GREEN HILL
SOLAR FARM

Green Hill Solar Farm
EN010170

Empirical Evidence on Glint and Glare from Solar PV Installations Near UK Aerodromes

Prepared by: Aviatica

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GREEN HILL SOLAR FARM: EMPIRICAL EVIDENCE ON GLINT AND GLARE FROM SOLAR PV INSTALLATIONS NEAR UK AERODROMES

May 2025

Report No.24/1267/IGP

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1. Introduction

1.1 This report provides information to supplement the assessment of effects of glint and glare on aviation receptors set out in Chapter 15: Glint and Glare [**EN010170/APP/GH6.2.15**] of the Environmental Statement (the ES Chapter) for Green Hill Solar Farm (the Scheme).

1.2 The methodology adopted for assessing the potential effects of glint and glare on all receptors is the use of the ForgeSolar computer model within the ES. However, the ES Chapter notes that "*The [ForgeSolar] software has not been validated against the empirical experience of pilots when encountering 'yellow glare' predicted by the model from operational solar PV installations*."

1.3 In order to test the validity of the ForgeSolar modelling predictions of glare to aviation receptors in the vicinity of the Scheme, research has been carried out to identify aerodromes in the UK that have operational solar PV installations in their vicinity (defined for the purposes of this exercise as being located within one nautical mile (1852m) of the end of any runway).[1] The details of each solar PV installation have been obtained from published planning documents. The published information for each aerodrome sourced from the UK Aeronautical Information Publication, aerodrome websites and pilots' guides, has then been analysed for any reference to the adjacent solar installation(s), advice or warnings to pilots, and mitigation measures in place to address effects of glint and glare. Finally, aerodromes have been consulted through face-to-face meetings, telephone and email to determine whether incidents of adverse effects from glare have been experienced or reported to them by pilots. The latter element of the research exercise is ongoing. So far, 65 UK aerodromes with solar PV installations in their vicinity have been identified; of those, 53 have been contacted; and responses have been received from 33 resulting in a response rate of 62%.

1.4 The research exercise described above is considered to be in keeping with the CAA policy on solar PV glint and glare set out in the October 2020 update to CAP 738 *Safeguarding of Aerodromes*, which states:[2]

> *"In the United Kingdom there has been a further increase in SPV cells, including some located close to aerodrome boundaries; to date the CAA has not received any detrimental comments or issues of glare at these established sites. Whilst this early indication is encouraging, those responsible for safeguarding should remain vigilant to the possibility."*

[1] It should be noted that this is significantly less than the minimum 5km radius suggested by the Combined Aerodrome Safeguarding Team – see ES Chapter paragraph 15.3.25.

[2] CAA, *Safeguarding of Aerodromes*, CAP 738, 3rd Edition, October 2020, Appendix C: Solar Photovoltaic Cells, paragraphs 1 and 2.

2. Empirical evidence from UK aerodromes

2.1 Research completed by Aviatica has identified 65 UK aerodromes with operational solar farms in their vicinity. The details of these are provided in Appendix 1.

2.2 Aviatica has consulted the operators of 53 aerodromes with solar farms in their vicinity. Responses have been received from 33 of those aerodrome operators. The results of these consultations are summarised in **Table 1**. In all cases where a response has been received to Aviatica consultations, the response has been that no adverse glare effects have been experienced or reported.

Table 1: Responses to Aviatica consultations with owners, operators and pilots at UK aerodromes with solar farms in vicinity

Aerodrome	***Consultee***	***Response***
Beccles	Chief Parachute Instructor	No issues for pilots or skydivers. Solar farms have been there 5-6 years and have had no issues with them and not heard of glare being a problem at other sites.
Belfast International	Safeguarding Manager	1. The Airport has had no Reportable Occurrences on the Solar farm and 2. Our Main Carrier has no observations reported within their safety system
Boscombe Down	Operations staff	I can say that with the way it is positioned, it does not effect the pilots at Boscombe Down due to any potential glare being directed away from our runways. We have not received any DASORs or anything alike reference this before.
Cae Mawr	Owner	Nobody's ever mentioned it. No issues.
Chalgrove	Company spokesperson	We can advise that to our knowledge, there hasn't been any problems reported with glare from solar panels
Coldharbour Farm	Aero Club Chair	Our guys have not reported any problems.
Croft Farm	Owner/instructor	No reports from pilots of adverse glare effects and none experienced personally. On basis of no impact from existing solar farm, aerodrome did not object to larger development to NW and has had no adverse impacts since it was built.
Cromer	Owner	We have a 25 acre solar array almost adjacent to the airfield at Northrepps. We do not get any 'glare' or reflected light from the panels.
Dunkeswell	Manager, parachute school	As both a skydiver and jump pilot I have not noticed any problems over the last 10 years.

