

Attlee Acre

BIRD HAZARD MANAGEMENT PLAN

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EXECUTIVE SUMMARY

Contents	Summary
Site Location	The site is located to the East of Stoneham Lane, Eastleigh and is centred at OS National Grid Reference SU 44244 18015. The site comprised a combination of semi-natural broadleaved woodland, scrub , marshy grassland and tall ruderal vegetation. There were also several scattered trees located along the boundaries of the site.
Proposals	The proposed development comprises the creation of 0.17 ha of wetland adjacent to Stoneham Lane to remove nitrogen from surface water run-off generated by the North Stoneham Park development and Stoneham Lane. The scheme also seeks to provide a net biodiversity gain through ecological enhancements via landscaping and the creation of two basins encompassed by bunds 300 mm in height with a connection to the Monks Brook. The creation of a bund is also proposed to be built over the existing water main which would link the two newly created basins.
Scope of this Report	Tetra Tech was commissioned by Highwood Homes Ltd to produce a Bird Hazard Management Plan to discharge Condition 8 of the planning permission (F/20/88820).
Potential Bird Roosting and Feeding Features	The species of relevance to potential bird strike incidents occurring to aircraft using Southampton Airport (feral pigeons, gulls, corvids and starlings) will roost anywhere there is a place to perch. Any flat areas, such as large open spaces or surfaces, have the potential to be used as a site for foraging / resting / roosting by all groups of birds of concerned. Extensive dense areas of fruit-bearing trees and tall trees have the potential to provide roosting and feeding features.
Control Measures	There are various control systems that are available for use in deterrence that can decrease the likelihood of roosting and resting of birds within landscaped areas. The following measures have been included: • No increase in large trees. • High density of fruiting species avoided. • Installation of non-human visual deterrents; and • Semi-regular site assessment of habitat and SuDS

1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech was commissioned by Highwood Homes Ltd on 24th August 2022 to produce a Bird Hazard Management Plan (BHMP) for Attlee Acre hereafter referred to as “the site”.

This report has been prepared by Project Ecologist, Ben Cooke BSC MSc.

1.2 SITE DESCRIPTION

The site is located to the East of Stoneham Lane, Eastleigh and is centred at Ordnance Survey National Grid Reference SU 44244 18015. The site comprised a combination of semi-natural broadleaved woodland –, scrub , marshy grassland and tall ruderal vegetation. There were also several scattered trees located along the boundaries of the site.

1.3 DEVELOPMENT PROPOSALS

The proposed development comprises the creation of 0.17 ha of wetland adjacent to Stoneham Lane to remove nitrogen from surface water run-off generated by the North Stoneham Park development and Stoneham Lane. The scheme also seeks to provide a net biodiversity gain through ecological enhancements via landscaping and the creation of two basins encompassed by bunds 300 mm in height with a connection to the Monks Brook. The creation of a bund is also proposed to be built over the existing water main which would link the two newly created basins.

1.4 PURPOSE OF REPORT

The purpose of this report is to discharge Condition 8 for planning permission (F/20/88820) which states:

“Development shall not commence until a Bird Hazard Management Plan has been submitted to and approved in writing by the Planning Authority. The submitted plan shall include details of

- monitoring of any standing water within the site temporary or permanent*
- sustainable urban drainage schemes (SUDS)*

The management plan shall comply with Advice Note 3 ‘Wildlife Hazards around Aerodromes’: <https://www.aoa.org.uk/wp-content/uploads/2016/09/Advice-Note-3-Wildlife-Hazards-2016.pdf>

The Bird Hazard Management Plan shall be implemented as approved on completion of the development and shall remain in force for the life of the building. No subsequent alterations to the plan are to take place unless first submitted to and approved in writing by the Planning Authority.

Reason: To avoid endangering the safe movement of aircraft and the operation of Southampton Airport through the attraction of birds and an increase in the bird hazard risk of the application site.”

Developments which include landscaping features that may attract bird species within 13 km of an airport require a Bird Hazard Management Plan to be implemented (Southampton Airport, 2019). Due to the site’s proximity to Southampton Airport (approximately 1.2 km from the centreline of Southampton Airport runway) the site falls under this criterion.

