

EDINBURGH AIRPORT AIRSPACE CHANGE PROGRAMME - HABITATS REGULATIONS APPRAISAL SCREENING REPORT

Authorisations

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Executive Summary

- 1 The Edinburgh Airport Airspace Change Programme is currently consulting on changes to flight paths used by aircraft approaching and departing the airport. This project requires a Habitats Regulations Appraisal (“HRA”) screening to ensure that it does not adversely affect any designated sites protected by either Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (“the Habitats Directive”) or Council Directive 2009/147/EC on the conservation of wild birds (codified version) (“the Birds Directive”).
- 2 This report assesses the proposed change in flight routes and their potential to negatively affect designated sites within the Zone of Influence of the routes by undertaking an appraisal of no likely significant effects on those sites.
- 3 A very precautionary approach was used, based on the experience of HiDef Aerial Surveying Ltd. (“HiDef”) flying twin engine survey aircraft to collect high definition digital aerial video data on birds, mammals and habitats.
- 4 Connectivity between designated sites was determined using a three dimensional approach incorporating bands of 1km, 2km, 4km, and 8km from the central flight path to designated sites, and using altitude based on the relative size of aircraft flying to and from Edinburgh Airport and HiDef’s survey aircraft.
- 5 A long list of 15 designated sites were initially identified, which was reduced down to four sites when altitude was assessed. For each of these four sites, the proposed changes to the flight routes did not result in a material change in disturbance compared to current flight paths. This was due to the altitudes low enough to represent a potentially disturbing effect occurring only relatively close to the airport, and therefore not representing an important difference to the current activity.
- 6 It was therefore possible to objectively conclude no likely significant effect to any Natura 2000 sites from the proposed Edinburgh Airport Airspace Change programme.

1 Introduction

- 1 Edinburgh Airport has been undertaking consultations with stakeholders on proposed changes to the routes taken by aircraft to and from the airport. These changes have the potential to cause impacts on the qualifying features of sites designated under Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ("the Habitats Directive") or Council Directive 2009/147/EC on the conservation of wild birds (codified version) ("the Birds Directive").
- 2 These directives are enacted in to law in Scotland by the The Conservation (Natural Habitats, & c.) Regulations 1994, as amended (referred to as the "Habitats Regulations") and as such, where licensed activities cannot be objectively shown to have no likely significant effect ("LSE") on the qualifying features, the Competent Authority ("CA") is required to undertake an Appropriate Assessment. The CA carries out this assessment using information provided by the applicant.
- 3 This report undertakes a Habitats Regulations Appraisal ("HRA") screening of sites designated under the Birds Directive and the Habitats Directive (together known as "Natura 2000" sites) for the Edinburgh Airport Airspace Change Programme.
- 4 The Natura 2000 network has been established across European Union ("EU") member states to conserve natural habitats and species, particularly those that are rare, endangered, vulnerable to human pressures, or endemic within the EU. The Habitats Directive has established protected Special Areas of Conservation ("SAC") for habitats and species other than wild birds, while the Birds Directive has similarly established Special Protection Areas ("SPA") for birds.
- 5 In addition, as a matter of government policy, Natura 2000 sites that have been proposed by the UK but not yet formally accepted as protected sites by the European Commission (candidate SACs ("cSACs") in the case of the Habitats Directive and potential SPAs ("pSPAs") in the case of the Birds Directive) are given the same level of protection as formally protected sites. In addition, sites identified as internationally important wetlands under the Ramsar Convention (1971) are considered under the HRA process.
- 6 Guidance from the European Commission on the assessment of plans or projects requiring a HRA recommends four steps be undertaken:
 - 1) Screening. The potential effects on Natura 2000 sites of plans or projects are identified and those sites where no LSE can objectively be concluded (alone and in combination with other reasonably foreseeable plans and projects) are screening out of the HRA.
 - 2) Appropriate Assessment. Where no LSE cannot be concluded the CA is required to undertake an Appropriate Assessment in order to show that the plan or project, along and in combination, will not constitute an adverse effect on site integrity, beyond reasonable scientific doubt.
 - 3) Alternatives. Where the CA cannot conclude no adverse effect on site integrity, an assessment of reasonable alternative plans, which achieve the same objective, must be undertaken.
 - 4) Imperative Reason of Overriding Public Interest ("IROPI"). If the CA cannot demonstrate there are reasonable alternatives, the plan or project can only proceed if the CA can demonstrate that there is an IROPI case for it to be undertaken and must also demonstrate that sufficient compensation can be achieved to maintain the favourable conservation status of the Natura 2000 network.

