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The Sands Torquay Resort

Operational Environmental Management Plan

July 2011



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Signoff

I, as the Managing Director, Manager or Secretary of 'The Sands Torquay' Resort, have read this Operational Environmental Management Plan and agree to undertake works and ensure all employees and subcontractors comply with this Operational Environmental Management Plan.

Signature:

Name:

Position at The Sands Torquay:

Date:



1. Introduction

1.1 Background

GHD Pty Ltd (GHD) has prepared this Operational Environmental Management Plan ('OEMP') for The Sands Torquay Resort (The Sands). This OEMP applies to the land and associated activities owned by The Sands Torquay Resort Golf Course and Residential Development ('the site') located in Torquay, Victoria.

The site is approximately 20 km south of Geelong located off 'The Esplanade' Road, on the eastern side of Torquay on the Victorian Surf Coast. The site covers approximately 170 ha of land and consists of 400 residential homes (consisting of both permanent residences and holiday homes) and 200 medium density units. The golf course is an 18 - hole "Stuart Appleby" designed private member course with Clubhouse and Recreation Centre and covers approximately 50 ha of the site. The Site Plan is shown in Appendix A. PGA LINKS Management Pty Ltd was contracted to manage the development including pre-opening consulting and technical services and the post-opening management of the golf course and clubhouse, recreational facilities, body corporate management and estate management.

GHD was engaged by The Sands to amend the original Operational Environmental Management Plan (OEMP). The original OEMP was developed in 2004 when the site construction had been completed. The original OEMP was based on an Environmental Management Plan (EMP) (Ecology Australia, 2001) for protection of the site during construction. The EMP, directed by requirements of an agreement between the Surf Coast Shire and Golden Wood Pty Ltd and Patrick Geoffrey Handbury & Helen Patricia Handbury (*Owner*) was to "ensure protection and maintenance of the environment and physical assets of the Torquay Sands development and sensitive surrounding environments". The Owner is required to the satisfaction of the Surf Coast Shire to protect the natural environment by way of:

Procedures and mechanisms establishing responsibility for and funding of monitoring and maintenance of the EMP to ensure protection of the natural environment following the completion of the development (Clause 16.1)."



1.2 Objectives

This revised OEMP is designed to fulfill the ongoing management requirements associated with the environmental effects of the operation of the golf course and surrounding residential area.

The main objectives of this OEMP are to:

- ▶ Reduce and monitor flow-on effects from The Sands development to surrounding ecologically sensitive ecosystems;
- ▶ Restrict pollution and nutrient loading of surface and ground waters as a result of operations within the golf course and residential development;
- ▶ Reduce and eliminate threatening weed species from the golf course and residential development and their spread to external environments, particularly ecologically sensitive habitats;
- ▶ Actively revegetate environments within the development with native and indigenous species;
- ▶ Create and maintain buffer zones between the golf course and any environmentally sensitive areas to reduce water runoff and recreational access;
- ▶ Control disturbance to native flora and fauna from humans and domestic and feral animals; and
- ▶ Effectively control erosion, siltation, turbidity and pollutants including chemical and fuel spills.

This OEMP outlines specific environmental management plans (Plans) which identify specific commitments, actions and monitoring requirements to ensure environmental protection. The OEMP is a live document that will be regularly reviewed. This document will be formally reviewed and amended, if applicable, every three (3) years in June, commencing 2011. The Sands will provide a tri-annual report to Surf Coast Shire commencing June 2012.

1.2.1 Funding

The funding of this OEMP will be provided by the Body Corporate. Body Corporate fees are levied pursuant to the Regulations, and are payable quarterly in advance by the land owners in The Sands. A budget for each body corporate (Plan of Subdivision) within the subdivision will be struck and approved, with future budgeting requirements approved at the Annual General Meeting of the Body Corporate. From these contributions, Allocations are made for maintaining The Sands, along with establishment of sinking funds for capital works/improvements and other requirements.

From time to time, special levies will be struck and charged to Members, pursuant to additional works and requirements that may be necessary to maintain The Sand, and environmental areas and reserves, as detailed in Section 173 Agreement dated May 2001 and this OEMP.

This provides the necessary funding for all programmed works through the collection of body corporate fees and for any unforeseen or rehabilitation/rectification works required in the supervision and management of the OEMP criteria.



2. Site Location and Surrounding Environments

2.1 Geology and Vegetation

The complex is located immediately adjacent to several ecologically sensitive environments including the Karaaf Wetlands found to the east of the site and the Coastal Alkaline Shrub and the natural Foreshore Wetlands located on the southern boundary. Some remnant indigenous vegetation occurs with coastal shrubland and grassland found within the dunal system and an adjacent large substantially intact saltmarsh (Karaaf Wetlands) (Carr et al., 2001).

The site is part of the Otway Plain Bioregion characterised by low relief and Tertiary and Quaternary sediments as well as volcanic geology. The climate is temperate with warm, dry summers and cool, wet winters. The topography of the area is generally flat to gently undulating (Carr et al., 2001).

Most of the site is cleared agricultural land previously devoted to grazing and cropping. Appendix A provides a site map.

2.2 Karaaf Wetland

The Karaaf Wetland is located adjacent to the site and north of the former landfill site along the eastern boundary of the development. The wetland forms a continuous band running along the estuary to the west of Breamlea. Prior to residential development of the area the wetland was subjected to natural tidal inundation. This was interrupted by the development of 'The Esplanade' (road accessing Point Impossible Road). The development at The Sands created an artificial waterway that feeds the Wetland.

The wetland is significant for its vegetation communities and sub-communities and contains both flora and fauna of high biological significance. The wetland contains both wet and dry saltmarsh and is particularly significant because of the adjacent *Poa* grassland (*Poa poiformis*) and sand dune system. Salt-tolerant species within the wetland includes Shrubby Glasswort (*Sclerostegia arbuscula*), Beaded Glasswort (*Sarcocornia quinqueflora*) and Sea Rush (*Juncus kraussii*). Long-fruit Water-mat (*Lepilaena cylindrocarpa*) and Round-leaf Wilsonia (*Wilsonia rotundifolia*) occur rarely in Victoria and are also found within the wetland (Carr et al., 2001).

Several species that utilise the saltmarsh habitat and adjoining coastal habitat are listed under the *Japan-Australia Migratory Bird Agreement 1974* (JAMBA) and the *China-Australia Migratory Bird Agreement 1986* (CAMBA) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The saltmarsh complex is known habitat for the nationally significant Orange-bellied Parrot. Other species of importance that may inhabit the area include Pacific Gull, Hooded Plover, Pied Cormorant, Crested Tern, Eastern Curlew, Royal Spoonbill, Great Egret, Southern Giant Petrel, Red-capped Dotterel, White-fronted Chat, Striated Field Wren and Swamp Harrier (Carr et al, 2001). The nationally significant swamp skink may also occur in the area.



Careful management to reduce and / or prevent potential impacts from the development is vital to protect the wetland habitat. As the wetland is a saline environment, reducing the impacts from increased runoff and reduced salinity is important in maintaining vegetation communities. It is also important to maintain high level of surface water quality runoff that enters the wetland site.

The Wetland also holds indigenous cultural significance with Aboriginal Midden artefacts located at one site within the Wetland.

2.2.1 Possible Issues

The Surf Coast Shire *Planning Agreement 173* requires “the protection of biological values of the saltmarsh community as well as remnant indigenous shrub land on the site”. Management of the wetlands is under the control of Parks Victoria. However, The Sands is responsible for minimising environmental impacts to the area associated with the operations of the resort. Protection of significant flora and fauna within this area is an important management consideration as well as the protection of indigenous artefacts. Flora is subjected to impacts from decreased water quality entering the wetland or increased freshwater flows, damage due to human access, weeds and pests.

2.3 Dunal System

To the south of the development and wetland area is a large sand dune system and beach managed by Great Ocean Road Coastal Committee (GORCC). The dunes along this stretch are culturally significant to the Aboriginal Corporation, and are an important environmental conservation area with many remnant indigenous species including Moonah – Coast Wirilda Shrubland and Blue Tussock-grass (*Poa poiformis*). Coast Wirilda is a highly restricted and rare taxon in Victoria and largely confined to the Bellarine Peninsula (Carr et al., 2001). The beach foreshore to the south of the dune complex provides habitat for the Hooded Plover (listed under the *Flora and Fauna Guarantee Act, 1998*).

2.3.1 Possible Issues

The vegetation within the dune system has been much degraded by agricultural grazing, rabbits, weeds and human access. Despite this, the vegetation is the most intact regionally on calcareous coastal sites (Carr et al., 2001). The nationally significant Smoky Mouse has been listed as possibly occurring within the dune complex (Carr et al., 2001). The dune complex forms part of the Council Conservation Zone area (CCZ). The Sands Torquay is responsible for limiting impacts to the area due to operations of the site and coordinating management of the area with the Surf Coast Shire.

2.4 Moonah Woodlands

The Moonah-Coast Wirilda Shrubland (Coastal Moonah Woodland) is listed under the *Flora and Fauna Guarantee Act 1998* and is significant for its flora and fauna habitat values. As similar habitats in the area are scarce this community provides important habitat for locally significant mammals and supports locally to regionally significant birds.



2.4.1 Possible Issues

This vegetation community has been fragmented by clearing. Apart from the dune system, a large block occurs to the west of the development and a much smaller remnant block to the east. The vegetation has been significantly degraded but is of high significance as it is the last remaining treed remnant habitat in the area in an otherwise cleared landscape (Carr et al., 2001). The Moonah Woodland areas also form part of the Council Conservation Zones (CCZ) and are under the management of the Surf Coast Shire. However The Sands is responsible for limiting environmental impacts to the area due to operations of the resort.

