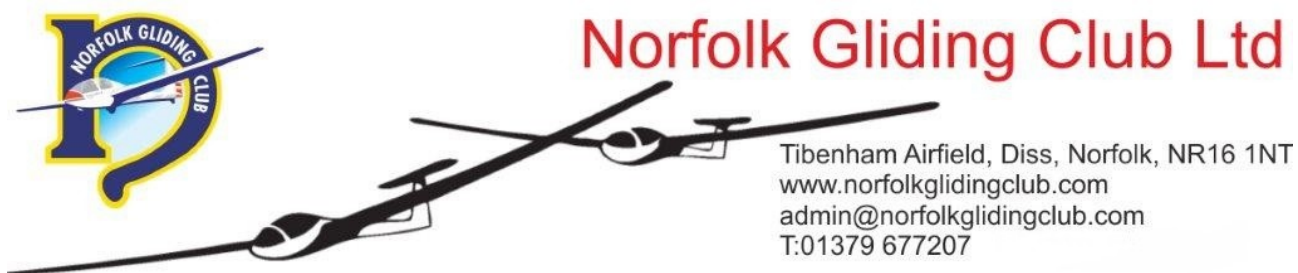


Submission ID: S558E21A6

Please accept this updated WR V2.0 Summary for NGC's WR regarding the East Pye Project.
This updated summary replaces