

FKY LIMITED



**ECOLOGY**SOLUTIONS

Part of the ES Group

LAND AT TILEKILN GREEN,  
STANSTED

## **Bird Hazard Management Plan**

February 2022  
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## CONTENTS

1	INTRODUCTION	1
2	CONVENTION ON INTERNATIONAL CIVIL AVIATION ANNEX 14	3
3	EUROPEAN COMMISSION REGULATION 139/2014	4
4	DfT/ ODPM CIRCULAR 1/2003	5
5	CAP 772 WILDLIFE HAZARD MANAGEMENT AT AERODROMES	6
6	SAFEGUARDING OF AERODROMES ADVICE NOTE 8	7
7	SAFEGUARDING OF AERODROMES ADVICE NOTE 3	8
8	RISK ASSESSMENT OF LAND AT TILEKILN GREEN, STANSTED	9
9	BIRD HAZARD MANAGEMENT PLAN	11
10	OBLIGATIONS AND UNDERTAKING	14
11	SUMMARY AND CONCLUSIONS	16
12	REFERENCES AND BIBLIOGRAPHY	18

## PLANS

PLAN ECO1                      Site Location

## APPENDICES

APPENDIX 1                      Landscape Proposals (Dwg No NC18.446-P204),  
Nigel Cowlin Landscape Assessment & Design

APPENDIX 2                      FC Restocking Plan (Dwg No NC18.446-P203),  
Nigel Cowlin Landscape Assessment & Design

APPENDIX 3                      Example Bird Hazard Management Log

## 1. INTRODUCTION

- 1.1. Ecology Solutions was commissioned by FKY Limited in April 2021 to complete a Bird Hazard Management Plan for the development land at Tilekiln Green, Stansted, Essex (see Plan ECO1 for the location of the site).
- 1.2. The site is situated west of the town of Bishop's Stortford and less than 1km southwest of Stansted Airport. Given that the site is within 13km of Stansted Airport, it lies within the safeguarding zone where aircraft are at lower altitudes and at increased risk of birdstrikes. All developments within the 13km radius require consultation to ensure no potential increases in birdstrike risk.
- 1.3. The site is approximately 5.3 hectares in size and dominated in the centre by recolonising semi-improved grassland, ephemeral / short perennial and tall ruderal habitats. Areas of broadleaved woodland are present in the northeast and along the southern boundary of the site and a shallow stream is located off-site along each of the western and southern boundaries. The proposals for the site are for the development of an open logistics facility with associated new access, parking areas and ancillary office and amenity facilities.
- 1.4. The purpose of this document is to ensure that the risk of birdstrike as a direct result of the development does not significantly increase.
- 1.5. The proposals have been assessed in the context of the regulatory framework published by the Convention on International Civil Aviation and European Commission Regulation 139/2014, and guidelines set out in the UK Government DfT / ODPM Circular 1/2003 and CAP 772 Wildlife Hazard Management at Aerodromes, produced by the Civil Aviation Authority (CAA, 2014).
- 1.6. The information contained within this document identifies the potential hazards resulting from the proposed development, considers the likelihood of that potential and illustrates how risks of bird hazard will be minimised through implementation of measures during construction, through good design, and through management and monitoring during the operational phase, with the aim of reducing any residual risk to as low as reasonably practicable.

### Consultation Response

- 1.7. A consultation response received from Diane Jackson, MAG Aerodrome Safeguarding Officer for Stansted Airport, in response to the previous application (UTT/21/0332/FUL) includes the following comments relevant to this report:

**Landscaping Scheme: the supplementary woodland and tree planting will increase the availability of this habitat in this location that will be attractive to hazardous species of birds. The current proposed tree canopy planting includes 50% Oak. This has the potential to result in a tall dense canopy once mature, that will be suitable for nesting and roosting corvids and pigeons. Therefore, the proportion of Oak planting should be reduced or entirely replaced within the overall planting scheme. The woodland shrub**

**layer species include a high proportion of berry bearing plants. These have the potential to result in an exploitable food resource for hazardous birds. As there is a relatively large amount of additional planting it is necessary that the berry bearing proportion of the woodland understory is reduced to 20% of this planting type.**

**The site will require a bird hazard management plan (BHMP) in perpetuity; the plan will need to include a commitment to have no areas of puddling or pooling of water. A development such as this has the potential to result in discarded waste and rubbish. Therefore, lidded bins should be provided, and there should be a robust maintenance process in place to ensure that they are emptied regularly, and that litter picking is carried out routinely to ensure that discarded rubbish does not result in an attractant for scavenging birds.**

- 1.8. These issues have been fully taken into account in the revised landscape strategy and in this updated report.

## 2. CONVENTION ON INTERNATIONAL CIVIL AVIATION ANNEX 14

2.1. Guidance on wildlife strike hazard reduction is provided by Annex 14 to the Convention on International Civil Aviation, published by the International Civil Aviation Organization (ICAO).

2.2. This is as follows<sup>1</sup>:

### 9.4 Wildlife strike hazard reduction

***Note.—The presence of wildlife (birds and animals) on and in the aerodrome vicinity poses a serious threat to aircraft operational safety.***

**9.4.1 The wildlife strike hazard on, or in the vicinity of, an aerodrome shall be assessed through:**

- a) the establishment of a national procedure for recording and reporting wildlife strikes to aircraft;**
- b) the collection of information from aircraft operators, aerodrome personnel and other sources on the presence of wildlife on or around the aerodrome constituting a potential hazard to aircraft operations; and**
- c) an ongoing evaluation of the wildlife hazard by competent personnel.**

**9.4.2 Wildlife strike reports shall be collected and forwarded to ICAO for inclusion in the ICAO Bird Strike Information System (IBIS) database.**

**9.4.3 Action shall be taken to decrease the risk to aircraft operations by adopting measures to minimize the likelihood of collisions between wildlife and aircraft.**

**9.4.4 The appropriate authority shall take action to eliminate or to prevent the establishment of garbage disposal dumps or any other source which may attract wildlife to the aerodrome, or its vicinity, unless an appropriate wildlife assessment indicates that they are unlikely to create conditions conducive to a wildlife hazard problem. Where the elimination of existing sites is not possible, the appropriate authority shall ensure that any risk to aircraft posed by these sites is assessed and reduced to as low as reasonably practicable.**

**9.4.5 Recommendation.— *States should give due consideration to aviation safety concerns related to land developments in the vicinity of the aerodrome that may attract wildlife.***

2.3. Paragraphs 9.4.4 and 9.4.5 of this guidance are most relevant to the development, with the stipulation *to prevent the establishment of garbage disposal dumps or any other source which may attract wildlife to the aerodrome, or its vicinity.*

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<sup>1</sup> American English text retained from the original.

