PROPOSED RESOURCE RECOVERY FACILITY

BLOCK 11, SECTION 21 HUME ACT

BIRD STRIKE ASSESSMENT

Proposed Resource Recovery Facility

Bird Strike Assessment

Flexible Australia

Prepared By:

Capital Environmental Consulting Pty Ltd as Trustee for Velex Trust
ABN: 96 800 162 676
PO Box 4722
Duffy ACT 2611

DOCUMENT CONTROL

REFERENCE	DATE	PREPARED	REVIEWED
Hume RRF Wildlife Strike Assessment.docx	16 July 2019	Jason Watson BAppSc, MEnvSc	Jason Watson BAppSc, MEnvSc

TABLE OF CONTENTS

1 INTRODUCTION

Flexible Australia engaged Capital Environmental Consulting Pty Ltd (CEC) to prepare a bird strike report as part of an Environmental Impact Statement (EIS) in support of a Development Application (DA) for the proposed Hume Resource Recovery Facility.

1.1 Purpose and Scope

The Environment, Planning and Sustainable Development Directorate (EPSDD) provided a Scoping Document for the EIS that specifically outlines the specialist study requirements for the EIS. The purpose of this report is to address the requirement associated with bird strike, being:

- Discuss the risks associated with bird attraction and bird strike to aircraft from the activities and operations of the facility.

1.2 Project Site

The Facility is to be located on Block 11 Section 21, Hume (36 Couranga Crescent). The regional locality of the Facility is illustrated in Figure 1. The site locality is illustrated in Figure 2.

The site is located approximately 1 kilometre from the southern extent of the Mugga Lane Landfill site and approximately 10 kilometres to the south west of Canberra International Airport.