the WR Summary uploaded as part of Submission S4A7CCF08.
Many thanks.



East Pye Solar Farm EN0110014

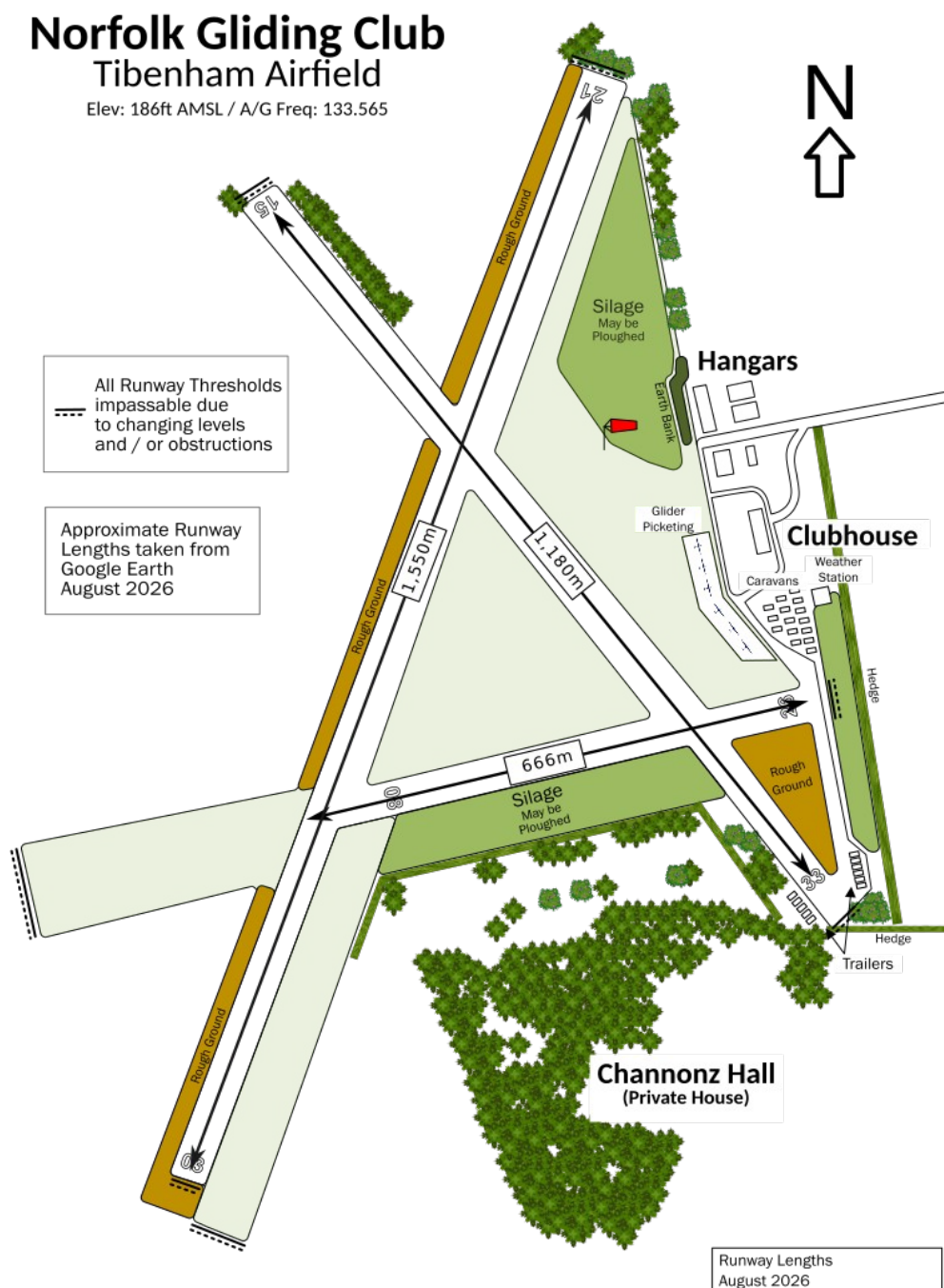
Interested Party Reference Number [REDACTED]