Bird strikes constitute a significant hazard to aviation. Due to the mobile nature of birds, features attractive to birds in proximity to the airport can constitute a significant flight safety hazard. Aircraft are vulnerable to bird strikes and over 80% of bird strikes occur on or close to aerodromes and their operators are required to take necessary steps to ensure that the bird strike risk is reduced to the lowest practicable level (Southampton Airport website).

The main birds that will be of concern to aviation are those that are large or commonly occur in dense flocks. The birds of concern within the Southampton Airport area largely relate to gulls, but also feral pigeons *Columba livia domestica*, corvids including crows *Corvidae* and starlings *Sturnus vulgaris*.

The following plan summarises the potential areas within the proposed development that could potentially provide foraging sites for these species and then recommends a management programme to make the new development less attractive for such species groups.

2.0 GUIDANCE AND STATUTORY PROTECTION

2.1 BIRD HAZARD GUIDANCE

Several sources of guidance are available on bird hazards and bird hazard management. These documents have been reviewed and the information within has been used to advise this Bird Hazard Management Plan as detailed below.

2.1.1 British Aviation Authority (BAA) Advice Notes

The British Aviation Authority has produced 3 advice notes, two of which are potentially relevant to this proposed development and will be considered in this Management Plan, along with the latest Civil Aviation Authority advice:

- Advice Note 3: Potential Bird Hazards from Amenity Landscaping and Building Design

Advice Note 3: Potential Bird Hazards from Amenity Landscaping and Building Design

This advice note outlines the need to minimise bird attractant features when designing amenity landscape or buildings in the vicinity of an aerodrome. Landscaping may attract birds by providing feeding, nesting and roosting habitat. Significant hazards associated with landscaping schemes include their potential to:

- Create dense vegetation that may provide roosting and nesting habitats for starlings, rooks, woodpigeons and other aviation-hazard species.
- Provide abundant winter food supply in the form of fruits and berries for large flocks of starlings, fieldfares and redwings, which may also move onto an adjacent aerodrome to feed on soil invertebrates; and
- Create standing water or watercourses that attract gulls and waterfowl and cause increased bird movements between existing waters and the new site, or over and around the aerodrome.

Buildings may be used by birds depending on the design and use of the building and the availability of food in the nearby environment. Pigeons and starlings are the most common birds to be found in and around buildings, whilst gulls may nest and roost on flat roofs. The advice note offers suggestions of how to minimise the attractiveness of landscaping and buildings to these birds and this advice will be considered later in this document.

2.1.2 Civil Aviation Authority (CAA)

CAP 738: Safeguarding of Aerodromes

This document offers guidance to those responsible for the safe operation of an aerodrome, to enable them to assess what impact a proposed development might have on that operation. Although this document mainly focuses on the design of developments, it does contain limited details in relation to bird strike hazards, referring to CAP 680 (now superseded by CAP 772).

CAP 772: Bird Strike Risk Management for Aerodromes

Although this document mainly focuses on the aerodrome itself, it provides useful information on Bird Control Management Plans, identifying bird strike risks and reducing these risks. CAP 772 builds on some of the ideas outlined in the BAA Advice Notes.

2.2 STATUTORY PROTECTION

Feral pigeons, gulls, corvids and starlings are protected under Schedule 2, Part 2 of the Wildlife and Countryside Act 1981 (as amended) (Her Majesty's Stationary Office (HMSO), 1981), which specifies that they may only be killed or taken by authorised persons.

A General Licence (WMLGEN-L06) can be issued to allow certain actions to be carried out to protect aerodromes that would otherwise be illegal under this legislation, but the British Airport Authority guidance (BAA, 2007) does not authorise third parties to act under the General Licence. Should a licence be required to control the above bird species appropriate advice will need to be sought in the first instance from Natural England.

Licences are issued by Natural England to allow killing or taking of certain bird species but used only as a last resort. Natural England primarily recommends environmental methods, such as reduction of suitable habitats for the birds of concern and anti-roosting and proofing measures, for the management of these species in unwanted areas. The only species that should be prevented from roosting are those that constitute a hazard to air traffic, i.e., if other smaller species such as songbirds roost in the area, this would not be considered to constitute a problem and these species should be left alone.

3.0 STATUTORY DESIGNATED SITES

There are ten statutory designated sites near to the site, where these are important for their bird populations, this has been highlighted in Table 1.