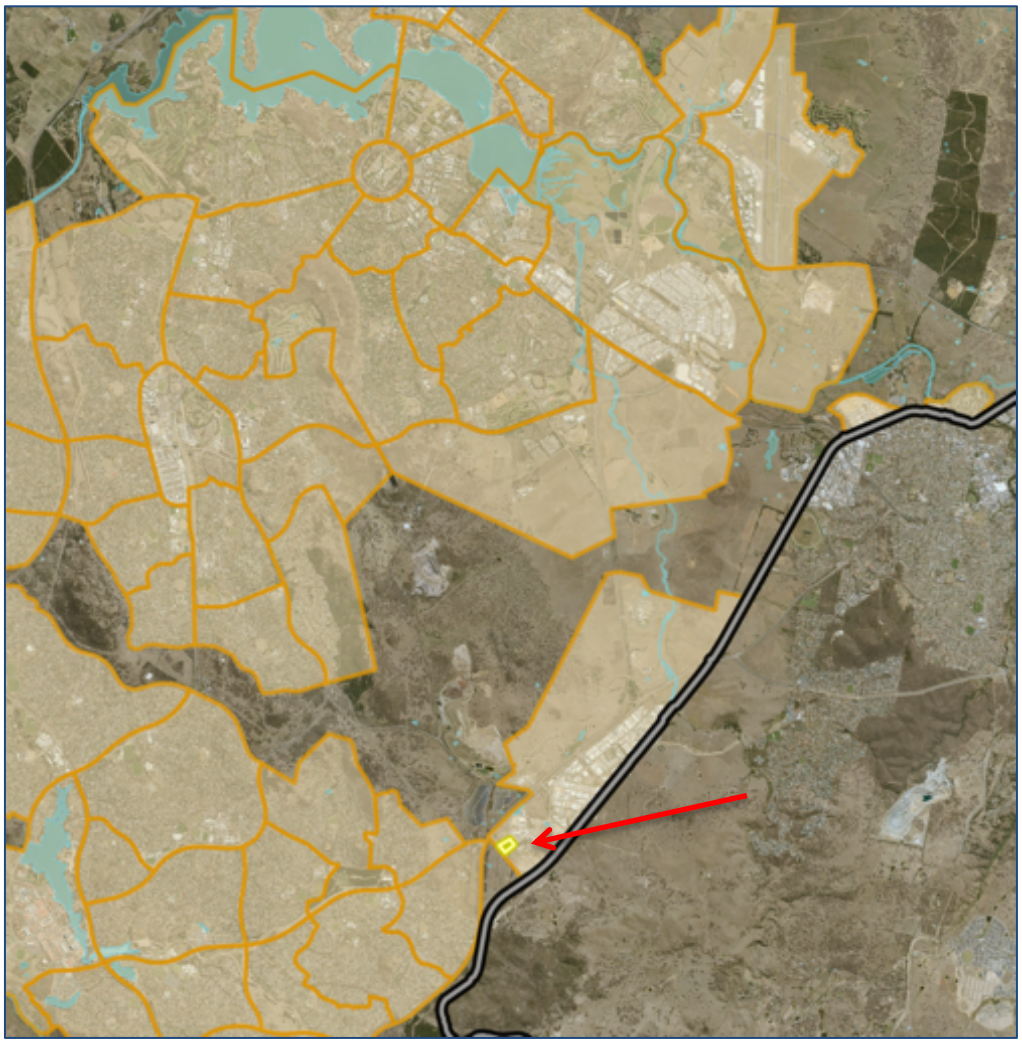

Figure 1: Regional Locality Block 11 Section 21 Hume ACT

Figure 2: Local Project Locality Block 11, Section 21 Hume ACT

2 Project Description

The proposed resource recovery facility (hereafter referred to as the Facility) uses specialist "low technology" plant to separate and treat solid inert waste residues into fit for purpose products for beneficial reuse in commercial markets. The Facility will comprise a large enclosed colourbond building on a bunded concrete slab in which the treatment plant will be located. The proposed development on the site is discussed further below.

2.1 Process Description

The follow waste streams are expected to be processed at the proposed resource recovery facility:

- Street sweeping activities;
- Stormwater maintenance activities (GPT's);
- Golf course bunkers (bunker sand); and
- Hydro excavation activities.

These waste streams comprise a variety of materials including organic matter (leaves, twigs and grass clippings), gross pollutants (glass, aluminium cans, plastic, litter), sand, gravel, soil and clay.

Hydro excavation residues will be delivered directly to the site in vacuum type trucks. These vehicles are weighed and inspected prior to discharge into an enclosed waste receival pit. The waste processed is then feed into the plant to recover sand, clay and aggregate.

Solid wastes (such as from GPTs) and street sweepings will be delivered in tipper trucks, weighed and inspected and unloaded into the resource recovery building for further inspection prior to loading fed directly into the first stage of the system by loader. This 1st stage will remove unwanted oversize material such as litter, break up clumps of incoming solids and homogenise the feed for processing.
Following processing the output materials such as sand and gravel are deposited into bunded bays for inspection and dispatch for reuse if deemed fit for purpose.

Any waste generated from the facility will be stored in the waste and recycling bin area and recyclable materials such as metal, paper or plastics will be placed in dedicated skips for transfer to a recycling facility.

The process does not require any discharge of liquid from the site other than sewer from staff amenities. The stormwater onsite will be captured, treated and reused within the operation of the facility and for irrigation of landscaping. The site perimeter will be surrounded with colour bond and steel tube type fencing and landscaped in selected areas.

The waste processing plant would be constructed on a concrete pad with a dincel wall perimeter bund, upon which an enclosed steel clad building would be constructed.

The building would be constructed on the southern portion of Block 11 as illustrated in Figure 3 below. The intention is to develop the block in 2 stages. The first stage is this development application for the proposed resource recovery facility building (housing the plant and associated infrastructure – weigh bridge / ticket office etc). The second stage will be subject to a future development application in merit track for a vehicle depot and administration building.

Figure 3: Proposed location of the resource recovery plant

The waste recovery plant process schematic is illustrated in Figure 4. The process plant is housed within the building, with exception of the resources recovered, which are transferred to covered (by an awning) concrete storage bays attached to the main building.