2.5 Landfill

The former landfill site now forms part of the golf course in the eastern area of the resort. The Karaaf Wetland is located to the immediate north of the landfill site and one of the CCZ is located to the south. The landfill has been capped and extensive drainage network constructed. Landfill areas produce methane gas emissions which have been highlighted as potential environmental impacts by the EPA. In 2008, EPA conducted testing of landfill areas with potential for methane gas emission problems within Victoria. All landfills were assessed against three separate and independent criteria. These criteria were as follows:

- ▶ Had the landfill received waste in the last 10 years?
- ▶ Had the landfill a buffer distance less than 500 m from buildings?
- ▶ Had the landfill received significant quantities of biodegradable waste?

Any landfills meeting any of the above criteria were short-listed for Stage 2 assessment. The landfill located within the Sands Resort did not meet the above criteria so was determined as being unlikely to generate methane gas. EPA determined that further testing of methane gas emissions from this landfill is not required.

2.5.1 Possible Issues

Possible issues surrounding this area include movement or cracking of the cap resulting in degradation to surface and groundwater. Erosion from the landfill previously degraded the edges of the wetland area.

2.6 Golf Course

The golf course zone surrounds the residential development and incorporates amenity and storage lakes and constructed wetlands for water quality management and aesthetic purposes. Class C recycled water is used for irrigation of golf course areas. The use of this water is restricted to certain times and areas. Management guidelines are set out in the Recycled Water Management Plan, Geerads (2004).



2.6.1 Possible Issues

Key issues for this zone include preventing surface water runoff to surrounding sensitive environments, correct application and use of recycled water for irrigation and chemical and fertiliser use. Other issues include pest plant and animal control, maintenance of buffer zones and user related issues.

2.7 Amenity and Storage Lakes

The Amenity and Storage Lakes are located throughout the residential and golf course area. The function of these lakes is to provide water storage for irrigation use, environmental protection through improved water quality and aesthetic values throughout the development.

2.7.1 Possible Issues

Potential issues for these areas include algal blooms, decreased water quality due to surface water runoff and weed and pest problems.

2.8 Constructed Wetlands

There are several constructed wetlands that occur throughout the development. The largest wetland that is situated on the foreshore was naturally occurring and has only had minor alterations. The most important function of the wetlands is to assist in controlling water quality in the development but they also provide aesthetic attributes.

2.8.1 Possible Issues

Potential issues for these areas include algal blooms, decreased water quality due to surface water runoff and weed and pest problems.

2.9 Residential Development

The residential development zone includes all commercial and housing development and associated infrastructure. The scope of the OEMP is to address impacts that may occur from residential activities to the surrounding environment.

2.9.1 Possible Issues

Sediment and pollutant runoff to surrounding environments are the main issues concerning this zone. Other issues include domestic animal control, inappropriate species planted for amenity and landscape plantings and noise affecting residents from site activities.



3. Roles and Responsibilities

The environmental management strategy of the site is based on Roles and Responsibilities.

The roles and responsibilities of the key personal including The Sands Torquay Resort Manager, golf course staff and site contractors are outlined below.

The Sands Torquay Resort Manager responsible for ensuring the following activities are conducted at the site, and is responsible for delegating necessary tasks to golf course staff and or site contractors:

Contractor(s) and Staff

Responsible for carrying out all work consistent with ongoing management of The Sands Torquay resort with site documentation, procedures and practices including but not limited to:

- ▶ OEMP implementation;
- ▶ Monitoring and reporting of all environmental elements, incidents and concerns in appropriate format and timely manner to The Sands Torquay Resort Manager; and
- ▶ Recording and addressing corrective action in relation to complaints and non-compliances and passing information to the site The Sands Torquay Resort Manager.

This OEMP will be reviewed and updated as required, to incorporate any relevant changes as well as the results of any additional environmental auditing, monitoring or community feedback.

Site Workers

- ▶ The objectives and requirements of the site OEMP will be communicated to all individuals on site, including sub-contractors;
- ▶ All staff and contractors will receive site inductions prior to commencing work at the site;
- ▶ A record of attendance at the site inductions will be maintained;
- ▶ When necessary, environmental issues will be discussed during regular meetings; and
- ▶ From time to time, informal training may be provided to individuals responsible for implementing specific environmental protection measures at the site.

Parks Victoria

- ▶ Responsible for managing the Breamlea and Karaaf Flora Reserves.
- ▶ Liaising with The Sands to ensure water quality discharged into the Karaaf Wetlands is maintained at a quality to ensure existing saltmarsh and avifauna species protection.
- ▶ Conducting independent analysis of water quality, and flora and fauna surveys to provide information for Parks Victoria's internal management objectives, where appropriate and at the discretion of Parks Victoria.



Surf Coast Shire

- ▶ Responsible for managing Moonah Woodlands that form part of the Council Conservation Zones (CCZ).
- ▶ Liaising with The Sands to ensure vegetation and pest management control are maintained at a quality to ensure protection of the conservation significance of the Moonah Woodlands.
- ▶ Conducting independent flora and fauna surveys to provide information for Surf Coast Shire's internal management objectives, where appropriate and at the discretion of Surf Coast Shire.



4. Legislative Requirements

Legislative and other requirements must be met during ongoing management of the resort. Legislation and other requirements that are likely to be relevant to this development are summarised in Table 1.

Table 1 Legislation Likely to be Relevant to the on-going management of the resort

Legislation	Component	Section	Objectives
<i>Environment Protection Act 1970</i>	Clean water	38	Discharge or deposit of waste into waters of the State of Victoria shall at all times comply with State environment protection policy or waste management policy.
		39	A person shall not cause or permit waters to be polluted. Persons contravening this section will be guilty of an offence and liable to a penalty.
	Control of solid wastes and pollution of land	44	Discharge or deposit of waste onto land shall at all times comply with State environment protection policy.
		45	A person must not litter. Persons contravening this section will be deemed guilty of an offence and liable to a penalty.
	Control of noise	46	Emission of noise shall at all times be in accordance with State environment protection policy.
		48	Any person who emits or causes or suffers to be emitted objectionable noise within the means of the regulations shall be guilty of an offence and liable to a penalty.
	Offence of aggravated pollution	59E	A person who intentionally, recklessly or negligently pollutes the environment is guilty of an indictable offence.
Environment Protection (Residential Noise) Regulations 1997	Noise	Regulation 4	Noise from power tools and vehicles (except a vehicle moving in or out of premises) are deemed prescribed items and may not be used during prohibited times defined in the regulations.



Legislation	Component	Section	Objectives
SEPP (Air Quality Management)	Clean air	Clause 18	The emission of odorous substances or particulates which create or are likely to create objectionable conditions for the public must be controlled (this includes dust).
SEPP (Waters of Victoria)	Clean Water	Clause 11	Water quality objectives and indicators are prescribed in Schedule A of the SEPP.
		Clause 37	Businesses which use or store environmentally hazardous substances (e.g. petroleum products) shall develop and maintain contingency plans for the avoidance and control of spills, leakages or breakdowns.
		Clause 38	Measures shall be undertaken to ensure that no chemicals, oil, grease, oily substances or other hazardous materials are spilled into surface waters.
	Groundwater	Clause 45	Groundwater quality shall be maintained in accordance with the SEPP (Groundwaters of Victoria).
	Land disturbance and erosion	Clause 56	Construction activities need to be managed to minimise land disturbance, soil erosion and the discharge of sediments and other pollutants to surface waters.

Other acts, regulations and policies not contained in the above table that may be relevant to this project are listed below.

A full list of acts may be accessed through the website of Australasian Legal Information Institute, a joint facility of UTS and UNSW law faculties:

<http://www.austlii.edu.au>

Acts - Federal

Aboriginal and Torres Strait Islander Heritage Protection Act 1984

Environment Protection and Biodiversity Conservation Act 1999

National Environment Protection Council Act 1994

National Greenhouse and Energy Reporting Act 2007

Ozone Protection and Synthetic Greenhouse Gas Management Act 1989



Acts - State

Building Act 1993

Catchment and Land Protection Act 1994

Coastal Management Act 1995

Dangerous Goods Act 1985

Environment Effects Act 1978

Environment Protection Act 1970

Flora and Fauna Guarantee Act 1988

Fisheries Act 1995

Forest Act 1958

Health Act 1958

Heritage Act 1995

Heritage Rivers Act 1992

Local Government Act 1989

National Parks Act 1975

Occupational Health & Safety Act 2004

Planning and Environment Act 1987

Plant Health and Plant Products Act 1995

Pollution of Waters by Oil and Noxious Substances Act 1986

Safe Drinking Water Act 2003

Safety on Public Land Act 2004

Transport Act 1983

Victorian Energy Efficiency Target Act 2006

Water Act 1989

Water Industry Act 1994

Wildlife Act 1975

Regulations

Aboriginal Heritage Regulations 2007

Dangerous Goods (Explosives) Regulations 2000

Dangerous Goods (Storage and Handling) Regulations 2000

Environment Protection (Environment & Resource Efficiency Plans) Regulations 2007

Environment Protection (Fees) Regulations 2001



Environment Protection (residential Noise) Regulations 2008

Environment Protection (Scheduled premises and Exemptions) Regulations 2007

Environment Protection (Vehicle Emissions) Regulations 2003

Occupational Health and Safety Regulations 2007

Pollution of Waters by Oil and Noxious Substances Regulations 2002

Water Industry Regulations 1995

Policies

ANZECC (2000). Australian Guidelines for Water Quality, National Water Quality Management Strategy, Chapter 3.

