

10 December 2024

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Issued by email only

## RE: WINKING HILL STORAGE PROJECT – BIRD HAZARD RISK ASSESSMENT (EAST MIDLANDS AIRPORT)

RammSanderson Ecology Ltd (RS) were commissioned by Renewable Energy Systems Ltd. (RES) to undertake a Preliminary Ecological Appraisal (PEA) and a Habitat Suitability Assessment (HSA) to assess the potential ecological constraints to the proposed Battery Energy Storage System (BESS) and associated infrastructure (hereafter referred to as the Scheme), located in Nottinghamshire, south of the A453 and Ratcliffe-on-Soar Power Station. More information is provided within this report (RSEE\_7308\_R1\_V3\_PEAR). All land situated within the red line of the Scheme is hereafter referred to as the Site and is shown on Figure 1. A Biodiversity Impact Assessment (BIA) for the Scheme has also been conducted by RS. During the pre-application process for the Scheme, the authority for East Midlands Airport has raised the following questions.

*"Whether the landscaping and SuDS [Sustainable Urban Drainage] scheme has the potential to introduce greater numbers of species of birds that are hazardous to aircraft and what measures are to be taken to mitigate that. A bird hazard management plan may be necessary.*

*Whether there will be any BNG [Biodiversity Net Gain] provision off-site within the Birdstrike avoidance zone of East Midlands Airport (13km radius)."*

A desktop assessment has been undertaken to determine the potential Bird Hazard Risk to East Midlands Airport and reviewed against the Civil Aviation Authority guidance 2<sup>nd</sup> Edition (2017)<sup>1</sup>. The Site's location in relation to the airport, its proposed landscaping plan (P23-1398\_EN\_02D Landscape Strategy Plan\_20.11.24), desk study data, and other nearby waterbodies (Figure 2) were assessed cumulatively to determine the likely risk level.

The CAA Guidance identifies bird species most hazardous to aircraft due to their size and behaviour. These include swans and geese, due to their large size and weight, gulls, due to their high damage potential often associated with flocking behaviour, smaller birds such as starlings, which form dense flocks, and birds of prey, due to their flight patterns and relatively large size. The desk study only identified four bird species within 1km of the Site, namely jay, magpie, red-legged partridge, and stock dove. Whilst an absence of data does not directly indicate an absence of additional species, none of these species are considered highly hazardous to aircraft, and higher risk species are unlikely to be present in high numbers on the Site.

The Site is located approximately 5km north-east of East Midlands Airport. The intervening land includes predominantly arable land, as well as the M1, the River Soar, a railway line, and the settlement of Kegworth. There are three ponds within 500m of the Site, all of which are very small (Figure 3). P1 is a SuDS feature associated with the road and the other two ponds have not been surveyed by RS. There are also multiple ditches within 500m, however, RS survey work found D1 and D2 to be dry. The other ditches have not been surveyed by RS. Overall, there are no waterbody features which would be suitable to support large populations of waterfowl within close proximity to the Site.

The landscaping proposals for the Scheme have prioritised a biodiversity net gain, predominately through increasing the species-richness of the grassland on Site. No off-site biodiversity net gain provision is necessary. Some areas of scrub, hedgerow, and tree planting have also been incorporated, to further increase the biodiversity value, as well as providing visual screening for the development. However, this scrub/tree planting is not considered extensive given the relatively small scale of the Site and is not likely to cause a significant increase in bird numbers in the locality. The majority of the gains are produced from grassland planting, i.e. greater species density, which will not fundamentally alter the habitat structure on Site. The SuDS which will be created on Site

<sup>1</sup> Civil Aviation Authority (2017) Wildlife Hazard Management at Aerodromes CAP 772 Version 2.



is approximately 0.2ha in size, i.e. relatively small scale as a waterbody feature. The Site (and SuDs) location, i.e., adjacent to a major road (the A453) further reduces the likelihood of it attracting large numbers of birds, due to high levels of disturbance. Whilst it is acknowledged that the new SuDs feature may attract some waterfowl, due to its small size with no other substantial waterbodies nearby, it is considered that it would not be able to support large waterfowl, in particular species identified as having a high damage percentage as identified within the CAA Guidance. Certainly, aggregations of species that would cause a risk to the flight path of the airport is considered extremely unlikely as the size is prohibitive to this but also limits birds' ability to take-off and land. Even when considering this SuDs in combination with the adjacent SuDs associated with the road, the two are still considered too small for large waterfowl and certainly aggregations of larger water fowl.