Table 1: Responses to Aviatica consultations with owners, operators and pilots at UK aerodromes with solar farms in vicinity		
Aerodrome	***Consultee***	***Response***
Dunsfold	Properties Infrastructure Manager	I can't think of a single case of anyone ever reporting that or mentioning it to me.
East Midlands	Safeguarding Manager	I can confirm that there have not been any reports from ATC or pilots concerning glare
Eastchurch	Owner	The two existing solar farms have caused me no problem at all
Fowlmere	Head of Training	We fly over the solar panels all day every day and have never experienced any glare or any difficulties. I have also flown into other airfields with solar panels and have never experienced any glare or even heard of others experiencing this
Freshwater	Owner	With regard to the solar farm, which is about 300m north east of my airstrip. I have not experienced a problem, and I have just spoken to the group who keep an aircraft here and fly from the airstrip, and they have not had any problems (to date) either.
Harringe Court Farm	Aero Club Chair	Our guys have not reported any problems.
Haverfordwest	Owner	It's not something we've had any reports of so far. No-one's mentioned it.
Kitty Hawk	Based pilot/former CAA policy officer	No adverse glare effects experienced in eight years of operating from the airfield and none reported by other pilots. Solar farm is "one of the best navigation features you could hope for", making it significantly easier to identify the airfield when inbound.
Laddingford	Owner	No glare ever reported
Little Staughton	Administrator	No reports from pilots of adverse glare effects. Some pilots comment that the solar farm makes it easier to identify the airfield when approaching.
Membury	Aerodrome manager	No incidents, nor reports from pilots, of adverse effects from glare from the solar farm on the airfield in the nine years since it began operating in 2015.
Newmarket Heath	Helicopter operator	I can't say we've ever had a report or concern raised on panel glare.
Old Hay	Owner	The solar farm is situated south of our air strip and the panels are angled south, so not a factor in departure and landing operations. When approaching the field from the south,

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Aerodrome	***Consultee***	***Response***
		you notice glare but nothing that causes an issue due to the angle being quite shallow.
Old Park Farm	Airfield manager	I'm the airfield manager and have been at Old Park Farm since 2007. The solar panels were installed around 2012 and I can honestly say I have had no complaints or observations made by any of our pilots or visiting pilots during this period of time. We do approach runway 36 directly over the panels at a height of about 600 to 800 feet and have never had any issues at all.
Peterlee	Chief Skydive Instructor	No glare issues experienced
RNAS Yeovilton	Air Operations Officer	There are no reported incidents from Solar Panel glare.
Shacklewell	Owner	We haven't experienced any glare from the nearby solar farm
Sherburn-in-Elmet	Head of Training	We've never had anything reported and I've never experienced it myself in 7-8 years of being here
Sywell	Owner	No adverse effects experienced or reported
Thruxton	Instructors x3	No glare issues experienced
Tilstock	Chief Skydive Instructor	No glare issues experienced
Turweston	Aerodrome manager	No reports from pilots or Air-Ground Radio Operators of adverse glare effects.
Upwood	Gliding Club CFI	As you know we have 2 blocks of solar panels just off the approach to runway 24, our normal gliding circuit takes us overhead of these. There are no reports of any glare from these, I myself have flown many hundreds of times over these and to be honest they can be a reliable source of lift for glider pilots ,so no problems for us at Upwood.
Wadswick	Owner	I've never encountered any issues with glare from the solar installation at Wadswick, and I don't recall anyone ever mentioning it (or it being recorded in any of the visiting pilots notes on SkyDemon for Wadswick).

2.3 The consultations summarised above are in keeping with the CAA's statement in Appendix C of CAP 738 which notes that "*to date the CAA has not received any detrimental comments or issues of glare*" from existing solar PV sites. The consultation responses also support the findings of the Department for Energy

Security and Net Zero that there is "*no evidence that glint and glare from solar farms results in significant impairment on aircraft safety*".[3]

2.4 To put these consultations into context, Aviatica has run the ForgeSolar glare prediction model for the final approach paths to the airfields at Beccles, Kitty Hawk, Membury, Thruxton and Turweston to determine whether the lack of adverse glare reports from pilots at those airfields might be at least in part explained by the model predicting no 'yellow' glare at those airfields. The results are shown in Table 2. Aerial photography imagery of these five aerodromes and their adjacent solar farms is reproduced in Appendix 2. It can be seen that the ForgeSolar model does predict significant durations of 'yellow' glare at each of those five airfields. It can be concluded that the lack of pilot reports of glare from those airfields cannot be explained by the ForgeSolar model predicting that the solar farms at those locations would not generate glare towards the approach paths. It also suggests that the ForgeSolar model is overly conservative in its predictions of the reactions of pilots to particular levels of glare.