Environment Protection (Industrial Waste Resource) Regulations 2009

State environment protection policy (Air Quality Management)

State environment protection policy (Ambient Air Quality)

State environment protection policy (Control of noise from Commerce, industry and Trade)

State Environment Planning Policy Framework (Section 15.01-2 - Catchment Planning and Management)

State environment protection policy (Prevention and Management of Contamination of Land)

State environment protection policy (2003), Waters of Victoria

State environment protection policy (Groundwaters of Victoria)

4.1.1 Relevant Standards, Codes of Practise and Guidelines

Relevant current Australian Standards will apply to the project and are given in Section 5 of this OEMP.



5. Ongoing Management Program

5.1 Structure Overview

The following environmental management procedures identify The Sands Torquay Resort Manager obligations in regard to the key protection requirements to mitigate and minimise potential environmental impacts of the ongoing management of the development.

The Sands Torquay Resort Manager and Contractors shall comply with these environmental management measures. Specific commitments, actions and conditions necessary to ensure that the environmental protection requirements are managed effectively have been identified.

Previous management strategies for specific elements such as weed management and the use of recycled water have already been developed and may be referred to within management guidelines.

The specific environmental management plans provided in this section are as follows:

- ▶ Plan 1: Water Quality; Groundwater, Surface Water and Stormwater Drainage.
- ▶ Plan 2: Recycled Water.
- ▶ Plan 3: Native Flora and Fauna Management.
- ▶ Plan 4: Cultural Heritage.
- ▶ Plan 5: Chemical and Fuel Management.
- ▶ Plan 6: Noise Management.
- ▶ Plan 7: Fire Management.

5.2 Sites

Management of the Karaaf Wetland is under the control of Parks Victoria and management of the Council Conservation Zones is under the control of the Surf Coast Shire. However, the Sands Torquay Resort Manager is responsible for limiting environmental impacts to these areas due to operations of the resort.

Where appropriate, a coordinated approach between The Sands Torquay Resort Manager, Parks Victoria and Surf Coast Shire will add value to the assessment of surface water quality, flora and fauna, weed and pest management and user-related issue. This coordinated approach will allow a concerted approach to implement monitoring and control procedures across the golf course development and ecologically sensitive areas. Appendix B provides a table with sites for each management zone and the relevant monitoring elements that correspond to each site.

- ▶ Three sites have been chosen (S1, S3 & S6) for surface water quality monitoring within the Karaaf Wetland. Six sites have been included for other monitoring elements such as weed management and flora and fauna surveys.
- ▶ Four sites have been chosen within the Council Conservation Zones (CCZ) for monitoring purposes. Two sites within the larger Moonah Woodland Reserve and one site in each of the CCZ areas located east and west of the main reserve.



Groundwater monitoring will occur in three bores:

- ▶ GW2 Bore;
- ▶ GW3 Bore; and
- ▶ Amenity Lakes Bore (GW AL5).

Water quality monitoring to register entry and exit point surface water quality for the Amenity Lake sites will occur in:

- ▶ AL1 (upstream); and
- ▶ AL5 (downstream).

Monitoring of surface water quality within the Storage lakes will occur in:

- ▶ Storage Lake 1 (SL1) – Located between The Sands Boulevard and the 17th Green; and
- ▶ Storage Lake 2 (SL2) – Located between Dornoch Link and the Karaaf Wetlands.

Monitoring of water quality within the constructed wetland sites will include:

- ▶ Wetland 1 (WL1) - Located on the foreshore.

5.3 Plan 1: Water Quality: Groundwater, Surface water and Stormwater drainage

5.3.1 Surface Water Management

All golf course drainage passes through constructed wetlands to the storage and amenity lakes. Water is then pumped to areas for irrigation of the golf course when recycled water is not being utilised. Water from the amenity lakes is harvested for use in the storage lakes system when excess water is available. Stormwater is discharged into wetlands located throughout the site for treatment then discharged into the amenity or storage lakes.

Prevention of surface water runoff and maintaining water quality, including correct turf management practices to ensure the prevention of nutrient enrichment and pollution of surface waters and drainage into adjoining sensitive environments, is an important management issue. Soil erosion and increased siltation of sensitive wetlands may also be a consideration. The protection of the Karaaf Wetland from freshwater inputs is of particular concern.

5.3.2 Groundwater Management

Management strategies for groundwater are aimed to ensure the protection of groundwater quality from contamination by nutrients and leachates. Possible pollutant sources include artificial watering regimes, recycled water used for irrigation and leachate from the old landfill site.

5.3.3 Objectives

- ▶ Protect Karaaf Wetlands from increased freshwater inputs and decreased surface water quality.
- ▶ Prevent pollution of sensitive environments due to reduced surface water quality runoff.



- ▶ Maintain groundwater quality.
- ▶ Prevention of increased sediment loads into water bodies.

5.3.4 Controls

Table 2 outlines management requirements.



Table 2 Requirements for control of water quality; groundwater, surface water and stormwater drainage

General Requirement	Item	Specific Requirements	Responsibility
Control drainage and runoff within the site to maintain surface water quality	2.1	Ensure water quality within the site lakes are within SEPP / ANZECC water quality parameters (<i>see table 4.1 for parameters to be measured</i>)	The Sands Torquay Resort Manager
	2.2	Monitoring shall be carried out at locations specified in <i>section 5.2 and Appendix B</i> . Coordination will occur between The Sands, Parks Victoria and Surf Coast Shire for monitoring of water parameters within the Karaaf Wetland and Council Conservation Zones	The Sands Torquay Resort Manager
	2.3	Monitoring shall be carried out according to frequencies specified in <i>Appendix C</i> .	The Sands Torquay Resort Manager
	2.4	Infrastructure i.e. drains, diversion channels, traps and structures that manage flow runoff into site lakes will be maintained and inspected regularly	The Sands Torquay Resort Manager
	2.5	Grass filtration and / or wetland treatment and lake storage systems will be maintained and managed so that no discharge of surface water occurs from any part of the development without being first processed through these areas.	The Sands Torquay Resort Manager
	3.6	Aquatic vegetation within the site lakes will be maintained to assist with maintaining water quality	The Sands Torquay Resort Manager
	2.7	A suitably qualified specialist will be engaged to conduct a macroinvertebrate survey of water bodies within the development to determine the health of the aquatic ecosystems. This will occur once every two years.	The Sands Torquay Resort Manager
	2.8	The use of fertilisers within the site will be kept to a minimum	The Sands Torquay Resort Manager
Maintain a high level of water quality in the Karaaf Wetlands	2.9	Spills from the main recycled water irrigation system to Karaaf Wetland will be prevented at all times through regular monitoring of infrastructure and correct use of recycled water for irrigation.	The Sands Torquay Resort Manager
Prevent increased sediment loads to water bodies due to erosion	2.10	Sediment retention structures will be monitored following rain events and maintained as required:	The Sands Torquay Resort Manager



General Requirement	Item	Specific Requirements	Responsibility
		<p>Sediment captured in retention structures will be cleaned out when captured sediment has diminished the capacity of the structure by a third or whenever the sediment has built up to a point where it is less than 500 mm below the spillway crest, whichever occurs earlier.</p> <p>When de-silting sediment retention structures, the sediment will not be stockpiled next to, up-slope or down-slope of the structure from which it was removed.</p> <p>Following rain events, all retention basins will be inspected and reinstated to function as designed within two (2) days of cessation of heavy rain events. In the event of rain continuing, all efforts will be afforded to prevent untreated runoff from the Site discharging both directly and indirectly into any surrounding waterway and / or drainage network.</p>	
	2.11	Vegetation will be established and maintained in and adjacent to drainage lines where practicable	The Sands Torquay Resort Manager
	2.12	Vehicles will be kept to well-defined internal roads, where possible.	The Sands Torquay Resort Manager
	2.13	Employ stabilisation methods (temporary and permanent) such as matting, grassing, mulch and revegetation as well as rock armouring, where required	The Sands Torquay Resort Manager
	2.14	Roughen surface of exposed soil to decrease erosion by reducing the velocity of run-off and increasing infiltration and to aid the establishment of vegetation	The Sands Torquay Resort Manager
Maintain proper reporting and accurate records of water quality results	2.15	Maintain "Chain of Custody" for water quality samples, collected in a folder located on site	The Sands Torquay Resort Manager
Monitor groundwater for leachate from Golf Course and Land Fill zones	2.16	Ensure groundwater quality within bores are within NEPM water quality parameters (see table 4.2 for parameters to be measured)	The Sands Torquay Resort Manager
	2.17	Groundwater table levels will be maintained to reduce impacts to surface water through rising of water tables due to irrigation	The Sands Torquay Resort Manager



5.3.5 Applicable Policies, Technical Standards and Guidelines

- ▶ ANZECC (2000) Australian Guidelines for Water Quality, National Water Quality Management Strategy, Chapter 3.
- ▶ SEPP (WoV) (2003) State Environment Protection Policy (Waters of Victoria).
- ▶ NEPM (1999) National Environment Protection Measures, Schedule B (1) Guideline on Investigation Levels for Soil and Groundwater.
- ▶ Urban Stormwater Best Practice Management Guidelines, CSIRO 1999.
- ▶ Australian Rainfall & Runoff, IE Aust, 1987.

5.3.6 Monitoring

Surface water quality parameters are to be measured against SEPP (WoV) (2003) and ANZECC (2000) criteria for water quality. Groundwater quality is required to be measured against NEPM (1999) criteria. Where criteria do not exist, baseline water quality data collected since 2004 has been applied.

Appendix C provides a table of analytes to be measured and the relevant criteria which they are to be measured against. Exceedances of parameters are required to be reported and corrective action taken (*see monitoring requirements Table 3 and 4*). Appendix D provides a monitoring schedule.