### **3. EUROPEAN COMMISSION REGULATION 139/2014**

- 3.1. Regulation 139/2014 sets out the regulatory framework at the European level, and is administered by the European Aviation Safety Agency (EASA). Sections relevant to wildlife management at aerodromes are as follows:

#### **Article 9**

##### **Monitoring of aerodrome surroundings**

**Member States shall ensure that consultations are conducted with regard to human activities and land use such as:**

...

- (e) the creation of areas that might encourage wildlife activity harmful to aircraft operations;**

...

#### **Article 10**

##### **Wildlife hazard management**

- 1. Member States shall ensure that wildlife strike hazards are assessed through:**
    - (a) the establishment of a national procedure for recording and reporting wildlife strikes to aircraft;**
    - (b) the collection of information from aircraft operators, aerodrome personnel and other sources on the presence of wildlife constituting a potential hazard to aircraft operations; and**
    - (c) an ongoing evaluation of the wildlife hazard by competent personnel.**
  - 2. Member States shall ensure that wildlife strike reports are collected and forwarded to ICAO for inclusion in the ICAO Bird Strike Information System (IBIS) database.**
- 3.2. This document considers the potential hazards arising as a result of the development and the means by which they will be addressed.

#### 4. DfT / ODPM CIRCULAR 1/2003

- 4.1. Department for Transport / Office of the Deputy Prime Minister Circular 1/2003 places responsibility for aerodrome safeguards with the aerodrome operators and introduces a consultation process for any development proposals which may affect an aerodrome.
- 4.2. Stansted Airport is a relevant aerodrome operator and so must be consulted on any planning application within the safeguarding area (13km).
- 4.3. It is the responsibility of the aerodrome operator to take all *reasonable* steps to ensure that the aerodrome and its surrounding airspace are safe at all times for use by aircraft.
- 4.4. One of the purposes of safeguarding of aerodromes in this way is to “...ensure that their operation and development are not inhibited...by developments which have the potential to increase the number of birds or the bird hazard risk” [Circ 1/2003 Annex 2 para 3].
- 4.5. Notwithstanding this reference, it is important to note that an increase in the number of birds in the vicinity of an aerodrome is not in itself a problem; it is the possible increase in birdstrike risk that is the issue of concern which plans are required to address. An increase in non-problem bird species is of no significance to the overall birdstrike risk.
- 4.6. Annex 2 to Circ 1/2003 sets out particular advice on birdstrike hazard and identifies particular forms of development which are most important and where the primary aim is to guard against new or increased hazards. These are: “...facilities intended for the handling, compaction, treatment or disposal of household or commercial wastes; the creation or modification of areas of water such as reservoirs, lakes, ponds, wetlands and marshes; nature reserves and bird sanctuaries; and sewage disposal and treatment plant and outfalls” [Circ 1/2003 Annex 2 para 8].
- 4.7. Annex 2 also advises that “...A local planning authority will need to consider not only the individual potential bird attractant features of a proposed development but also whether the development, when combined with existing land features, will make the safeguarded area, or parts of it, more attractive to birds or create a hazard such as bird flightlines across aircraft flightpaths” [para 9].
- 4.8. For the types of development described in paragraph 8 of the Circular, a Local Planning Authority is advised to ask an applicant to demonstrate by means of a risk assessment that the development would not be likely to increase the bird hazard risk to aircraft.



## 5. CAP 772 WILDLIFE HAZARD MANAGEMENT AT AERODROMES

- 5.1. CAP 772 sets out guidelines for the control of bird hazards in and around aerodromes. Whilst the document concentrates on bird control on aerodromes there is some relevant guidance for landscape areas in the vicinity.
- 5.2. The principal hazards are gulls, wading birds, pigeons and Starlings *Sturnus vulgaris*, and to a lesser extent corvids. Other species such as Canada Geese *Branta canadensis* and Greylag Geese *Anser anser* are considered in the CAA Safety Regulation Group document *Large Flocking Birds – An International Conflict Between Conservation and Air Safety*, but are of lower concern in a UK context. The objective of CAP 772 is to reduce the potential for roosting and to make sure that landscape areas are not attractive to such large flocking bird species. Smaller birds that do not form dense flocks have a low hazard potential.
- 5.3. Typical measures to accommodate the recommendations of CAP 772 are:
  - Reduce tree planting density to 4m centres or lower, use open rides and thin existing stands to avoid formation of Starling roosts;
  - Reduce species providing abundant winter food source, the most attractive of which are Holly *Ilex aquifolium* (female), Rowan *Sorbus aucuparia*, Hawthorn *Crataegus monogyna*, *Viburnum* spp. and *Cotoneaster* spp. together with Crab Apple *Malus sylvestris* and Honeysuckle *Lonicera* spp.;
  - Pay attention to normal management programmes such as trimming Hawthorn hedges, which can limit berry production and thereby form part of a mitigation strategy; and
  - Avoid larger, permanent open water sites.

