Appendix 1:

Consultation response from the North Norfolk DC Landscape and Ecology Section

Received 03/06/19

Concerns regarding the possible impacts on internationally-designated wildlife sites:

The elevation/altitude at which the Swift aircraft will fly at is relevant as it has the potential to affect the special interest features of the international and nationally-designated nature conservation sites, in particular the avian conservation interest features which may be disturbed by low flying aircraft.

Section 6 of the Planning Statement (submitted 23rd February 2018) states that there will be no impacts to the Broads National Park (equivalent), Broadland Ramsar site, Broadland SPA, the Broads SAC and the Norfolk Valley Fens SAC. The Planning Statement suggests this is because they are located between 5 to 10km away from the Coltishall aerodrome (application site) and because "the proposed development does not include impacts that will reach these areas of interest and therefore there will be no effect". In addition, the following SSSIs have been highlighted to be within 2 to 5km of the aerodrome: Crostwick Marsh, Smallburgh Fen and Westwick Lakes. The Planning Statement again suggests that "the proposals will have no impacts at this distance and therefore no further assessment has been carried out on these sites". However, the Landscape Section have given further consideration to the potential impacts on these sites as part of the assessment of the application.

In the various documents submitted by the applicant to address the issue of test flights and delivery flights passing over designated land (e.g. nature reserves, SSSIs, AONB and The Broads), it is stated by the applicant that flight routes will be constrained by the Controlled Airspace (CAS), and in association with Norwich Airport Air Traffic Control (NAATC) and with respect to aviation guidelines/rules that operate around restricted airspace and as shown on aviation maps.

The runway site is located within an area of controlled and restricted airspace related to Norwich Airport. As shown on a map provided by the applicant in May 2019, the site is used as a Visual Reference Point (VRP) "Coltishall Disused" by pilots, and is in an area of restricted airspace (termed "Control Area CTR D"), which restricts all flights from the surface up to 4000 feet altitude. A further restricted airspace lies beyond the immediate CTR D zone, to the east, west and north of Coltishall VRP ("Control Area CTA-1 D"), which controls flights between 1500 feet and 4000 feet.

Although the applicant's map appears to illustrate that the entirety of the former RAF Coltishall site is within the CTR D airspace, the map VRP location point does not account for scale and if the restricted airspace boundaries are plotted directly onto an OS map, it appears that the northern section of the runway might actually be located outside of the CTR D Controlled Air Space, and instead within the CTA-1 D Controlled Air Space. This means that there is a possibility that some of the application site might not be subject to Norwich Airport Air Traffic Control between the surface and 1500 feet altitude, thus having a less stringent restriction on flights at certain altitudes than has been suggested by the applicant.

Birds can be disturbed by aircraft because they perceive aircraft as predators and the birds will be affected physiologically (such as by changes to heart rate and hormone levels caused

by increased stress) or behaviourally (such as by pacing, increased calling and flight responses). This reduces a bird's ability to conserve energy and forage and ultimately harms their survival, as well as having territorial implications and affecting breeding success. It should also be noted that migratory birds will often fly at greater altitudes that have more exposure to aircraft; the Broadland and North Norfolk Coast SPA/Ramsar sites include migratory birds as a designated conservation feature.

Although effects will alter between species and season, it is generally considered amongst ecologists that disturbance by aircraft will decrease with increased flight altitude of aircraft and a greater lateral distance between birds and aircraft flight path. Generally, flights above 500m (approximately 1600 feet) altitude are considered preferable for bird conservation with a lateral distance greater than 1km (more for helicopters) from the bird feature. However, it is worth noting that flights above the north Norfolk coast bird reserves are only restricted by the Civil Aviation Authority [CAA] to fly above 500 feet (c. 125m) (as identified on CAA aviation maps) whilst bird reserves at Minsmere and Havergate are restricted by the CAA to fly above 2000 feet (c. 600m). It is evident that there are some inconsistencies around the protection afforded to bird reserves through the CAA aviation maps, and it should not be assumed that all SPA/Ramsar sites are covered by the CAA, nor given a consistent level of protection.