An excel spreadsheet has been developed for recording sample results analysed *in situ* and by a NATA accredited laboratory. Data is to be entered into the spreadsheet and checked against the relevant criteria for exceedances.

Table 3 outlines the surface water monitoring requirements and Table 4 outlines the groundwater monitoring requirements.



Table 3 Monitoring requirements for water quality: surface water and stormwater drainage

Activity	Measurement	Frequency	Zone	Responsibility	Exceedance Parameters	Corrective Action	Reporting
<ul style="list-style-type: none"> Monitor surface water quality. Include results in an excel spreadsheet and analyse against SEPP and ANZECC criteria 	Parameters (In-situ measurements): <ul style="list-style-type: none"> Temperature Dissolved Oxygen (DO) Total Dissolved Solids (TDS) Turbidity 	Four times a year <i>Refer to Appendix C</i>	Amenity & Storage Lakes Constructed Wetlands Karaaf Wetland Council Conservation Zones (CCZ)	The Sands Torquay Resort Manager <i>The Sands Torquay Resort Manager to coordinate with Parks Victoria and Surf Coast Shire</i>	Pollutant levels exceed SEPP or ANZECC guidelines <i>(see Appendix C)</i>	<ul style="list-style-type: none"> Inform Parks Victoria or Surf Coast Shire if exceedance occurs in Karaaf Wetland or Council Conservation Zone (CCZ). Locate source of parameter exceedance and remedy if possible. Increase monitoring until problem is rectified Record non-conformity Seek specialist help where needed. Contact EPA for guidance on exceedance 	Every 3 yrs or occurrence of exceedance
	Parameters (laboratory): <ul style="list-style-type: none"> Electrical Conductivity (EC) Suspended Solids (SS) Dissolved Oxygen (DO) pH Total Kjeldahl Nitrogen (N) Total Nitrogen (N) Total Oxidised Nitrogen(N) Total Ammonia (N) Nitrate (N) Total phosphorous 	Once per year <i>Refer to Appendix C</i>					



Activity	Measurement	Frequency	Zone	Responsibility	Exceedance Parameters	Corrective Action	Reporting
Inspect infrastructure: drains, diversion channels, traps and structures that manage flow runoff into site lakes.	Visual Inspection	Bi - Monthly	Golf Course Area	The Sands Torquay Resort Manager	Damage noted to infrastructure	<ul style="list-style-type: none"> Repair damage as soon as possible Record spills or cases of water pollution Cease using recycled water if leak occurs until infrastructure is fixed 	Every 3 yrs
Inspect for algal blooms	Visual inspection	Bi - Monthly when undertaking recycled water monitoring	Amenity & Storage Lakes Constructed Wetlands	The Sands Torquay Resort Manager	Observations of excessive algae concentrations	<ul style="list-style-type: none"> Follow guidelines for algal bloom management in <i>Recycled Water Management Plan</i> Follow up with species id and algal counts from specialist 	Every 3 yrs
Monitor condition of aquatic vegetation	Visual inspection	Bi - Monthly when undertaking recycled water monitoring	Amenity & Storage Lakes Constructed Wetlands	The Sands Torquay Resort Manager	<ul style="list-style-type: none"> Decline in density and coverage Maintain up to 80 % free surface water of lakes and 20 % free surface are for wetlands 	Undertake removal and replacement of plants as appropriate	Every 3 yrs
Macro invertebrate survey		1 x every 2 yrs	Amenity & Storage Lakes Constructed Wetlands	The Sands Torquay Resort Manager <i>to organise a specialist</i>	Increase water quality if macro invertebrates decline below levels set by specialist	After baseline survey follow recommendations based on specialist report for maintaining levels.	Every 3 yrs



Table 4 Monitoring requirements for water quality: groundwater

Activity	Measurement	Zone	Frequency	Responsibility	Exceedence Parameters	Corrective Action	Reporting
<ul style="list-style-type: none"> ▶ Monitor groundwater quality ▶ Add results to excel spreadsheet and compare against NEPM criteria ▶ Monitor groundwater depth 	<p>Parameters (<i>In-situ measurements</i>):</p> <ul style="list-style-type: none"> ▶ Temperature ▶ Dissolved Oxygen (DO) ▶ Total Dissolved Solids (TDS) ▶ pH ▶ Electrical Conductivity (EC) ▶ Standing Water Level (m) <p>Parameters (<i>laboratory</i>):</p> <ul style="list-style-type: none"> ▶ Metals <ul style="list-style-type: none"> – Arsenic – Cadmium – Chromium – Copper – Iron – Lead – Mercury – Nickel – Zinc 	<p>Boreholes:</p> <ul style="list-style-type: none"> ▶ GW1 ▶ GW2 ▶ GW3 ▶ AL 	<p>Once per year</p> <p><i>Refer to Appendix C</i></p>	<p>The Sands Torquay Resort Manager</p>	<p>Pollutant levels exceed NEPM Guidelines (see <i>appendix C</i>)</p>	<ul style="list-style-type: none"> ▶ Locate source of parameter exceedance and remedy if possible ▶ Increase monitoring to monthly until problem is rectified ▶ Record non-conformity ▶ If trend develops for rising groundwater levels changes to the management of recycled water regime may need to occur ▶ Contact EPA and Surf Coast Shire if trend develops 	<p>Every 3 yrs</p> <p><i>Or occurrence of exceedance</i></p>



5.4 Plan 2: Recycled Water

5.4.1 Recycled Water Management

Recycled water (classified Class C under EPA Use of Reclaimed Water, 2003) is used for the irrigation of the golf course area. Recycled water is pumped from Black Rock Sewerage treatment plant via a storage facility at Torquay Flower Farm. Recycled water is applied directly for irrigation and will not be stored in any of the amenity or storage lakes. Water contained within the storage lakes system is used for irrigation during hours when recycled water is not in use.

Potential issues include degradation of surface water quality due to an overflow from storage facilities or damage to infrastructure, degradation of groundwater quality, changes in watertable, changes to soil characteristics due to increased salinity, human health risks, and algal blooms in storage lakes.

5.4.2 Objectives

- ▶ Ensure that wastewater used for irrigation purposes does not result in pollution of site, groundwater or surface water.
- ▶ Ensure that wastewater used for irrigation purposes does not result in changes to soil structure and permeability.
- ▶ Ensure a reduction of the human health risk due to the presence of microbiological and chemical contaminants within irrigation water.

5.4.3 Controls

A *Recycled Water Management Plan* was developed by Geerads W (2004). This plan is referred to for management requirements for recycled water. The *Turf Management Plan* developed for the golf course is also referred to. Table 5 outlines management requirements.



Table 5 Requirements for management of recycled water use

General Requirement	Item	Specific Requirements	Responsibility
Ensure that recycled water used for irrigation purposes does not result in pollution of site, groundwater or surface waters	5.1	Water quality used for irrigation will be maintained at a high level and will be in accordance with EPA (2003) <i>Guidelines for Use of Reclaimed Water</i>	The Sands Torquay Resort Manager
	5.2	The amount of wastewater used for irrigation will be kept to a minimum and will not exceed 1.0 ML / day (<i>Recycled Water Management Plan, 2004</i>).	The Sands Torquay Resort Manager
	5.3	The Sands Torquay Resort Manager is responsible for ensuring that the recycled water scheme is operated in accordance with EPA guidelines and the Sale of Recycled Water Agreement with Barwon Water including maintenance of recycled water infrastructure (<i>Recycled Water Management Plan, 2004</i>).	The Sands Torquay Resort Manager
	5.4	Treated waste water will be applied in accordance with EPA <i>Guidelines for Wastewater Irrigation Agreement with Barwon Water (Publication 464.2)</i> .	The Sands Torquay Resort Manager
	5.5	Water quality of constructed wetlands, amenity and storage lakes will be maintained. Recycled water used for irrigation will be stored separately from constructed wetland and lakes areas to reduce the risk of contamination of these areas.	The Sands Torquay Resort Manager
	5.6	High levels of water quality will be maintained in the Karaaf Wetland by ensuring that irrigated water does not flow into the natural drainage channel due to an overflow from the storage facility or a spill from the irrigation infrastructure	The Sands Torquay Resort Manager Parks Victoria
Ensure waste water used for irrigation purposes does not result in changes to structure and permeability of soil.	5.7	A soil test for Total Dissolved Solids (TDS) will be conducted at a site that is regularly irrigated and compare with a control site to identify any potential issues with reclaimed water use	The Sands Torquay Resort Manager
Ensure a reduction to the amount of human health risk due to the presence of contact with microbiological and chemical contaminants within recycled water	5.8	Appropriate signage and restricted access will apply to irrigated areas. Signs will be located: Around the perimeter of the site boundary fence Around the recycled water storage	The Sands Torquay Resort Manager



General Requirement	Item	Specific Requirements	Responsibility
		<p>The entrance to the pump shed</p> <p>Every valve box located on all greens and some fairways</p> <p>All main entrances to the site</p> <p>Where appropriate in residential area</p>	
	5.9	Stored irrigation water will be applied from 2:00 am EST onwards. Potable water will only be used for irrigation if both recycled water and irrigation lake water are unavailable.	The Sands Torquay Resort Manager
	5.10	Application of recycled water will be restricted to the hours of 9:00 pm and 2:00 am EST.	The Sands Torquay Resort Manager
	5.11	Recycled water may be used during the day via hand held hoses. Hoses will be disconnected when not in use.	The Sands Torquay Resort Manager
	5.12	A minimum withholding period of 4 hours after irrigation with recycled water will be observed (<i>Recycled Water Management Plan, 2004</i>).	The Sands Torquay Resort Manager
	5.13	A buffer zone will be maintained to a minimum width of 20 m between the irrigated area and residential zone.	The Sands Torquay Resort Manager
	5.14	<p>OH & S practices will be followed by all staff in contact with recycled water:</p> <p>No consumption of food or drink while working directly with recycled water,</p> <p>Washing of hands with soap before eating, drinking or smoking, and at the end of the working day,</p> <p>Avoidance of exposure to, and inhalation of recycled water spray by limiting access to irrigation areas,</p> <p>Appropriate signage located in buildings,</p> <p>Advice from local GP's or relevant government authorities.</p>	The Sands Torquay Resort Manager



