

NOTE TO INQUIRY FROM DR ROY ARMSTRONG

At the time I wrote paragraphs 2.5 – 2.7 of my Proof of Evidence (LAA/7/A) these paragraphs represented my professional assessment of the potential impacts on bird conservation as a result of the development proposals for London Ashford Airport; these paragraphs of my Proof of Evidence still continue to represent my professional opinion. In expressing my opinions I considered whether there would be any likely significant effect on any species. My opinion then, as now, was that there would be no such effect.

I have been asked to produce the notes that I made while writing my evidence. These are attached at Annex A. However, since writing my evidence and in preparation for the Inquiry I have updated these notes to assist me in the presentation of my evidence. These are attached as Annex B and they represent a draft summary of the document that I will produce by next Thursday, 3 March 2011.

Dr Roy Armstrong

25 February 2011

ANNEX A

Species	Significance	Likely Impact of disturbance	Predicted future*	
Aquatic warbler		None		Does not occur regularly. A review of the latest available county avifaunas (Kent Bird Report 2005-2007) reveals only one record in 3 years in Kent and this was not on the Dungeness peninsula.
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Avocet				
Bearded tit				
Bewick's swan		None		Known to use areas very close to existing airports e.g. Derry.
Bittern		None		Known to nest very close to existing busy airfields.
Black-headed gull		None		No longer nests at Dungeness so irrelevant. Close relative (Laughing gull) known to nest close to very busy airport (JFK, New York) and increased from 15 pairs in 1979 to 3,000 pairs in 1989.
Cetti's warbler				
Common sandpiper		None		Apparent importance of this species is an artefact of the recording system. The 1% claimed is clearly down to the low numbers recorded by WeBS etc. counts. This species breeds in quite large numbers in the UK (15,800 pairs in UK). Even if each pair only fledged 1 chick, the autumn passage population would be over 47,000 (not including Irish and continental birds). The maximum recorded in the citation (checkref) is 30, which clearly falls well short of a reasonable estimate of the 1% threshold.
Common tern		None		No longer nests at Dungeness so irrelevant. Changes in management may have rendered the site

				unsuitable (see RA rebuttal to Bob Gomes). Closely related species (Arctic tern) nests on airfields in UK demonstrating tolerance of aircraft.
Coot				Popn size?
Cormorant				Impact on fisheries – widely persecuted
Corn bunting				
White-fronted goose				
Gadwall		None		Extensive “refuge” areas available so no impact expected.
Garganey				
Golden plover		None		Very tolerant of aircraft as reflected in large numbers found around airports and the bird strike risk presented by this species.
Great crested grebe				Big numbers must be marie – percentage must be WeBS
Grey partridge				
Hen harrier		None		Very tolerant to aircraft. Jackson et al (1977) found noted of this species “Extreme tolerance of aircraft and missile bombing was recorded”. The noise levels experienced during this study were in the range 80-87dB and birds foraging as close as 60m from explosions remained undisturbed.
Herring gull		None		Unlikely to be affected by aircraft. Likely to be “controlled” by RSPB as part of their efforts to attract breeding terns.
Kingfisher				
Lapwing		None		Very tolerant of aircraft as reflected in large numbers found around airports and the bird strike risk presented by this species.
Linnet				
Little grebe				Extensive “refuge” areas available so no impact expected.
Little stint		None		Another artefact of the system. The population at Dungeness cannot be considered to be of conservation significance.
Little tern				
Marsh harrier		None		Clearly very tolerant of existing conditions and unafraid of aircraft. I am surprised to see Dr Underhill-

				Day's comment (10.54) that marsh harriers are intolerant of human disturbance. Fernandez and Azkona (1993) observed of breeding marsh harriers that the "lack of observed reaction to crayfish trappers visiting the nesting areas to check traps, was remarkable, suggesting habituation" and that "birds were tolerant of regular sources of disturbance".
Mediterranean gull		None	Disappeared from UK as breeding species	No longer nests at Dungeness so irrelevant. Close relative (Laughing gull) known to nest close to very busy airport (JFK, New York) and increased from 15 pairs in 1979 to 3,000 pairs in 1989.
Merlin				
Mute swan				Extensive "refuge" areas available so no impact expected.
Peregrine				
Pochard				Extensive "refuge" areas available so no impact expected.
Purple Heron				
Reed bunting				
Ruff				
Sanderling				
Sandwich tern				No longer nests at Dungeness so irrelevant. Changes in management may have rendered the site unsuitable (see RA rebuttal to Bob Gomes). Closely related species (Arctic tern) nests on airfields in UK demonstrating tolerance of aircraft.
Short-eared owl				
Shoveler	No longer present in Internationally important numbers.			Extensive "refuge" areas available so no impact expected.
Skylark		None		Found on airports throughout the UK. Clearly highly tolerant of aircraft movements.
Smew				Extensive "refuge" areas available so no impact expected.
Spotted crake				

