GREAT SOUTHERN LANDFILL (GSL) FERAL ANIMAL ENVIRONMENTAL MANAGEMENT PLAN

Alkina Holdings Pty Ltd

Document Control

Date	Version	Prepared by	Comment	Reviewed / Approved by
9/4/2019	V1.0	A K	Approved by:	S Mangione
29/11/2019	V2.0	A K	Updated to consider EMP requirements	
7/4/2020	V3	A K	Inclusion of DBCA comment in relation to feral animal exclusion	

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Summary

Proposal Name	Great Southern Landfill at Allawuna Farm Lot 4869 and Part Lot 29259, Great Southern Highway, St Ronans
Proponent	Alkina Holdings Pty Ltd (Alkina)
Referral	Minister for Environment directed the Environmental Protection Authority (EPA), on 29 March 2019, under section 43(1) of the *Environmental Protection Act 1986* to assess the proposal. The Minister considers that feral animal numbers can increase because of the presence of landfills, and therefore have the potential to significantly impact on the survival of native fauna.
Assessment no.	2204
Purpose	The Environmental Scoping Document (ESD) specifically identifies Item 9d, 10 and 13) relating to feral animals. 9d. conduct a baseline feral animal survey. 10. Assess the potential for increased feral animal activity and likely impacts as a result of the proposal 13. Identify management measures to ensure impacts are not greater than predicted. This shall include preparation of an Environmental Management Plan for feral animals. The Plan shall include a description of the best practice management measures to: prevent feral animals from entering the site minimise the number of feral animals attracted to the site eradicate, where practicable, feral animals within the development envelopee. The Plan shall specify environmental objectives, management targets, management actions, monitoring and reporting measures.
Key Environmental Factor	Terrestrial Fauna: The Objective is to protect terrestrial fauna so that the biological diversity and ecological integrity is maintained
Key provisions of the Plan	The objective of this EMP is to minimise attraction of feral animals to the landfill facility, prevent their ability to access the landfill, and control increasing populations around the facility where they are identified and attributed to the landfill operation.

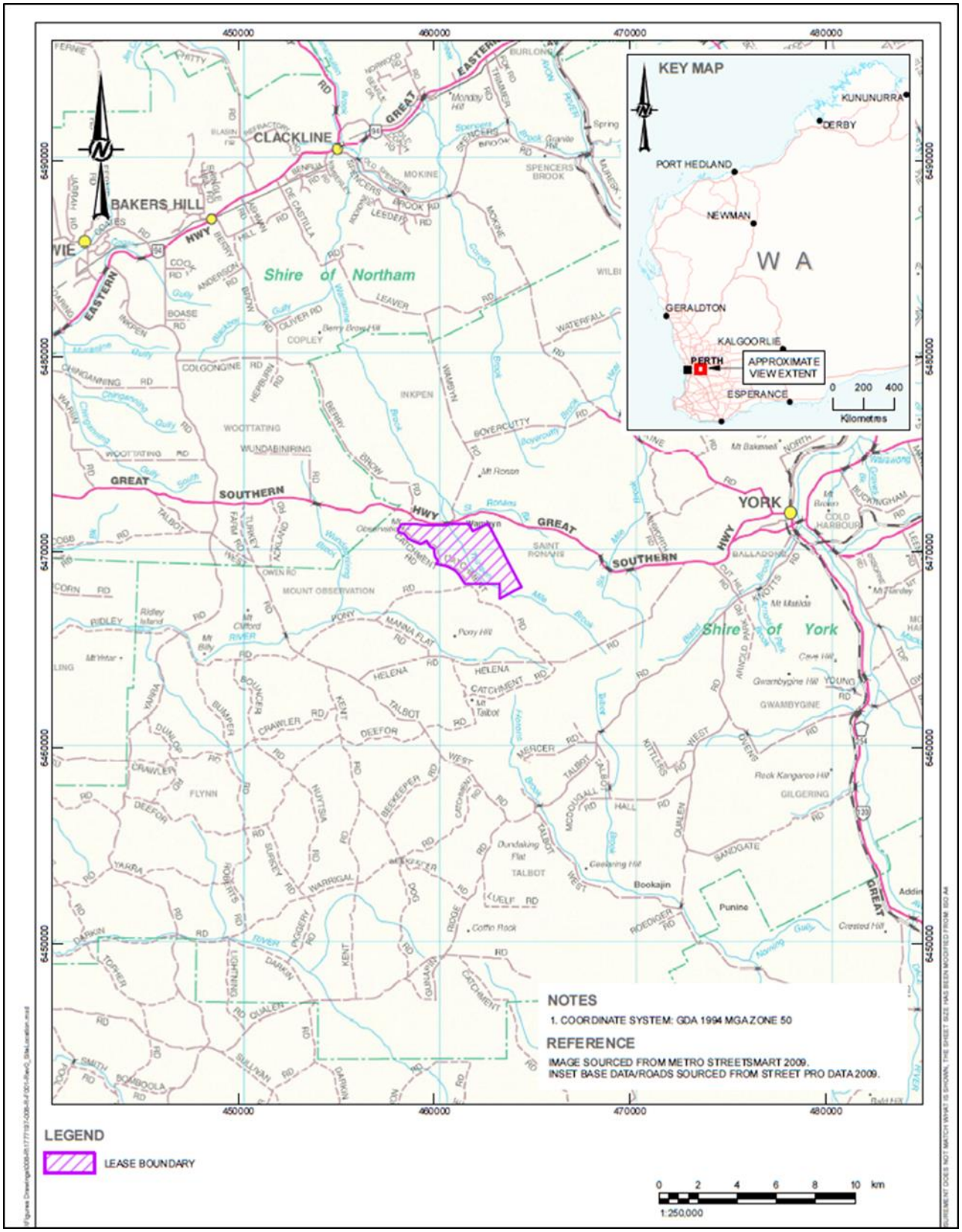

Figure 1: Regional context of the Great Southern Landfill. The purple area denotes Lot 4869.