The inner-most controlled airspace CTR D area would require permission from the Norwich Radar Air Traffic Control for aircraft entering airspace from ground-level to 4000 feet. This appears to have been granted already through the 2017-'18 Letter of Agreement (LoA) between Norwich Airport ATC and Swift Aircraft because this agrees a set of procedures for the Controlled Airspace above the Coltishall aerodrome.

The agreed set of procedures in the LoA includes:

- *Swift aircraft operating under Visual Flight Rules (VFR),*
- *Swift aircraft not flying above 500 foot AGL (Above Ground Level) until two-way communications have been established with Norwich Radar, and,*
- *when within the Controlled Airspace up to 4,000 feet, requiring flights to remain within an area defined by Coltishall village (to the south), Buxton (west), and Tunstead (east).*

However, the agreement also allows alternate routes and altitudes to be negotiated with Norwich Radar once two-way communication has been established.

In addition, further procedural matters are in the LoA in relation to inbound flights and re-entry into the Controlled Airspace. This means the LoA would allow aircraft to visit / arrive at the aerodrome, which would be contrary to the intentions stated in the application, which implies that visiting aircraft are not part of any planned development and that aircraft will only depart from the aerodrome to be supplied to customers.

As noted in the planning submission, European protected SAC/SPA and Ramsar sites of the Broads and Broadland (Natura 2000 sites – N2K) lie within 10km of the aerodrome. Some key features of these designated sites are both breeding birds and over-wintering and migratory birds, all of which could be disturbed by low-flying aircraft. The presence of such ornithological interest also requires a "buffer zone" to be factored into the geographical areas which might be affected by flights, and this zone is defined as a 2km area of all functionally linked land (arable fields and pasture used for foraging and roosting) adjoining the SPA/Ramsar sites.

It would appear that the majority of the Broads Natura 2000 sites are located predominantly to the east, north-east and south-east of the aerodrome but all lie within Norwich Airport's Controlled Airspace (either CTR D or CTA-1 D areas). Based on the LoA with Norwich Airport ATC, the features of the European sites and their buffer zones are unlikely to be impacted by either the test flights or the delivery of aircraft, because aircraft will need to route themselves out of the NAATC controlled airspace as quickly as possible towards the north of Coltishall aerodrome.

However, whilst the general direction of flights is to head north, there are discrepancies in the information provided in respect of flight altitudes and geographical extent. The applicant originally said in has said in the Ecological Impact Assessment of August 2018, that the test circuits would be flown at just over 300m (or 1000 feet) altitude. This is contradicted by the applicant's statement in November 2018 that Swift aircraft will operate above 1600 feet (the height at which helicopters pass over the aerodrome) and that Swift aircraft will leave "local airspace immediately upon take off", with test flights lasting approximately 3 minutes between take-off and landing. A further complication is that the test flights carried out for the Noise Report operated within a 2km radius of the airstrip, and the applicant has suggested this is the same pattern of manoeuvre likely to be used by the Swift aircraft on their test flights.

If it is the case that Swift Air will operate on the basis of the information submitted thus far, it would appear that test flights will operate mostly within 2km of the airstrip and at an altitude between 1000 and 1600 feet. On that basis, the Landscape and Ecology Section considers that Swift aircraft flights are unlikely to have an impact on the avian conservation features of the nearby internationally-designated sites because the sites and their buffer zones are beyond 2km from the aerodrome, are within Controlled Airspace (and therefore to be generally avoided), and flight altitude is likely to (generally) not result in disturbance effects.

While there is a minor concern that the LoA allows for alternative routeings within the Controlled Airspace on agreement with Norwich Radar, which might involve some flights near or above designated areas due to occasional safety requirements, it is assumed that the occurrence of such alternative routeings would be uncommon. Therefore, the Landscape Section conclude that a significant effect on the conservation interests of the Broadland/Broads European designated sites is unlikely.

