDE
PERTH
SYDNEY
BEIJING

Hames Sharley

NAN HAI PU TUO TEMPLE CONCEPT DESIGN

VIEW 2 - AFTER

FIGURE 20

REV.A June 2010

31164

SK 04

ADELAIDE
PERTH
SYDNEY
BEIJING

Hames Sharley

NAN HAI PU TUO TEMPLE CONCEPT DESIGN

VIEW 3- BEFORE

FIGURE 21

REV.A June 2010

31164

SK 05

ADELAIDE
PERTH
SYDNEY
BEIJING

Hames Sharley

NAN HAI PU TUO TEMPLE CONCEPT DESIGN

VIEW 3- AFTER

FIGURE 22

REV.A June 2010

31164

SK06

ADELAIDE
PERTH
SYDNEY
BEIJING

Hames Sharley