## 6. SAFEGUARDING OF AERODROMES ADVICE NOTE 8

- 6.1. Advice Note 8 sets out the hazards which may arise from building design and advises on measures to avoid them, or where this is not possible to mitigate and manage these hazards to reduce them to acceptable levels.
- 6.2. Section 4 of Advice Note 8 states that the following features should be considered when designing a building:
- Roof overhangs should be kept to a minimum;
  - Ledges beneath overhangs and external protrusions should be avoided where possible;
  - Steeply pitched roofs should be used to deter gulls from nesting, roosting and loafing;
  - The roof space be designed in such a way as to prevent access by birds;
  - Self-closing doors to prevent access to birds or openings should have plastic strip curtains fitted; and
  - Where flat and / or shallow pitched roofs greater than 10m x 10m cannot be avoided in the design, there must be access available by foot to all areas of the roof to ensure that any hazardous birds, nesting, roosting and loafing can be dispersed and where necessary any nests and eggs can be removed (see note below regarding licences).
- 6.3. Prevention, inspection and dispersal measures are included at Section 5, and comprise the following:
- Netting;
  - Bird spikes;
  - Pyrotechnics;
  - Distress Calls;
  - Removal of Nests and / or Eggs (under the relevant Natural England licence as appropriate); and
  - Inspections, where flat or shallow pitched roofs are present.
- 6.4. Management of birds relating to flat or shallow pitched roofs would include the following measures:
- Confirmation that access to all areas of the roof is available and by what method, to ensure that inspections can be carried out;
  - Confirmation that inspections will be carried out year-round with increased frequency during the breeding season;
  - Confirmation that any nests / eggs will be removed, with the appropriate licences first being obtained;
  - Confirmation that any hazardous birds found nesting, roosting and loafing will be dispersed when detected or when requested by Airfield Operations staff. In some instances, it may be necessary to contact Airfield Operations staff before bird dispersal takes place;
  - Details of any dispersal methods to be used; and
  - A log to be kept of bird numbers and species utilising the roof(s).

## 7. SAFEGUARDING OF AERODROMES ADVICE NOTE 3

- 7.1. Advice Note 3 considers the types of development that may come forward in the vicinity of an aerodrome and the particular issues that can arise. Parts of the advice are similar to that provided in the (earlier) Advice Note 8.
- 7.2. Developments such as housing, factories, industrial estates / units, mineral extraction and green roofs can provide food and shelter for urban species such as Pigeons, Gulls, Corvids, Starlings etc.
- 7.3. Buildings with flat roofs can provide nesting opportunities for gull colonies; Feral Pigeons, Jackdaws and Starlings can take advantage of ledges and gullies for nesting sites and perching areas.
- 7.4. The advice sets out ways in which these potential risks could be reduced, as follows:
- Netting to proof roofs and exclude hazardous species;
  - Roof overhangs kept to a minimum;
  - Ledges beneath overhangs and external protrusions avoided where possible;
  - Redesign roof to steeply pitched to deter Gulls from loafing, roosting and resting;
  - Lighting structures proofed to prevent perching;
  - Choice of roof material to reduce attractiveness (smooth surfaces with minimal protrusions or vents to reduce breeding opportunities);
  - Roof spaces to be designed in such a way as to prevent access by birds;
  - Self-closing doors to prevent access to birds or openings fitted with netting or plastic strip enclosure materials;
  - Safe access by foot access to all areas of roof that cannot be proofed;
  - Outside dining areas enclosed or avoided in close proximity to an aerodrome.
- 7.5. Advice is provided with regards to monitoring and inspection of gulls, as follows:

**During the breeding season for Gulls, for example, inspections to assure compliance with a 'no breeding' BHMPs should be carried out at least weekly during the breeding season, (e.g. Gulls typically April to June). To ensure that all hazardous birds found nesting are dispersed and any nests and / or eggs are removed. This process should be fully documented to provide an audit trail.**

**For roosting or loafing (resting) birds, regular inspections should be carried out and if the threshold level is exceeded then birds should be dispersed. The frequency of inspections should be dictated by the presence of hazardous birds and be sufficient as to ensure the efficacy of the plan. This process should be fully documented to provide an audit trail and compliance site visits from the aerodrome operator may be required, subject to the necessary Health and Safety considerations.**

## 8. RISK ASSESSMENT OF LAND AT TILEKILN GREEN, STANSTED

- 8.1. The proposals are for the construction of an open logistics facility with associated new access, parking areas and ancillary office and amenity facilities.
- 8.2. This does not constitute one of the 'most important' types of development that create new or increased birdstrike hazards, such as landfill and mineral extraction as set out in DfT / ODPM Circular 1/2003 Annex 2 paragraph 8.
- 8.3. New landscape planting is proposed as part of the development. Factors such as planting of trees and bushes are referred to in Paragraph 8 of Annex 2 to Circular 1/2003.
- 8.4. A source of potential risk for the development is the proposed landscaping scheme, which incorporates the restocking of the perimeter woodland belt buffer planting along the western and southern part of the site. The Landscape Proposals are included at Appendix 1 while the restocking scheme is included at Appendix 2. This supplementary woodland and tree planting is a requirement of the Felling Licence (ref: 017/45385/2018) obtained for previous areas of tree felling, to replace what was previously removed. This includes the planting of Field Maple *Acer campestre*, Aspen *Populus tremula*, Wild Cherry *Prunus avium*, Wild Service Tree *Sorbus torminalis*, Hornbeam *Carpinus betulus* and Oak *Quercus robur*, with understorey species of Hazel *Corylus avellana*, Dogwood *Cornus sanguinea*, Hawthorn *Crataegus monogyna*, Blackthorn *Prunus spinosa*, Dog Rose *Rosa canina* and Wild Privet *Ligustrum vulgare*.
- 8.5. Small areas of flat roof will also be a source of potential risk for the development. Shallow and flat roofs are attractive to species such as gulls to roost, nest and loaf. The new portacabin buildings, which serve as an ancillary office for administration and amenity facilities for staff welfare purposes, will provide small areas of flat roofs, which provide the potential to attract gulls and feral pigeons.
- 8.6. Given the pre-development status of the site it is not likely that the construction phase would give rise to any significant additional risk. Significant areas of topsoil will not be exposed, and no significant areas of standing water are expected to establish.
- 8.7. Chapter 4 of CAP 772 identifies the various risks that can arise within and adjacent to an aerodrome, which include the presence of food sources, nest and roost sites and the presence of open water. Certain plant species, generally berry bearing species, are considered to be greater attractants for birds, and it is recommended that such species be avoided.
- 8.8. CAP 772 states that buildings and structures with access holes and crevices provide nest sites and roosts, especially for Feral Pigeons and Starlings, but also gulls. Pigeons roost and nest inside buildings and on ledges on their exteriors. It is recommended that, wherever possible, flat roofs be avoided, and that where they are constructed, they be fully accessible for inspection purposes.