1. Context, Scope and Rational

1.1 Proposal

Alkina propose to construct and operate a lined Class II / III putrescible landfill (Great Southern Landfill) on Lot 4869 on Plan 224502, Great Southern Highway, Saint Ronan's in the Shire of York. This will also require upgrades to the Great Southern Highway (Road Reserve Lot 29259 on Plan 21496) for traffic safety.

The landfill will be approximately 80 km east of Perth within the western edge of the Shire of York boundary, approximately 18 km west of the York town site. The development will be located on the south side of the Great Southern Highway. The regional location of the proposal is reflected in Figure 1.

The GSL facility will accept between 150,000 and 250,000 tonnes of waste per annual period. It is envisaged the facility will operate for approximately 28 years, dependent on achieved filling and compaction rates. The landfill will have a lifetime capacity of approximately 5.6 Mm^3. The wastes will principally include Inert Type 1 and Type 2, Special Type 1 and Type 2 wastes, and municipal solid wastes. The wastes will predominantly be sourced from the Perth metropolitan; however, there is opportunity in future to accept waste from regional areas within the proximity.

With the acceptance and burial of putrescible wastes, there is a risk that the associated activities may further attract / increase feral animals and vermin to the area (attracted to a potential food source) and subsequently pose greater risk on native fauna through predatory activities and habits.

The proposal footprint will be approximately 77 ha within the greater 1164 ha development envelope. Within the development footprint of mostly cleared farmland. The infrastructure will include seven landfill cells (developed in stages) and supporting infrastructure (stormwater pond, leachate ponds, retention pond, sediment management infrastructure, office roads etc).

Figure 2 shows relationship between the development envelope and development footprint (being the area to be disturbed with the placement of infrastructure).

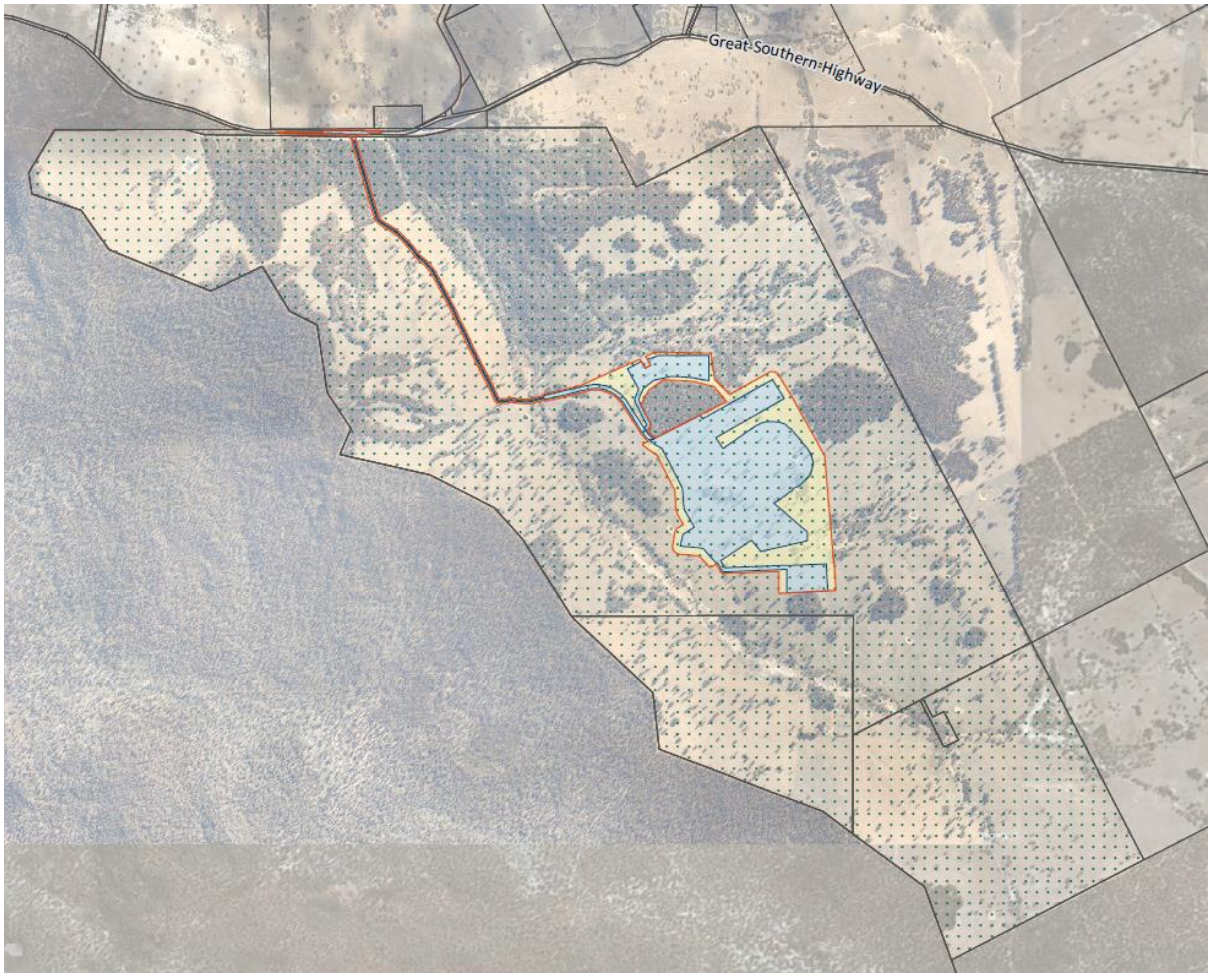

Figure 2: Relationship between the Allawuna Farm (dotted), the development boundary (yellow shaded) and footprint (blue shaded) (Emerge Associates).

