2014

Waste Management Plan Lot 304 Sunday Island Bay Short Stay Units

Hypermarket Pty Ltd

WASTE MANAGEMENT PLAN LOT 304 SUNDAY ISLAND BAY – DIRK HARTOG ISLAND

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WASTE MANAGEMENT PLAN FOR DEVELOPED LOT 304

1 Introduction

Dirk Hartog Island is the largest Island on Australia's west coast and is the site of the first recorded landing of a European on Australian soil. It is located within a World Heritage area adjacent to a Marine Park and has been declared a National Park(Dirk Hartog Island National Park).

Conservation and tourism are now its two main employment and income opportunities.

Tourism has the potential to

a. deplete natural resources through increased consumption
b. cause pollution through unregulated occupation and to
c. have physical impacts on the landscape.

The transformation of lot 304 to provide accommodation and other infrastructure for the commencement of a unique and unforgettable eco experience has been planned to address and mitigate perceived and identified impacts .

The waste management plan has been prepared in response to Shire of Shark Bay requirements that such a plan be prepared, in consultation with, and approved by DPaW as part of the process for planning approvals for Lot 304 Sunday Island Bay. A draft copy of the plan was provided to DPaW and the plan amended taking account of comments and recommendations from DPaW included in their letter dated 29August,2013.

This Waste Management Plan in particular is directed to mitigating pollution through proper waste management procedures both within the lot and the adjacent Dirk Hartog Island National Park foreshore area between lot 304 and the nearshore Shark Bay Marine Park Property

Unregulated waste disposal has the capacity to impact on the on the going amenity of Lot 304 and the Dirk Hartog Island National Park.

The transformation of Sunday Island Bay is directed to providing the launch site of a truly unique eco experience, for visitors to the area, on both Dirk Hartog Island National Park, the adjacent Shark Bay Marine Park and the Shark Bay World Heritage area**.**

2 Land Use Type

Lot 304 is currently zoned rural. Under its current zoning there is the opportunity, among many options, to submit application for short term residential accommodation units - Council has the discretion to consider such an application.

An application for a single residential house on Lot 304 was approved by the Shire of Shark Bay in 2013 subject to a number of conditions including the submission of a waste management plan.

In consultation with the Shire of Shark Bay and their town planning consultants Grey and Lewis and in line with the Shires proposed new Interim Town Planning Strategy – it is proposed that lot 304 will be rezoned to 'special use' allowing a range of development options to be considered including short stay accommodation.

Lot 304 will be used to initially develop 7 short term accommodation units. A central lodge facility and other supporting infrastructure may be considered in the future in line with financing options.

Each completed accommodation unit will be part of a comprehensive, co ordinated and managed destination providing the launch site for unique eco experiences on the National Park, within the Shark Bay World Heritage Property and the adjacent Shark Bay Marine Park.

Each accommodation unit will provide accommodation for guests on a self catering or fully catered basis .

It is proposed that all built accommodation will be managed and coordinated by a manager of the eco destination and each owner will enter into a management agreement with the manager, a company associated with the current owners of this lot and lot 62 on Dirk Hartog Island.

This waste management plan has been prepared on the basis that the property will be developed for short stay accommodation and managed by a manager.

3 AIM OF LOT 304 WASTE MANAGEMENT PLAN

a. To minimize the environmental impact of waste generation and disposal on Lot 304 and the immediate National Park foreshore area between lot 304 and the nearshore Marine Park
b. To reduce waste handling , disposal volumes and costs
c. To provide a standard for waste segregation
d. To protect visitor health and safety
e. To provide a safe working environment

4 OBJECTIVES OF LOT 304 WASTE MANAGEMENT PLAN

a. To establish a monitoring system for performance and to conduct a review of the plan annually
b. To develop waste management segregation principles to ensure final disposal of each category of waste and or recycling occurs

c. To fully understand the possible waste generated on the site and adjacent foreshore area of the National Park and nearshore area of the Marine Park and have appropriate procedures in place to address waste created within these locations.
d. To encourage commitment from staff, contractors and visitors to actively participate in waste avoidance, waste reduction and recycling programs
e. To provide on site education to staff, management, contractors and visitors to increase the awareness of workplace health and safety practices and waste minimization principles.
f. To adopt policies and procedures to minimize the environmental impact of waste and its disposal
g. To provide user friendly signage in regard to appropriate waste disposal, segregation and management.