- 8.9. Section 5 of Chapter 4 lists off-aerodrome bird attractant habitats. The proposed development is not located on *The Coast* and does not include *Landfills for Food Wastes; Sewage Treatment and Disposal; or Sand Gravel and Clay Pits*.
- 8.10. Overall, the development of the site has the potential to increase bird hazards in the vicinity of Stansted Airport if not subject to appropriate avoidance and mitigation measures.
- 8.11. The Bird Hazard Management Plan is concerned with managing potential risks that may arise during the operational phase.

## 9. BIRD HAZARD MANAGEMENT PLAN

- 9.1. Taking into account the regulations and guidance reviewed in the previous sections, this section sets out the means by which bird hazards will be addressed and monitored as part of the development.
- 9.2. The overarching principle of this plan is that the developer implements all reasonable endeavours to maintain the birdstrike risk associated with the development as low as reasonably practicable, in line with published guidance and legislation.

### **Operational Phase**

#### *Roof Overhangs*

- 9.3. The design of the roof of the portacabin buildings is to be such that these are kept to a minimum to reduce nesting opportunities. Any skylights will be fitted with appropriate grilles or netting to prevent nesting opportunities.

#### *Roof Inspections*

- 9.4. The two portacabin roofs will be accessible for safe inspection, and will be inspected on a weekly basis (or sooner if bird activity dictates) during the nesting bird season (March to July inclusive). Inspections will be undertaken by a designated person or company. During the remainder of the year inspections would be undertaken on a monthly basis. In the event that bird activity during any given period is found to be high, the frequency of inspections would increase.
- 9.5. All accessible roof spaces would be searched for roosting, loafing and nesting birds such as gulls and Feral Pigeon. Any roosting or loafing birds would be dispersed by means of human presence and activity.
- 9.6. Where nesting birds are found, an ecologist would be contacted for advice. All wild birds are protected while nesting and removal of nests and eggs may require a Natural England licence. If it is clear that eggs are not present, then any nest in the process of being constructed can be cleared away without the need for further advice or intervention. As a general principle the roof area should be kept free of material at all times.

#### *Bird Spikes*

- 9.7. Wherever possible, bird spikes would be affixed to the top of lighting columns. These would be inspected, and replaced if necessary, as part of annual site maintenance.

#### *Log of Activity*

- 9.8. A paper and electronic log of monitoring activity will be kept by the designated individual or company and will be available for inspection by interested parties. Details of activities undertaken and of birds recorded will be kept, together with views on the efficacy of measures taken. An example of a recording sheet is included at Appendix 3.

### *Reassessment*

- 9.9. The effectiveness of these measures will be reassessed on a six-monthly basis. Where they are considered to be lacking then additional methods such as netting of roofs and use of installed sonic deterrents will be considered.

### *Trees and Shrubs*

- 9.10. The approach to the landscape scheme, which has been revised since the earlier submission, has been informed by discussion with Diane Jackson (Group Aerodrome Safeguarding Officer) on 7 July 2021, and by her consultation response noted in section 1 of this report. Following this discussion steps were taken to avoid additional risk, as follows:

- The planting mix has been designed not to attract problem species and to have trees that will be easy to maintain at no higher than 10m (to avoid interference with communications and navigation).
- To avoid attracting problem birds, the landscape strategy (as distinct from the restocking scheme) does not include any species that are berry bearing or otherwise provide a food source for birds, and Oak has been used very sparingly in the scheme (Oak tree quantities equate to less than 10% of the total trees).

- 9.11. The restocking scheme is separate to the landscape strategy, and includes a greater proportion of Oak as well as berry bearing species in the canopy and understorey mix. It is important to note that the restocking works do not form part of the planning application, and are controlled by the Forestry Commission. Restocking percentages were formulated to give suitable replacement for the stock that was removed. Thus there is no *additional* risk arising as a result.

### *Water Features*

- 9.12. No water features are included as part of the proposed development.
- 9.13. Additionally, there will be a commitment to ensure that no areas of puddling or pooling of water are allowed to establish, even on a temporary basis. The drainage strategy will ensure that the site drains appropriately, and in the event that temporary puddles or pools are seen to establish steps will be taken to remove them.

### *Waste Imports and Monitoring*

- 9.14. As the proposals do not feature use of the site for landfill, incineration or the treatment of hazardous wastes, no wastes are to be brought onto the site.

### *Waste Collection, Storage and Disposal*

- 9.15. Chapter 5 of CAP 772 states that:

**Waste food is an attractant to gulls, corvids, pigeon species and starlings in particular and should not be tolerated [...]. Where food waste could occur, all bins and skips provided should be of designs that prevent animals (such as foxes and rodents) and birds getting in; for example, with drop-down or swinging lids. They should be emptied before they overflow.**

- 9.16. Any food, garden or other putrescible wastes produced within the proposed development will be disposed of in appropriate refuse bins, which will be installed at suitable locations.
- 9.17. Bins will be of designs that exclude birds (e.g. with drop-down or swinging lids), as will any skips used for refuse. Bins will be subject to regular collections.
- 9.18. A litter picking round will be regularly undertaken at the site to ensure that discarded rubbish does not result in an attractant for scavenging birds.
- 9.19. The importance of appropriate waste collection, storage and disposal will form part of the site induction.

### **Obligations and Undertaking**

- 9.20. The following section sets out the commitment of the end user of the development to implement the Bird Hazard Management Plan as set out in this section. The wording will be agreed with Stansted Airport and Uttlesford Borough Council.



## **10. OBLIGATIONS AND UNDERTAKING**

### **I / we can confirm the following:**

- That the roofs are constructed in such a manner so that all areas are safely accessible to enable any nests and eggs to be cleared and birds to be dispersed.
- Checks will be made weekly or sooner if bird activity dictates, during the breeding season by an appointed person / company. The breeding seasons for gulls typically runs from March to June.
- Any birds found nesting and / or roosting and / or loafing during the breeding season will be dispersed when detected and / or when requested by Stansted Airport Airfield Operations staff.
- Any nests or eggs found will be removed, the appropriate licence(s) will be obtained from Natural England beforehand if required.
- Checks will be made on a regular basis, as dictated by bird activity, outside of the breeding season by a nominated person/company.
- Any birds found roosting and / or loafing outside of the breeding season will be dispersed when detected and / or when requested by Stansted Airport Operations Staff.
- The methods of dispersal used will be as follows:
  - Physical disturbance through human presence
- A log will be kept which will detail the following:
  - Dates and times of inspections
  - The individual(s) who carried out the inspections
  - Bird numbers and species seen
  - Details of any dispersal action taken along with details of any nests / eggs removed.
- The log must be available to Stansted Airport Airfield Operations to view upon request.