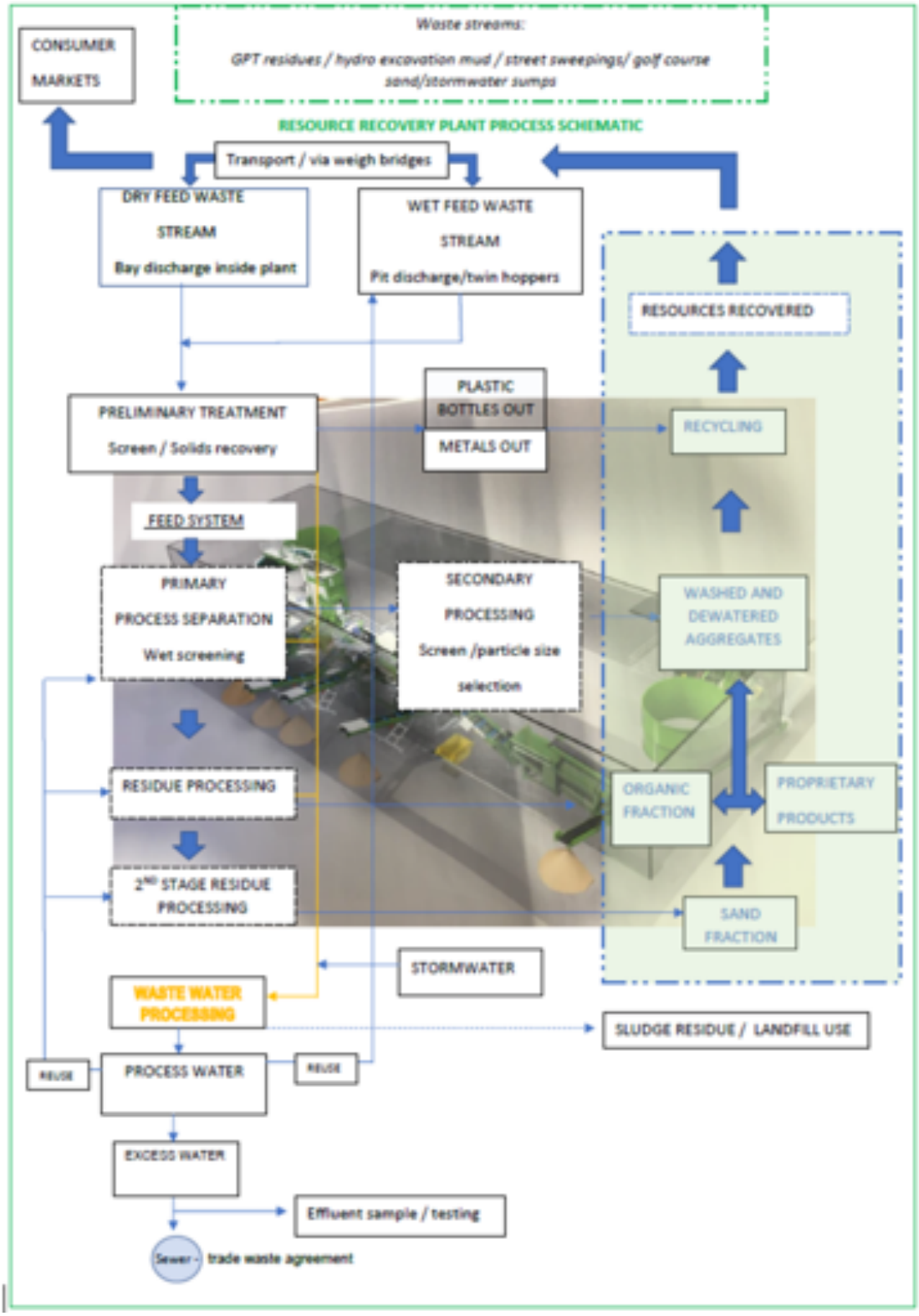

Figure 4: Resource Recovery Plant Process Schematic

3 Legislative Context

3.1 The National Airport Safeguarding Framework

In May 2012, the Department of Infrastructure and Transport (DIT) released the National Airport Safeguarding Framework (NASF). The NASF aims to develop informed land use planning regimes to safeguard airports and their adjacent communities.