General Requirement	Item	Specific Requirements	Responsibility
	5.15	Algal blooms will be kept to a minimum. See <i>Recycled Water Management Plan</i> for procedure for management of blue-green algal bloom.	The Sands Torquay Resort Manager
	5.16	All employees that have or may have contact with recycled water will be required to undertake induction as part of their employment. Correct use of recycled water will be incorporated into this induction process.	The Sands Torquay Resort Manager



5.4.4 Applicable Policies, Technical Standards and Guidelines

- ▶ *Environmental Management Plan for Recycled Water.*
- ▶ *EPA Victoria (1991) Guidelines for wastewater irrigation, Publication 168.*
- ▶ *EPA Victoria (2003) Guidelines for Environmental Management – Use of Recycled Water, Publication 464.2.*
- ▶ *Sale of Recycled Water Agreement Barwon Water.*

5.4.5 Monitoring

Monitoring requirements are outlined in Table 6. Water quality parameters are to be measured against EPA (2003) criteria for recycled water quality.

Appendix C provides a table of analytes to be measured and the relevant criteria which they are to be measured against. Exceedances of parameters are required to be reported and corrective action taken (see monitoring requirements). A spreadsheet has been developed for samples that require laboratory analysis. Data is to be entered into the spreadsheet and checked against the relevant criteria for exceedances.



Table 6 Monitoring requirements for recycled water use

Activity	Measurement	Zone	Frequency	Responsibility	Exceedance Parameters	Corrective Action	Reporting
Record flow rates and total volume of all treated wastewater applications and weather conditions during and after application	-	Golf Course Area	When applied	The Sands Torquay Resort Manager	-	-	Every 3 yrs
Review Barwon Water's recycled water quality assessment for supplied recycled water	Parameters <ul style="list-style-type: none"> ▶ E Coli ▶ pH ▶ Biological Oxygen Demand ▶ Suspended Solids (SS) ▶ TDS 	Golf Course Area	Every six months or twice during irrigation season	The Sands Torquay Resort Manager	Pollutant levels exceed EPA (2003) guidelines (see appendix C)	<ul style="list-style-type: none"> ▶ Cease water use until problem is rectified ▶ Increase monitoring until problem is rectified ▶ Record non-conformity ▶ Seek specialist help where needed ▶ Notify EPA and Surf Coast Shire if trend develops. 	Every 3 yrs <i>Or occurrence of exceedance</i>
Conduct soil test for Total Dissolved Solids (TDS) at an irrigation and a control site	<ul style="list-style-type: none"> ▶ TDS 	Golf Course Area	Once per year	The Sands Torquay Resort Manager	Pollutant levels exceed EPA (2003) guidelines (see appendix C)	<ul style="list-style-type: none"> ▶ Cease to use water until problem is rectified ▶ Seek specialist help where needed ▶ Notify EPA and Surf Coast Shire if trend develops 	Every 3 yrs <i>Or occurrence of exceedance</i>



Activity	Measurement	Zone	Frequency	Responsibility	Exceedance Parameters	Corrective Action	Reporting
Regularly test and maintain all infrastructure elements of irrigation system during irrigation season	-	Golf Course Area	Every six months or twice during irrigation season	The Sands Torquay Resort Manager	Damage noted to infrastructure	<ul style="list-style-type: none"> ▶ Repair damage as soon as possible ▶ Record spills or cases of water pollution ▶ Cease using recycled water if leak occurs until infrastructure is fixed ▶ Report to EPA if regularly exceeding guidelines 	Every 3 yrs <i>Or occurrence of exceedance</i>



5.5 Plan 3: Native Flora and Fauna Management

Flora and fauna within the Karaaf Wetland and Council Conservation Zones (CCZ) are of high biological significance. Limiting environmental impacts to these areas from site activities is of a high priority.

Retention and revegetation of native vegetation is essential for maintaining fauna habitat and ecologically sensitive environments. Revegetation using local flora is advised in both amenity and landscaping areas. Native revegetation and recruitment adjacent to the Karaaf Wetland and Dune complex is important to maintain.

Weed management is important for eliminating or reducing problem species and preventing horticulture escapees. Of particular importance is maintaining the Karaaf Wetland, CCZ and buffer zones free of weed species.

Buffer Zones play an important role in the reduction of adverse edge effects such as noise, light, disturbance by people and animals and introduction of weed species. Buffer zones also reduce impacts from surface water runoff and drainage and prevent changes in micro-climate and soil nutrient composition. The maintenance of buffer zones between the development, landfill and the Karaaf Wetland areas are of particular importance.

Restricting access by domestic animals to ecologically sensitive areas such as the Karaaf Wetland and Moonah woodlands is important for protection of native flora and fauna. Rabbits are the major feral animal concern. The prevention of mosquito populations in constructed wetlands and amenity and storage lake areas is also important.



5.5.1 Objectives

- ▶ Enhance the quality of remnant native vegetation through protection, recruitment and revegetation.
- ▶ Protection of sensitive environments such as the Karaaf Wetland and Council Conservation Zones.
- ▶ Protection of habitat for significant faunal species.
- ▶ Protect soils from erosion.
- ▶ Prevent cultivation of weed species in residential areas and reduce the likelihood of potential escapees to sensitive environments.
- ▶ Eradicate and control any existing weed populations.
- ▶ Prevent the emergence of new weed populations.
- ▶ Prevent the degradation of the Karaaf Wetlands and Council Conservation Zones due to weed encroachment.
- ▶ Reduce the impacts of edge effects to natural environments such as the Karaaf Wetlands and Council Conservation Zones.
- ▶ Reduce the impacts of surface water runoff and drainage to sensitive environments.
- ▶ Reduce human access to sensitive environments.
- ▶ Reduce the impacts of rabbits and foxes to flora and fauna.
- ▶ Reduce the impacts of domestic animals to flora and fauna.
- ▶ Reduce the occurrence of mosquitoes in water bodies within the development in a manner that minimises and avoids disturbance to native fauna.

5.5.2 Controls

Table 7 outlines management requirements for flora and fauna protection. The Environmental Management Plan developed by Carr et al., (2001) has been referred to for indigenous species that are suitable for planting and weed management. A *Weed Management Plan* developed by Carr (2001) has also been referred to.



Table 7 Requirements for Management of Flora and Fauna

General Requirement	Item	Specific Requirements	Responsibility
Protection and enhancement of native flora and fauna particularly within sensitive environments such as the Karaaf Wetland and the Council Conservation Zones	7.1	Only indigenous species are to be used for revegetation or landscape and amenity plantings within resort and within residential gardens as stated within Body Corporate guidelines to owners. The quantity of revegetation and success of recruitment is to be monitored and improved where necessary.	The Sands Torquay Resort Manager, Surf Coast Shire
	7.2	Ensure roadways and pedestrian access do not impact on flora and fauna.	The Sands Torquay Resort Manager
	7.3	Native vegetation will not be disturbed without appropriate permits being granted from authorities.	The Sands Torquay Resort Manager,
	7.4	Salt marsh vegetation in the Karaaf Wetland will continue to be supplemented with indigenous plantings at the interface of golf course and buffer zones.	The Sands Torquay Resort Manager, Parks Victoria
	7.5	Adequate signage and fencing is to be maintained in the Karaaf Wetland and CCZ's.	The Sands Torquay Resort Manager Surf Coast Shire
	7.6	Construct a gate for access from The Sands into the Karaaf Wetlands. Maintain access at all times through the gate, and use this access point to remove golf balls.	The Sands Torquay Resort Manager
Buffer Zones	7.7	A buffer zone of > 10 m will be maintained between the golf course, landfill and Karaaf Wetland interface. Buffer zones will be maintained around the CCZ's and constructed wetland areas. The buffer zone will be kept free of weed species and planted with native vegetation.	The Sands Torquay Resort Manager
Pest Animals	7.8	Regular monitoring for feral animals will occur and populations will be controlled with appropriate control methods, such as fumigation, baiting and or fencing. The Sands Torquay Resort Manager will coordinate and seek advice from GORCC and SCC where needed.	The Sands Torquay Resort Manager, Surf Coast Shire, GORCC
	7.9	Seasonal monitoring of mosquito numbers will occur for water bodies within the development. Bacterial larvicide will be used as a preferred control method, and used in a manner that	The Sands Torquay Resort Manager