Table 1. Designated Sites within 5 km of the Site

Site Name	Designation	Distance and direction from Site	Reasons for designation
River Itchen	SSSI	1.4 km, E	In addition to the qualifying features listed above, the River Itchen SSSI is also designated for the following: water vole <i>Arvicola terrestris</i> and an assemblage of breeding birds. These include tufted duck <i>Aythya fuligula</i> , pochard <i>A. Farina</i> and shoveler <i>Anas clypeata</i> , the waders lapwing <i>Vanellus vanellus</i> , redshank <i>Tringa totanus</i> and snipe <i>Gallinago gallinago</i> , and wetland passerines including sedge warbler <i>Acrocephalus schoenobaenus</i> , reed warbler <i>A. Scirpaceus</i> and the Schedule 1 listed Cetti's warbler <i>Cettia cetti</i> .
Solent and Southampton	SPA/RAMSAR	4.4 km, S	The Solent and Southampton SPA is designated due to the breeding populations of; common tern <i>Sterna hirundo</i> , little tern <i>Sterna albifrons</i> , Mediterranean Gull <i>Larus melanocephalus</i> , roseate tern <i>Sterna dougalli</i> and sandwich tern <i>Sterna sandvicensis</i> . It also qualifies through the non-breeding presence of the following; black-tailed godwit <i>Limosa limosa islandica</i> , dark-bellied brent goose <i>Branta bernicla bernicla</i> , ringed plover <i>Charadrius hiaticula</i> and teal <i>Anas crecca</i> . This site qualifies for RAMSAR designation due to the presence of black-tailed godwit, dark-bellied brent goose, ringed plover and teal
Lee on the Solent to Itchen Estuary	SSSI	4.5 km, S	The site comprises extensive intertidal mud's with a littoral fringe of vegetated shingle, saltmarsh, reedbed, marshy grasslands and deciduous woodland on alluvium, valley gravels (Hamble Common), and Bracklesham Beds (Hook Links). The site is an integral part of Southampton Water which is of international importance for over-wintering dark-bellied geese, and of national importance for three species of wildfowl (great-crested grebe, teal and widgeon) and five species of wader (black-tailed godwit, dunlin <i>Calidris alpina</i> , grey plover <i>Pluvialis squatarola</i> , ringed plover, redshank). The SSSI support an outstanding assemblage of nationally scarce coastal plants.
Chessell Bay	LNR	4.5 km, S	A long stretch of undeveloped natural shoreline, a narrow strip of woodland runs along the north eastern boundary of the reserve with a strip of shingle and salt-marsh running parallel to this woodland. The majority of the site is composed of mud flats which provide feeding grounds for wading birds.

3.1 SITE FEATURES IN RELATION TO DESIGNATED SITES

These sites are important for their bird fauna or support habitats which are more favourable for roosting and feeding bird species than the site. Birds commute along these designated sites and feed and flock as the state of the tide changes and as tidal mudflats are exposed. Monks Brook which lies at the eastern extent of the site is a tributary of the River Itchen which joins Southampton Water below the River Itchen Bridge. The unusual tidal regime (double tide) in Southampton Water ensures that bird movements are continual throughout the day.

Habitats on site are not suitable for many species associated with the designated sites and it is therefore considered that the site does not constitute a highly significant bird hazard compared to the habitats that surround and connect these statutory designated sites, but it is nonetheless important to manage this potential issue at this site.

4.0 POTENTIAL BIRD ROOSTING AND FEEDING FEATURES WITHIN ATTLEE ACRE

The bird species of relevance to potential bird strike incidents (feral pigeons, corvids and starlings) will roost, feed and perch within areas of dense vegetation.

4.1 EVALUATION OF CONTROL MEASURES

There are various control systems that are available for use in deterrence that can decrease the likelihood of roosting and resting of birds within landscaped areas. These measures are summarised in Table 2.