Guideline C of NASF, *Managing the Risk of Wildlife Strikes in the Vicinity of Airports* (Guideline C) aims to provide guidelines to land users and planning decision makers to manage the risk of collisions between wildlife and aircraft at or near airports where that risk may be increased by the presence of wildlife-attracting land uses.

This issue is important because wildlife strikes can cause potential for aircraft damage fatalities, injuries and operational delays. These potential impacts can be reduced by managing land use around airports to minimise the potential for wildlife to be in conflict with aircraft operations. Most wildlife strikes occur on and in the vicinity of airports, where aircraft fly at lower elevations. The risk of a strike at an airport relates to wildlife activity both within the boundary of an airport and in surrounding areas and wildlife attracted to land uses around airports can migrate onto the airport or across flight paths, increasing the risk of strikes. Airports actively reduce wildlife populations and manage the risk of strikes on airport land. Such on-airport activities are underpinned by current aviation safety regulations (NASF, 2012).

The risk of a strike off airport relates mostly to wildlife activity in areas surrounding the airport and the International Civil Aviation Organisation (ICAO) has developed specific advice on land uses with potential to become high risk wildlife attractants which include:

- food garbage disposal;
- sewage treatment and disposal;
- artificial and natural lakes;
- abattoirs and freezing works;
- fish processing plants;
- bird sanctuaries; and
- outdoor theatres.

Attachment 1 to Guideline C aligns with ICAO benchmarks to provide guidance for land uses at certain distances from airports (i.e. 3 km, 8 km and 13 km) that present a risk of attracting wildlife. Attachment 1 (Table 1) details the different land uses types and whether these are considered incompatible land uses, or very low to high risk uses and recommends actions for both existing and proposed developments (i.e. incompatible, mitigate, monitor, no action).

Table 1: Guideline C – Attachment 1 to Wildlife Strike guidelines

Land Use	Wildlife Attraction Risk	Actions for Existing Developments			Actions for Proposed Developments/ Changes to Existing Developments		
		3 km radius (Area A)	8 km radius (Area B)	13 km radius (Area C)	3 km radius (Area A)	8 km radius (Area B)	13 km radius (Area C)
Agriculture							
Turf farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Piggery	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fruit tree farm	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Fish processing /packing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Cattle /dairy farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Poultry farm	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Forestry	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Plant nursery	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Conservation							
Wildlife sanctuary / conservation area - wetland	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Wildlife sanctuary / conservation area - dryland	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Recreation							
Showground	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Racetrack / horse riding school	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Golf course	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sports facility (tennis, bowls, etc)	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Park / Playground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Picnic / camping ground	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Commercial							
Food processing plant	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Warehouse (food storage)	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Fast food / drive-in / outdoor restaurant	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Shopping centre	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action
Office building	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Hotel / motel	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Car park	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Cinemas	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Warehouse (non-food storage)	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Petrol station	Very Low	Monitor	No Action	No Action	Monitor	No Action	No Action
Utilities							
Food / organic waste facility	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - landfill	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Putrescible waste facility - transfer station	High	Mitigate	Mitigate	Monitor	Incompatible	Mitigate	Monitor
Non-putrescible waste facility - landfill	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Non-putrescible waste facility - transfer station	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Sewage / wastewater treatment facility	Moderate	Mitigate	Monitor	Monitor	Mitigate	Mitigate	Monitor
Potable water treatment facility	Low	Monitor	Monitor	No Action	Monitor	Monitor	No Action

Guideline C encourages a coordinated approach between airport operators and land use planning authorities to mitigate risks, and where risks are identified for new developments recommendations include:

- developing a management program
- establishing management performance standards
- allowing for design changes and/or operating procedures where the land use is likely to increase the strike risk
- establishing appropriate habitat management
- creating performance bonds should obligations not be met
- monitoring by airport authorities
- reporting wildlife events as per Australian Transport Safety Bureau (ATSB) requirements

4 Bird Strike Assessment

This section considers the potential for the site to be considered a risk as a bird attractant which may be a risk to Canberra airport operations.