General Requirement	Item	Specific Requirements	Responsibility
		minimises and avoids disturbance to native fauna	
	7.10	Domestic animals will be controlled. A cat curfew or ban will be imposed for residents. Dogs are to be kept on a leash at all times and are not to enter the Karaaf Wetland.	The Sands Torquay Resort Manager, Surf Coast Shire
	7.11	Investigate the applicability of constructing a rabbit proof fence between The Sands and GORCC managed Coastal Reserve.	The Sands Torquay Resort Manager, Surf Coast Shire, GORCC
Ensure the control and / or eradication of weed species and the prevention of spread	7.12	All woody weeds species, annual and herbaceous perennial species that will become major dominants in understorey, and species listed under the <i>Catchment and Land Protection Act</i> (1994) and listed in the <i>Weed Management Plan</i> (Carr, 2001) are to be controlled to minimise their abundance, using methods such as active weeding and applying herbicides in a manner that minimises and avoids disturbance to native fauna.	The Sands Torquay Resort Manager, Surf Coast Shire
	7.13	Regionally prohibited and regionally controlled weeds will be eliminated.	The Sands Torquay Resort Manager, Parks Victoria, Surf Coast Shire
	7.14	The correct identification of weed species when monitoring and controlling is to be ensured.	The Sands Torquay Resort Manager, Parks Victoria, Surf Coast Shire
	7.15	High impact species such as <i>Terracina spurge</i> are to be listed as priority for control. <i>Terracina spurge</i> will be sprayed with herbicides every 6 months in a manner that minimises and avoids disturbance to native fauna.	The Sands Torquay Resort Manager, Parks Victoria, Surf Coast Shire
	7.16	Maintain current documentation on site that details application of herbicide type, concentration, timing and location.	The Sands Torquay Resort Manager, Surf Coast Shire
	7.17	A suitably qualified botanist is to conduct a comprehensive weed management survey and	The Sands Torquay Resort



General Requirement	Item	Specific Requirements	Responsibility
		<p>recommend control methods where appropriate, in a timeframe agreed between GORCC, Surf Coast Shire and The Sands Torquay.</p> <p>Weed surveying is to also be coordinated once yearly by The Sands Torquay Resort Manager. Weed management is to be coordinated with GORCC and Surf Coast Shire.</p>	<p>Manager, Surf Coast Shire</p>
<p>Ensure prevention of new weed populations from establishing</p>	<p>7.18</p>	<p>New residents and contractors are to be supplied with weed species list and appropriate plantings list see: <i>Carr et al 2001 EMP Plant species with weed potential that should not be planted within development- Appendix 10</i></p>	<p>The Sands Torquay Resort Manager</p>



5.5.3 Applicable Policies, Technical Standards, Guidelines and Reports

- ▶ Carr et al., (2001). Flora and Fauna Assessment and Environmental Management Plan for Torquay Sands Residential Lakes and Golf Course Development, Torquay, Ecology Australia.
- ▶ Environment Protection & Biodiversity Conservation Act (Cwlth), 1999
- ▶ Japan-Australia Migratory Bird Agreement, 1974 (JAMBA)
- ▶ China-Australia Migratory Bird Agreement, 1986 (CAMBA)
- ▶ Flora and Fauna Guarantee Act 1988
- ▶ Conservation, Forests and Lands Act (Vic) 1987
- ▶ Catchment and Land Protection Act (Vic), 1994
- ▶ Carr (2001) Weed Management Plan
- ▶ Victoria's Native Vegetation Management – A Framework for Action, 2002
- ▶ Australian Weeds Strategy – A national strategy for weed management in Australia¹
- ▶ Coomes Consulting Group (2009) Native Vegetation and Weed Action Plan (prepared for Great Ocean Road Coast Committee)

5.5.4 Monitoring

Table 8 outlines monitoring requirements.

¹ Natural Resource Management Ministerial Council (2006), Australian Government Department of the Environment and Water Resources, Canberra ACT (<http://www.weeds.gov.au/publications/strategies/pubs/weed-strategy.pdf>).



Table 8 Monitoring requirements for native flora and fauna

Activity	Zone	Frequency	Responsibility	Exceedance Parameters	Corrective Action	Reporting
<p>A baseline survey will be conducted to determine the current flora and fauna values in the area. Current quality of buffer zones and weed management can also be completed during this survey. Success of native revegetation and recruitment will also be determined.</p> <p>Historical photographs and records kept by The Sands Torquay Resort Manager, and the results of the Carr et al., (2001) study can be used for qualitative comparison.</p> <p>Refer to information provided in Coomes Consulting Group (2009) <i>Native Vegetation and Weed Action Plan</i>, prepared for Great Ocean Road Coast Committee and where appropriate coordinate the survey to overlap between the GORCC managed reserve and CCZs.</p>	Council Conservation Zones	Once in 2011	<p>The Sands Torquay Resort Manager.</p> <p>Survey to be coordinated with GORCC and Surf Coast Shire for appropriate zones.</p> <p>A suitably qualified specialist is to be engaged.</p>		Amendments to OEMP may be required based on outcome of survey. Management recommendations are to be discussed with GORCC and Surf Coast Shire	After survey is complete results are to be discussed with GORCC and Surf Coast Shire.
Monitor success of native revegetation where undertaken	Karaaf Wetland Council Conservation Zones Constructed Wetlands Golf Course Area	3 yearly after 2011	The Sands Torquay Resort Manager Surf Coast Shire	Cover of indigenous species not adequate	Replant where needed	Every 3 yrs
Monitor success of native vegetation recruitment levels	Karaaf Wetland Council Conservation	3 yearly after 2011	The Sands Torquay Resort Manager	Cover of indigenous species not	Replant where needed	Every 3 yrs



Activity	Zone	Frequency	Responsibility	Exceedance Parameters	Corrective Action	Reporting
	Zones Golf Course Area		Surf Coast Shire	adequate		
Monitor buffer zones. Measure width, length, % cover of weed species, and diversity of native vegetation	Golf Course Area Council Conservation Zones (CCZ)	Yearly	The Sands Torquay Resort Manager	Buffer zones not maintained at required width. Diversity of native vegetation not adequate. Weed species present	Replant where needed with native vegetation Remove / control weed species	Every 3 yrs
Undertake weed survey and control once a year by qualified specialist and once a year by The Sands Torquay Resort Manager	Golf Course Area Karaaf Wetland Council Conservation Zones (CCZ)	Once yearly (winter / spring) Specialist Once yearly (summer / autumn) The Sands Torquay Resort Manager	The Sands Torquay Resort Manager is responsible for organising weed management. Coordination is to occur with GORCC, Parks Victoria and Surf Coast Shire for relevant zones.	Weed species increased from baseline survey in 2011. New weed populations emerging. Control methods unsuccessful	Control weed species Seek advice from DPI where necessary	Every 3 yrs
Monitor for emergence of weed species after disturbance event	Golf Course Area Karaaf Wetland Council Conservation Zones (CCZ)	After disturbance event	The Sands Torquay Resort Manager Surf Coast Shire Parks Victoria	Weed species present	Removal of weed species	Every 3 yrs



Activity	Zone	Frequency	Responsibility	Exceedance Parameters	Corrective Action	Reporting
Follow up possibility of Moonah Woodland monitoring program with GORCC.	Council Conservation Zones (CCZ)	To be determined	Surf Coast Shire	-	-	-
Monitor damage done to native vegetation due to human access	Karaaf Wetland Council Conservation Zones (CCZ) Golf Course Area	Once yearly	The Sands Torquay Resort Manager Surf Coast Shire Parks Victoria	Extensive damage noted to vegetation	Replant where needed Improve human management strategies where necessary i.e. fencing	Every 3 yrs
Monitor pest animals: <ul style="list-style-type: none"> rabbit warrens and scratchings, rabbit and fox numbers domestic animals in ecologically sensitive areas. Control pest animals during the drier seasons and bait where appropriate.	Karaaf Wetland Council Conservation Zones (CCZ) Golf Course Area	Ongoing during the year	The Sands Torquay Resort Manager. Surf Coast Shire. Parks Victoria.	Presence of domestic animals. Increase in warrens or scratchings noted Damage to vegetation	Control as appropriate Consult with Surf Coast Shire, Parks Victoria, DPI and GORCC where necessary	Every 3 yrs
Monitor weed infestation, particularly <i>Terracina spurge</i> , and remove weeds prior to seed production.	Karaaf Wetland Council Conservation Zones (CCZ) Golf Course Area	Once yearly, in spring	The Sands Torquay Resort Manager. Surf Coast Shire. Parks Victoria. Coordination to occur with GORCC where applicable		Consult with Surf Coast Shire, Parks Victoria, DPI and GORCC where necessary	Every 3 yrs



5.6 Plan 4: Cultural Heritage

Aboriginal middens have been identified within the Karaaf Wetland. The protection of Aboriginal middens, particularly from erosion, is an ongoing management issue. The dune complex is also of important cultural significance to the Aboriginal Corporation.

5.6.1 Objectives

- ▶ Protect cultural artefacts located within the Karaaf Wetlands; and
- ▶ Protect the sensitive dune environment which is of cultural significance to the Wathaurong Corporation.



5.6.2 Controls

Table 9 outlines management requirements.