1.2 Key Environmental Factors

While the EPA determined that the proposal needed to address the following Key Environmental Factors, the first is specifically pertinent in the context of the EMP.

- Terrestrial Fauna
- Flora and Vegetation
- Terrestrial Environmental Quality
- Inland Waters
- Social Surroundings.

The EPA objective for the Terrestrial Fauna factor is 'to protect terrestrial fauna so that the biological diversity and ecological integrity are maintained'.

Feral animals are those species that have the potential to cause serious impact on natural ecosystems through direct effects such as predation, habitat destruction,

competition for food and territory, introduction of disease, and through environmental degradation such as that caused by over-grazing, disturbance of vegetation and native fauna habitat. With evidence of these species already within the development boundary, the impacts on the environmental values are most likely already established.

The landfill site is located in a remote rural agricultural area (> 1.8 km from the nearest residence), which combined with the intervening landform and vegetation provides a considerable buffer in minimising impacts to visual and landscape amenity.

Allawuna Farm is an agricultural property (principally cropping and sheep); these activities will continue within the development area around the landfill operation. The surrounding properties to the east and south are agricultural while the Wandoo National Park (WNP) is located along the western edge of the Allawuna Farm, approximately 1,000 m from the landfill. Remnant vegetation within the northern boundary of Lot 4869 separates the landfill from the Great Southern Highway (GSH) and being contiguous with the WNP, provides a wildlife corridor to other remnant vegetation to the east and north. Wambyn Nature Reserve (NR) is located approximately over 2.2 km ENE of the landfill while St Ronans NR is located approximately 3.2 km to the north, north of the Great Southern Highway.

The proximity to sensitive receptors is summarised below (Table 1) while map in Figure 3 illustrates the environmental setting.

Table 1: Proximity of the landfill to sensitive receptors.

Receptor	Separation Distance (m)	Comment
Nearest neighbour boundary fence	600 m	East of GSL
Nearest Neighbour Dwelling	>1,8 km	North-east
Mt Observation Picnic Area	4,4 km	West-north-west
WNP	1,000 m	West
Wambyn Nature Reserve (NR)	>2 km	East-north-east
St Ronan NR	>3.2 km	North
Aboriginal Heritage Site:	700 m	West site associated with Helena River
Helena River catchment	1,000 m	P1 Public Drink Water Catchment area in the adjoining catchment, which coincides with the WNP
Leachate Pond to Thirteen Mile Brook	310 m	East
Landfill to Thirteen Mile Brook	350 m	East
Declared rare flora	1.24 km	NW of the development site (*Lechenaultia laricini*) listed as endangered under EPBC Act

Receptor	Separation Distance (m)	Comment
Threatened fauna	0 m	Black cockatoo habitat present on site
Koodeja swamp (wetland of significance)	21km	NW of GSL