ANNEX B

Species Notes

Species	Likely Impact of disturbance	Notes
Aquatic warbler	None	Does not occur regularly. A review of the latest available county avifaunas (Kent Bird Report 2005-2007) reveals only one record in 3 years in Kent and this was not on the Dungeness peninsula. If present, likely to be in reedbeds away from airport area.
Avocet	None	Most suitable areas for nesting appear to be sufficiently distant from airport for no disturbance to be expected. Sporadic breeder with 2,0,0,1 and 0 in last 5 years. Range extremely large with 15,600,000 km ² and 210,000 - 460,000 Mature individuals
Bearded tit	None	Species associated with dense reedbeds, therefore mostly away from boundary with airport. Dense reedbeds likely to buffer any noise effects. Extremely large range of 10,800,000 km ² with 1,500,000 - 6,000,000 Mature individuals
Bewick's swan	None	Highly tolerant of aircraft as reflected in Known use of areas very close to existing airports e.g. Derry. Likely to disappear from area as breeding/wintering grounds shift NE.
Bittern	None	Known to nest very close to existing busy airfields.
Black-headed gull	None	No longer nests at Dungeness so irrelevant. Close relative (Laughing gull) known to nest close to very busy airport (JFK, New York).
Cetti's warbler	None	Species associated with dense cover which will partly shield from noise effects. Many other warblers and small birds nest close to busy runways. Extremely large range of 6,450,000 km ² with 5,000,000 - 20,000,000 Mature individuals
Common sandpiper	None	Only present on passage, therefore not linked to specific areas and able to move away from noise (within the site) if necessary. Sufficient time available to exploit food patches close to airfield.

		<p>Apparent importance of this species is an artefact of the recording system. The 1% claimed is clearly down to the low numbers recorded by WeBS etc. counts. This species breeds in quite large numbers in the UK (15,800 pairs in UK). Even if each pair only fledged 1 chick, the autumn passage population would be over 47,000 (not including Irish and continental birds). Numbers recorded clearly falls well short of a reasonable estimate of the 1% threshold. Globally, 2,600,000 - 3,200,000 Mature individuals with an "extremely large range" of 25,900,000 km²</p>
Common tern	None	<p>Known to nest on and around airports including in large numbers at RSPB Belfast Lough.</p> <p>Last 5 years 1, 2, 0, 4 and 2 pairs. Changes in management may have rendered the site unsuitable (see RA rebuttal to Bob Gomes). Closely related species (Arctic tern) nests on airfields in UK demonstrating tolerance of aircraft.</p> <p>Range estimate 29,200,000 km² Estimated popn size of 1,600,000 - 4,600,000 Mature individuals</p>
Coot	None	<p>Common around airports.</p> <p>Extremely common and widespread with a minimum population of 8,900,000 to 9,800,000 mature individuals (considered minimum estimate by Wetlands International) range covers 27,500,000 km². Birdlife species of least concern.</p>
Cormorant	None	<p>Highly tolerant of aircraft movements e.g. feed in balancing ponds at Heathrow, which required suitable mitigation.</p> <p>Extremely large range of 25,800,000 km² with 1,400,000 - 2,900,000 Mature individuals</p>
Corn bunting	None	<p>Known to breed on several RAF airfields including Cranwell. Other buntings known to nest on airfields.</p>
White-fronted goose	None	<p>Known to occur around RAF Machrihanish. Similar species found very close to airports, including large numbers of Pink-footed and Greylag geese.</p> <p>Extremely large range of 5,900,000 km and a population of 2.6-3.1 million. W European populations likely to disappear as breeding range shifts NE (check</p>

		climatic atlas).
Gadwall	None	Tolerant of high levels of disturbance including urban parks etc. and around airfields including on the balancing ponds at Stanstead Airport. Extremely large range of 18,200,000 km ² with 3,200,000 - 3,800,000 Mature individuals
Garganey	None	Breed in dense cover therefore buffered from disturbance. Main areas of use probably away from airport boundary – large swathes of apparently suitable habitat available away from boundary. Extremely large range of 16,900,000 km ² with 2,600,000 - 2,800,000 Mature individuals
Golden plover	None	Very tolerant of aircraft as reflected in large numbers found around airports and the bird strike risk presented by this species. Extremely large range of 3,240,000 km ² with 640,000 - 1,200,000 Mature individuals
Great crested grebe	None	Occur in the vicinity of airports including Belfast Lough SPA.
Grey partridge	None	Already present in spite of intensive shooting activities. Extremely large range of 10,000,000 km ² with 5,000,000 - 10,000,000 Mature individuals
Hen harrier	None	Very tolerant to aircraft. Jackson et al (1977) (cited in Whittfield) noted of this species “Extreme tolerance of aircraft and missile bombing was recorded”. The noise levels experienced during this study were in the range 80-87dB and birds foraging as close as 60m from explosions remained undisturbed. Extremely large range of 29,900,000 km ² with 1,300,000 Mature individuals
Herring gull	None	Unlikely to be affected by aircraft. Highly tolerant to disturbance. Likely to be “controlled” by RSPB as part of their efforts to attract breeding terns.
Kingfisher	None	Known to use ditches on busy airfields such as Birmingham. Extremely large range of 24,900,000 km ² with 600,000 Mature individuals
Lapwing	None	Very tolerant of aircraft as reflected in large numbers found around airports and the bird strike risk presented by this species.