Table 9 Requirements for management of cultural issues

General Requirement	Item	Specific Requirements	Responsibility
Protection of culturally sensitive areas	9.1	The protection of Aboriginal Middens located in the Karaaf Wetland (site 4) is to be maintained.	Parks Victoria
	9.2	The cultural values of the dune system are to be maintained	GORCC
Minimise any impact on items of Aboriginal or European heritage	9.3	<p>If suspected cultural heritage material is found within The Sands Torquay:</p> <ul style="list-style-type: none"> ▶ the Manager shall be immediately notified, ▶ works within the area must cease, and ▶ a cultural heritage advisor shall be notified within 72h and arranged to undertake an archaeological assessment of the area, document any material and formulate an appropriate management response. <p>The assessment shall be undertaken in consultation with the relevant Aboriginal stakeholders if the material is Aboriginal.</p>	<p>The Sands Torquay Resort Manager</p> <p>GORCC</p>
		9.4	<p>Should any cultural artefacts be found on Parks Victoria managed estate, all agreed works is to cease immediately and Parks Victoria is to be notified.</p> <p>Parks Victoria must immediately notify the State Coroners Office, the Victorian Police and any relevant Parks Victoria Ranger in Charge.</p>



General Requirement	Item	Specific Requirements	Responsibility
<p>Minimise any impact if human remains are discovered.</p>	<p>9.5</p>	<p>If suspected human remains are found within The Sands Torquay:</p> <ul style="list-style-type: none"> ▶ the Manager shall be immediately notified; ▶ all activity in the vicinity must cease to ensure minimal damage is caused to the remains; and ▶ the remains must be left in place, and protected from harm or damage, until further notice. <p>Once suspected human remains have been found, The Sands Torquay Manager must immediately notify the State Coroners Office, the Victorian Police and any relevant Parks Victoria Ranger in Charge.</p> <p>All details of the human remains must be provided to the relevant authorities.</p> <p>If there is reasonable grounds to believe the remains could be Aboriginal, the DSE Emergency Coordination Centre must immediately be notified on 1300 888 544.</p> <p>Inform Aboriginal Affairs Victoria (AAV) on 9208 3298 if Aboriginal cultural material is found or Heritage Victoria on 9655 6519 if historical cultural material is found.</p>	<p>The Sands Torquay</p>



5.6.3 Applicable Policies, Technical Standards and Guidelines

- ▶ *Aboriginal and Torres Strait Islander Heritage Protection Act 1984.*
- ▶ *Archaeological Heritage Act 2006.*
- ▶ *Heritage Act 1995.*
- ▶ *Victorian Heritage Register.*

5.6.4 Monitoring

Table 10 outlines monitoring requirements.



Table 10 Monitoring requirements for cultural issues

Activity	Zone	Frequency	Responsibility	Exceedance Parameters	Corrective Action	Reporting
Inspection of middens in the Karaaf Wetland	Karaaf Wetland	yearly	Parks Victoria	Damage to middens Increased erosion	Notify The Sands Torquay Resort Manager and Aboriginal Corporation Develop more measures to prevent human access	Every 3 yrs
Inspection of dune system	Council Conservation Zone	yearly	Surf Coast Shire	Damage to dunes	Notify The Sands Torquay Resort Manager and Aboriginal Corporation Develop more measures to prevent human access	Every 3 yrs



5.7 Plan 5: Chemical and Fuel Management

Ongoing management of the site will involve the use of fuels, oil and chemicals. Where these materials are used, their use and storage will be managed to minimise environmental impacts. This will include chemical and fuel storage being undertaken in accordance with EPA bunding guidelines. Sensitive receptors to chemical spills include site employees, golf course users, local residents and flora and fauna both within sensitive environmental areas and within the site.

5.7.1 Objectives

- ▶ Protect the contamination of both the natural and constructed environment from fuels or chemicals used on site; and
- ▶ Prevent human injury from chemical or fuel spills or inappropriate use.

5.7.2 Controls

Table 11 outlines management requirements.



Table 11 Requirements for management of chemical use

General Requirement	Item	Specific Requirements	Responsibility
Implement measures to ensure correct handling of chemicals and fuels	11.1	A register will be maintained of all fuels and chemicals stored on site and maximum quantities to be held at one time	The Sands Torquay Resort Manager
	11.2	MSDS for all chemical and fuels stored on site must be held on site and made readily accessible	The Sands Torquay Resort Manager
	11.4	Provide adequate training to operations staff and contractors on chemical use and storage	The Sands Torquay Resort Manager
	11.3	Emergency procedures will be displayed in a prominent position within the site working area(s).	The Sands Torquay Resort Manager
	11.5	Up to date records of chemical use must be maintained	The Sands Torquay Resort Manager
Storage Area	11.6	All chemical storage areas must be appropriately signed	The Sands Torquay Resort Manager
	11.7	Chemicals and fuels will always be stored away from sensitive areas in an area where spills cannot result in any environmental damage	The Sands Torquay Resort Manager
	11.8	“Hazard” and “No Smoking” signs will be placed near stored combustible / flammable goods	The Sands Torquay Resort Manager
	11.9	Appropriate bunding will be applied for transfer and handling of all chemicals and fuels	The Sands Torquay Resort Manager



General Requirement	Item	Specific Requirements	Responsibility
	11.10	All chemicals and fuels to be held in appropriate bunded storage areas in accordance with EPA bunding guidelines	The Sands Torquay Resort Manager
Spills	11.11	Waste oil / petroleum products onsite will be placed in designated waste oil containers within an appropriate storage location.	The Sands Torquay Resort Manager
	11.12	Staff will be made aware of fuel and chemical spill contingency plan and all staff will be trained in emergency action procedures	The Sands Torquay Resort Manager
	11.13	In the event of spill refer to MSDS and take appropriate precautions and clean up	The Sands Torquay Resort Manager
	11.14	Spill response equipment must be available on site at all times	The Sands Torquay Resort Manager
	11.15	Material affected by spill must be disposed of in accordance with MSDS or EPA guidelines	The Sands Torquay Resort Manager
	11.16	Spills are to be contained utilising chemical spill kit to prevent further discharge to surrounding environments	The Sands Torquay Resort Manager



5.7.3 Applicable Policies, Technical Standards and Guidelines

- ▶ *Dangerous Goods (Storage and Handling) Regulations 2000.*
- ▶ *The Storage and Handling of Flammable and Combustible Liquids AS 1940-1993.*
- ▶ *Safe Storage and Handling Information Cards for Hazardous Materials AS2508.*

5.7.4 Monitoring

Table 12 outlines monitoring requirements.

Table 12 Monitoring requirements for chemical use

Activity	Frequency	Responsibility	Corrective Action	Reporting
Inspect storage facilities for fuels, chemicals and waste spills	Weekly and daily during a rainfall event	The Sands Torquay Resort Manager	<p>Notify EPA if spill affects natural environments and waterways (pH) 5226 4825 or 1800 444 004 after hours</p> <p>Notify The Sands Torquay Resort Manager immediately in the event of soil, water or air contamination resulting from fuel or chemical spill</p> <p>Improve bunding and containment</p>	Every 3 yr



5.8 Plan 6: Noise Management

Due to the nature of activities undertaken at the site noise is considered to be a low risk. However given the close proximity of the golf course to residential areas, management strategies still need to be put in place. Strategies will aim to reduce the impact to neighbours and the surrounding environment from any associated activities.

5.8.1 Objectives

- ▶ Minimise nuisance to residents from noise due to operating procedures.

5.8.2 Controls

Table 13 outlines management requirements.

Table 13 Requirements for management of noise

General Requirement	Item	Specific Requirements	Responsibility
Schedule works to minimise disturbance to neighbours	13.1	Restrict work hours to between 7.00 am and 6.00 pm on weekdays and 7.00 am and 1.00 pm on Saturdays	The Sands Torquay Resort Manager
	13.2	Noise generated within working hours should be minimised where possible and must be of a level that is considered 'reasonable'	The Sands Torquay Resort Manager
	13.3	If activities are to occur outside normal operating hours, if required, obtain an out-of-hours work permit from Council and inform residents of the nature and duration of the noise	The Sands Torquay Resort Manager
	13.4	Noisy activities will be scheduled for the least sensitive times of the day, such as mid-morning to mid-afternoon	The Sands Torquay Resort Manager
Complaint Management	13.5	All complaints will be passed on to The Sands Torquay Resort Manager along with corrective actions taken. Record of complaints will be kept in a complaints register	The Sands Torquay Resort Manager

5.8.3 Applicable Policies, Technical Standards and Guidelines

- ▶ *EPA Victoria (1997) Environmental Protection (Residential Noise) Regulations.*
- ▶ *EPA Victoria (1992) Noise Control Guidelines, Publication TG302 / 92.*



5.8.4 Monitoring

Table 14 outlines monitoring requirements.

Table 14 Monitoring requirements for noise

Activity	Zone	Frequency	Responsibility	Corrective Action	Reporting
Monitor noise and vibration levels near neighbouring residents as required i.e. after a complaint	Residential Development	As required	The Sands Torquay Resort Manager	Amend work schedule and implement mitigation measures	3 yrs



5.9 Plan 7: Fire Management

The Sands Torquay Resort Manager has a responsibility to actively minimise the likelihood of a fire occurring and to control any fire that is started on or moving towards the site. It is important to minimise the risk of fire destroying significant ecological attributes, particularly within the Karaaf Wetland and Council Conservation Zones.

5.9.1 Objectives

- ▶ Reduce the likelihood of the occurrence of a fire.
- ▶ Have appropriate management strategies in place in the occurrence of a fire that will reduce impacts to surrounding environments.
- ▶ Reduce the impact to sensitive environments due to fire.
- ▶ Reduce the threat of fire to human safety.



5.9.2 Controls

Table 15 outlines management requirements.