Table 2: ForgeSolar glare predictions at Beccles, Kitty Hawk, Membury, Thruxton and Turweston airfields

Airfield	*Runway approach/receptor*	*ForgeSolar predicted minutes of 'yellow' glare per annum*
Beccles	09	9722
	27	198
Kitty Hawk	10	8441
	28	7027
Membury	31	6202
	34	3327
Thruxton	30	231
	Heli North approaches	4364
	Heli South approaches	16534
Turweston	09	22581
	Alternate helicopter	1807
	Control tower	4479

2.5 In the light of these findings, it is clear that sole reliance on the outputs of the ForgeSolar model to predict adverse glare effects on aircraft safety is unreliable. Due consideration must also be given to empirical evidence on the effects of glare from solar farms, as the UK Department for Energy Security and Net Zero (DESNZ) and the US Federal Aviation Administration (FAA) have done in the development of

[3] Department for Energy Security & Net Zero (DESNZ), *National Policy Statement for Renewable Energy Infrastructure (EN-3)*, November 2023, paragraph 2.10.159.

their policy on this topic. The DESNZ conclusion in NPS EN-3 that there is "*no evidence that glint and glare from solar farms results in significant impairment on aircraft safety*" is supported by the empirical evidence from airfields across the UK.

3. Accident and incident data

3.1 As a further validation check against the predictions of the ForgeSolar glint and glare model, Aviatica has conducted analysis of UK and US aviation accident and incident data to find any reports in which glare from solar PV installations was cited as a causal or contributory factor.

Accident data

3.2 The likelihood of an aircraft crashing as a result of its pilot experiencing glare from a solar PV installation can be derived from UK Air Accident Investigation Branch (AAIB) data on similar occurrences. Online searches of AAIB data were conducted on 30 November 2022 and 15 May 2024. The 2022 search found eleven accidents since 01 January 2005 in which the word 'glare' was mentioned in the accident report. Ten of these were accidents in which the aircraft's pilot was affected by glare from the sun. The eleventh was a helicopter night landing accident in which the pilot was dazzled by glare from the helicopter's landing light reflected by mist. There were no instances of accidents in which glare from solar PV installations was involved. The 15 May 2024 search found one further accident since 2022 in which 'glare' was cited in the text of the accident report. This was an accident on landing into a low sun. None of the accidents found in the AAIB searches occurred at locations with solar farms in the vicinity.

3.3 To provide a comparison with, and some validation of, the AAIB data, a search of the database of the US aviation accident investigation authority, the National Transportation Safety Board (NTSB) was conducted on 27 May 2024. The searches were for instances of the word 'glare' in the 'Probable Cause' field, which includes 'Contributory Factors'. These searches found 92 instances between 1 January 2000 and 31 December 2023, all of which referred to glare from the sun, in some instances (principally floatplane accidents) involving glare from the sun causing reflections from the water. None of the accident reports referred to glare from solar PV installations.

Incident data

3.4 Safety incidents that did not result in an aircraft accident are primarily recorded in the UK through the Mandatory Occurrence Reporting (MOR) system. Reporting of these incidents is mandatory under EU law (since transposed into UK law) for all aircraft types other than vintage, amateur-built and microlight types. Operators of the latter categories are 'strongly encouraged' to report such incidents.[4]

[4] [redacted]

3.5 In 2020 the CAA published a new edition of its guidance on aerodrome safeguarding, CAP 738. It stated:[5]

> *"In the United Kingdom there has been a further increase in SPV cells, including some located close to aerodrome boundaries; to date the CAA has not received any detrimental comments or issues of glare at these established sites. Whilst this early indication is encouraging, those responsible for safeguarding should remain vigilant to the possibility."*

3.6 In order to update the 2020 CAP 738 statement that the CAA had never received any detrimental comments or issues concerning glare from solar PV installations, Aviatica submitted a request to the CAA in May 2024 for release of MOR data relating to glare affecting pilots. The CAA responded with a list of 19 incidents that occurred between 1st April 2014 and 31st March 2024 in which the pilot referred to 'glare' as a factor. Of these, two involved flights at night in which pilots were dazzled by ground lighting at the airport. The other 17 were incidents in which the pilot was either directly dazzled by flying or taxi-ing directly into a low sun, or reflections of the sun made it difficult for the pilot to read the aircraft's instruments. There were no cases involving reflections from solar panels.