### **Review of the Management Plan**

The management plan shall be subject to review to reflect changes in habitat or populations of bird species. Should the airport deem it necessary, a meeting between Stansted Airport Limited, the developer / operator and / or Uttlesford Borough Council will be convened at the earliest opportunity to discuss and agree any changes which may be necessary.

### **Inspection & Site Access**

Stansted Airport Limited, or their nominated representatives, will be allowed access to the site by prior arrangement, to evaluate the success of the Management Plan and to review any remaining birdstrike hazard.

## **Long Term Management**

This Management Plan will remain enforceable by Stansted Airport Limited, Uttlesford District Council, the CAA or any successor to these bodies throughout the existence of the buildings. These obligations will be passed to any subsequent owners / operators of these buildings and land.

**Signed:**

**On Behalf of:           FKY Limited**

**Date:**

## 11. SUMMARY AND CONCLUSIONS

- 11.1. Ecology Solutions was commissioned by FKY Limited in April 2021 to complete a Bird Hazard Management Plan for the development at land at Tilekiln Green, Stansted, Essex (see Plan ECO1 for the location of the site).
- 11.2. The site is situated west of the town of Bishop's Stortford and less than 1km southwest of Stansted Airport. Given that the site is within 13km of Stansted Airport, it lies within the safeguarding zone where aircraft are at lower altitudes and at increased risk of birdstrikes. All developments within the 13km radius require consultation to ensure no potential increases in birdstrike risk.
- 11.3. The site is approximately 5.3 hectares in size and dominated in the centre by recolonising semi-improved grassland, ephemeral / short perennial and tall ruderal habitats. Areas of broadleaved woodland are present in the northeast and along the southern boundary of the site. A shallow stream is located off-site along each of the western and southern boundaries. The proposals for the site are for the development of an open logistics facility with associated new access, parking areas and ancillary office and amenity facilities.
- 11.4. The purpose of this document is to ensure that the risk of birdstrike as a direct result of the proposed development does not significantly increase. The proposals have been considered in the context of the relevant regulations and guidelines.
- 11.5. The approach to the landscape strategy and this document have been revised following a consultation response received from and subsequent discussion with the MAG Aerodrome Safeguarding Officer.
- 11.6. The effect of the construction phase on birdstrike risk is considered to be negligible. The planting mix has been designed not to attract problem species and also to have trees that will be easy to maintain at no higher than 10m (to avoid interference with communications and navigation). To avoid attracting problem birds, the landscape strategy does not include berry bearing species, and Oak has been used very sparingly.
- 11.7. The restocking scheme is separate to the landscape strategy, and includes a greater proportion of Oak as well as berry bearing species in the canopy and understorey mix. It is important to note that the restocking works do not form part of the planning application, and are controlled by the Forestry Commission. Restocking percentages were formulated to give suitable replacement for the stock that was removed. Thus there is no *additional* risk arising as a result.
- 11.8. The roofs of the two new portacabin buildings may also be attractive to problem bird species, particularly roosting, nesting and 'loafing' gulls. All roof areas will be safely accessible and will be subject to regular inspection to disperse any birds that may be present. A log of activity will be kept.

- 11.9. A robust approach to collection, storage and disposal of waste will be taken, with appropriate lidded bins on site, as well as a regular litter picking regime. Temporary puddles and pools will not be permitted to establish.
- 11.10. The end user of the development, FKY Limited, gives an undertaking to implement the Bird Hazard Management Plan.
- 11.11. Overall, with these measures in place it is considered that the development of the site that would not result in an additional significant birdstrike risk to Stansted Airport during the construction or operational phases.

## 12. REFERENCES AND BIBLIOGRAPHY

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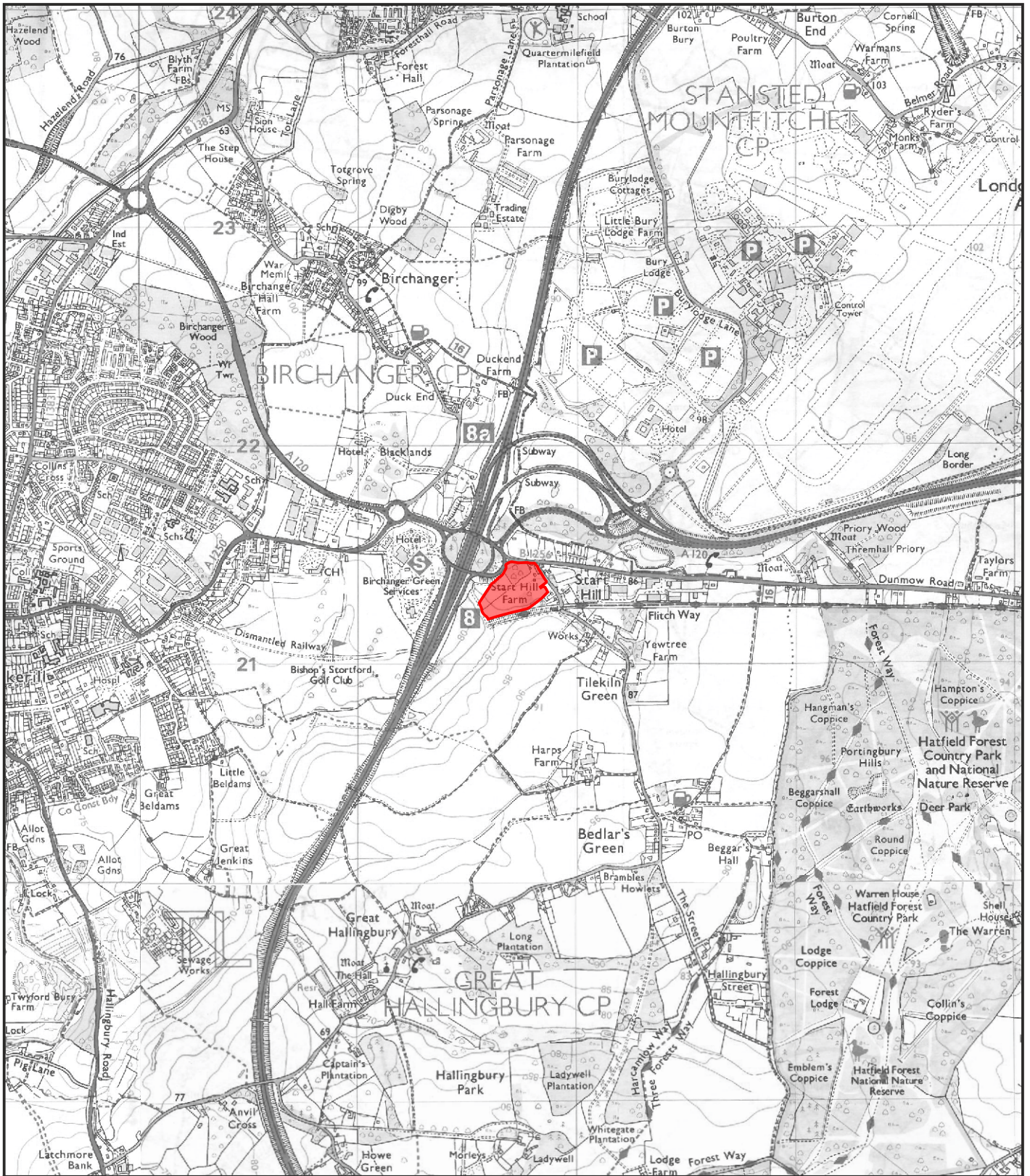
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## PLANS