**Written Representation Appendices on behalf of
Norfolk Gliding Club**

Appendix A - Tibenham Airfield Runway Layout & Lengths

This appendix shows details of the tarmac runways available for use by powered aircraft.

Note: Runway 08/26 consists of both Tarmac and Grass sections – Due to these areas becoming waterlogged in Winter and the existence of a ‘step’ at the transition from Grass to Tarmac, the Grass section is not recommended for use by powered aircraft and is utilised only by Gliders when winch launching or landing. Gliders being aerotowed, also commence their Runway 08 Take-Off run from the start of the tarmac section.



Appendix B - Local Map Tibenham & Priory Farm

This map shows the proximity of Tibenham Airfield and Priory Farm Airstrip and clearly demonstrates why there is a need to avoid circuit conflict between the two airfields, Tibenham circuits are predominately transposed towards the East, Priory Farms' to the West.

The likely imposition of the Norwich to Tilbury Pylons will only increase the importance of this separation.

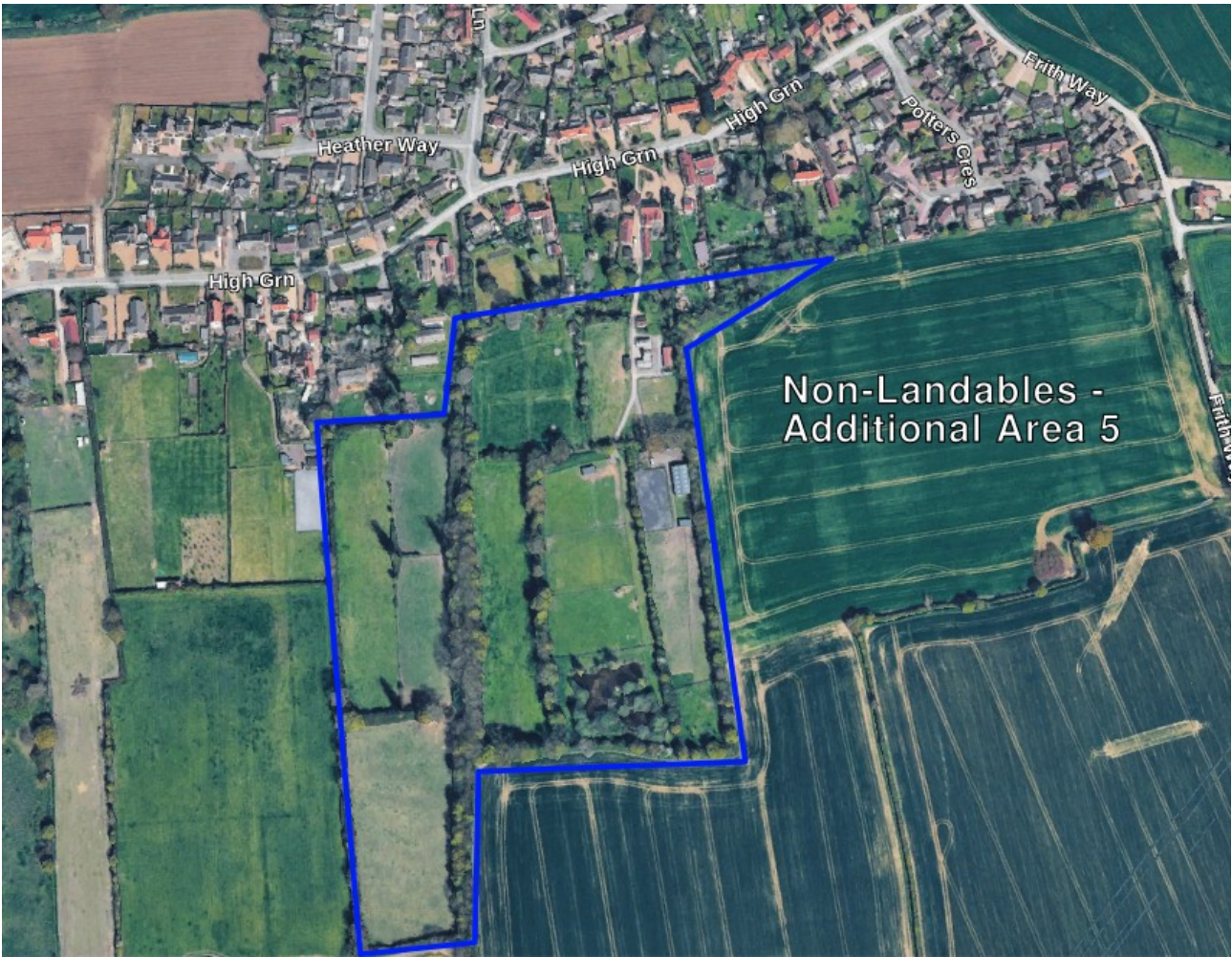


Appendix C - NGC Selection of Areas Unsuitable for an Off-Field Landing

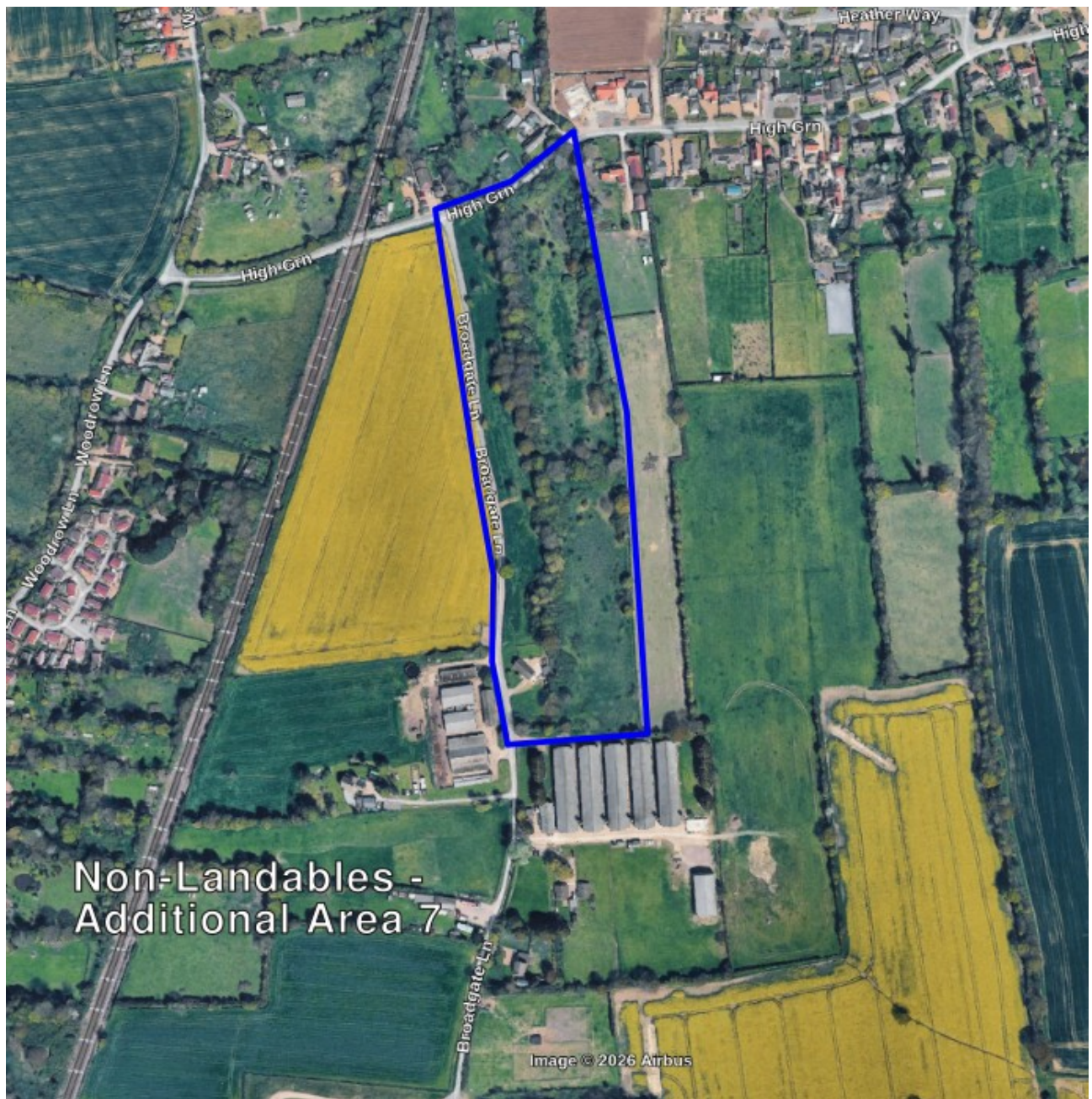
This appendix details those areas judged to be unsuitable for an off-field emergency landing. These are in addition to those identified by the Applicant in their 'High Level Investigative Report': Issue 2 Feb 2026.