3.7 Again, in order to provide comparison with and validation of the UK CAA MOR data, a search of the database of the US Aviation Safety Reporting System (ASRS) was conducted on 15 May 2024. This found six incidents involving aircraft flying under the Visual Flight Rules (VFR) in the period January 2000 to May 2024 in which 'glare' was referred to by the pilot. Of these:

- two involved aircraft landing on 'glare ice' and hitting obstructions;
- one involved an aircraft flying into proximity with another aircraft while on approach into sun causing reduced visibility; and
- three involved pilots being unable to maintain visual flight due to the 'blinding' or 'annoying and distracting' glare from the Ivanpah Solar Plant in California.

3.8 In relation to the three incidents caused by the Ivanpah Solar Plant, this is a concentrated solar thermal plant in which 173,500 heliostats (mirrors) track the sun and focus its radiation on a tower-mounted solar collector that drives steam boilers that generate electricity. It is not a solar PV system and the sunlight reflections from its heliostats are many orders of magnitude greater in intensity than the reflections from solar PV panels. It is not, therefore, comparable in any way with solar PV installations. There are no concentrated solar thermal plants in the UK.

4. Conclusions

4.1 The evidence from UK aerodromes with existing solar PV installations in their vicinity is that none have ever experienced adverse glint and/or glare effects from those installations.

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[5] CAA, *Safeguarding of Aerodromes*, CAP 738, Third Edition, 2020, Appendix C, paragraph 2.

4.2 ForgeSolar modelling of potential glare at five of the 65 UK aerodromes with solar farms in their vicinity and where no glare effects have been experienced confirms that the model does predict ‘yellow’ glare at those aerodromes. This suggests that the ForgeSolar model is not an accurate predictor of pilots experiencing adverse safety effects from solar PV installations.

4.3 AAIB data show that there has never been an aircraft accident in the UK in which glare from solar PV installations was cited as a factor.

4.4 NTSB data show that there has never been an aircraft accident in the USA in which glare from solar PV installations was cited as a factor.

4.5 UK CAA Mandatory Occurrence Reporting data contain no instances of a reported incident in which glare from a solar PV installation was cited as a factor.

4.6 US Aviation Safety Reporting System data contain no instances of a reported incident in which glare from a solar PV installation was cited as a factor.

APPENDIX 1

Examples of UK aerodromes with solar farms in proximity						
Aerodrome	***Licensed or unlicensed***	***Solar farm name***	***Capacity/no. of panels***	***Location relative to airfield***	***Date consented/status***	***References to solar farm in AIP/pilots guides***
Barrow/Walney Island (Cumbria)	Licensed	Sowerby Lodge	5MW	1100m final rw 23 (unlicensed)	Consented 13-2-15 Operational June 2018	None
Beccles (Norfolk)	Unlicensed	Ellough Airfield	14.1MW 57,522 panels	Across rw 09 approach at 300-500m from touchdown and extending to south	Consented Apr 2013 Operational Mar 2014	Shown on aerodrome chart. No text.
		Playters New Farm	7.245MW 27,864 panels	1.5km final rw09	Consented July 2014 Operational Feb 2016	None
Belfast International (Antrim)	Licensed	Crooked Stone Road	4.8MW	640m north of rw 25 threshold	Operational 2016 All electricity generated goes directly to the airport	None
Bognor (Sussex)	Unlicensed	Bilsham Farm	14.5MW 60,000 panels	1.4km final rw 23	Operational 2014	None
Boscombe Down (Wilts)	Government	Boscombe Down	12MW	On airfield	Operational 2015	None
Bourn (Cambs)	Unlicensed	Skylark Meadow	5MW 22,000 panels	1400m west of rw18 threshold – ahead of ac on right base 18	Consented 13-11-12 Operational Mar 2013	None
Bournemouth (Dorset)	Licensed	Parley	Extensive multi-phase development	Between 1 and 3km north of rw 08 threshold	Consented 2013-2015	None
Cae Mawr (Caernarfon)	Unlicensed	Parciau	13.86MW	50m north of rw 08 threshold	Operational March 2015	Shown on maps on website; no text.
Chalgrove (Oxon)	Licensed	Easington Farm	21.3MW	0.5nm final rw30	Consented 14-8-14 Operational March 2015	None
Coldharbour Farm (Kent)	Unlicensed	Sycamore Farm	20MW	500m east of runway	Consented 17-1-13 Operational 2014	Shown & mentioned on