## **PLAN ECO1**

Site Location





**KEY:**

 **SITE LOCATION**



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**8723: LAND AT TILEKILN GREEN,  
STANSTED**

**PLAN ECO1: SITE LOCATION AND  
ECOLOGICAL DESIGNATIONS**

Rev: A  
May 2021



## **APPENDICES**

## **APPENDIX 1**

Landscape Proposals (Dwg No NC18.446-P204),  
Nigel Cowlin Landscape Assessment & Design



**PLANTING SPECIFICATION**

**PRELIMS**

**Quality control**  
All landscape works to be carried out in accordance with the relevant current British Standards (including current revisions of 4428, 3936 & 5837); National Planting Specifications Guidelines; Horticultural Trades Association standards (including 'Handling and establishing landscape plants' part 1, 2 & 3); CPSE 'Plant Handling' Standards & COSHH Regulations. All soft landscape works to be carried out by trained and competent operatives under appropriate supervision and only after a suitable pre-commencement site meeting of all relevant parties. Setting out, materials and plant stock supplies to be approved by a competent client representative. There will be no plant substitutions or scheme revisions allowed without written approval of the client or client representative. Workmanship and maintenance operations to be subject to monitoring inspections and approval also by a competent client representative.

**Health and Safety (CDM)**  
No site or project specific production, maintenance or in-use hazards have been identified during the design stages of this project. Should any hazards subsequently be identified they are to be brought to the attention of the client/appropriate client representative.

**SITE PREPARATION**

**Site Clearance**  
Areas for hedge planting to be cleared of all vegetation in a strip 700mm wide. Areas for copse plantation to be generally cleared of any rubbish or waste material but otherwise only 1m circles for each planting location to be cleared of ground vegetation.

**PLANTING**

**Weed control**  
Where there is a delay between ground preparations and planting, planting locations to be cleared of any recent weed growth and any other waste material.

**Plants and plant handling**

All plant material to be of good quality stock, size in accordance with the specification, and in a healthy condition; free from pest, disease and weed growth in accordance with BS3906 and HTA National Plant Specification. British native species to be of British origin, of local seed stock/provenance wherever possible, and from sustainable seed sources. Plants to be handled in accordance with BS4428 and the HTA code for Plant Handling and Establishment of Landscape Plants to ensure that transit, storage, handling on site and planting operations preserve and promote the condition of the stock. Trees and tree handling to be in accordance with BS8545:2014 Trees: from nursery to independence in the landscape - Recommendations.

**Planting generally**

Plants to be evenly spaced throughout allotted planting areas, at densities as specified. Planting mixes to be laid out with species randomly distributed throughout allotted planting areas. Planting to be carried out in accordance to the HTA code stated above, and into planting holes/pits/notches slightly larger than the growing container/root spread, with sides and bottom of pits loosened as necessary to ensure adequate drainage and to allow normal root growth. All bare-root planting to be carried out only during the winter planting season between mid-November and the end of February. No planting to be undertaken when the ground is frozen.

**Copse plantation set out**  
Woodland tree species to be set out on a 2.5m x 2.5m staggered grid.

**Hedge set out**  
Hedges to be planted in a double staggered row at 450mm centres with rows off-set by 300mm.

**Mulch**  
Within copses, mulch 1m circles around each planting location; hedges to be mulched in a 1m wide strip. Contractor to agree mulching method and material to be used with client representative.

**Protection**

All tree canopy plants to be protected with 900mm high deer guards. All woodland shrub layer species to be protected with 600mm high rabbit guards. These to be 170-200mm diameter for shrub species and 80-110mm diameter for trees. All to be installed and secured in accordance with manufacturer's instructions immediately after planting.

**INITIAL MAINTENANCE / RECTIFICATION PERIOD**

**Replacement planting within woodland areas**  
Contractor to be responsible for replacement of any failed, falling or missing plants in winter planting season one year after planting where losses are over 30% of total planting. Otherwise, canopy to be allowed to develop through natural regeneration.

**Weeding**

Weed removal, to 1m circle around each woodland plant and 1m strip along width of hedges, to be carried out twice during each growing season.

**Mulch**

Mulch to be reinstated to original specification 1 year following original planting.

**LONG-TERM MAINTENANCE**

**Establishment maintenance - copse planting**

It is recommended that the landowner makes provision for ongoing annual maintenance, repeating the first year's maintenance operations for at least two further years. After this period, if establishment is progressing well, the woodland planting can be monitored, and maintenance operations carried out as and when found necessary.

**Establishment maintenance - hedges**

Hedges to be cut back annually in June and September to encourage bushy growth down to ground level. Trim to tapered A-shape. Height to achieve minimum 2.5m to provide screen to acoustic fence.

