

WA SKYPIRATES

PARAMOTORING CLUB INC.

PROPOSED LAUNCH AND LANDING
AREAS FOR CLUB ACTIVITIES

THE LARK HILL PARAMOTORING
FACILITY

Location

Lark Hill, Local Authority of Rockingham

Prepared for

W.A. SkyPirates Paramoting Club

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FOR THE WA SKYPIRATES PARAMOTORING CLUB

FEBRUARY 2013

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THIS DOCUMENT FORMATTED FOR DOUBLE-SIDED PRINTING

1.0 Introduction

1.1 Scope

This document provides an introduction to the sport of Paramoting, its legal status, organisation and the environmental management issues that relate to the use of a proposed Lark Hill Paramoting Facility located at Lark Hill within local government area of Rockingham WA.

It is proposed that only those persons who have been endorsed by the WA SkyPirates Paramoting Club, who have signed an agreement to abide by the requirements of this document, are to have the privilege of using the proposed Lark Hill Paramotoring Facility. Any pilots using the site and not being able to produce such an endorsement will be subject to disciplinary actions by the Hang Gliding Federation of Australia (HGFA) which is the federal organisation for all foot launched flying operations in Australia and Western Australia

1.2 The Sport

Paramotoring is a powered form of the sport of Paragliding. Paragliders are foot-launched gliders that use a fabric wing without any rigid structures. The pilot is supported in a harness below a hollow fabric wing whose shape is formed by the suspension lines that support the harness, the pressure of air entering vents on the front of the wing and the aerodynamic forces of air flowing over the outside of the wing. The complete aircraft can be folded into a rucksack and packed into the boot of a small car.

Powered paragliding has in recent years become a popular recreational flying activity in its own right. Engines and wings are now on the market that are especially designed for Paramotoring.

Un-powered paragliders are dependent on a very narrow band of weather conditions that apply to a limited number of launch sites. The advantage of paramoting is that flights can be made at any time, from any flat ground with an open aspect and provided that wind strength is light.

Currently there are 25 paramotor pilots that live in the Perth Metropolitan area. Of these 19 are members of the WA SkyPirates Paramotoring Club.

Experience over the previous two to three years indicates that at any one location south of the Perth Metropolitan area, a maximum of between one and eight pilots are likely to be present at launch during optimal flying conditions.

1.0 Introduction

1.3 Why Lark Hill?

The subject site at Lark Hill (see Figures 1, 2, 4 and 5) is an ideal operational site for the launching and landing of paramotor aircraft; it exceeds all expectations for compliance with safety, regulatory and environmental requirements.

The site

- Is located within a greater area that has been zoned for Parks and Recreation.
- Is located within a greater area that has been set aside for future development for public recreational purposes
- Is located at a distance from any noise sensitive premises
- Is located within a greater area that was previously cleared of vegetation that does not include trees and shrubs that would impede the safety of paramotor operations.
- Is located on reasonably flat terrain.
- Has no nearby obstructions that would either represent a risk to pilots or could cause turbulent air.
- Has clear flight paths to the east and west over land that does not include noise sensitive premises or areas that would result in pilots being in breach of regulations
- Has clear flight paths to the east and west over land that does not represent a risk to pilots in the event of an engine failure.
- Has easy vehicle access
- Has adequate space available for vehicle parking.

Other sites within the greater region cannot meet all of the above requirements. Consequently, the request for a paramotoring facility heavily favours the Lark Hill site.

Paramotor flights from the Lark Hill Facility are most likely to transit the Port Kennedy Scientific Park and to proceed either north or south along the coast. Returning flights would follow the same route to land at the point of take-off.

1.4 Rules & Regulations

The Hang Gliding Federation of Australia (HGFA) is a non-profit sporting body that administers Hang Gliding, Paragliding and powered versions of these activities under the regulations laid down by the Civil Air Safety Authority (CASA). As the administering body it provides standards for pilot training syllabus, pilot and instructor certifications and best practice in operational procedures throughout all of Australia

CASA, which controls all civilian flying in Australia, has delegated responsibility for pilot and instructor training and accident investigation to HGFA for all hang and paragliding and motorised versions of these sports in Australia. Under law, all active PG and HG pilots are required to carry HGFA membership and pilot certification under the requirements of the HGFA Operations Manual. The third-party insurance cover that goes with compulsory membership for all paramotoring activities provides the community with the knowledge that paramotor pilots are members of a highly regulated system and that lawful actions of pilots are backed by their governing body.