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Aerodrome	***Licensed or unlicensed***	***Solar farm name***	***Capacity/no. of panels***	***Location relative to airfield***	***Date consented/status***	***References to solar farm in AIP/pilots guides***
						plate as VRP, no warnings
Craysmarsh Farm (Wilts)	Unlicensed	Snarlton	49.6MW	300m final rw19	Consented on appeal June 2015	N/a
		Craysmarsh	1.8MW 6384 panels	50m west of runway 01/19	Consented Jun 2012	N/a
Croft Farm (Worcs)	Unlicensed	Defford Aerodrome	50MW	Across and to north of rw 10 approach at 1km from touchdown and 80m north of runway 10 threshold	Consented 10-7-20 Operational	None
Cromer (Norfolk)	Unlicensed	Manor Farm	9.9MW 44760 panels	700m final rw15	Consented Nov 2012 Operational	None
Crowland (Lincs)	Unlicensed	Decoy Farm	5MW	1200m S of rw03 threshold	Consented Aug 2014 Operational	None
Dairy House Farm (Cheshire)	Unlicensed	Dairy House Farm	3.4MW	200m N of rw 12/30	Consented 30-9-15 Operational 27-2-16	Shown on aerodrome chart. No text.
Dunkeswell (Devon)	Licensed	Dunkeswell	2MW	300m N of rw22 threshold	Operational 2015	Shown on aerodrome chart. No text.
Dunsfold (Surrey)	Unlicensed	Dunsfold	1.7MW 8,500 panels	400m N of rw 07 threshold	Operational 2011	Shown on aerodrome chart. No text.
East Midlands (Leics)	Licensed	Kegworth	1.5MW 6000 panels	0.7nm east of threshold rw27	Operational Oct 2015	None
		Marks & Spencer East Midlands Distribution Centre	6.1MW 24272 panels	2.2km north of threshold rw09	Consented 4-4-11; operational March 2015	None
Eastchurch (Kent)	Unlicensed	South Lees Farm	11MW	2.1km W of rw08 threshold	Consented 22-1-14 Operational 22-6-14	Shown on aerodrome chart. No text.

Examples of UK aerodromes with solar farms in proximity						
Aerodrome	***Licensed or unlicensed***	***Solar farm name***	***Capacity/no. of panels***	***Location relative to airfield***	***Date consented/status***	***References to solar farm in AIP/pilots guides***
		Old Rides Farm	8MW	1.6km SE of rw26 threshold	Consented 14-2-13 Operational 15-1-14	Shown on aerodrome chart. No text.
Forwood Farm (Notts)	Unlicensed	West End Farm	13.7MW 55132 panels	500m SE of airfield	Consented 27-2-15 Operational	None
Foston (Lincs)	Unlicensed	Toll Bar Road, Marston	4.4MW	1100m final rw28	Consented 19-5-11 Operational	N/a
Fowlmere (Cambs)	Unlicensed	Black Peak Farm	31.79MW	150m final rw07	Consented 15-12-14 Operational	Shown on aerodrome chart. No text.
		Muncey's Farm	31.6MW	Under base-final turn/joining route rw07	Consented 24-11-14 Operational	None
		Royston	14MW	Under joining route for rw07	Consented 29-10-14 Operational	None
		Bury Lane Fruit Farm	24MW 94,000 panels	Under crosswind/joining route for rw25	Consented 12-5-14 Operational	None
Freshwater (IoW)	Unlicensed	Wilmingham Lane	7MW	300m ENE of thr 17	Consented 12-4-12 Operational 14-3-13	N/a
Goodwood (W Sussex)	Licensed	Westhampnett	7.4MW 26,000 panels	0.6nm final rw32	Operational 2018	None
Harringe Court Farm (Kent)	Unlicensed	Partridge Farm	10.6MW 40,000 panels	950m NW of threshold rw20	Consented on appeal 6-10-15 Operational 2016	N/a
Haverfordwest (Pembs)	Licensed	Rudbaxton	9.9MW 43,348 panels	0.5nm final rw 21	Consented 27-7-12 Operational	None
Heywood Farm (Somerset)	Unlicensed	Grange Farm	4.9MW	1km NE of thr rw 09	Consented 14-1-13 Operational 28-8-13	N/a
Kitty Hawk (E Sussex)	Unlicensed	Laughton Level	7MW 33,000 panels	Along north side of runway 10/28	Consented 13-3-14 Operational	Shown on maps on website; text states "*Solar farm adjacent to NW edge of 10/28.*"