**Removal of waste materials**

Rabbit and deer protection guards to be removed at the end of Year 5.

**Future management**

It is also advised that every three years, an appropriately qualified tree/forestry expert should inspect the woodland areas and produce a condition and management report.

**WOODLAND PLANTING SCHEDULE**

Qty	Species	Specification	Height	Girth
18	Acer campestre	BR 3x Heavy Standard Clear Stem min 200.5 brks	350-425cm	12-14cm
11	Betula pendula	BR 3x Heavy Standard Clear Stem 175-200.5 brks	350-425cm	12-14cm
21	Carpinus betulus	RB 3x Heavy Standard Clear Stem 175-200.5 brks	350-425cm	12-14cm
Total :50				

Qty	Species	Specification	Height	Density
1010	Carpinus betulus	BR 1+1 Transplant - seed raised	60-60cm	450/ Double Staggered at 0.3m offset
Total :1010				

Qty	Species	Specification	Height
163	Acer campestre	BR 1+1 Transplant - seed raised	40-60cm
670	Carpinus betulus	BR 1+1 Seeding - undercut	40-60cm
163	Populus tremula	BR 1+1 Seeding	40-60cm
136	Quercus robur	BR 1+1 Transplant - seed raised	40-60cm
82	Salix caprea	BR 10T Cutting Branched 2 brks	60-80cm
136	Tilia cordata	BR 1+1 Transplant - seed raised	40-60cm
Total :1350			

Seed / Turf	Area Type	Specification	Seeding rate (g)
2277.59m <sup>2</sup>	Lawn seed	Germinall A18 Road Verge & Embankments	35m <sup>2</sup>
Total :2277.59m <sup>2</sup>			



**KEY:**

- Trees & hedging to be cleared
- Existing woodland & trees to be retained to provide established containment screening
- Felling licence restocking works completed March 2020 Licence nr. 01745385/2018
- Supplementary woodland & tree planting
- Hedge planting
- Standard tree planting
- Amenity grass mix
- Junction visibility splays
- Acoustic fence

**KEY**

1 3 2 4

2.4

81

20

6 x

13-01-22 A Revised baseline IAK  
28-07-21 Initial submission IAK/NC

Date	Rev	Rev/Author/Checked By

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Client: **WREN**

Project: **Bedlars Green Road  
Tilekiln Green, Stansted**

Drawing title: **LANDSCAPE PROPOSALS**

Scale: 1:500 @ A1 drawn by: AK  
date: 28-07-21 chkd by: NC  
drawing number: NC18.446-P204 revision: a





## **APPENDIX 2**

FC Restocking Plan (Dwg No NC18.446-P203),  
Nigel Cowlin Landscape Assessment & Design



**PLANTING SPECIFICATION**

**PRELIMS**

**Quality control**  
All landscape works to be carried out in accordance with the relevant current British Standards (including current revisions of 4428, 3936 & 5837); National Planting Specifications Guidelines; Horticultural Trades Association standards (including 'Handling and establishing landscape plants' part 1, 2 & 3); and 'Plant Handling Standards & COSEH Regulations'. All soft landscape works to be carried out by trained and competent operatives under appropriate supervision and only after a suitable pre-commencement site meeting of all relevant parties. Setting out, materials and plant stock supplies to be approved by a competent client representative. There will be no plant substitutions or scheme revisions allowed without written approval of the client or client representative. Workmanship and maintenance operations to be subject to monitoring inspections and approval also by a competent client representative.

**Health and Safety (CDM)**  
No site or project specific production, maintenance or in-use hazards have been identified during the design stages of this project. Should any hazards subsequently be identified they are to be brought to the attention of the client/appropriate client representative.

**SITE PREPARATION**

**Site Clearance**  
Areas for copse plantation to be generally cleared of any rubbish or waste material but otherwise only 1m circles for each planting location to be cleared of ground vegetation.

**PLANTING**

**Weed control**  
Where there is a delay between ground preparations and planting, planting locations to be cleared of any recent weed growth and any other waste material.

**Plants and plant handling**  
All plant material to be of good quality stock, size in accordance with the specification, and in a healthy condition; free from pest, disease and weed growth in accordance with BS3936 and HTA National Plant Specification. British native species to be of British origin, of local seed stock/provenance wherever possible, and from sustainable seed sources. Plants to be handled in accordance with BS4428 and the HTA code for Plant Handling and Establishment of Landscape Plants to ensure that transit, storage, handling on site and planting operations preserve and promote the condition of the stock. Trees and tree handling to be in accordance with BS8545:2014  
Trees: from nursery to independence in the landscape - Recommendations.

**Planting generally**  
Plants to be evenly spaced throughout allotted planting areas, at densities as specified. Planting mixes to be laid out with species randomly distributed throughout allotted planting areas. Planting to be carried out in accordance to the HTA code stated above, and into planting holes/pits/notches slightly larger than the growing container/root spread, with sides and bottom of pits loosened as necessary to ensure adequate drainage and to allow normal root growth. All bare-root planting to be carried out only during the winter planting season between mid-November and the end of February. No planting to be undertaken when the ground is frozen.

**Timing**  
Tree planting to be undertaken February-March 2020. Shrub planting to be undertaken during winter 2020/21.

**Copse plantation set out**  
Woodland tree species to be set out on a 2.5m x 2.5m staggered grid and interplanted on a 1.25m x 1.25m staggered grid with woodland shrub species; this equates to 25% tree species and 75% shrub species.

**Protection**  
All tree canopy plants to be protected with 1.5m high deer guards. All woodland shrub layer species to be protected with 600mm high rabbit guards. These to be 170-200mm diameter for shrub species and 80-110mm diameter for trees. All to be installed and secured in accordance with manufacturer's instructions immediately after planting.

**INITIAL MAINTENANCE / RECTIFICATION PERIOD**

**Replacement planting**  
Contractor to be responsible for replacement of any failed, falling or missing plants in winter planting season one year after planting.