For the proposed recreational flying operations out of the Lark Hill site, the relevant legal requirements for powered paragliders, as required by the CASA and provided in the HGFA Operations Manual, are provided below.

1.0 Introduction

A person shall **not** fly a powered paraglider

- a) Over any built up area below 1000 ft above ground level or at such a height that the aircraft could not glide to a landing outside the built-up area – or whichever is the highest.
- b) Not below 100ft or within a horizontal distance of 25metres from
 - i. A public road;
 - ii. Members of the public;
 - iii. A dwelling except by permission of the owner;
 - iv. During launching, not less than 25metres from members of the public; or
 - v. At any regatta, race meeting or public gathering.

Additional restrictions are placed on proposed operations from the Lark Hill Paramotoring Facility under the requirements of this document.

2 The Existing Environment

2.1 The Proposed Site

The Proposed Lark Hill Paramotoring Facility is shown in a regional context in Figure 1. The subject site is located in an open and undeveloped area located between dense urban areas both to the north and south. The site provides flight paths over open ground both to the east and west.

To the west of the subject site, between Warnboro Sound Avenue and the ocean, is the Port Kennedy Scientific Park and to the east is land zoned for public purposes (now a decommissioned wastewater treatment site – see Fig.3) and to the south east is the Lark Hill Thoroughbred Training Centre.

The City of Rockingham zoning map for the locality is provided in Figure 3 indicating the approximate location of the Paramotoring Facility and surrounding land zoned for Parks and Recreation.

The subject site is located on Lark Hill Stage 2 that is currently proposed for development circa 2025/26 (pers.com. M.Emmott; 17.9.12) for public recreational purposes. The applicant understands that future planning for the locality may not allow permanent use of the subject site.

Figure 4 below indicates in more detail the proximity of the subject site to Port Kennedy housing and the location of the Lark Hill Thoroughbred Training Facility. As can be seen from Figures 4 and 5, the subject site is located on an area where vegetation was previously cleared for future planned public recreational development.

Figure 5 provides a more accurate boundary description for the subject site. An access track and parking area will be required – however, the location of these facilities will need to be verified so as to minimise the disturbance to ground and vegetation.

2.2 Nature Reserves

A description of the wetlands as provided by the *Information Sheet on Ramsar Wetlands (RIS)* is provided below. Clearly, the Becher Point wetlands, that are included within the Port Kennedy Scientific Park, were reserved because they represent a landform poorly represented in an undisturbed state in the south west of WA. The Port Kennedy Scientific Park includes Reserves 44076 and 44077.

The Becher Point Wetlands Ramsar Site comprises the entire area of Nature Reserve 44077. It includes a substantial part of the suite of approximately 200 discrete, very small wetlands located between Becher Point (Indian Ocean coast) and the Perth-Mandurah Road.

The Site comprises a substantial portion of the system of inter-dunal wetlands associated with Becher Point, on the coast of South-Western Australia. The series of wetlands within the Site exhibits a continuum of development in geomorphology, hydrology and vegetation and is considered by researchers to be a unique wetland system in Western Australia and one of the youngest wetland systems on the Swan Coastal Plain. The sedgeland that occur within the linear wetland depressions of the Site are listed as a threatened ecological community under the Commonwealth Environment Protection and Biodiversity Conservation Act (1999). The listing is recorded as “Sedgeland in Holocene dune swales of the southern Swan Coastal Plain”.

1 The Becher Point Wetlands are an example of shrub swamps and seasonal marshes that have formed in an extensive sequence of inter-dunal depressions that have arisen from seaward advancement of the coastline over recent millennia. This type of wetland system is rare in South-Western Australia. Examples of this type of geomorphological sequence in equally good condition and within a protected area are rare world-wide.

2 The Existing Environment

2 The sedgelands that occur within the linear wetland depressions of the Site are listed as a threatened ecological community under the Commonwealth Environment Protection and Biodiversity Conservation Act (1999). The listing is recorded as “Sedgelands in Holocene dune swales of the southern Swan Coastal Plain”.

Noteworthy native fauna of the Site includes the quenda (*Isoodon obesulus fusciventer*), carpet python (*Morelia spilota imbricata*), Perth lined lerista (*Lerista lineata*) and black-striped snake (*Neelaps calanotus*). At least four species of amphibians and 21 species of reptiles have been recorded.