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Aerodrome	***Licensed or unlicensed***	***Solar farm name***	***Capacity/no. of panels***	***Location relative to airfield***	***Date consented/status***	***References to solar farm in AIP/pilots guides***
Laddingford (Kent)	Unlicensed	Paddock Wood	9.2MW	1700m S of threshold rw03	Consented 19-12-14 Operational 2015	None
Lee-on-Solent (Hants)	Licensed	Fareham	17MW 90,000 panels	1100m north of rw 23 threshold	Consented Sep 2013 Operational	None
Little Staughton (Cambs)	Unlicensed	Little Staughton	40MW	On airfield, both sides of runway	Consented 28-9-15 Operational 2019	Shown on aerodrome chart. No text.
Membury (Wilts)	Unlicensed	Membury	17MW	On airfield both sides of rw 13/31	Consented 27-5-14 Operational	Shown on aerodrome chart. No text.
Mitchells Farm (Cambs)	Unlicensed	Mingay Farm	5MW 57120 panels	1500m W of airfield	Consented 9-2-11 Operational	None
		Mingay Farm Extension	17MW 69320 panels	1500m W of airfield	Consented 30-10-13 Operational	None
Newmarket Heath (Suffolk)	Unlicensed	Exning	29.9MW	1100m NW of Rowley Mile rotary airstrip; 1km N of thr 14 (July landing strip)	Consented 4-7-14 Operational 27-3-15	None
Newport City (Upfield Farm) (Newport)	Unlicensed	Llanwern	75MW 187,500 panels	270m final rw23 + 650m N of runway + 1km W of thr rw05	Consented 8-11-18 Operational 1-3-21	N/a
Nottingham (Tollerton) (Notts)	Licensed	Radcliffe	4.2MW	1.6km final rw 21	Consented 14-11-14 Operational 13-6-15	None
		Stragglethorpe Road	5MW	1.5km NE of thr rw 27	Consented 1-12-15 Operational 29-3-16	None
		Cotgrave	4.9MW	1.5km final rw 27	Consented 28-1-15 Operational 15-7-15	None
Old Hay (Kent)	Unlicensed	Paddock Wood	9.2MW	650m SW of threshold rw10	Consented 19-12-14 Operational 2015	Shown on aerodrome chart. No text.
Old Park Farm (Neath Port Talbot)	Unlicensed	Caegarw Farm	4.96MW	800m final rw 36	Consented 17-5-16 Operational	None

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Orston (Notts)	Unlicensed	Lodge Farm	12.4MW	200m SE thr rw 03/ 250m final rw 30	Consented 15-11-13 Operational March 2014	N/a
Park Farm (Newport)	Unlicensed	Lodge Farm	4MW	250m final rw06	Consented Feb 2016 Operational March 2017	N/a
Peterlee (Co Durham)	Unlicensed	Land North Of Mill Hill North West Industrial Estate	5MW 20,000 panels	900m NE of Peterlee airfield	Consented 14-1-16 Operational	None
		BHK (UK)	1.3MW rooftop 2344 panels	850m NE of Peterlee DZ	Consented 18-5-22 Operational	None
RAF Wyton (Cambs)	Unlicensed	Wiggin Hill	10.9MW	2.1km final rw 26	Phase 1 consented 19-2-13 Phase 2 consented 14-2-14 Operational March 2015	None
		Lodge Farm	2.4MW	1.7km N of rw 08G threshold	Consented 5-9-14	None
Rectory Farm (Cambs)	Unlicensed	Caldecote Manor Farm	5MW	1600m west of airstrip	Consented 7-1-15 Operational 24-2-16	None
Rhigos (Rhondda Cynon Taf)	Unlicensed	Hendre Fawr	11.6MW	Immediately south of the airfield	Operational March 2015	Shown on aerodrome chart. No text.
RNAS Yeovilton (Somerset)	Government	Bindwell Lane	10MW	2.2nm final rw26 Yeovilton	Consented 21-1-21	None
		Sutton Montis	5.3MW 22,680 panels	2.5nm final rw26 Yeovilton	Consented 28-1-14 Operational	None
		Southfield Farm	9.47MW	0.8nm final rw26 Yeovilton	Consented 9-7-15 Operational	None
Roche (Cornwall)	Unlicensed	Woodlands Barton	4.5MW 19,776 panels	Immediately north of airfield	Consented 2010 Operational	Shown on aerodrome chart. No text.