Linnet	None	Occurs on airfields throughout UK. Extremely large range of 12,200,000 km ² with 40,000,000 - 150,000,000 Mature individuals
Little grebe	None	Occurs in good numbers directly under the flightpath of departing aircraft at much busier Belfast City Airport. Extremely large range of 36,700,000 km ² with 610,000 - 3,500,000 Mature individuals.
Little stint	None	Only present on passage, therefore not linked to specific areas and able to move away from noise (within the site) if necessary. Sufficient time available to exploit food patches close to airfield. Another artefact of the system. The population at Dungeness cannot be considered to be of conservation significance. Extremely large range of 1,740,000 km ² with 1,400,000 - 1,500,000 Mature individuals
Little tern	N/a	Has not nested for at least 5 years. Nests around runway at Stormaway. Extremely large range of 11,800,000 km ² with 190,000 - 410,000 Mature individuals
Long-eared owl	None	Regularly feed on airfields.
Marsh harrier	None	Clearly very tolerant of existing conditions and unafraid of aircraft. I am surprised to see Dr Underhill-Day's comment (10.54) that marsh harriers are intolerant of human disturbance. Fernandez and Azkona (1993) observed of breeding marsh harriers that the 'lack of observed reaction to crayfish trappers visiting the nesting areas to check traps, was remarkable, suggesting habituation' and that 'birds were tolerant of regular sources of disturbance'.
Mediterranean gull	None	No longer nests at Dungeness so irrelevant (none in last 5 years). Changes in management may have rendered the site unsuitable (see RA rebuttal to Bob Gomes). Other closely-related gull species known to nest near airfields.
Merlin	None	Wintering and passage birds highly mobile and can exploit other areas if

		disturbed. Other falcons known to use airfields extensively and use anthropogenic disturbance to assist hunting.
Mute swan	None	Occurs in large numbers close to airports. Non-native species that could have a negative impact on native flora and fauna
Oystercatcher	None	Breed on airfields and feed/roost near to runways, therefore clearly tolerant to aircraft disturbance.
Peregrine		As Merlin
Pochard	None	Occurs in urban parks close to airports. Clearly highly tolerant of high levels of disturbance.
Purple heron		No specific studies available. Dense reedbed species therefore likely to be buffered from noise disturbance and unlikely to nest in close proximity to airport. Other heron species known to be highly tolerant of aircraft disturbance with bittern and grey heron both known to nest close to runways. See proof for discussion of colonial waterbirds.
Redshank	None	Breed on airfields. Known to feed directly under flightpaths at busy airports.
Reed bunting	None	Breed on the airfield and therefore clearly tolerant of disturbance caused by aircraft. Known to nest on other airfields close to runways.
Ruff	None	Only present on passage, therefore not linked to specific areas and able to move away from noise (within the site) if necessary. Sufficient time available to exploit food patches close to airfield.
Sanderling	None	Not likely to occur in immediate vicinity of airport as almost exclusively marine.
		Extremely large range of 1,260,000 km ² with 620,000 – 700,000 Mature individuals
Sandwich tern	N/a	No longer nests at Dungeness so irrelevant (none in last 5 years). Changes in management may have rendered the site unsuitable (see RA rebuttal to Bob Gomes). Closely related species (Arctic tern) nests on airfields in UK demonstrating tolerance of aircraft.
Short-eared	None	Regularly found hunting on airports

owl		
Shoveler	None	Known to occur close to airports directly under flight-lines e.g. Coventry. Feed at night so even in the unlikely event that disturbance did occur, long periods of undisturbed feeding times would be available.
Skylark	None	Found on airports throughout the UK. Clearly highly tolerant of aircraft movements.
Smew	None	Tolerant of disturbance at other sites including Cotswolds Water Park next to RAF Fairford.
Spotted crane	None	Retiring species associated with dense cover therefore partly buffered from disturbance. Extensive areas of suitable habitat available and probably only a rare passage migrant.
Snipe	None	Known to breed on airfields. Passage and wintering birds have extensive areas of buffered habitat available and can access other feeding areas at night.
Teal	None	Occur close to airports. Site mostly used for day-time roosting with extensive undisturbed areas throughout. Likely to benefit from lack of night-flying.
Tree sparrow	Not Known	Highly tolerant of human disturbance in other parts of range.
Tufted duck	None	Found near busy airports
Water rail	None	Retiring species associated with dense reedbeds therefore partly buffered from disturbance and likely to be away from airport boundary. Extensive areas of suitable habitat available.
Whimbrel	None	Populations on migration are not linked to individual areas and can move. Lack of night-flying would allow access anyway as per Gill et al 2001.
Whooper swan	None	Known to occur in close proximity to busy airports e.g. Glasgow.
Wigeon	None	Occur close to airports. Site mostly used for day-time roosting with extensive undisturbed areas throughout. Likely to benefit from lack of night-flying.
Yellow wagtail	None	Known to breed and winter on airfields.

References