The *Rockingham Lakes Regional Park (Proposed final management plan 2010)* provides the following comment on avian fauna:

The wetland ecosystems of the Park serve as a refuge for a diverse bird population, including trans-equatorial migratory birds that are protected under international agreements and the EPBC Act 1999. Carnaby’s black cockatoo have been sighted in the Park and are also listed as threatened under the EPBC Act 1999¹.

2.3 Other Parks and Reserves

The Lark Hill Thoroughbred Training Centre is located to the south east of the proposed site. The Noise Management Plan (Section 4 below) will ensure that horse training at the Centre will not be disturbed by paramotoring activities operating from the subject site.

The areas zoned for public purposes (Figure 3) to the east of the subject site, includes a decommissioned wastewater treatment plant that is not currently in use.

¹ Carnaby’s Black Cockatoos may have been sighted in the locality, but these species typically roost and are feeders of flowers and seed in tall trees that are not found in the Scientific Park.

2 The Existing Environment



Figure 1. Satellite photograph showing the regional aspects of the Lark Hill Paramotoring Facility
(from Landgate)

The proposed Paramotoring Facility is shown in red; regional areas are located to the north and south; the Scientific Park lies between Warnboro Sound Avenue and the ocean. A more detailed annotation is provided in Figure 4 below.

2 The Existing Environment



Figure 2. Aerial photograph indicated flight path restrictions *(from Landgate).*

The proposed Lark Hill Paramotoring Facility is marked in red. The green lines enclose required flight path restrictions. Urban areas to the north and south and the Lark Hill include **No-Fly Zones** extending at least 100 metres beyond the boundaries of urban areas when flying below 1000 ft. The Thoroughbred Training Facility includes a minimum 250 m **No-Fly Zone**. A minimum height of 300 ft is required for overflying the Scientific Park that is to the West of Warnboro Sound Avenue. See Figure 4 below for more detailed annotation.