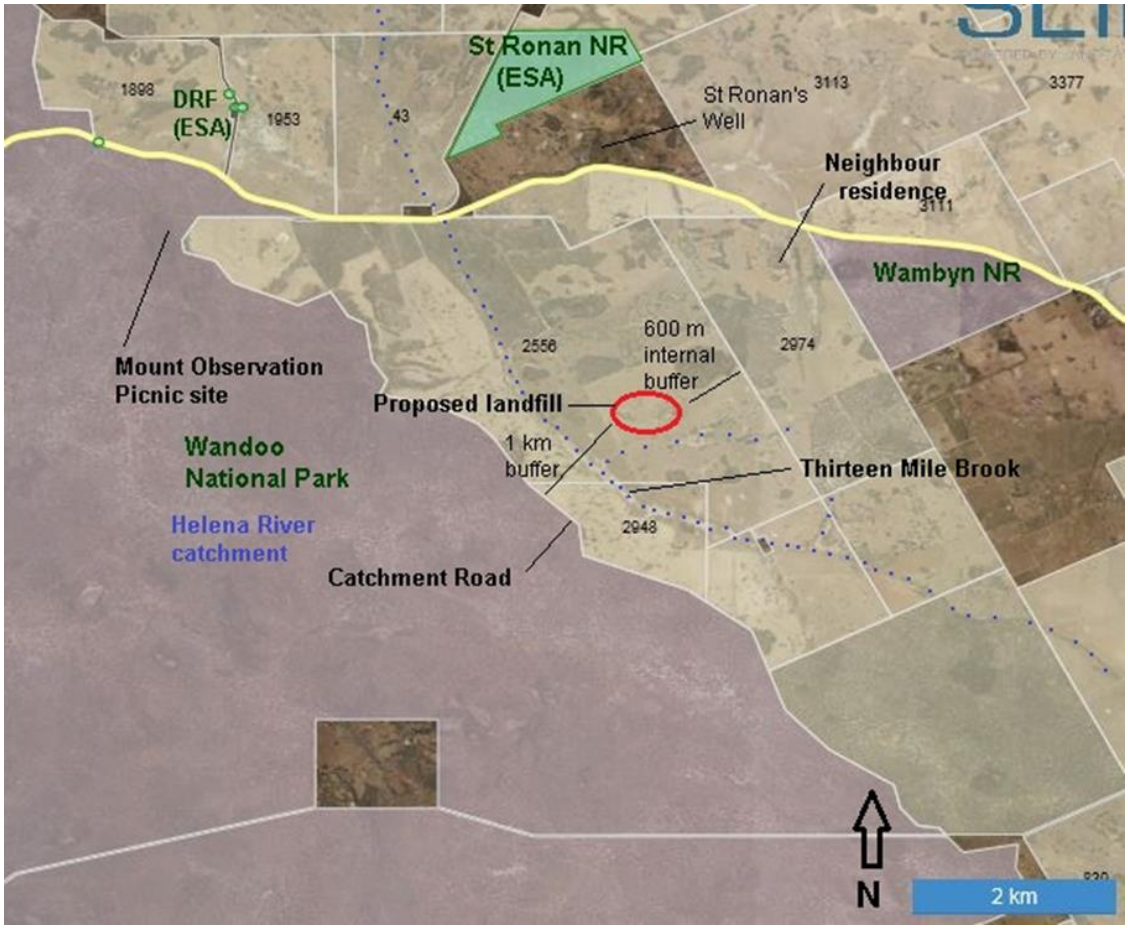

Figure 3: Relationship between the GSL and environmental receptors.

1.3 ESD Requirements

The ESD specifically identified the following tasks related to feral animals

Table 2: ERD requirements specifically relating to feral animal management.

ESD Item	Detail	Reference
9d.	Undertake a baseline feral animal survey	Appendix 1
10	Assess the potential for increased feral animal activity and likely impacts as a result of the proposal	ERD 4.3.4; 4.3.5 and EMP
13	Identify management measures to ensure impacts are not greater than predicted. This shall include preparation of an Environmental Management Plan for feral animals. The Plan shall include a description of the best practice management measures to: a. prevent feral animals from entering the site b. minimise the number of feral animals attracted to the site c. eradicate, where practicable, feral animals within the development envelope. The Plan shall specify environmental objectives, management targets, management actions, monitoring and reporting measures.	ERD 4.3.6 and EMP

Legislation of feral fauna Species

The term 'feral' is applied to fauna that have escaped from domestication and survive in the wild without assistance. Introduced fauna that threaten native ecosystems are also often also referred to as feral, pests or invasive.

Under the EP Act, it is an offence for a person to intentionally, or with criminal negligence to cause (or allow) serious or material harm.

Particularly invasive (or detrimental) feral species may be listed a 'declared pest' pursuant of Western Australia's Biosecurity and Agriculture Management Act 2007 (BAM Act) and require special management to limit their spread. This Act is legislated to prevent new animal and plant pests (vermin and weeds) and diseases from entering Western Australia and manage the impact and spread of those pests already present in the state. This means a person must not keep, breed or cultivate or intentionally infect or infest anything with a declared pest. Under the BAM Act, declared pests are placed in one of three control categories (C1 - exclusion, C2- eradication, or C3 -management). C3 species are those species already established in WA and should be controlled to prevent increased population size or density, or expanding their distribution range. Restrictions are also placed keeping such animals.

Under this legislation landowners have an obligation to control declared pests on their property with restrictions to keeping such animals, which include the species identified during the feral animal base line survey.

At a Commonwealth level, pest fauna may be listed as 'established pests and diseases of National Significance under the Australian Pest Animal Strategy (Emerge 2019).

The *Cat Act 2011* is also relevant: The purpose of this Act is to introduce measures to: reduce the large number of stray cats being euthanised each year; encourage responsible cat ownership; and provide for better management of the unwanted impacts of cats on the community and environment. Local governments are responsible for administering and enforcing the legislation. This legislation will reduce incidence of domestic cats becoming unwanted and stray / feral.

1.4 Rationale and Approach

ENV Australia completed flora and fauna surveys in 2012 when the proposed Allawuna Farm landfill was first considered by SUEZ. This information formed the basis of the understanding the fauna represented in the area. The only threatened fauna habitat known to occur in the development is black cockatoo habitat trees.

Emerge Consultants (in conjunction with Zootopia) conducted flora and targeted fauna surveys in spring 2019 to assess the risks identified in the ESD. The EMP has been informed by the Baseline Feral Animal Assessment conducted in 2019 and anecdotal evidence of feral animals within the area.

1.4.1 Baseline Feral Fauna Survey and Assessment

As part of the feral fauna survey, a desktop review was undertaken of relevant background information pertaining to the site and surrounds, including database searches for fauna species. A reconnaissance survey was completed to review habitat within the site and identify sampling locations. The findings were provided in a report.

As part of the survey, 30 infrared motion-sensor cameras were strategically placed across the Allawuna Farm between late August and October 2019. Camera locations were selected to provide systematic coverage of the GSL site with a focus on habitats likely to be favoured by feral fauna species (see Figure 4).

A total of 20 fauna species were recorded over a 40-day period of which five were non-natives (or feral) species. Four of these non-native species are listed as declared pests pursuant of the *Biosecurity Agriculture Management Act 2007* (BAM Act):

- Feral cat
- Rabbit
- Feral pig
- Red fox

In total, 455 observations were recorded of which 373 were of native species (mainly Australian raven, western grey kangaroo, Australian magpies and Australian ringneck). Feral fauna species accounted for the rest of the observations (recorded at a lower frequency compared to native fauna species). The red fox was the most common feral species recorded (recorded 67 times) during the survey period while six rabbits, five individual feral pigs and one cat were also recorded.