5 RESPONSIBILITIES FOR LOT 304 WASTE MANAGEMENT PLAN

The manager has the overall responsibility for the waste management plan . The manager will consult and advise each lot owner in regard to waste handling, waste storage and waste location designs and ensure compliance with the Waste Management Plan .

The manager will :-

a. Develop spill management strategies for all waste categories
b. Oversee waste assessment
c. Develop workplace health and safety strategies for injury prevention in regard to waste management
d. Design and implement on going education and training in regard to waste management
e. Design and implement a waste avoidance and minimization policy
f. Look into and regularly review(annually) all recycling opportunities
g. Identify and implement waste segregation practices
h. Formally review the waste management plan annually
i. Provide waste storage areas in consultation with lot owners
j. Carry out ongoing audits of rubbish

All persons , including the manager, staff, contractors and visitors have a general environmental duty to protect the environment through formalized and non-formalized safe and approved waste management practices.

The waste management processes included in this plan are a framework for prioritizing to achieve the best environmental outcome including:-

1) Waste avoidance
2) Waste reuse

3) Waste recycling
4) Waste disposal

6 WASTE GENERATING AREAS

1 Guest Accommodation Units
2 Support infrastructure areas
3 All other areas of the site
4 Dirk Hartog Island National Park foreshore area between lot 304 and the nearshore Marine Park

7 WASTE GENERATED

1&2 Guest Accommodation Units

It is probable that two main categories of waste will be generated from these areas

a. Recyclables - including plastic, aluminum, steel, glass, cartons, paper, fabrics
b. General waste including – food scraps, food in packaging and plastic film. Grease trap liquid waste, domestic batteries

The control and coordination of this waste is highly dependent in the first instance on guests and staff knowledge and education on the importance of proper waste segregation and disposal and the effective placement of suitable disposal containers in appropriately located positions both within the accommodation unit and close by on the site.

It is essential that these containers are attractive rather than foreboding and their purpose is easily understood and able to be used, serviced and cleaned.

All bins will be attractive and marked with proper labels, colour coded including clear symbols and words on all signage provided showing segregation requirements .

The procedure for servicing all disposal units will ensure that litter is contained within the disposal units with no opportunity for overflow to contribute to litter prior to servicing.

Emptying schedules will be reviewed continually to ensure compliance with the waste management plan. Any alterations to servicing will be noted in the waste management diary at the time and form the foundation for review of the waste management plan

3&4 Support Infrastructure areas

It is predicted that the following categories of waste could be generated from these areas

c. Recyclables - including plastic, aluminum, steel, glass, cartons, paper, bulk cardboard, light cardboard, heavy cardboard packaging,fabrics, white goods, building materials.

d. General waste including – food scraps, meat scraps, cling wrap, polystyrene packaging, plastic strapping, food in packaging etc . cooking oil separated for collection and not to be disposed of into the septic system or waste water. Grease trap liquid waste. Light bulbs, fluorescent lights, toner/ink cartridges that could be recyclable and e waste. Furniture, electrical goods, batteries, aerosol cans.

It is essential in each of these situations that effective bin placement or disposal area locations with high identification are in place and established to make waste disposal easy for catering, maintenance and administration staff to meet the waste management plan aims and objectives.

The direct control and involvement of the manager on a daily basis and the education and direction of staff by the manager will ensure that effective waste separation is achieved and maintained.

The manager will be responsible for developing and maintaining a safe working environment and safe working practices in regard to waste management to ensure that any activities in this regard do not breach environmental standards prescribed in State and Federal legislation. This will include the general environmental duty to prevent or minimize environmental harm by taking all reasonable and practicable measures and incorporating Shire food regulations and State Government policies and procedures.

Staff will be responsible for complying with all safety instructions and work safe procedures in regard to waste management developed by the manager for their own protection and the protection of guests and other visitors to the sites.