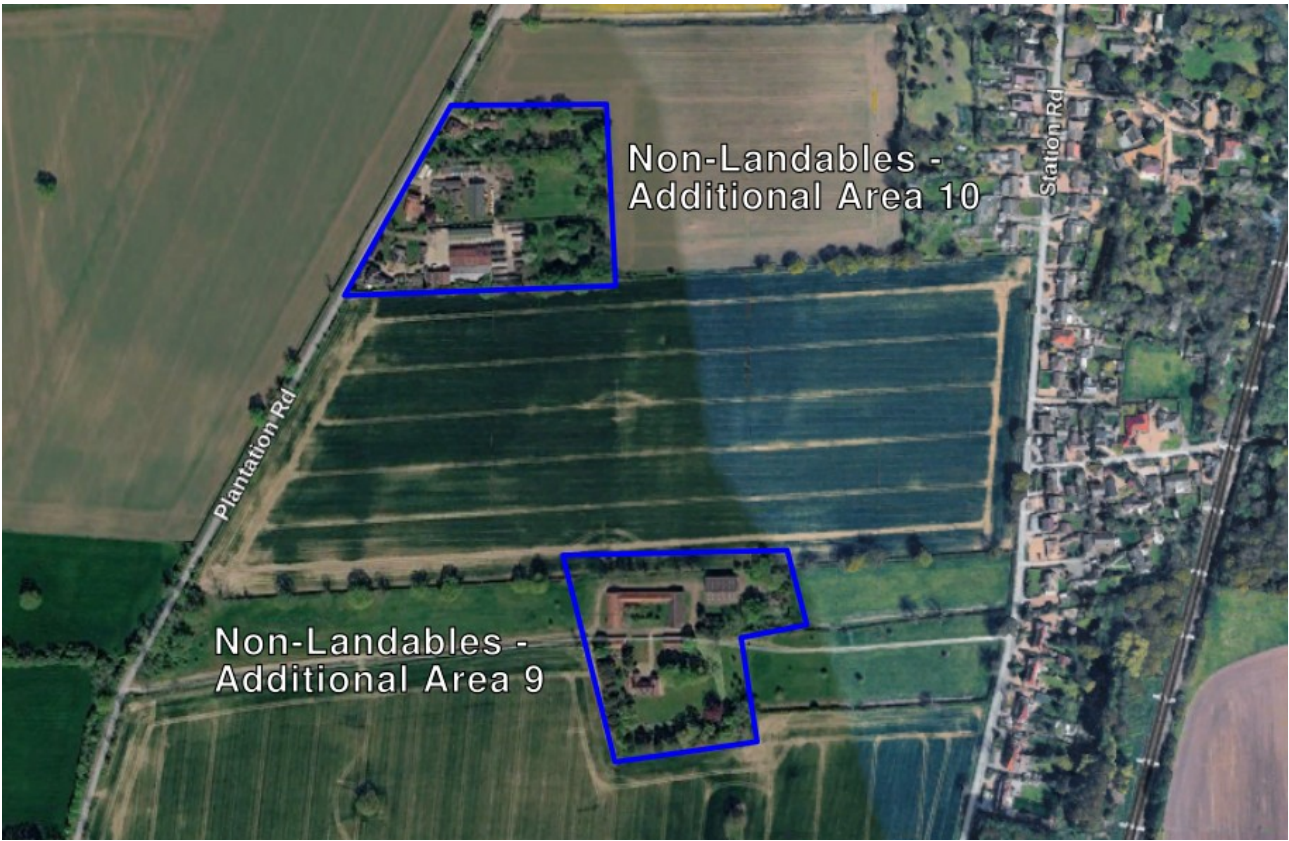


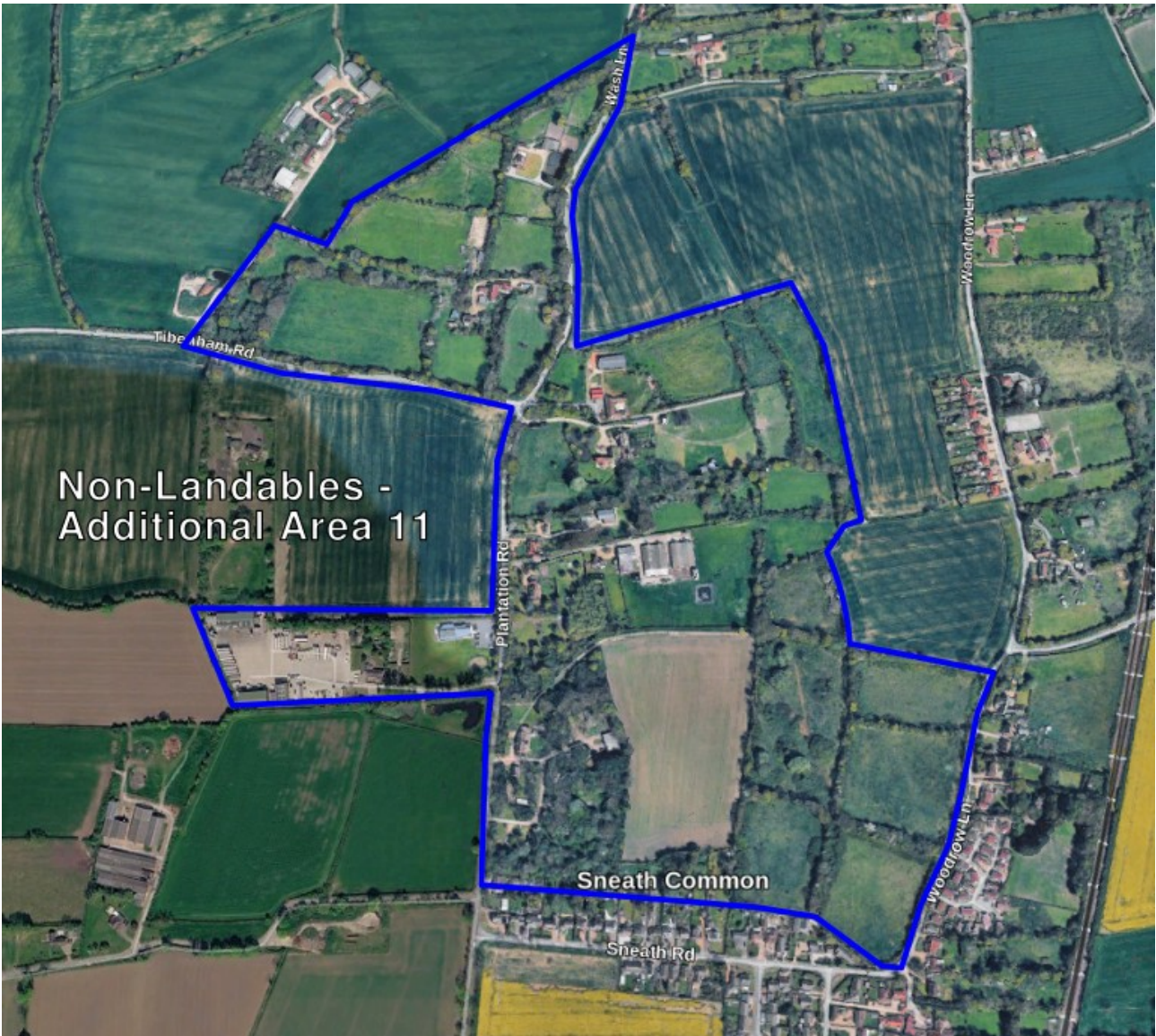
















Appendix D - Method used to calculate the EAFTO Distances

This appendix details the method used to calculate the EFATO distances shown in the EFATO analysis section of NGC's Written Representation Oct'26.

The EFATO scenarios were calculated at EFTAO Event heights of 100ft, 200ft, 300ft and 400ft.

The analysis applied the same criteria as used by the Applicant when analysing the EFATO events at Seething Airfield.

(See DCO Document : **APP-223 - EN0110014-000085-7.28 Potential Impact on Seething Aerodrome Forced Landing Options**)

Airborne point	600m from the start of runway
Aircraft climb rate	500 feet per minute at a ground speed of 60 knots, i.e. a climb gradient of 500ft per nautical mile or 8.2%
Aircraft best glide	Glide ratio of 8:1 from the point of performance engine failure i.e. a descent gradient of 12.5% or 760ft per nautical mile
Potential forced landing	Those within +/-45° of the fields climb-out heading.

Distance to EFATO Event

Calculated using a climb rate of 8.2% or 1:12.2 for each of the EFATO Heights: 100ft, 200ft, 300ft and 400ft.

Distance to Ground

Calculated directly from the EAFTO Event Height at a downslope of 8:1 and so is:

$$[\text{EAFTO Event Height} * 8]$$

Total Distance

Is simply the sum of the two factors above

$$[\text{Distance to EFATO Event} + \text{Distance to Ground}]$$

Time to Gnd from EFATO Event (At 60 knots and downslope of 8:1)

$$60 \text{ knots} = 1 \text{ nautical mile per minute} = 6,076 \text{ ft per minute}$$