The pie-chart below provides an indication of the proportion of days that feral species were recorded between 26 August and 5 October 2019 (Emerge 2019). The results did not provide any clear pattern of movement of feral animals even through some camera points did record animals more often. It is however clear based on the recordings that the feral animals move between the properties.

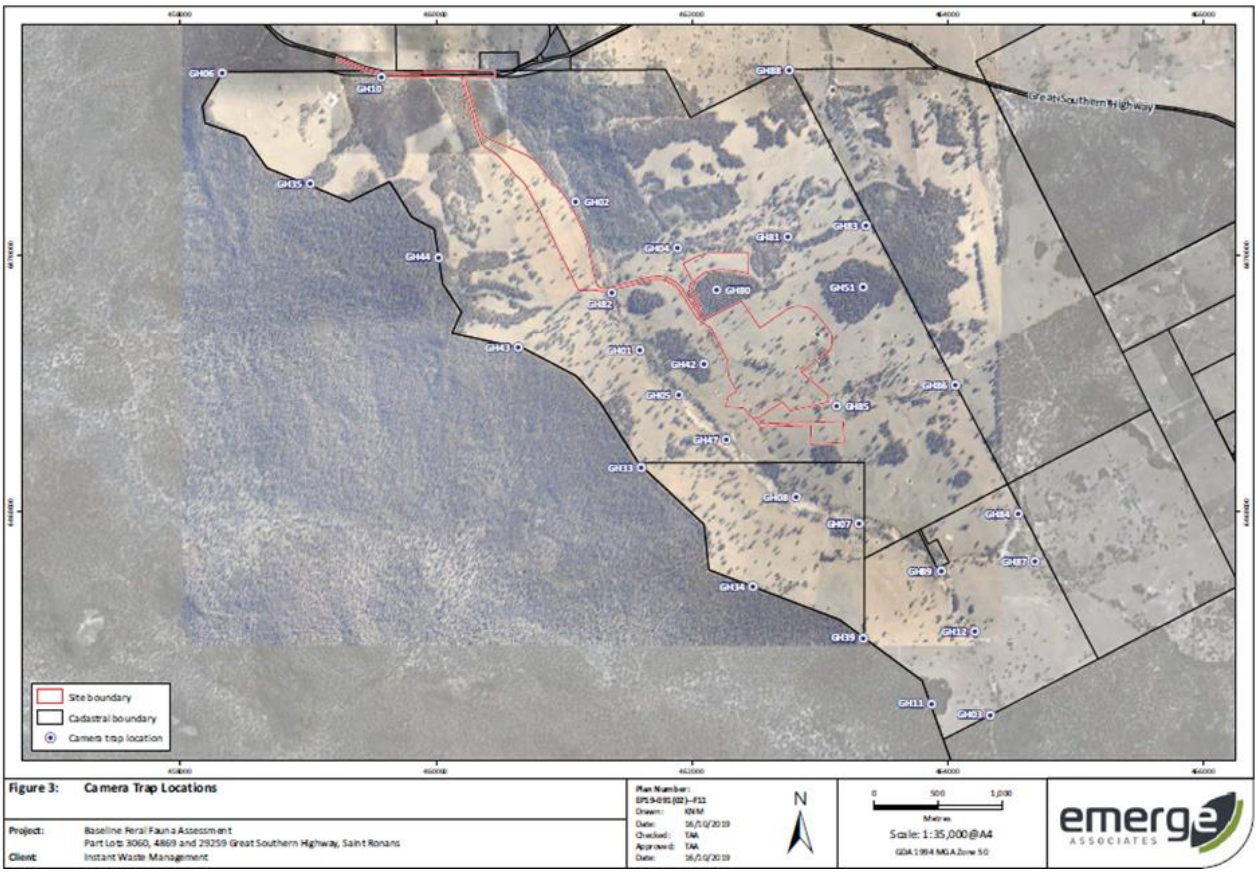

Figure 4: Location of camera placement during feral animal assessment (Emerge 2019)

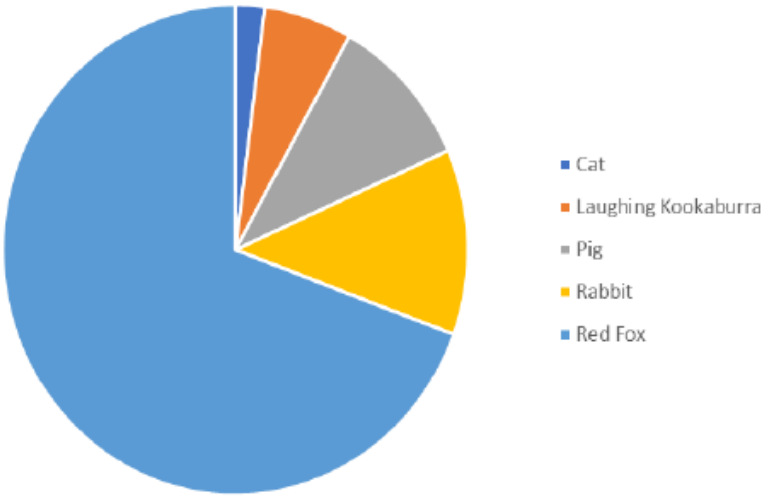

Figure 5: Proportion of days that feral animals were recorded during the survey period (Emerge 2019)

According to Emerge survey (Emerge 2019b), the population of feral fauna recorded is not considered to be relatively large or unusual for the site given its agricultural setting. It must be noted that feral animal control is undertaken in the adjoining WNP according to DBCA (including aerial baiting under the Western Shield Program and pig control), while the current landowner also periodically shoots feral animals encountered. The owner of the Allawuna Farm destroyed five pigs during 2019 autumn. Shooting of feral animals on agricultural properties is common practice.