**Weeding**  
Weed removal, to 1m circle around each plant, to be carried out 4 times during each growing season.

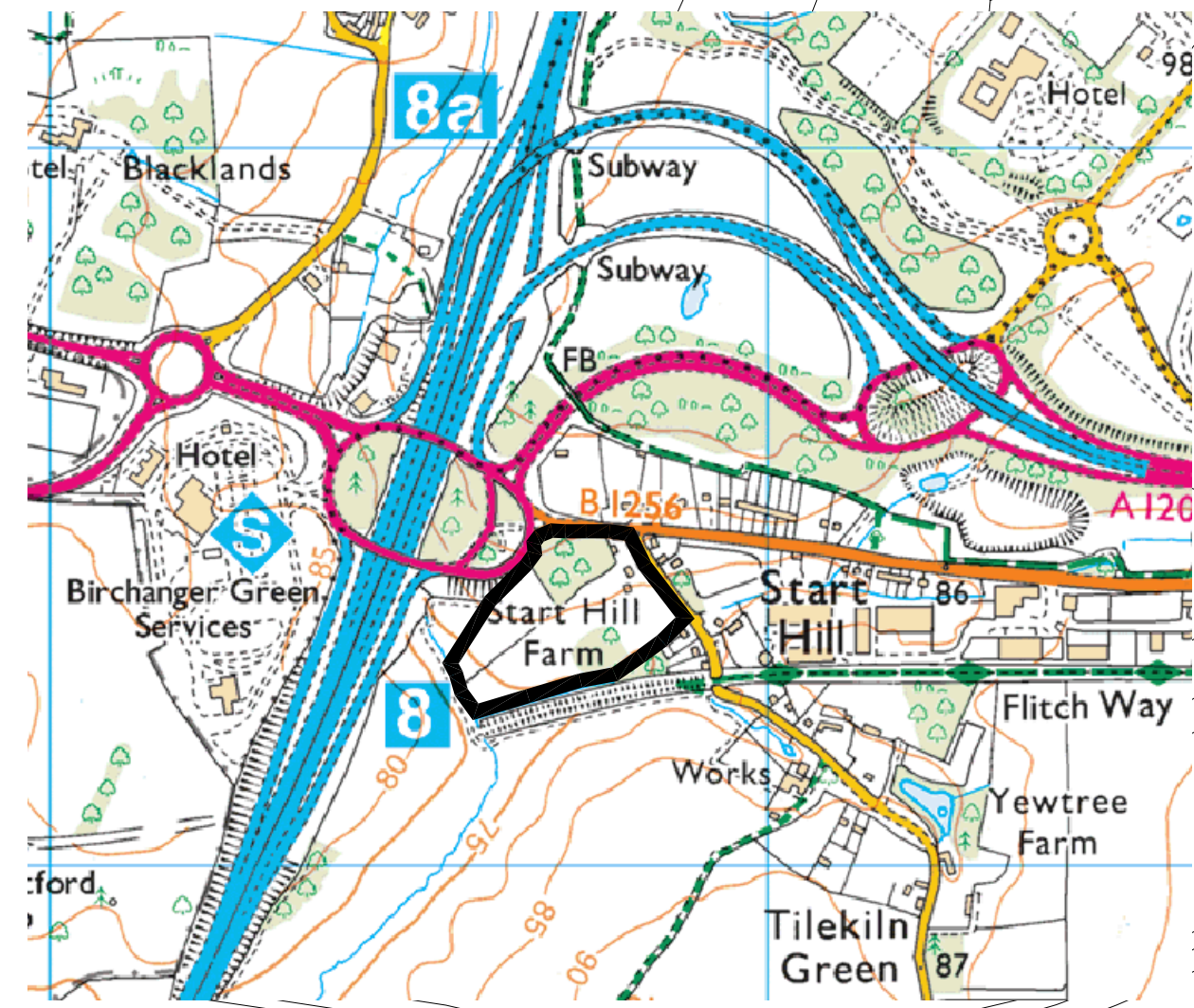
**LONG-TERM MAINTENANCE**

**Establishment maintenance**  
It is recommended that the landowner makes provision for ongoing annual maintenance, repeating the first year's maintenance operations for at least two further years. After this period, if establishment is progressing well, the woodland planting can be monitored, and maintenance operations carried out as and when found necessary. Note that the felling licence (01745385/2018) requires protection against damage, adequate weeding and replacement planting for any failure or losses of the tree species for a period of 10 years.

**Removal of waste materials**  
Rabbit and deer protection guards will have served their purpose once the plants have established more mature stems. At this point the guards may be splitting away from the stems and will need to be collected and recycled or disposed of as waste. This will typically be between 5 and 10 years from planting. Some biodegradable guards are becoming available and use of these may negate the need for this clear up operation. If non-organic mulch mats have been used, these will also need to be cleared from the site around the same time.

**Future management**  
It is also advised that every three years, an appropriately qualified tree/forestry expert should inspect the woodland areas and produce a condition and management report.

**LOCATION PLAN**



B 1256

(Training Centre)

**KEY:**

- Existing woodland & trees
- Perimeter woodland belt buffer planting to connect between sections of retained woodland (FC restocking requirement)



**FULL PLANT SCHEDULE**

Qty/Species	Specification	Height	Pot Size
74 - Acer campestre	bare root transplant	45-60cm	
74 - Carpinus betulus	bare root transplant	45-60cm	
219 - Cornus sanguinea	bare root transplant	45-60cm	
393 - Corylus avellana	bare root transplant	45-60cm	
1089 - Crataegus monogyna	bare root transplant	45-60cm	
45 - Ligustrum vulgare	bare root transplant	45-60cm	
110 - Populus tremula	bare root transplant	40-60cm	
74 - Prunus avium	bare root transplant	40-60cm	
328 - Prunus spinosa	bare root transplant	45-60cm	
364 - Quercus robur	bare root transplant	40-60cm	
110 - Rosa canina	bare root transplant	45-60cm	
37 - Sorbus torminalis	bare root transplant	40-60cm	
Total :2917 -			
Total area of woodland planting 4533m2			

Date	Rev	Rev/Author/Checked By
15-02-20	A	Revisions to planting timing, guards and marking BAC/C
29-01-20	-	Initial submission NZ/AR

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client: **WREN**  
project: **Bedlars Green Road Tilekiln Green, Stansted**  
drawing title: **FC RESTOCKING PLAN**  
scale: 1:500 @ A1 drawn by: NC  
date: 29 January 2020 chkd by: AK  
drawing number: **NC18.446-P203** revision: A



## **APPENDIX 3**

### Example Bird Hazard Management Log





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