However, it is recommended that additional measures as identified within the CAA Guidance should be incorporated into the SuDs design and management to further minimise associated risks:

- There should be no development of islands, to reduce nesting opportunities;
- Banks should be as steep as possible;
- A vertical fence approximately 1m high should be constructed around the water edge to prevent wildlife such as Canada geese accessing the feature;
- Water should not be stocked with fish.

Due to all the factors discussed above, overall, it is considered that the Bird Hazard Risk caused by the Scheme to the flight path of East Midlands Airport is negligible.

I trust this is to your satisfaction. Should you have any queries, or require any clarifications, please do not hesitate to call me directly.

Yours sincerely,  
Nicky Woods



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For and on behalf of RammSanderson Ecology Ltd.

Enclosures:

Appendix 1: Plans

## 1: Plans


Figure 1: Site Context Plan

Figure 2: P23-1398\_EN\_02D Landscape Strategy Plan\_20.11.24

Figure 3: Waterbody Plan





	
Title: Site Context Plan	
Project: Winking Hill Storage Project	
Client: Renewable Energy Systems Limited	
Date: 06/02/2024	Fig: 1
Author: RD	
A4 Scale: 1:1750	ID: RSE_7308_STC_0224_V1R3
EPSG:27700 OSGB36 / British National Grid	





**KEY**

Site boundary

Existing vegetation to be retained

Proposed native tree planting

Proposed small urban tree planting

Proposed native hedgerow planting

Proposed mixed scrub

Recently proposed planting associated with highway works

Neutral grassland  
- N5 Long Season Meadow Mix, or similar

Modified grassland  
- N14 Flowering Lawn Mixture, or similar

Basin grassland mix  
- N8F Water's Edge Flowers Mix, or similar

BESS units

Power conversion system

BESS substation building

Auxiliary transformer

LV distribution equipment

Aggregation panel

Pre-insertion resistor

Capacitor bank

Harmonic filter and resistor

Spares container

Lighting / CCTV column

Security fence and gate

Acoustic fence

Graveled surface

Access track

Emergency access track

Cesspool allowance area

Surface water filter drain & inspection chamber

Surface water pipe & flow control device

Basins and swale

INDICATIVE PLANTING SCHEDULE

PROPOSED NATIVE TREE PLANTNG					
Species	Form	Girth	Height cm	Clear Stem	Root Condition
Acer campestre	HS	12-14	350-425	Min. 200	RB
Betula pendula	HS	12-14	350-425	175-200	RB
Betula pubescens	HS	12-14	350-425	175-200	RB
Quercus robur	HS	12-14	350-425	175-200	RB
Sorbus aria	HS	12-14	350-425	175-200	RB
Sorbus aucuparia	HS	12-14	350-425	175-200	RB

PROPOSED SMALL URBAN TREE PLANTING					
Species	Form	Girth	Height cm	Clear Stem	Root Condition
Malus sylvestris	HS	12-14	350-425	175-200	RB
Prunus avium	HS	12-14	350-425	175-200	RB
Prunus padus	HS	12-14	350-425	175-200	RB

PROPOSED NATIVE HEDGEROW PLANTING				
To be planted at 7 per linear metre at 0.3 cm offsets in triple staggered rows				
Species	Mix %	Height cm	Form	Root Condition
Crataegus monogyna	60	60-80	1+1,Branched	B
Corylus avellana	20	60-80	1+1,Branched	B
Prunus spinosa	20	60-80	1+1,Branched	B