5&6 National Park foreshore area between Lot 304 and the nearshore National Park and other areas of the site

It is probable that two main categories of waste may be generated from these areas

a. Recyclables – including plastic, aluminum, steel, glass and paper
b. General Waste – food scraps and general litter.

The control of this waste is largely dependent upon:-

1 'the manager',
2 education of staff, contractors and guests
3 clear signage systems showing segregation requirements and
4 placement of bins close to areas of human activity.

Proper storage and containment of all waste is essential to maintaining a pristine environment and destination.

8 WASTE GENERATION

From international studies and the past 10 years of tourism operations at Dirk Hartog Island It is anticipated that the garbage generated from each accommodation unit would not exceed 60l per week. Recycling waste generation however could be higher based on known figures from existing operations on Dirk Hartog Island.

9 WASTE SYSTEMS

Each accommodation unit will be responsible for their own waste in terms of collection and storage through appropriate systems. All rubbish will be processed on a daily basis by the manager of the coordinated eco resort. An agreed location at or close to each accommodation unit will be allocated for rubbish collection close to approved access routes.

Collected kitchen, food and paper waste will be deposited directly into the cyclo burn unit and where practical disposed of daily .

Bottles will be placed into appropriately coloured sacks/containers and returned to Lot 62 for crushing and further disposal

Cans will be crushed on site and placed into appropriately coloured sacks/containers for return to Lot 62 and then to the Shire of Shark Bay recycle facility in Denham

All other waste not dealt with as above will be collected 'on demand' and returned to Lot 62 for ultimate return to the Shire of Shark Bay disposal site.

Three separate smaller bins will be provided within each accommodation unit for presorting and segregation into the above categories

10 BIN SIZE AND CAPACITY

Bins/sacks will be approx. 100l capacity.

The cycloburn facility has a 220lt capacity steel disposal bin

Collection Frequency

Cyclo burn daily

Bottles on demand daily or when sack/bin full or guest changeover as applicable

Cans on demand daily when sack/bin full or guest changeover as applicable

Other waste on demand as required

11 BIN STORAGE

There will be an area close to each accommodation unit allocated to waste collection where sacks and bins will be stored after exiting the accommodation unit and before further processing. This will include an area of operation for the cyclo burn unit.

12 WASTE COLLECTION

Waste will only be permitted to be stored on the allocated site between collection or operation of the cyclo burn.

All sacks/bins will be collected and the rubbish disposed of as described above.

13 SIGNAGE

Signage will clearly state the necessity to accurately place all segregated waste into the appropriate and provided receptacles.

Additionally all guests will be inducted upon their arrival when the necessity of dealing with all rubbish in an appropriate manner will be fully explained

14 WASTE TYPES

Waste anticipated to be generated from the site has been broken into the following categories

1 **Cans**

Each accommodation unit will be provided with one or more manual can crushers. Guests will be instructed and encouraged to be involved with processing cans on site by crushing on site and placing the remainder into appropriately coloured sacks/bins(coloured to identify what is to be placed into them) provided to each accommodation unit. On a daily basis or whenever appropriate the sacks will be returned to Lot 62 where the cans will be tipped into larger wool packs and compacted further into these larger packs and returned as required to Denham for disposal at the Shire of Shark Bay can recycling centre**.**

2 **Bottles**

Each accommodation unit will be supplied with appropriately coloured sacks/bins that indicate what is to be placed into them. Bottles will be placed into the sacks and returned to Lot 62 for further processing. At lot 62 the glass will be fed into a glass crusher which will reduce the size of the glass to sand sized granules which can be used as building materials and/or fill.

3 Paper and Cardboard

Paper and cardboard will be burned on site at each accommodation unit by the manager , using cyclo burn technology, reducing the product to ash.

4 Household Waste

Household rubbish including food waste will be burned on site at each accommodation unit by the manager, using cyclo burn technology, reducing the waste to ash.