In addition, it is noted the Norfolk Valley Fens SAC (Buxton Heath) is approximately 9km from the aerodrome. However, there are no designated conservation features of that site that will be affected by aircraft movements (the Heath is designated for its wet and dry heath, spring fed mire vegetation communities and populations of silver-studded blue butterfly), and this designated site is within the NAATC controlled airspace where Swift Air flights should be minimised.

<u>Concerns regarding the possible impacts on nationally-designated Sites of Scientific Interest:</u>

Three SSSIs are located within 2 to 5km of the aerodrome. Crostwick Marsh and Smallburgh Fen SSSIs, are located within the NAATC controlled airspace and therefore unlikely to be flown over on a regular basis due to the aforementioned Controlled Airspace restrictions and LoA. Further these SSSIs have limited ornithological interest features associated with them.

Westwick Lakes SSSI, however, is located approximately 3.5km due north from the northern end of the Coltishall runway, beyond the northern boundary of the NAATC Controlled Airspace, and has a greater ornithological interest and is more vulnerable to flight impacts.

Westwick Lakes comprises five man-made lakes/ponds, and has been designated due to the aquatic flora and flora associated with acidic, nutrient-poor lakes found in upland areas. The ponds vary in water quality and floristic diversity and composition, with Perch Lake being the deepest and largest of the lakes. The ponds also have considerable ornithological interest with large flocks of overwintering wildfowl, with Perch Lake attracting many species of diving duck in winter including Goldeneye and Goosander.

As with the assessment of impacts on SPA/Ramsar sites, it has been assumed that Swift aircraft test flight circuits will mirror those of the test flight carried out as part of the Noise Report, and as such will operate within a 2km radius of the airstrip and at an altitude of greater than 1600 feet. Given that Westwick Lakes are located more than 1.5km beyond the expected 2km test flight area, the Swift test flights are unlikely to result in disturbance effects on the wildfowl and diving ducks of the SSSI. This should still be confirmed though, prior to determining that there will be no significant detrimental impact.

However, the flight paths for completed Swift aircraft leaving the aerodrome (approximately two per week) for delivery to customers is less clear. The LoA with Norwich Airport ATC requires flights to be routed to the north initially beyond the NAATC Controlled Airspace boundary, and this could result in flights reaching the Westwick Lakes SSSI which is outside of the scope of the LoA and NAATC controls, and is not already afforded CAA protection.

Westwick Lakes is not designated as a bird reserve on the CAA aviation maps and does not benefit from any over-reserve flight restrictions. Although the LoA requires Swift aircraft to fly under Visual Flight Rules (VFR) and in accordance with VRF charts, these restrictions do not preclude aircraft flying low over the Westwick Lakes SSSI.

Although the occurrences of low flying Swift aircraft over Westwick Lakes SSSI is considered to be low, as the flight altitude for the aircraft appears to be greater than 1600 feet in normal conditions, there is nothing in place to prevent low altitude overflights, for example during poorer weather (VFR have certain procedures with regard to Visual Metrological Conditions).

The application's submitted report by Evers Consulting Ltd (section 5.5.4) states that the initial climb out from either runway position is over fields with adequate opportunities for aircraft to avoid built up areas. It also recommends the applicant should provide VFR (Visual Flight Rules) for setting clear arrival and departure routes for all users of the aerodrome, to assist in the avoidance of built-up areas or other noise sensitive areas. As such it would appear feasible and sensible to determine specific areas of flying and/or routes for aircraft to use, without prejudicing the ability to operate from the site or imposing unreasonable restrictions on the applicant.

Therefore, to ensure that the airspace above Westwick Lakes SSSI is avoided by departing Swift aircraft (and because the SSSI is outside of Controlled Airspace and is not listed as a sensitive site, i.e. bird reserve, on the CAA VFR Charts) a planning condition is requested to require the submission of a standard VFR departure route for all aircraft leaving the site. The VFR departure route could specify avoidance of a 1.5km buffer around Westwick Lakes SSSI yet still adhere to all of the other restrictions and CAS/VFR rules. A suggested flight route departure map is provided by the Landscape Section as an example of how this could be achieved. It would also be possible to expand this map to establish the same principles of defining appropriate areas for the test circuit flights.