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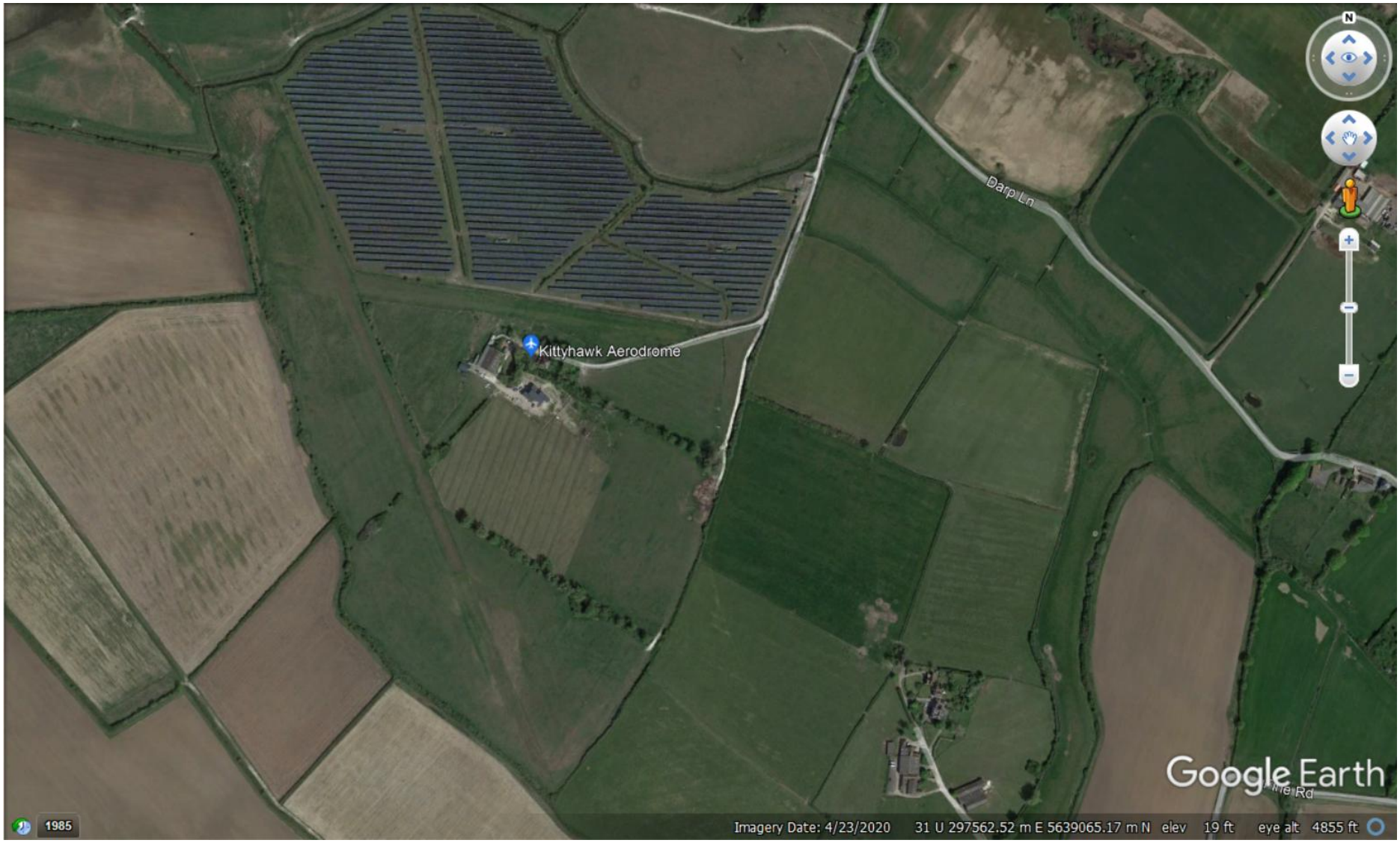
Shacklewell (Rutland)	Unlicensed	Ketton	3MW	1km SE of airfield	Consented 2013 Operational	None
Sherburn in Elmet (N Yorks)	Licensed	Ash Row Farm	5MW	900m N of rw 19/24 thresholds	Operational	None
		Kingspan Insulation	5MW rooftop	800m N of rw06 threshold	Operational	None
St Athan (Glamorgan)	Licensed	Rosedew Farm	5MW	0.9nm final rw 07	Operational March 2016	None
		Llancadle Farm	5MW	1nm final rw 25	Operational Dec 2015	None
		West Hall	7MW	Under downwind/VFR East route	Operational March 2014	None
St Mellion (Cornwall)	Unlicensed	Newton Ferrers	19.5MW 75,168 panels	350m west of the runway	Consented 3-10-14	N/a
Stoke (Kent)	Unlicensed	Malmaynes Hall Farm	12MW	1.3km NW of airfield	Consented 6-11-14 Operational 31-3-15	None
Sywell (Northants)	Licensed	Sywell Road	4MW 30,000 panels	1km final rw23	Operational 2016	None
Thornborough Grounds (Bucks)	Unlicensed	Thornborough Grounds	5MW	150m final rw 24	Operational 2016	Shown on aerodrome chart. No text.
Thruxton	Licensed	Lains Farm	5MW	350m south of airfield boundary	Operational 2016	None
Tilstock (Shrops)	Unlicensed	Tilstock	79,968 panels	On airfield, west of rw 14/32	Consented 30-6-15 Operational	Shown on aerodrome chart. No text.
Tinnell Farm (Cornwall)	Unlicensed	North Wayton Farm	5MW	1km SW of threshold 06	Consented 8-4-13 Operational	N/a
Top Farm (Cambs)	Unlicensed	Manor Farm	21.6MW 82,944 panels	2km final rw24	Consented 20-8-14 Operational	None
Truro (Cornwall)	Unlicensed	Four Burrows	7MW 25,000 panels	800m N of rw14 threshold	Consented 9-7-13 Operational 2015	None