2 The Existing Environment

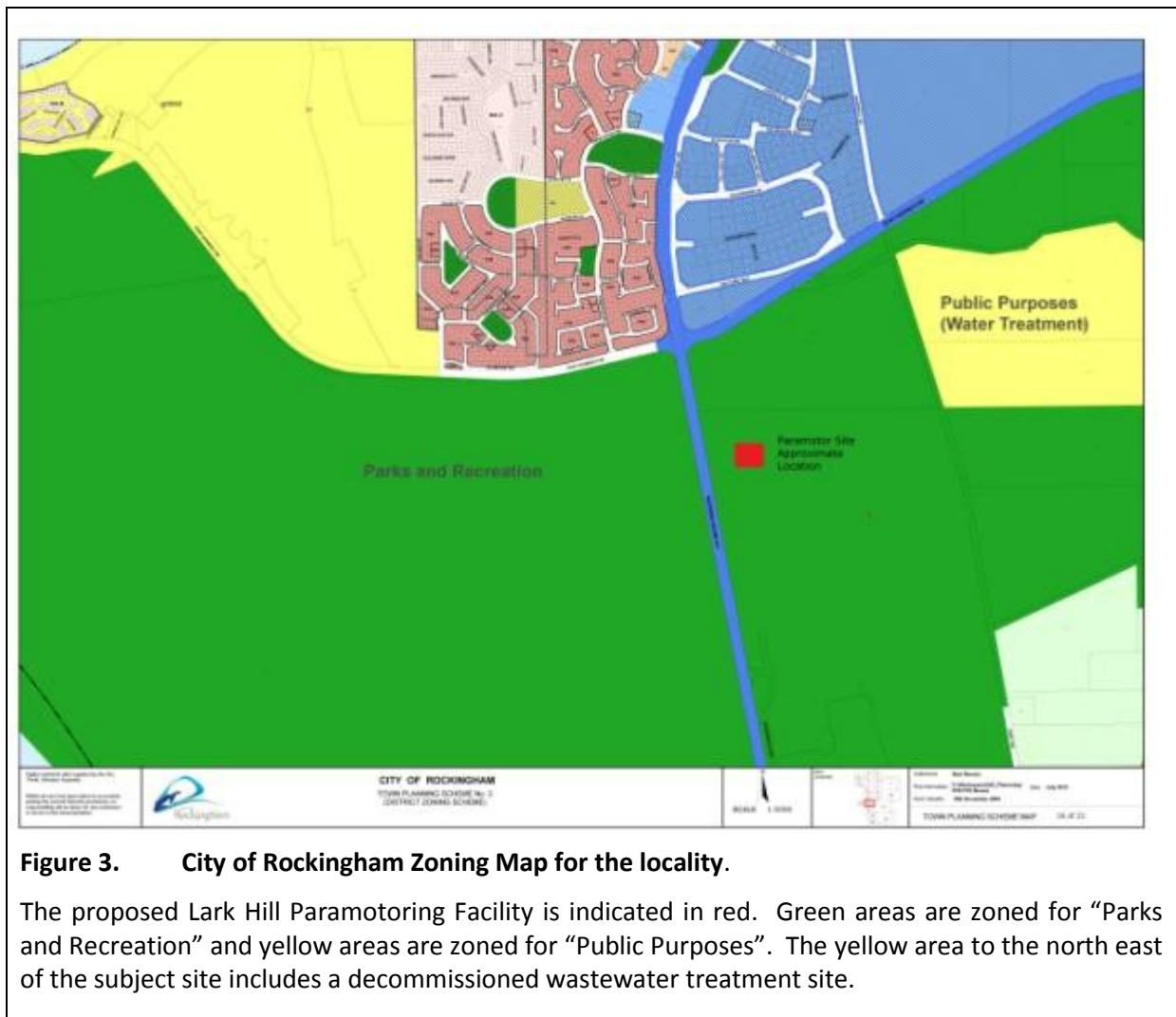


Figure 3. City of Rockingham Zoning Map for the locality.

The proposed Lark Hill Paramotoring Facility is indicated in red. Green areas are zoned for “Parks and Recreation” and yellow areas are zoned for “Public Purposes”. The yellow area to the north east of the subject site includes a decommissioned wastewater treatment site.

2 The Existing Environment



Figure 4. Satellite photograph showing local aspects of the Lark Hill Paramotoring Facility
(from Google Maps)

The proposed Lark Hill Paramotoring Facility is shown in red and is located on a strip of land previously cleared of vegetation. The distance from the edge of the proposed site to the edge of urban housing to the north west is approximately 650 metres. The Lark Hill Thoroughbred Training Facility is located 400 m to the south east of the proposed site.

2 The Existing Environment



Figure 5. Proposed location for the Lark Hill Paragliding Site shown in detail
(from Google Maps)

The proposed boundaries of the Lark Hill Paramotoring Facility are shown indicating an approximate area of 200 by 100 metres. Also shown is the proposed access track from Warnbro Sound Avenue and a parking area. The locations of the access track and parking area would have to be finalised on the basis of ground survey so as to minimise ground and vegetation disturbance.

3 Fuel Management Plan

The handling, storage and dispensing of fuel is a potential environmental issue where careless practices could result in spillage in areas frequently used for refuelling. The perception may arise that refuelling of paramotor engines would take place by tipping from portable fuel containers into funnels on paramotor fuel tanks.

Depending on engine size – paramotor fuel tanks may vary in size between 5 and 10 litres. Unleaded fuel is used for all paramotor engines. Typically, paramotor pilots may carry up to 10 litres of fuel in containers in their vehicles for subsequent refuelling, depending on the fuel tank capacity.

Safety factors demand that fuel is transferred either by hand-operated gravity pump or electric fuel pump. Spillages due to dispensing fuel via a funnel present an unacceptable fire risk to pilots where the engine and pilot are strapped together to form a single unit. Safety demands that dispensing practices minimise fuel spills. With the use of pumps for dispensing fuel, spillages during refuelling are limited at most to a few millilitres that rapidly evaporate due to the low vapour pressure of unleaded petrol.

Flights may last up to three or four hours before re-fuelling is required. Initial filling is invariably conducted prior to arrival at the launch area. In the event that a second flight is planned, the motor will be refuelled at the launch site.

Commitment. All paramotor pilots refuelling paramotor engines at the Lark Hill Site will use hand-operated gravity pumps or electric fuel pumps for transfer of petrol to paramotor fuel tanks. All efforts will be employed to minimise the potential for fuel spillages by ensuring only containers approved for containing petrol are used and that portable fuel containers have properly sealed lids and are stored within vehicles when not in use.

4 Noise Management Plan

4.1 Engine Noise Emissions

Typically, paramotor aircraft generate about the same amount of noise as would be expected from a single-cylinder domestic lawn mower. Total noise generated by a paramotor aircraft is a combination of both engine and propeller noise, where the paramotor engine on its own generates a lot less noise than a lawn mower. Consequently, the starting and idling of motors at the Lark Hill Site will present very low noise emissions.