5 White Goods

All white goods and other associated similar products will be returned to Lot 62 for assembly and ultimate return to the Shire of Shark Bay rubbish disposal site by the manager

6 Chemicals

Any chemicals and chemical containers will be stored on site at each accommodation unit in locked cabinets. These containers and their contents will be returned to Lot 62 when empty or no longer required. Excess chemicals will be placed into 44 gal drums located at Lot 62 and returned to Shire of Shark Bay Disposal site when full. Any containers will be collected and palletized within pallet containers and returned to Shire of Shark Bay disposal site when appropriate by the manager.The transport, storage and removal of hazardous chemicals is described separately as an appendix to this waste plan

7 All other waste

All other non classified rubbish that can not be dealt with under any of the above classifications will be returned to Lot 62 and ultimately to the Shire of Shark Bay disposal site by the manager.

Used batteries ,oil, aerosol cans, paint cans and tyres will be stored within a containment area at lot 62 prior to transport to the Shark Bay disposal site by the manager.

All visitors will

a. be provided with basic outline information(either by email or letter) , following confirmed bookings. This information will highlight the necessity of reducing any excess packing within any of the luggage and food or drink that guests may bring when coming to the island.
b. Be inducted on their arrival date and provided with detailed instructions in regard to rubbish disposal.
c. Be provided with literature that describes each element of the rubbish disposal protocols to be used at each accommodation unit
d. Be provided with suitable disposal containers for the different classifications of rubbish to be placed into them - as detailed in the protocols.
e. Be informed and have identified on site all signage appropriate to rubbish disposal

f. Be encouraged to comply with the disposal of waste through colourful and easily identifiable containers/bins/sacks.

When the first accommodation units are completed and stage one of the resort is in operation all of the elements included within this waste management plan will be reviewed and updated by **'the manager'**.

15 WASTE MINIMIZATION STRATEGIES

Transport of waste materials from the site by whatever means will necessarily be expensive and thus subsidize the importance of seeking alternative and less expensive options for waste disposal that are still compatible with maintaining sound environmental values.

All staff involved in operating and managing the location will be vital to implementing waste minimization strategies that will include reduction, recycling and reusing of the generated waste either at lot 304 or back at lot 62.

Guests, visitors and any contractors will be encouraged to reduce their waste by for eg;

(a) reducing the number of shopping bags and packaging material brought on to the site with them;

(b) encouraging bulk purchasing and

(c) insisting that contractors using construction materials more carefully calculate their materials quantities to limit the amount of offcuts etc. Excess building and maintenance materials that remain, and assessed as useful, will be carefully stored at lot 62 for further reuse .

Wherever possible materials will be reused : the use of washable cups glasses and plates in preference to disposables.

Bottles will be crushed and re used as building materials: plastic water bottles will be substituted wherever possible with glass bottles and the use of water fountains with desalinated water.

The solid waste management program will focus on public awareness aimed at educating and sensitizing staff, transient visitors, guests, contractors and others about the importance of managing all waste.

The main focus will be to ensure that proper ethics are conducted when it comes to throwing away the waste garbage. Signs will be posted and information sheets will be used to enhance the program which will be continuous and on going. It is internationally accepted that littering will occur within the first hour of visitation of a tourist destination especially if litter is present. However it is equally accepted that if there is no visible litter

but there are attractively placed and signed bins readily available then there will be little or no littering of the site.

16 CYCLO BURN

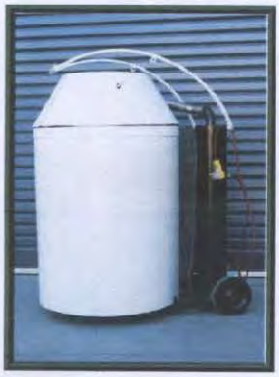
The use of the cyclo burn disposal unit will be compliant with all of the regulations of the Bush Fires Act 1954 .

In the event of a total fire ban being placed on the Dirk Hartog Island National Park the cycloburn unit, although fitted with spark arrestor protection, will not be operated and the waste will be stored for additional days until the conditions are suitable for its use.

Current operating experience at Dirk Hartog Island Lodge evidences that a total fire ban has not been imposed on the site for more than twenty years and that conditions for the operation of the cyclo burn unit have been available at all times of the year.