APPENDIX 1

Examples of UK aerodromes with solar farms in proximity						
Aerodrome	***Licensed or unlicensed***	***Solar farm name***	***Capacity/no. of panels***	***Location relative to airfield***	***Date consented/status***	***References to solar farm in AIP/pilots guides***
		Garvinack	7MW	Under downwind for 14/32	Consented 23-5-14 Operational	None
		Causilgey Barton	5MW	Under downwind for 14/32	Consented 10-8-20 Operational	None
Turweston (Bucks)	Unlicensed	Turweston	16MW	Across rw 09 approach at 700m to 200m final	Consented Sep 2013 Operational	Shown on aerodrome chart; text states "*Solar farm on approach to Rwy 09.*"
Upwood (Hunts)	Unlicensed	Bury Green Farm	5MW 16880 panels	1km N of rw23 threshold	Consented Sep 2015 Operational	None
		Land at Biggin Lane	5MW 16880 panels	600m NE of rw23 threshold	Consented Sep 2015 Operational	None
Wadswick Farm (Wilts)	Unlicensed	Wadswick Farm	6.3MW	Immediately south of airfield	Consented 2014 Operational	Shown on aerodrome charts. Website states: "*There is a large solar farm to the south east of the runway.*"
Warton (Lancs)	Licensed	Clifton Marsh Waste Water Treatment Works	3MW	South of final approach 25 at c.1nm	Consented 30-11-18 Operational	None
West Horndon (Essex)	Unlicensed	Fairwind	10MW 40000 panels	1300m final rw24	Consented 25-11-13 Operational	None
West Wales (Ceredigion)	Licensed	Aberporth	1.5MW	900m N of airfield	Consented 24-12-14 Operational	None
		Llwyn Du	8MW	1700m SE of airfield	Consented 2013 Operational Feb 2015	None
Wood Walton (Hunts)	Unlicensed	Abbey Farm	9MW	500m east of runway	Consented 5-9-13 Operational 19-3-14	N/a

APPENDIX 2

Beccles


Darp Ln
Kittyhawk Aerodrome
Google Earth
1985
Imagery Date: 4/23/2020 31 U 297562.52 m E 5639065.17 m N elev 19 ft eye alt 4855 ft

Kitty Hawk


N
M4
M4
Lambourn Woodlands
Google Earth
1985
Imagery Date: 4/9/2017 30 U 600061.49 m E 5704284.82 m N elev 695 ft eye alt 8037 ft

Membury


Thruxton
A303
A303
A303
Image © 2025 Maxar Technologies
Image © 2025 Airbus
Google Earth
1985
Imagery Date: 6/20/2024 lat 51.205704° lon -1.598743° elev 273 ft eye alt 9470 ft

Thruxton

Turweston

AVIATICA – COMPANY QUALIFICATIONS AND EXPERIENCE

Aviatica is a trading name of the specialist planning consultancy Gladhouse Planning Ltd. This report was compiled by Malcolm Spaven, founder and director of Gladhouse Planning Ltd.

Mr Spaven holds a Master's degree in Rural and Regional Resources Planning from the University of Aberdeen and an MA (Hons) from the University of Edinburgh. He has served as a Specialist Adviser to the House of Commons Defence Committee and on the Aviation Study Group of the British Wind Energy Association.

Aviatica has been offering specialist services in the assessment and management of the effects of planning developments on defence and aviation since 1996.

The company has been carrying out assessments of the effects of buildings, wind turbines and solar energy developments on aviation for more than 25 years, including proposed developments in the vicinity of a wide range of UK civil and military airfields including Aberdeen, Bedford, Belfast City, Belfast International, Bourn, Broadford, Campbeltown, City of Derry, Clacton, Coventry, Cranfield, Doncaster-Sheffield, Dundee, Durham Tees Valley, Edinburgh, Enniskillen, Fairoaks, Fife, Fishburn, Gamston, Glasgow, Humberside, Inverness, Kinloss, Leeds-Bradford, Lee-on-Solent, London Gatwick, London Heathrow, Lossiemouth, Lydd, Manston, Newcastle, Newquay, Northolt, Norwich, Oban, Prestwick, Scatsta, Southend, Stornoway, Strathaven, Tatenhill, Thruxton, Tingwall, West Freugh, Wick and Woodvale.

Malcolm Spaven is an active light aircraft pilot and flying instructor with 2500 hours flying experience, including 2000 hours instructing on single-engine piston aeroplanes, mostly conducted from Fife Airport, which has three solar PV installations in the vicinity.