1.4.2 Uncertainties

One is not able to quantify the density of these species from the surveys undertaken. It is uncertain how many of these feral animal observations were the same or different individuals moving across the site on the same or different days. Therefore, it is difficult to predict the actual population size without unique individual markings/identification (or tracking of individuals through a capture and release program).

For instance, the red fox is highly mobile, usually live in small family groups around the breeding season and can cover a large area within a territory, which they maintain for most of the year. Territory size varies depending on habitat type, food source etc., and meaning that several observations may have been attributed to the resident family unit.

The surveys also strategically targeted locations likely to be used by the feral animals, however, the cameras used do not provide a 360^{o} view of the surroundings, meaning animals could have moved behind the cameras without detection. NWS DPI (2007) also identify the potential shortcomings of various monitoring techniques to monitoring abundance of foxes; generally all rely on assumptions in determinations.

There was evidence of fauna movement between the properties to and from the woodland and forested areas, which will include freely moving between the conservation estate and freehold land (including the neighbours), meaning the forest areas are also a source of these animal.

The survey was also completed in spring, during a time the foxes may have been more actively looking for food (lambs, being the lambing season) to feed their young.

1.4.3 Ecology (habits) and potential impacts of feral species

There is currently limited (none found) published information on the direct relationship between feral animals and landfill activities. Landfill management strategies can however, ensure that access to waste, as a food source is limited and control initiatives implemented. The baseline study undertaken in 2019 has identified their presence in the area. Foxes, pigs, rabbits, and a cat were recorded and these species would be freely moving between the conservation estate and freehold land.

Feral pig

Feral pigs are the descendants of domestic pigs (*Sus scrofa*), which were first brought to Australia by early European colonists.

Feral pigs have established in a very wide range of habitats in most medium to high rainfall areas of Australia. They prefer thick cover and need access to water, especially in hot conditions. In Western Australia, they occur in large areas of the jarrah forest and adjacent farming areas of the south-west, including the subject area.

Feral pigs directly affect agriculture by feeding on crops and livestock, causing damage by uprooting and trampling flora, and by harbouring and spreading diseases and parasites. Damage to native ecosystems are harder to quantify but some effects are clear. Uprooting of soil causes physical damage, erosion, and affects soil fauna. It also reduces the ground cover, sometimes changes the composition of plant communities and can encourage invasion by weeds. Feeding on native plants and animals is directly destructive, and presumably results in competition with native animals dependent on the same food resources. There is also circumstantial evidence that pigs spread the fungal pathogen *Phytophthora cinnamomi*, which causes jarrah dieback disease in Western Australia. As part of their habit's pigs will pose a threat to threatened species through their actions.

Feral pigs are true omnivores but they generally rely on plant material for the bulk of their diet. Odours and presence of a food source may increase their presence in the area.

The presence of pigs in the vicinity is recorded and observed by locals. This was supported by the baseline survey undertaken in 2019 and the regular pig shooting on the property. While the landfill does not pose a risk to the feral pigs, indirect

consequences may be the attraction of further pigs, which will damage agricultural and environmental values identified above (as they currently do). The indirect impacts / risks already exist and through site management, these risks will not materially increase.

Red Fox

The red fox (*Vulpes vulpes*) is a native of the northern hemisphere. The early Europeans that colonised Australia introduced the red fox from Britain for hunting with foxhounds. The fox has now colonised most of mainland Australia, including Western Australia.

In Western Australia, the fox is a declared pest under the BAM Act administered by the Department of Primary Industries and Regional Development (DPIRD). This declaration is for the whole of Western Australia (C1 exclusion and C3 management category C3 under the BAM Act).

There is strong evidence to suggest that foxes have caused the decline of many small to medium-sized species of Australian native mammals. Foxes are solitary and hunt alone, however, they become more social as the breeding season approaches, forming or re-establishing pairs.

Foxes tend to eat whatever is most easily available to them, which could include food wastes accessible at landfills, and presence of other food sources (preying on other animals attracted to the landfill).

The 2019 surveys have demonstrated that foxes are very active in the area (Emerge 2019b) with numerous daily recordings. They are also quite mobile in their search for food within a defined territory, which may have led to regular recording. The survey was also undertaken during the lambing season which means the foxes may actively have been searching for easy prey to feed their young.

The numbers of individual feral animals are also impacted by regular shooting activities on the property (e.g. shooting of five pigs on Allawuna Farm during autumn of 2019). Being territorial maintains a level of natural population density control. Removal of individuals will mean another animal (e.g. fox) will fill the void. While the foxes will not pose a direct threat to the landfill, they will seek to any food source that is available to them from the landfill. The impacts of their presence will already be observed and the landfill is unlikely present further indirect or cumulative impacts.

Feral cat

Cats were introduced to Australia by early settlers. Feral cats are the same species as domestic cats. Feral cats became established throughout Australia from multiple releases where ever Europeans settled. Feral cats are now widespread across almost all habitats and populations are self-supporting in the wild by hunting (stalking, ambushing and pouncing / sudden attack) and scavenging. Its spread

across Australia was assisted by the prior spread of the European rabbit *Oryctolagus cuniculus*.