Attachment A includes a noise assessment of paramotor operations under various conditions. As would be expected, maximum noise emission is generated for maximum thrust during take-off. Typically, maximum thrust lasts for a period of about 45 seconds until the aircraft reaches a height of about 150 ft when the pilot can safely reduce thrust and progressively power down until cruising height is reached. Minimum noise is generated when the motor is idling during a landing approach. In between these two power levels, is the cruising thrust required to maintain a given altitude.

4.2 Noise Receptors

Potential noise receptors from paramotor operations near Lark Hill include housing developments at Secret Harbour to the south and Port Kennedy to the north west. To the south east is the Lark Hill Thoroughbred Training Facility. To the west is the potential for disturbing bird life in wetlands within the Port Kennedy Scientific Park.

4.2.1 Urban Development

The nearest urban development is located at Port Kennedy, approximately 650 m to the north west. This is sufficient distance such that take-off thrust noise may be audible on the fringes of Port Kennedy housing, but would hardly be noticed as being loud or annoying over that distance.

Commitment: The SkyPirates Paramotoring Club will ensure that all noise emissions from operations at the proposed Lark Hill Paramotoring Facility will be compliant with the requirements of the *Environmental Protection (Noise) Regulations (1997)*. The requirements of the Noise Regulations are summarised in Attachment B.

From data generated from the noise monitoring survey (Attachment A) the Club is confident that paramotor noise emissions received at the nearest urban locations will be well within the requirements of the Noise Regulations.

Commitment: When flying below 1000 ft, all paramotor pilots operating from the Lark Hill Site are required to observe a **No-Fly Zone** over and including a 100 m buffer zone around urban areas to the north and south of the subject site.

4.2.2 Lark Hill Thoroughbred Training Facility (LHTTF).

Horses are said to be likely to be disturbed by unusual loud noises and sights.

The LHTTF is located approximately 400 m from the subject site. Training hours change from day to day (see Section 5.2). Clearly, consultation with the LHTTF has revealed that there is a high degree of sensitivity when track work is in progress.

The best options for avoiding conflict with the LHTTF during trackwork hours is for pilots to be observant when horse training is in progress and to show additional courtesy to users of the LHTTF by keeping a wider margin, in addition to the flight path restrictions indicated in Figure 2, if at all possible.

4 Noise Management Plan

Commitment: When flying below a height of 1,000 ft, all pilots operating from the Lark Hill Site are required to observe a **No-Fly Zone** over and including a minimum 100 m buffer zone around urban areas and at least 250 around the the Lark Hill Thoroughbred Training Facility - regardless of whether or not horses are on the track. Mr Dudley Corbett of the Racing and Wagering WA will be provided with updated contact details of the Sky Pirates Paramotoring Club to ensure ongoing liaison between the LHTTF and the Sky Pirates Club.

4.2.3 Port Kennedy Scientific Park Water Avifauna

An official description of the Ramsar Site located within the Port Kennedy Scientific Park, located to the west of Warnbro Sound Avenue, is provided in Section 2.1.1 above. It is noteworthy that the significance of the site is related to its landforms rather than its wetland bird fauna. The reference cited in Section 2.1 does not include a discussion of the importance of the area to migratory water birds. However, the Rockingham Regional Park Management Plan includes a reference to the importance of the area to trans-equatorial migratory bird species. Migratory bird species will be found in the southern hemisphere (and may be found in the Port Kennedy Scientific Park) during the Austral summer when it is winter in the northern hemisphere.

The site includes a large number of small wetlands located in linear Holocene dune swales that run south to north within the park. To date, Paramotor pilots overflying this area have noticed that birds tend more to congregate in the lakes that have been excavated into the water table in golf courses and on the edges of urban areas where there are more open expanses of water. These pilots have also noted that in general, birds in flight tend either take little notice of paramotor aircraft or else may be curious to a degree – but generally do not show signs of alarm. It is more likely that roosting or feeding avifauna are more likely to be disturbed by low-flying aircraft.

Commitment: Regardless of the presence or otherwise of migratory or other bird species, all paramotor pilots using the Lark Hill Site are required to gain and maintain an altitude of 300 ft above ground level as soon as possible when transiting the Port Kennedy Scientific Park. Transiting the Park at this height will minimise the disturbance to any avifauna that may be utilising the wetlands within the Port Kennedy Scientific Park.

Commitment: All paramotor pilots operating from the Lark Hill Site are required to give a commitment to observe the flight path restrictions indicated in Figure 2.