The following points are made about the facility:

- The majority of site activities are contained within an enclosed building, eliminating access to birds.
- Processed material will be housed in bays adjacent to the building. This material is inert, and is not considered an attractant to birds. The material is considered similar in nature to that stored at a business selling landscape supplies.

4.1 Guideline C

The proposed use for the site is a resource recovery facility which will accept, process a select number of waste streams as identified in Section 2.1 and does not specifically relate to any of the uses identified in Guideline C.

As noted above, the site activity external to the enclosed building is similar in nature to that stored at a business selling landscape supplies. This land use also does not specifically relate to any of the uses identified in Guideline C.

Based on the land use not being recognised within Guideline C, the risk of the facility attracting birds is considered very low and no actions are required to mitigate bird attraction.

4.2 Bird Attractants

The *Australian Airports Association Managing Bird Strike Risk Species Information Sheets, Airport Practice Note 6* identifies the common wildlife species around Australian Aerodromes and how best to manage these. It describes the main attractants for different species often involved in bird strike around airports which generally include:

- water;
- food, such as human waste food, worms and invertebrates;
- loafing areas/shelter;
- grass;
- lighting; and
- transit routes for bird and bat species.

Other typical attractants to birds are those uses identified in the Table from Guideline C Attachment 1 (Table 1) and are sites or uses that offer habitat, food, shelter or roosting sites for birds.

The waste streams accepted at the facility for treatment on the site are predominantly non-putrescible inert materials which will be processed into sand, soil, clay, water, aggregates, and recyclables.

The overall estimated proportion of organic materials as part of the incoming materials stream is approximately 33% (based on data on the different components of the sources). These components could be considered an attractant to birds, but these organic materials are co-mingled within the source material stream and have usually been submerged within a GPT or stormwater retention chamber and therefore are unlikely to be attractive to birds.

Fine organic materials are removed with waste water in the treatment system, and larger organic materials are dewatered and separated out into an organic product for reuse, along with the other products, such as sand, gravel and clay.

Any non-recyclable/reusable waste materials separated out during treatment, or generated by facility staff will be directed to waste skip bins on site for collection.

The facility is not considered to provide potential attractants for birds, it will operate much like an industrial site with a large colourbond building, weighbridge, parking area, site landscaping, storage areas for treated products demountable office and amenities.

4.3 Design and Management

The Facility has been designed to minimise the potential impacts on the environment including the potential for birds to access materials both during processing and finished product storage.

Materials would be delivered to site within enclosed hydro excavation trucks or covered tipper trucks. Following receival, weighing and inspection, waste streams are transferred directly into the facility. Due to the way materials are handled on the site and the design of the facility there would be very limited opportunity for birds to access materials even if they were a source of food or nesting material.

Waste and recycling bins would be sealed and be managed in accordance with the site operations plan, and be serviced regularly by a waste contractor.

The site would be kept clean and tidy.

5 Conclusion

CEC was engaged by Flexible Australia to prepare a this assessment to consider potential risk of the facility to attract birdlife, and potentially contribution to bird strike issues at the Canberra International Airport as part of an EIS in support of a DA for the proposed Waste Recovery Facility, Hume ACT.

The following points relevant to the facility:

- The majority of site activities are contained within an enclosed building, eliminating access to birds.
- Processed material will be housed in bays external to the building. This material is inert, and is not considered an attractant to birds. The material is considered similar in nature to that stored at a business selling landscape supplies.

With the land use not being recognised within Guideline C, the risk of the facility attracting birds is considered very low and no actions are required to mitigate bird attraction.

The proposed operation of a resource recovery facility at this site is not considered to increase the risk of bird strike as the operation is not considered to offer any significant increase in attractants to birds or wildlife than other industrial or commercial activities.

6 References

Australian Airports Association Managing Bird Strike Risk Species Information Sheets, Airport Practice Note 6, September 2015

Guideline C National Airports Safeguarding Framework. Managing the risk of wildlife strikes in the vicinity of airports (2014).