If such a condition is secured, the Landscape Section considers that the special interest features of Westwick Lakes SSSI, specifically the ornithological interests of over-wintering wildfowl and diving ducks, would not be adversely impacted by the proposed development, and in doing so the concerns of Natural England (in their response of September 2018) will be addressed.

Concerns regarding the possible impacts on wildlife within the Scottow Enterprise Park / airfield:

Consideration has also been given to the impact on skylarks, which are known to breed on the former RAF Coltishall site and solar farm, and the application has included an Ecological Impact Assessment (EcIA), dated August 2018. The impact assessment considered the characteristics of the skylark, potential impacts, level of significance of effects, and evaluated any residual effects. A 'significant effect' would either support or undermine the conservation objectives for skylark.

The EcIA determined that the area around the solar farm, airstrip and retained grassland areas adjoining the airstrip are of County level importance for the population of skylarks, which has an average density of 0.3 skylark territories per hectare (0.6 in the retained grassland areas). The EcIA considers that the skylark population would remain relatively stable if the proposed development didn't take place.

The EcIA provided a literature review of avian responses to aircraft, although limited information was available regarding the likely impacts of aircraft movements on skylark. A review of known skylark populations on airfields was also provided, which appears to demonstrate skylark populations will succeed on existing airfields with some habituation occurring.

Noise disturbance is also considered in the EcIA, and it considers that noise from the aircraft (in combination with the visual disturbance) should be expected to result in 'flushing behaviour' amongst skylarks during peak noise events (take-off). Other disturbance effects (alert posturing and periodic flushing from nests and feeding areas) could occur at distances up to 200m from the runway, resulting in the loss of some territories – i.e. breeding being prevented and populations ultimately declining. Significant disturbance-related effects on nesting skylarks were not considered to occur at distances greater than 200m from the runway.

The impact assessment calculated the potential loss of territories and concluded that the proposed development could result in an adverse impact on 30 breeding territories, which might result in a population decline and loss of 0.48% of the overall SEP skylark population. Based on the assessment, the EcIA concludes that although the flights will result in some impacts to the skylark population, the impact of the development as a whole on the SEP population is considered 'not significant'.

The Landscape Section considers that the EcIA is robust and has been carried out in accordance with best practice and ecological guidelines, and concurs with the conclusions of the EcIA. As such, whilst there is concern that this protected species of principal importance would be compromised and populations would be caused to decline, the Landscape Section does not disagree with the assessment that impacts are 'not significant' to the site's skylark population.

Concerns regarding the possible impacts on wildlife within the Scottow Enterprise Park / airfield:

The Landscape Section has also assessed the impact of the development on designated landscapes, and considers the impact to be limited. The Broads National Park, at its closest point, is over 5km away from Coltishall aerodrome, with the majority of the designated landscape feature within the area of Controlled Airspace of Norwich Airport. VFR flights for the delivery of Swift Aircraft to customers are likely to have to avoid the CAS in accordance with the LoA with Norwich Airport ATC, and therefore adverse impacts on the designated landscape site are not expected.

The Norfolk Coast Area of Outstanding Natural Beauty (AONB) is located over 11km (at its closest point) away from the Coltishall aerodrome. The AONB covers a narrow stretch of land from Horsey in the east of the County to Kings Lynn in the west, generally hugging the north Norfolk coastline and immediate hinterland. The application suggests that test flights would not extend this far, but flights for the purposes of delivering Swift aircraft to customers could fly over the AONB. Nevertheless the impact from these deliveries is considered to be low because of the coastal location of the AONB and the locational relationship of Coltishall aerodrome with other aerodromes/airstrips that may receive delivered aircraft within the UK. Furthermore, should a Swift aircraft need to fly north over the coast, the altitude of these overflights is unlikely to impact on the key characteristics (i.e. tranquillity and sense of wildness and remoteness) of the AONB. Adverse impacts on the key characteristics of the designated AONB landscape are not therefore expected if the manner of flights is controlled in line with the application submissions.

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