Table 15 Requirements for management of fire

General Requirement	Item	Specific Requirements	Responsibility
Prevent fire outbreak from occurring on	15.1	The Sands Torquay Resort Manager is required to provide, operate and maintain adequate fire fighting equipment	The Sands Torquay Resort Manager
Golf Course or in sensitive environments	15.2	Operations personnel and contractors will comply with requirements of the CFA Act and Regulations	The Sands Torquay Resort Manager
	15.3	One staff member will be delegated to act as Fire Warden. Replacement staff will also be trained to act in the absence of the delegated fire warden. Staff members are to be trained in appropriate procedures that need to be implemented in case of fire.	The Sands Torquay Resort Manager
	15.4	Fire management procedures will be outlined to all staff during training and / or induction.	The Sands Torquay Resort Manager
	15.5	On days of Total Fire Ban operations will comply with CFA requirements. Welding, grinding, soldering or gas cutting is not allowed.	The Sands Torquay Resort Manager
	15.6	Periodic review of fire management plan is to be carried out as advised by CFA	The Sands Torquay Resort Manager
Restore damage done to vegetation due to fire	15.8	The implementation of a vegetation and soils rehabilitation program in the Karaaf Wetland or Council Conservation Zones may occur in the event of a fire. Consultation with Parks Victoria is required and control of post fire weed infestations may be adequate. A specialist may be required to provide advice if this occurs.	The Sands Torquay Resort Manager Parks Victoria Surf Coast Shire
	15.9	Post fire impacts are required to be monitored and management actions may need to be implemented.	The Sands Torquay Resort Manager Parks Victoria Surf Coast Shire



5.9.3 Applicable Policies, Technical Standards and Guidelines

- ▶ CFA Act and Regulations.

5.9.4 Monitoring

Table 16 outlines monitoring requirements.

Table 16 Monitoring requirements for fire management

Activity	Frequency	Responsibility	Exceedance Parameters	Corrective Action	Reporting
Testing of all fire extinguishers, hoses and hydrants	Twice yearly	The Sands Torquay Resort Manager	Equipment failure	Replace equipment	Every 3 yr
Emergency and fire evacuation drill	Twice yearly	The Sands Torquay Resort Manager	Staff unaware of procedure	Staff training	Every 3 yr



6. Compliance Procedures

6.1 Introduction

The internal reviews and monitoring of the ongoing management of the resort for specific requirements of the Operational Environmental Management Plan are specified in Section 5.

The aim of the internal review and monitoring is to ensure that environmental protection requirements outlined in the schedules are addressed and that environmental objectives are met. Where internal review reveals that issues have not been addressed The Sands Torquay Resort Manager shall notify appropriate stakeholders and authorities and undertake corrective action as required.

6.2 Monitoring, Inspection and Reporting

6.2.1 Site Inspection Checklist

The Sands Torquay Resort Manager is responsible for ensuring that monitoring for various parameters (i.e. water quality) occurs as per the monitoring schedule outlined in the relevant tables of Section 5. Appendix C also provides a monitoring checklist and the frequency required. The Sands Torquay is responsible for arranging contractors where appropriate and liaising with Parks Victoria and the Surf Coast Shire Shire for management issues regarding the Karaaf Wetlands and Council Conservation Zones.

6.2.2 Site Environmental Folder

A site environmental folder, documenting site inspections and any issues of note will be maintained at the site office under the care of the designated site The Sands Torquay Resort Manager. The folder will include the following information:

- ▶ Completed monitoring checklists Appendix E signed and dated;
- ▶ Documentation of any issues of non-compliance with the OEMP and remedial action undertaken to address items of non-compliance (see Appendix G);
- ▶ Documentation of complaints received from the public and remedial actions undertaken in response to each complaint (see Appendix H);
- ▶ Current site contact list (see Appendix H);
- ▶ Documentation of any site inspections, meeting or correspondence from responsible authorities, issued raised and remedial action taken to address any items of non-compliance; and
- ▶ Any other information and documentation relevant to demonstrating compliance with the requirements of the OEMP and relevant legislation and guidelines.



6.2.3 Three Yearly Reporting

The Sands Torquay Resort Manager will be required to report to the Surf Coast Shire every 3 years and as required upon any incident (*refer to appropriate element in section 3*). The format of the three yearly report should include:

- ▶ All monitoring requirement tables (the second table within each element) are to be included within the report indicating whether each action was completed for each year of the three years;
- ▶ Documentation of any infringements and corrective actions are to be included for each action where it occurred;
- ▶ Completed water quality monitoring tables highlighting any exceedances and documenting corrective actions;
- ▶ Incident reports where applicable;
- ▶ Complaint registers;
- ▶ Non-conformity reports;
- ▶ Conclusions and management recommendations that result from any studies that occur within the three year period i.e. flora and fauna surveys; and
- ▶ Any changes made to OEMP due to management recommendations from studies.

6.3 Complaints, Non-Conformance & Corrective Actions

6.3.1 Incident Management

Examples of incidents include a fuel or chemical spill, decreased water quality in surface or groundwater or damage to protected vegetation or cultural heritage sites. The Sands Torquay Resort Manager or Contractor will record any incidences in accordance with the Incident Report given in Appendix F.

In the event of a discharge or imminent discharge of waste beyond the premises boundaries, The Sands will immediately notify EPA providing detail about the size, type and cause of the discharge, and the steps taken or being taken to contain the discharge.

6.3.2 Non-Conformances

If a non-conformance is identified (i.e. monitoring results identify an exceedance of performance criteria, or a non conformance with procedures and controls is identified through an internal or external audit) appropriate measures must be taken to ensure that the non-conformance is recorded and corrective and preventative actions implemented. The Sands Torquay Resort Manager will record the non-conformance in accordance with the Nonconformity Report given in Appendix G.



7. References

ANZECC (1992). Australian Water Quality Guidelines for Marine and Fresh Waters (AWQG).

ANZECC (2000). Australian Guidelines for Water Quality, National Water Quality Management Strategy, Chapter 3.

Best Hoopers Solicitors (2001). Agreement between Surf Coast Shire and Golden Wood Pty Ltd and Patrick Geoffrey Handbury and Helen Patricia Handbury, 173 Agreement

Carr, G.W (2001). Weed Management Plan, Torquay Sands Residential Lakes and Golf Course, Ecology Australia.

Carr, et al. (2001). Flora and Fauna Assessment and Environmental Management Plan for Torquay Sands Residential Lakes and Golf Course Development, Torquay, Ecology Australia.

Conn, B.J (1993). Natural regions and vegetation of Victoria. In 'Flora of Victoria'. Vol.1. D.B Foreman and N.G. Walsh (eds). Pp.79-158. (Inkata Press Melbourne).

Coomes Consulting Group Pty Ltd (2009). Great Ocean Road Coast Committee Native Vegetation and Weed Action Plan. Prepared by Coomes Consulting Group in association with Mark Trengove Ecological Services, April 8th 2009

EPA (2003) Use of Reclaimed Water Guidelines for Environmental Management Publication 464.2

Geerads W (2004). Environmental Improvement Plan for The Sands Torquay Golf Course – Utilising Recycled Water.

NEPM (1999). National Environment Protection Measures, Schedule B (1) Guideline on Investigation Levels for Soil and Groundwater (*Taken from ANZECC, 1992*).

SEPP (WoV) (2003) State Environment Protection Policy (Waters of Victoria)



Appendix A
Site Map



Appendix B
Monitoring Sites



Appendix C
Frequency



Appendix D

Water Quality Monitoring Program



Appendix E
Emergency Contacts



Organisation	Name	Number
Emergency Services	Ambulance, Fire, Police	000
Geelong Hospital		(03) 5226 7111
Surf Coast Shire	Mark Harwood or Gayle Seddon	(03) 5261 0600
Parks Victoria	Stuart Willsher	136 186 5215 5117
EPA	Chemical Spills and Reports	(03) 5226 4825
Department of Sustainability and Environment	Donna Burns (DSE)	136 186
	Emergency Coordination Centre	1300 888 544
Aboriginal Affairs Victoria		9208 3298
Heritage Victoria		9655 6519
CFA Torquay		(03) 5261 2708



Appendix F
Incident Report



OTHER TREATMENT GIVEN: YES / NO, IF YES DESCRIBE:

.....
.....
.....

WITNESSES: (NAMES AND ADDRESSES):

.....
.....
.....

REMARKS:

.....

LIKELY OUTCOME:

.....

NAME OF PERSON RAISING REPORT:

.....

REPORTED

TO:.....



Appendix G
Non conformity Report



Nonconformity Report (NCR)

NCR No.: *(To be provided by the Auditor)*

SECTION A (To be completed by Auditor)

Auditor:

Client:

Project:

Issue:

Issued to:

Date Raised:

Description Of Non-Conformity:

SECTION B Proposed Corrective Action: (To be completed by the Contractor)

Contractor's Representative: _____ Date: _

SECTION C Verification of Corrective Action: (To be completed by Auditor)

Satisfactory Unsatisfactory

Comment:

Project Auditor: _____ Date: _

SECTION D Corrective Action Reviewed: (To be completed by Client)

Satisfactory Unsatisfactory

Client Project Manager: _____ Date: _



Appendix H

Complaint and Corrective Action Form



Complaint and Corrective Action Form

Name of Complainant: _____ Home Phone: _____ Complaint Number: _____
Address: _____ Work Phone: _____

Method of communication: Face-to-face Telephone Written

Received by: _____ Date: _____ Time:.....

Complaint / Enquiry Details: _____

Acknowledgment made: Date Face-to-face Telephone Written Reference

INVESTIGATION

Nature of Issue: _____

Weather Conditions at time of complaint: _____

CAUSE OF COMPLAINT

The Sands Torquay Resort _____ Subcontractor to The Sands Torquay Resort

Services _____ Other Contractors _____ Others _____

PROPOSED ACTION

Rectify by The Sands Torquay Resort _____

Follow Up others _____ The Sands Torquay Resort

PROPOSED COMPLETION DATE _____

Investigation by: _____ Signature _____ Date _____

Approved by _____ Signature: _____ Date _____

INSURANCE Insurer Advised Yes No N / A

by _____ Date _____ Contact _____

FOLLOW UP AND CLOSE OUT

Action Completed Yes No Follow Up Details _____

Close Out with Enquirer / Complainant Date _____ Letter Reference(s) _____ (Attach records of conversation and include dates and times)

Complainant Satisfied Yes No Sign-off: _____ / /



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