In the event that cyclo burn units are not useable for up to five consecutive days the waste will be transported to Lot 62 ,placed into a skip and may be transported to the Shire of Shark Bay tip in Denham. This process will be monitored and assessed on a daily basis in the event that such a situation should arise to allow the most practical and expedient solution to be addressed.

Cyclo Burn

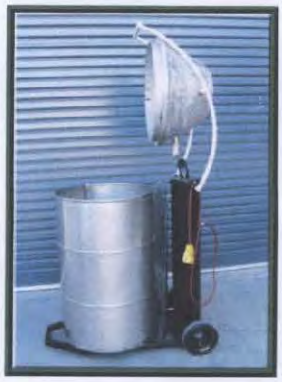


The Cyclo Burn incinerator is available in two models—the INSULATED DRUM and LID unit or the Standard Model with a NON-INSULATED LID for use with a standard 205-litre drum (drum not supplied)

This Cyclonic Incinerator has been designed specifically to create the most efficient process of incinerating a large range of combustible materials in the least amount of time in a small easily-moved unit.

Our fully insulated drum and lid unit has been designed for safety, whilst retaining its portability. The extremely high temperatures which are created within the unit are insulated from the outside surrounds. This also saves having to build safety compounds to contain the unit which reduces costs whilst also avoiding having to restrict the portability of the unit.

Unlike other portable incinerators on the market, ***the Cyclonic Incinerator gives a complete burn.***



APPENDIX 1

TRANSPORT AND DISPOSAL OF HAZARDOUS WASTE/CHEMICALS

Introduction

There may arise the necessity to transport hazardous chemicals from lot 304 to lot 62 prior to transport back to Shire of Shark Bay Rubbish disposal facility. In the event of such necessity the following procedure will be followed.

1 Any chemicals to be transported between the lots and/or over the Marine Park must be in sealed containers.
2 Prior to loading on to vehicles/boats/barges each container will be checked to ensure it has no cracks, holes or splits and that the lid is properly secured.
3 Each container will be loaded onto a vehicle/boat/barge and be properly secured to ensure that any opportunity of it falling onto the ground has been assessed and addressed by proper containment within the vehicle/boat/barge ' tray' area.
4 In the event of any spillage the following procedure will be followed.

SPILL MANAGEMENT PROCEDURE

Minor Spill

In the event of an accidental spill involving chemical of 5lt or less of non concentrated type the following action will be undertaken:

- All guests and non aligned employees will be kept clear of the spill and an assessment made by **"the manager"** that he has the right training and equipment to deal with the spill.
- Providing it is safe to do so the spill will be stopped at its source including although not limited to a) righting any overturned container and or b) sealing any holes or cracks in the container
- The spill will be mopped up immediately
- The spill will be recorded in terms of when, how and where it occurred and the measures taken to clean up the spill.
- A note will also be made of what changes could be made when handling transporting or storing chemicals to ensure such an incident does not occur again.

Large Spill

In the event of a large spill of more than 5 lt or concentrated chemical of any volume the following procedure will be followed

- Assess the safety and keep all guests and non aligned employees clear of the spill while 'the manager' assesses that he has the right training and equipment to deal with the spill
- Consult the material safety data sheet(MSDS) which will have instructions on how to deal with the specific chemical spill
- Protective clothing will be put on and if necessary gloves ,goggles ,a mask and an apron.

- The source will be stopped providing it is safe to do so. This may involve righting the container or sealing cracks or holes in the container
- The flow is to be contained and controlled and prevented from filtering in to the ground or entering any stormwater system. The outer edge of the spill is to be dammed with rags, blankets, sand, sand bags. Mops and or absorbent booms
- The spill is to be cleaned up by quickly covering it using absorbent materials such as the correct absorbent granules for the product, sand and rags whilst not splashing the spill. Using a dustpan and or spade the absorbent granules or sand must then be scooped up and put into a container. The DPaW and if necessary the Department of Environment will be consulted in regard to the disposal of the collected waste.
- The EPA will be separately notified particularly if the spill entered any stormwater system
- The event will be recorded in terms of how and where the spill occurred and the names of any witnesses. A note in regard to how to improve procedures when handling, transporting or storing chemicals will be made to ensure there is no repeat of such an incident