5 Consultation

5.1 City of Rockingham

Preliminary discussions have held with Mr M Emmot (Sport and Recreation Officer – Club Development) of the Rockingham City Council as the potential suitability of the site. Advice from Mr Emmot was that if permission was granted to use the site as a paramotoring launch and landing site, then this would probably be on a temporary basis as this site has been set aside for future public recreational purposes.

5.2 Lark Hill Thoroughbred Training Facility

Discussions have been held with Mr D Corbett from the Racing and Wagering WA (RWWA). The operators have also confirmed that they have no objection to the use of the proposed Lark Hill Paramotoring site, provided that the commitments given in this document are adhered to by all users of the subject site. Mr Corbett provided the following comments relevant to the draft document provided. Other comments by Mr Corbett have been taken into account in editing the final document.

- RWWA currently leases the Lark Hill Thoroughbred Complex from the WA Planning Commission. Documentation was signed last week which will vest management authority over the property directly with RWWA (from the State of WA). IMPORTANTLY, amendments (additional land parcels) to RWWA's holding will be effected when we accept a formal Management Order over the site. Of particular relevance to your organisation is the extension of our property boundary north (see highlighted section A in Figure 6 below) to the Northern Conservation Boundary. We do not have any immediate plans to develop this land and, subject to stakeholder consultation, do not foresee any issues with you flying over this area.
- Our tracks are open for trackwork until 8.30am (Mon, Wed, Thurs, Fri) and until 9.00am on Tuesdays and Saturdays. Complex is closed on Sundays. Every alternate Monday (typically) we conduct official trials at Lark Hill – they normally run through to 12 pm – 1 pm. Trials are a heightened risk event as you may appreciate – we would be very anxious about any neighbouring paramotoring activity during our trials.

I am happy to continue good faith discussions with WA SkyPirates in order to determine a mutually acceptable relationship between our respective operations.

Dudley Corbett | Racing Training Centre Manager
Racing & Wagering Western Australia | 14 Hasler Rd, Osborne Park WA 6017
Telephone: +61 8 9445 5224 | Mobile: +61 428 115 208 | Fax: +61 8 9244 5914
Email: dudley.corbett@rwwa.com.au