The Cat Act was legislated in 2011 to reduce uncontrolled cat population growth.

Feral cats threaten the survival of a multitude of native species in Australia. They have caused the extinction of some ground-dwelling birds and small to medium-sized mammals. They are a major cause of decline for many land-based endangered animals such as the bilby, bandicoot, bettong and numbat. Many native animals are struggling to survive so reducing the number killed by this introduced predator will allow their populations to grow. Predation by feral cats is listed as a Key Threatening Process under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Feral cats are predominantly solitary and nocturnal, spending most of the day in the safety of a shelter such as a rabbit burrow, log or rock pile. They are carnivores, generally eating small mammals, birds, reptiles, amphibians, fish and insects depending on their availability. They may scavenge food wastes where these are available, or be attracted be the presence of rats and mice.

The main impact of feral cats is through direct predation, but cats also spread diseases that affect, humans, livestock and native wildlife. Feral cats are known to scavenge for human food scraps and to feed on carrion. They can build up large populations around such reliable food sources (e.g. artificially rich food sources such as rubbish tips, including being attracted to the presence of rodents that would also potentially be attracted to the landfills).

While a single cat was recorded during the survey period, more are likely to be present based on their ability to survive in diverse habitats. Similar to foxes, they pose no threat to the landfill but their presence may place other taxa at risk. Similarly, the impacts of their presence will already exist on native species (even though this is not quantified through this study). An increase in cat numbers (assuming there is an increase in food source availability may add to existing cumulative impacts. No other activities are being proposed that will result in additional feral animal population increases that would add to the existing concern.

European Rabbit

Rabbits will feed on native vegetation and potentially impact on threatened species upon they feed. They compete with grazing stock for food, contribute to soil erosion, damage crops and destabilise the land, potentially leading to injury of livestock. Rabbits threaten the survival of many native flora and fauna species, including threatened species, thereby negatively affecting biodiversity values. It is not expected that rabbit numbers will increase as a consequence of the proposed landfill as the landfill will not present suitable habitat.

Rabbits were recorded during the 2019 survey. The presence of the landfill is not expected to have an impact on their numbers, or impacts are they will not be reliant on the landfill as part of its habitat requirements.

Risk Assessment

From an assessment of risk, the feral animals are already present in the area and the consequences of their presence may already have been realised prior to the establishment of the landfill. The presence of the landfill will not change this. While the landfill may present a food source if not adequately managed (management actions identified in following section), existing controls are required of landowners where the species are declared pests. Advice from the Parks and Wildlife Perth Hills District (Department of Biodiversity Conservation and Attractions) is that they conduct aerial baiting in sections of the WNP for foxes and cats as part of the Western Shield program, and target pig control during the drier times of the year when pigs are likely to congregate near water.

Control activities undertaken by DBCA, neighbours, current landowner (and Alkina as the future landowner) will continue.

Alkina contacted DPIRD for advice on potential biosecurity risks as part of its stakeholder engagement for the Part IV EP Act assessment. DPIRD no evidence of agricultural biosecurity incidents originating from operating Class II or Class III landfill sites in rural areas that would pose an unacceptable biosecurity risk for agriculture. DPIRD did reiterate (similar advice provided to DWER during the Allawuna Farm works approval assessment stakeholder engagement in 2015/16) the importance of identifying biosecurity risks and implementing the all-necessary control methods raised in previous advice.

The baseline survey has been to validate the presence of feral animals within the Allawuna Farm property but was not able to predict population numbers of densities without being able to uniquely identify animals (either from marking or GIS tracking), or specific impacts from a proposal not yet operational.

On this basis, management based-provisions form the basis of mitigation actions.

1.5 Index of Biodiversity Surveys for Assessments (IBSA)

The biological survey information collected for the environmental impact assessment has been captured and presented with the associated Environmental Review Document appendices.

2. EMP Provisions

The EMP will follow management-based provisions, which will be adopted / adapted (e.g combination of different strategies) as required to ensure effectiveness and consider any new technology that could become available and successfully be implemented.

Table 3: Feral Animal mitigation strategies

EPA factor and objective	Terrestrial Fauna: The Objective is to protect terrestrial fauna so that the biological diversity and ecological integrity is maintained
Key Environmental values	The landfill will be located on principally cleared agricultural land, which has been determined to have low fauna habitat value. Feral animals do already occur in the area. The only known threatened fauna known to frequent the site are black cockatoo species. However, the landfill is near conservation estate, which has the purpose of protecting biodiversity – the landfill operations should not compromise this purpose.
Key impacts and risks	Feral animals impact terrestrial fauna and flora through either direct predation, habitat modification, and introduction /spread of diseases. General impacts of feral animals on native fauna are well documented. Feral animals known to exist in the area and their presence will likely have already realised impacts on the local ecosystem (which is unquantified for this location). There is concern the numbers of ferals may increase in the area if suitable habitat and food is available through the acceptance of certain waste types (putrescible food wastes). The establishment of the landfill may attract greater numbers of feral animals to the immediate area looking for food, or wanting to prey on other animals attracted to the facility. Active management will be required to mitigate risk.
Objective and outcome	The objective of this EMP is to minimise attraction of feral animals to the landfill facility, prevent their ability to access the landfill, and control increasing populations around the facility where they are identified and attributed to the landfill operation. In doing so, the following outcomes will also be achieved:

	• Protect and maintain key environmental and other assets in the vicinity (minimise impacts); • Being a good neighbour to adjoining landholders and reduce economic impacts; • Comply with required legislation and codes; and • Mitigate the transmission of disease vectors.