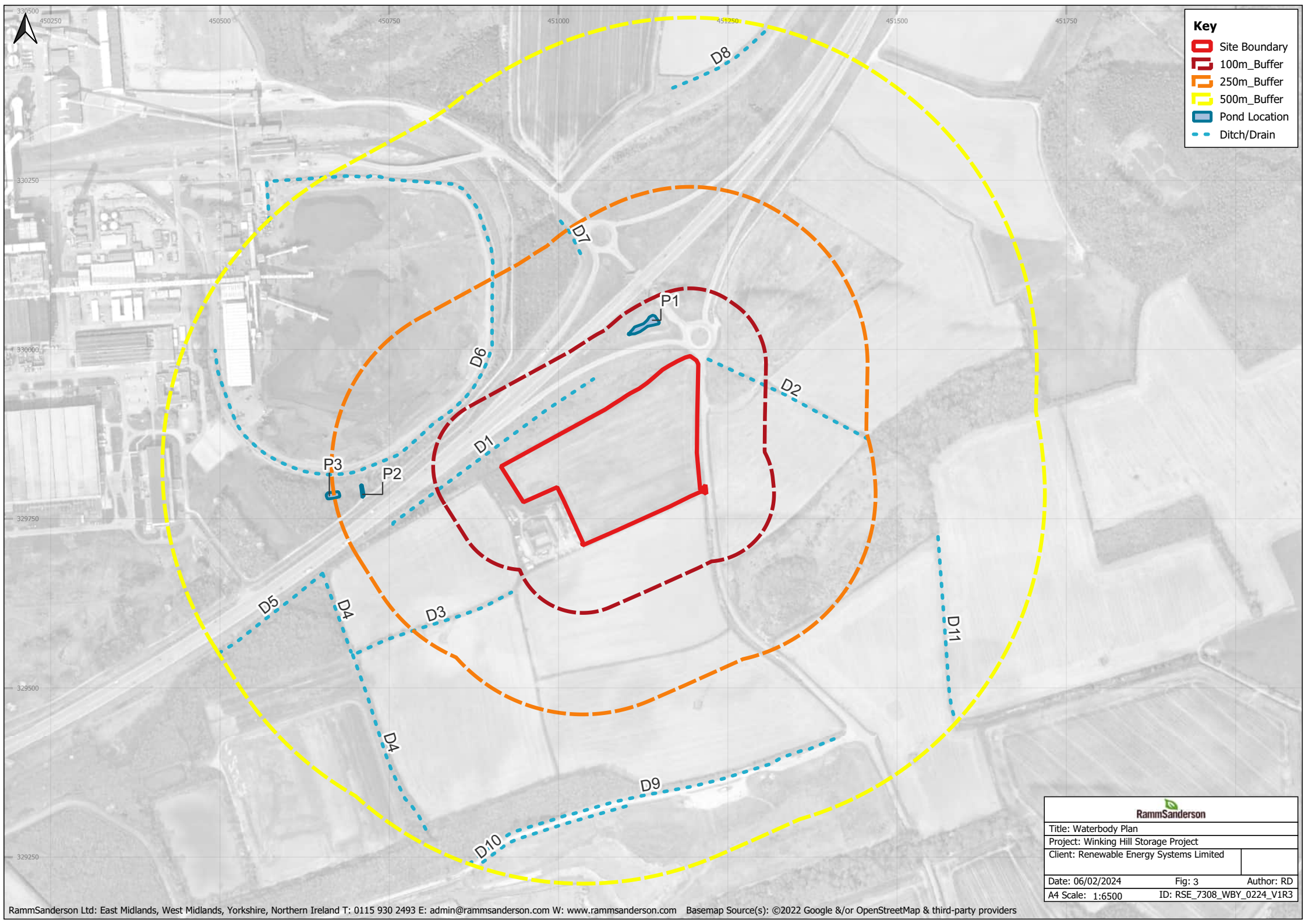
PROPOSED SCRUB PLANTING				
Species	Mix %	Height cm	Form	Root Condition
Acer campestre	15	60-80	1+1, Branched	B
Crataegus monogyna	40	60-80	1+1, Branched	B
Prunus spinosa	30	60-80	1+1, Branched	B
Rosa canina	15	60-80	1+1, Branched	B

WINKING HILL BESS – LANDSCAPE STRATEGY PLAN

| PEGASUSGROUP.CO.UK | TEAM/DRAWN BY: VR | APPROVED BY: DT | DATE: 07/10/2024 | SCALE: 1:1000@A2 | DRWG: P23-1398\_EN\_O2D | CLIENT: RES LTD |

PEGASUS GROUP





**Key**

-  Site Boundary
-  100m\_Buffer
-  250m\_Buffer
-  500m\_Buffer
-  Pond Location
-  Ditch/Drain



Title: Waterbody Plan		
Project: Winking Hill Storage Project		
Client: Renewable Energy Systems Limited		
Date: 06/02/2024	Fig: 3	Author: RD
A4 Scale: 1:6500	ID: RSE_7308_WBY_0224_V1R3	