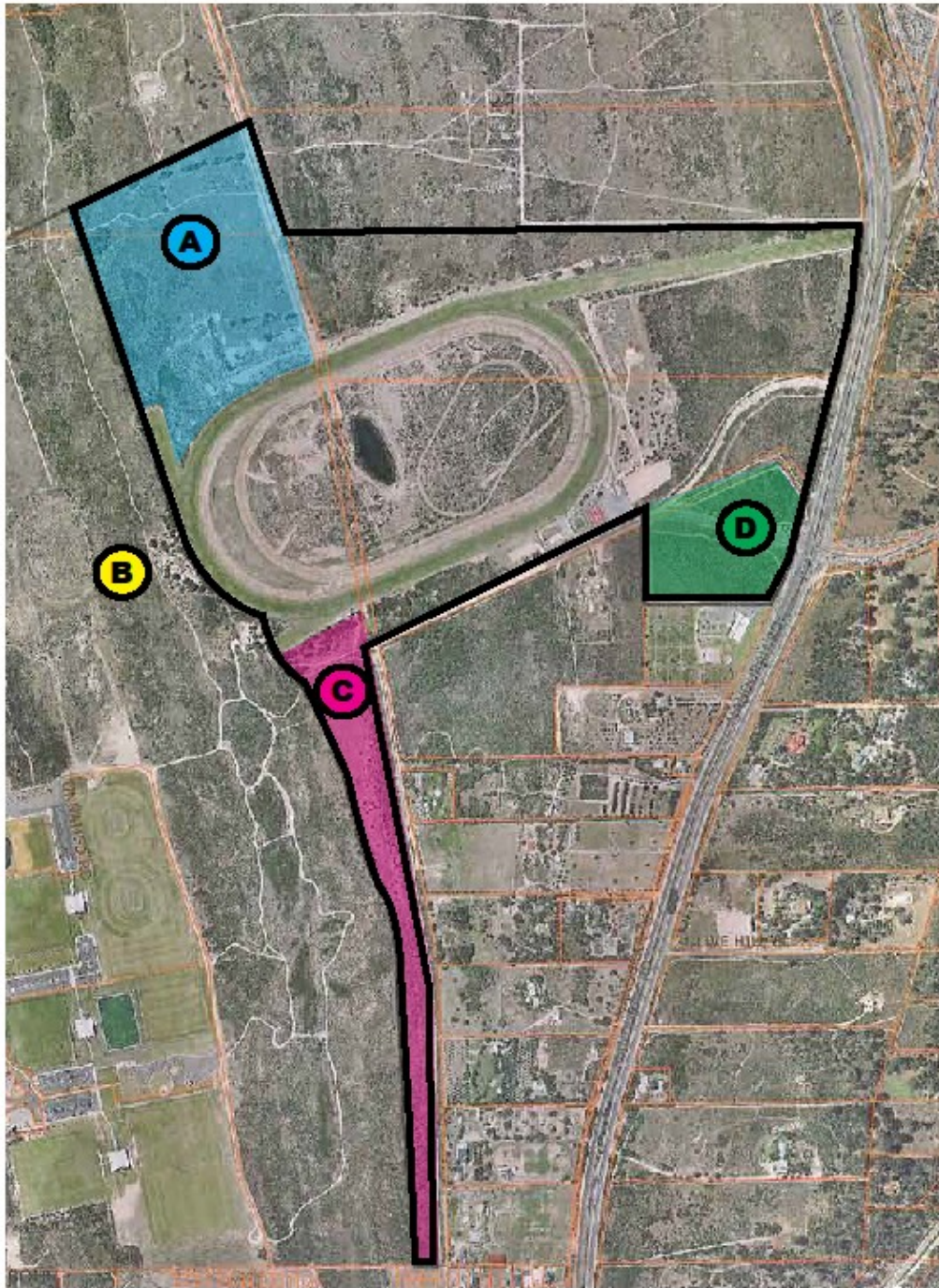


Figure 6. Lark Hill Thoroughbred Training Complex Boundaries

Note that the proposed Paramotoring Facility is located off-page in the vertical “grey” strip to the west of the “Letter A”

6.0 Limitations

This report has been prepared in accordance with the usual care and thoroughness of the consulting profession for use by members of the SkyPirates Paramoting Club Inc. The report is based on generally accepted practices and standards at the time that it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined by Mr Stephen Galvin, paramotoring pilot and committee member of the Club.

In regard to the methodology adopted and sources of information outlined in this report, no independent verification of this information beyond the agreed scope of works has been undertaken and the author assumes no responsibility for any inaccuracies or omissions. No indications were found during the investigations that information contained in this report was false.

This report was prepared during January and February 2013 and is based on the conditions encountered and information reviewed at the time of preparation. The author disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioner.

Attachment A

Noise Survey of Paramotoring Operations

Burns Beach June 2012 – by Neil Angwin

Noise Survey of Paramotoring Operations

Burns Beach June 2012

A noise survey of Paramotoring operations taking place at Burns Beach was conducted over the 15th and 17th of June 2012.

On both occasions the wind direction varied from North east to North west at an average of 7 knots.

Two brands of paramotor regularly used by the WA Skypirates Paramotoring Club (WASP) were surveyed using a Bruel & Kjaer type 2240 sound pressure meter, the parameters measured were LaEQ and Lc Peak which are recognised as standard for the measurement of noise exposure.

In addition a domestic Alroh brand lawnmower was surveyed for comparison of noise output.

Noise measurement methodology:

Each of the paramotors were surveyed when operating a full power which is typical power used for takeoff purposes.

The machines were measured at 5 different locations;

The pilots ear level.

At 25 metres, the closest separation point for persons not directly involved with flying operations.

At 50 metres.

During takeoff run, 15 metres from pilot.

During a flyover using cruise power at a height of 100 feet, the minimum altitude for separation from members of the public not directly involved in flying operations.

At the 25 metre and 50 metre points noise levels were recorded with the pilot facing the sound meter, at 90 degrees to the meter and with the pilot facing directly away from the meter.

The Alroh 4hp lawnmower was surveyed at the operators ear level, at 15 metres(the maximum separation from machine to property boundary) and at 25 metres.

The tables below record the levels in decibels (dB).