Management action	Management target	Monitoring	Reporting
Construct and maintain a 2m-high chain-mesh perimeter fence the landfill area and leachate infrastructure.	Prevent feral animal access to the landfill / food buried at the facility.	Daily visual inspection of the perimeter fence. Maintain register of repair work. Install strategically placed (min four) motion sensor cameras to detect any feral animal intrusion (establish if management actions are effective – find and close off any access points)	Annual reporting as part of the Part V licence.
Remove ability for feral animals to crawl under the chain mesh fencing. This could include installing a 400mm skirt/apron netting around the base of the landfill cell fencing, or creating a hardstand under the fenceline, and ensuring access gates have a reduced gap to the floor (e.g. 50mm) comprised of compacted hardstand material.			
Remove the ability for feral animals to climbing over the landfill fence by design or, electrification using two hotwires; one near the base and the other near the top of the fence when the site is not operational.			
Lock the landfill gates when the facility is closed, ensuring feral animals cannot access the site.		Staff training Supervision	
Staff training: Staff at the GSL will undergo induction to ensure compliance of safe work environments specified in the *Occupational, Health and Safety Act 1984*. Staff will also be trained in the identification of feral animals and control methods. Any person undertaking specified controls / actions are be trained or be required to demonstrate competency.	Minimise the attraction of feral animals to the facility. Eradicate, where practicable, feral animals within the development envelope when their presence is detected.	Staff training register. Register of competencies to undertake specific controls (e.g. contractors).	Annual reporting as per licence requirements.

Weekly visual inspections around the fenced landfill infrastructure area to look for signs of feral animal presence and initiate controls as required.		Look for visual evidence of increased feral animal activity around the landfill development footprint (e.g. spoor, droppings etc.) Staff training records Maintain inspection register.	Annual reporting as per licence requirements.
Placement of food and odorous wastes below other wastes types before the end of the day to minimise odour.	Minimise the attraction of feral animals to the facility	Staff training Supervision - daily Complaint register	
Effective compaction of waste deposited within the landfill		Staff training On-going requirement Supervision - daily	
Covering food wastes with suitable daily cover (150mm of soil, or alternative daily cover). Intermediate cover (300 mm of soil) to be placed on areas not being landfilled within a three-month period		Staff training On-going requirement Supervision - daily Auditable EP Act licence requirement	
Minimising the size of the active landfill area (tipping face).			
Trapping and euthanasing captured feral animals			
Shooting of feral animals within the property by a competent person.	Eradicate, where practicable, feral animals within the	Maintain register of all control measures undertaken, and	

Poisoning (1080 baiting) by an authorised person and meeting specified requirements. This could also include the use of canid pest ejectors.	development envelope when their presence is detected.	numbers of animals destroyed. Auditable EP Act licence requirement	Annual reporting as per licence requirements.
Destroying any feral animal dens identified within the property			
Liaising and coordinating feral animal control measures with neighbours		Stakeholder meetings	

3. Adaptive Management and Review

This management plan will be a living document and continue to evolve / be updated as the facility landfill operations develop and progress. Additional strategies will also be included as these are warranted.

4. Stakeholder Consultation

The following consultation has been undertaken in the preparation of this EMP:

Department of Primary Industries and Regional Development (DPIRD).

Alkina contacted DPIRD for advice on potential biosecurity risks as part of its stakeholder engagement for the Part IV EP Act assessment (see Environmental Review Document). Advice provided by DPIRD (Sustainability and Biosecurity) on 11 November 2019 that this agency has no evidence of agricultural biosecurity incidents originating from operating Class II or Class III landfill sites in rural areas that would pose an unacceptable biosecurity risk for agriculture. DPIRD did reiterate (similar advice provided to DER during the Allawuna Farm works approval assessment stakeholder engagement in 2015/16) the importance of identifying biosecurity risks and implementing the all-necessary control methods raised in previous advice (which is also consistent with the strategies identified above).

Department of Biodiversity Conservation and Attractions (DBCA)

Advice from the Parks and Wildlife Perth Hills District (DBCA) is that they conduct aerial baiting in sections of the Wandoo National Park for foxes and cats as part of the Western Shield program, and target pig control during the drier times of the year when pigs are likely to congregate near water (See Environmental Review Document).

Advice obtained from the Parks and Wildlife, Perth Hills District Office (Mundaring) in relation to suitable controls to prevent feral animals entering exclusion areas has been included within the management strategies.

Once the landfill is established, Alkina will work with its neighbours and stakeholders to manage feral animals in the area, to ensure control efforts are aligned where possible to maximise opportunities to achieve the best environmental outcomes.

References

Biosecurity and Agriculture Management Act 2007 (State Law Publisher website: www.legilsation.wa.gov.au)

Cat Act 2011 (State Law Publisher website: www.legilsation.wa.gov.au)

Department of Primary Industries and Regional Development website: (https://www.agric.wa.gov.au/pests-weeds-diseases/pests/pest-animals)

Emerge 2019. Basal feral animal survey. , Part Lots 3060, 4869, 29259 Great Southern Highway, Saint Ronans. Emerge Associates Perth: November 2019.

NSW DPI 2007. Monitoring Techniques for vertebrate pests: Foxes, New South Wales Department of Primary Industries, Orange NSW.