Table 2. Control Measures and their Proposed Suitability for the Site

Control Measure	Method and Examples	Effectiveness	Suitability for this Site
Audible deterrents	Electronic devices emit a noise that is uncomfortable for the bird to scare them away. Examples include: • Gas cannons. • Pyrotechnics; and • Bioacoustics.	Bishop <i>et al</i> (2003) suggest audible devices are of short-term benefit and as such they are usually only recommended as part of an integrated control strategy. Artificial noises (sonic devices), ultrasonics and high intensity sound are considered either ineffective or unsafe. Bishop <i>et al</i> (2003) states that audible devices may be a nuisance to the public.	Unsuitable This method is unsuitable as it will be too disturbing to local residents.
Habitat Modification - Starling Roosts	BAA Advice Note 3 (2003) suggests that planting density should be at 4 m centres or greater and that thinning out should be undertaken if necessary to ensure this is maintained.	Avoid creating large areas of suitable habitats to support roosting birds will naturally deter birds to other areas within the surrounding landscape. Reducing large areas of dense vegetation will minimise the attractiveness of the site to birds.	Suitable Areas of tree and hedgerow planting can be designed to reduce the likelihood of large roosts becoming established.
Visual deterrents	Visual techniques:	Bishop <i>et al</i> (2003) suggest their effectiveness depends on how real a	Suitable

Control Measure	Method and Examples	Effectiveness	Suitability for this Site
	Lasers, human disturbance, silhouettes, scarecrows, raptor models and balloons.	threat they are perceived to be. Visual devices are thought to be of varied effectiveness ranging from extremely effective (human disturbance) to ineffective (most scarecrows).	Stationary deterrents would be required as the site would not be subjected to consistent human disturbance.

5.0 MANAGEMENT SCHEME

The aims of this management scheme are to avoid any increase, and preferably to reduce or eliminate the use of the development features by the bird species of concern. The recommended methodologies to achieve this aim are:

- Habitat modification; and
- Visual deterrents.

5.1 HABITAT MODIFICATION

5.1.1 Wetland Habitat Creation

A potentially hazardous consequence of a landscaping development is the formation of starling roosts. To minimise the potential attractiveness of the proposed site to roosting starlings, planting density for trees as part of the landscape design will be at 4 m centres or greater where possible. Thinning out should be undertaken if necessary to ensure this is maintained (BAA Advice Note 3, 2003).

Rookeries tend to occupy trees which are of a height of 20 m and hence the majority of the tree species proposed for planting (i.e., hawthorn and blackthorn) do not grow to this height. For silver birch planted within the site, these specimens will be monitored to prevent them growing too tall. Furthermore, there is to be no net increase in large trees.

As the site has a total area of 0.17 ha and the boundaries consist of established mature trees and scrub, the site is considered too enclosed and small to be attractive to a significant number of waders and waterfowl. The two SuDS are proposed to be connected to each other as well as the adjacent Monks Brook to aid with drainage. It is therefore considered likely that these SuDS will be dry during the summer months further decreasing their attractiveness.

5.1.2 Bird Feeding

The bird species of concern, specifically gulls and corvids tend to be scavengers and will dominate areas where there is edible waste. As there is proposed to be no public access to the site, there is a lack of waste (e.g., food, dog etc) or individuals intentionally feeding the birds, on or within the vicinity of the site that would attract these species.

5.2 VISUAL DETERRENT

5.2.1 Non-human Disturbance

The installation of stationary non-human deterrents would aid in preventing birds from roosting and / or perching within the site. These could include raptor decoys, situated within existing vegetation.

6.0 REFERENCE

- Bishop, J., McKay, D. and Allan, J. (2003) *Review of international research literature regarding the effectiveness of auditory bird scaring techniques and potential alternatives*. DEFRA Central Services Laboratory.
- BAA Advice Note 3 January 2003, *Safeguarding of Aerodromes- Potential Bird Hazards from Amenity Landscaping and Building Design*.
- BAA Advice Note 8, August 2007, *Safeguarding of Aerodromes- Potential Bird Hazards from Building Design*, Airport Operations Association and General Aviation Awareness Council.
- CAA (2006) CAP 738: *Safeguarding of Aerodromes*. Civil Aviation Authority: London 8
- CAA (2008) CAP 772: *Birdstrike Risk Management for Aerodromes*. Civil Aviation Authority: London.
- HMSO, (1981), *Wildlife and Countryside Act*, [online] Available at <http://www.legislation.gov.uk/ukpga/1981/69>, Accessed November 2022.
- Natural England, 2018. *License to kill or take certain birds to preserve air safety (WML-CL12)*. [online] Available at <https://www.gov.uk/government/publications/birds-licence-to-kill-or-take-them-for-air-safety-purposes>, Accessed November 2022.
- Southampton Airport, (2019), *Aerodrome safeguarding*, [online] Available at <http://www.southamptonairport.com/about-us/aerodrome-safeguarding/>, Accessed November 2022.

APPENDIX A – REPORT CONDITIONS

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