Table 1: WERNC 135 cc

Position	LaEQ	Lc Peak
Pilots ear	99	115
25 m Forward	80	100
25 m Adjacent	81	102
25 m Behind	77	100
50 m Forward	71	94
50 m Adjacent	66	90
50 m Behind	70	95
Takeoff	78	101
100 ft flyover	66	89
300 ft flyover	62 (by Calculation)	

Table 2: Nirvana Instinct 200 cc

Position	LaEQ	Lc Peak
Pilots ear	110	129
25 m Forward	84	101
25 m Adjacent	85	104
25 m Behind	90	114
50 m Forward	75	95
50 m Adjacent	78	98
50 m Behind	78	104
Takeoff	74	98
100 ft flyover	68	89
300 ft flyover	64 (by Calculation)	

Table3: Alroh lawnmower

Position	LaEQ	Lc Peak
Operators ear	94	108
15 m	91	101
25 m	88	100

Discussion of results:

Workplace legislation is in place to limit noise exposure over 8 hours to below 85dB. The term used is La8EQ, no one can be exposed to a peak level of above 140dB as noise levels above 140dB can cause instant hearing damage. An example of this noise level would be a high calibre rifle shot.

None of the peak noise levels recorded came near to exceeding the 140dB Lc Peak.

Decibels are logarithmic calculations so an increase of 3 dB represents a doubling of the sound pressure, typically a human will aware of noise levels changes when the sound pressure changes between 5 and 10 decibels.

For exposure purposes if the noise level increases by 3 dB then the exposure time should be halved, conversely if the noise level decreases by 3 dB the exposure time can be doubled.

Sound pressure levels will be halved if distance to source is doubled, this method was used to calculate 300ft flyover noise levels.

Table 4: Illustrating noise levels and exposure times to meet La8EQ.

Noise level LaEQ	85	88	91	94	97	100
Exposure time	8 hrs	4 hrs	2 hrs	1 hr	30 min	15 min

The highest noise levels recorded were at the pilots ear level for both paramotors surveyed, both pilots were wearing helmets fitted with ear muff type hearing protection, using a conservative estimate of the attenuation provided by these of 25dB the sound pressure reaching the pilot's ear during a full power ground run up would be 85dB.

Exposure to bystanders during a 30 second full power ground run up at 25 metres (90 dB) represents minimal risk to hearing damage as does exposure during the take off run as the noise source moves away from the initial point.

Inflight noise level exposure to bystanders on the ground is also minimal.

Neil Angwin



Noise Officer 04026

Attachment B

Summary of of the Environmental Protection (Noise) Regulations 1997

Type of Premises Receiving Noise	Time of Day	Assigned Level (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Noise Sensitive Premises at Highly Sensitive Areas	0700 to 1900 hrs Mon to Sat	45	55	65
	0900 to 1900 hrs Sunday & Public Holidays	40	50	65
	1900 to 2200 hrs All Days	40	50	55
	2200 hrs on any day to 0700 hrs Mon to Sat & 0900 hrs Sunday & Public Holidays	35	45	55

Attachment C

Paramotor Pilot Induction
for the
Lark Hill Paramotoring Site
City of Rockingham.

Pilot Induction

All persons operating Paramotor Aircraft out of the Lark Hill Paramotoring Facility are required to sign an agreement that they have read the induction form and agree to its commitments.



The Lark Hill Paramotoring Facility is marked in red. The green lines enclose required flight path restrictions. Urban areas to the north and south and the Lark Hill include **No-Fly Zones** extending at least 100 metres beyond the boundaries of urban areas when flying below 1000 ft. The Thoroughbred Training Facility includes a minimum 250 m **No-Fly Zone**. A minimum height of 300 ft is required for overflying the Scientific Park that is to the West of Warnboro Sound Avenue.

Commitments made by the WA SkyPirates Club to the City of Rockingham.

1. All paramotor pilots refuelling paramotor engines at the Lark Hill Site will use hand-operated gravity pumps or electric fuel pumps for transfer of petrol to paramotor fuel tanks. All efforts will be employed to minimise the potential for fuel spillages by ensuring that portable fuel containers have properly sealed lids and are stored within vehicles when not in use.
2. When flying below 1,000 ft, all paramotor pilots operating from the Lark Hill Site are required to observe minimum **100m No-Fly Zone** around urban areas to the north and south of the Lark Hill Site. The Lark Hill Thoroughbred Training Centre requires a minimum **250m No-Fly Zone**.
3. Regardless of the presence or otherwise of migratory bird species, all paramotor pilots using the Lark Hill Site are required to gain and maintain an altitude of 300 ft above ground level when transiting the Port Kennedy Scientific Park. Transiting the Park at this height will minimise the disturbance to any migratory birds that could be utilising the wetlands of the Port Kennedy Scientific Park.

Pilot Name Pilot Signature Date