7 The objectives of this report are to:

- 1) Determine which Natura 2000 sites may have connectivity to the proposed new flight paths;
- 2) Determine whether the new flight paths result in a route to impact on the qualifying features of the sites identified; and,
- 3) Determine whether it can be objectively determined whether there is no LSE on the sites identified.

8 Scottish Natural Heritage (“SNH”) guidance recommends that the no LSE step should be “a simple decision”. In general, it is relatively simple to establish connectivity between a plan or project and a Natura 2000 sites, as the assessment is typically a two dimensional one. However, while the decision for concluding no LSE or not may be a simple one, due to the three-dimensional aspect of assessing disturbance from flying aircraft, the process of determining this is more complicated than many plans or projects. Here the assessment of no LSE has considered both the two-dimensional aspects of connectivity, by determining distance from the proposed new flight routes on the ground, and the third dimensional aspect of disturbance caused by aircraft altitude.

2 Methods

- 9 To establish the Zone of Influence (“Zoi”) of the Airspace Change Programme it was necessary to determine both the new flight path corridors and the zone of influence around them. The impacts being assessed here are only direct disturbance caused by the presence of overflying aircraft, or the noise they generate. A hypothetical source of impact is collisions with aircraft (i.e. bird strike). resulting in the death of protected birds from SPAs with connectivity. Bird strikes are extremely rare and monitored by the Civil Aviation Authority (“CAA”).
- 10 This HRA only considers the new flight paths being proposed, as the existing flight paths form the baseline of the current site condition of the Natura 2000 sites. This is the “do nothing” scenario, against which the proposed change to flight paths is compared.
- 11 There are three key factors which must exist to be unable to conclude that there is no LSE; connectivity, route to impact and the presence of non-trivial abundance of the qualifying feature. The methods used here considered each of these in turn.
- 12 Connectivity was established by determining which SPAs and SACs would be overflown by aircraft using the proposed new flight paths. In addition, since both flight paths may not be exactly followed, and aircraft would be visible and audible from distances from sites, buffers of 2km, 4km and 8km of the flight paths were also used to determine which Natura 2000 sites may have connectivity.
- 13 A further aspect of connectivity is the altitude of aircraft. As altitude increases the visual appearance decreases (all other aspects being equal). So, the approximate altitude of aircraft using the flight routes was also determined for each Natura 2000 site. Since there was no published data on the effects of disturbance of airliners on wildlife at different altitudes, the cut off altitude was based on the minimum acceptable altitude used by HiDef when surveying highly sensitive species. From unpublished data, we know that altitudes of less than 500m, when flying a DA-42 twin engine, 4 seat aircraft, can cause reactions from birds such as scoters and divers, which are generally recognised as the most sensitive seabirds to disturbance from aircraft (Furness *et al.* 2013). This has been confirmed in a recent study by the British Trust for Ornithology (“BTO”) (Thaxter *et al.*, 2015) which considers flight altitudes below 500m to cause flushing of sensitive species. Taking the airliners used in two thirds of flights to and from Edinburgh Airport as a basis for this, the altitude of these aircraft to give a similar appearance of size to a DA-42 at 500m was calculated. These results show that between 3,600 and 4,300 feet, two thirds of airliners using Edinburgh Airport, would have the same physical appearance as a DA-42 (

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- 14 Table 1). To provide context we also calculated the altitude that the largest commercial airliner, the A380, would need to fly to also give the same appearance. This was approximately 10,000 feet. A value of 5,000 feet was therefore used as a threshold for connectivity in the vertical plane (i.e. any flights more than 5,000 feet would have no connectivity).