The descent rate at 8:1 is 6,076ft divided by 8 = 759 ft per minute

Time to Gnd (minutes) = EFATO Height ft / 759 ft

Total Distance to Run

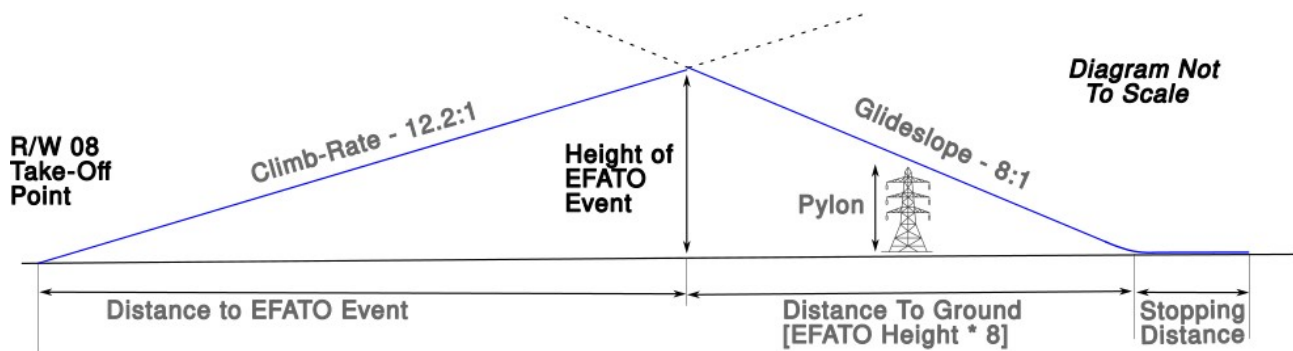
Is simply the sum of the three factors

[Distance to EFATO Event + Distance to Ground + Stopping Distance]

Conversion Factors:

1 Nm = 1,852 m = 6,076 ft

500ft in 1 Nm = 8.23% Upslope = 1:12.2



Appendix E - Station Road Solar Farm

The 20MW 'Station Road Solar Farm' is planned to occupy 36.9 hectares of agricultural land immediately adjacent to the location of the Applicant's Battery Energy Storage system (BESS) & 400kV Substation 1 proposals.

Planning approval for the 'Station Road Solar Farm' with conditions, was given by South Norfolk District Council on 27th June 2025.



Figure 1: Location of Station Road Solar Farm

In his decision regarding 'Engine Failure After Take-Off' (EFATO) from Tibenham's Runways 08 and 15, (The decision document references these as Runways 26 & 33) the Planning Officer stated that:

"with the exception of the built development on the western side of the railway line (to the west of the site), the application side is currently part of a wider tapestry of agricultural land within the vicinity of the airfield. Taking account of that and the degree of separation, I am not persuaded the risks presented by the development in relation to occurrences of EFATO are sufficient enough to warrant refusal of the application on these grounds."

However from the diagram above it can be seen that, should the Applicant's proposals go ahead, the conditions under which the Planning Officer gave consent for the Station Road Solar Farm, will no longer exist. Had the Applicant's proposals predated the Station Road

application, it is unlikely that this argument would have been up-held and the Station Road application may subsequently have been refused.

It should be noted that objections to the Station Road Solar Farm were raised by Norfolk Gliding Club, however these were not deemed sufficient to warrant refusal of the application. This even though the Planning Officer had no aviation experience, had not consulted any independent aviation experts and instead relied heavily upon the advice of the applicant's own aviation consultant.



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East Pye Solar Farm EN0110014

Interested Party Reference Number [REDACTED]

**Written Representation on behalf of
Norfolk Gliding Club**

Introduction

This Written Representation is presented by Norfolk Gliding Club (NGC) which objects to the East Pye Solar (The Applicant) proposals on the basis that:

- The Applicant's proposals impose an unacceptable increased risk of serious or fatal injury to pilots, passengers and crew operating from Tibenham's Runway 08.
- The Applicant is deficient in that they did not adequately collaborate with NGC on the design of the Solar installation as required by National Policy Statement for Energy (EN-1), resulting in the proposed design directly affecting the safe operation of aviation activities at Tibenham Airfield.
- The Applicant did not carry out any detailed assessment of the impact that the proposals would have on aviation activities at Tibenham Airfield, particularly as they relate to Engine Failure After Take-Off (EFATO) scenarios.
- In failing to carry out a full EFATO impact assessment, Tibenham has been treated very differently and in a far less serious manner than Seething Airfield, which is also impacted by the Applicant's proposals. This, even though Tibenham operate within a far more complex aviation environment.
- The Applicant produced a seriously flawed Glint & Glare assessment containing a number of omissions / misrepresentations.

Tibenham Airfield

Tibenham airfield is a large aviation facility situated approximately 22km South West of Norwich. It comprises 3 x Tarmac Runways (which can be used in alternate directions giving 6 x Take-off and Landing options) with large areas laid to grass, which can be used by both gliders and powered aircraft where appropriate. **(See Appendix A: Tibenham Runway Layout)**

Priory Farm Airstrip is located approximately 1km away to the West of Tibenham Airfield. The location of Priory Farm has a direct effect on the circuits that are prescribed for use at Tibenham, with these being predominately laid out to the East of Tibenham - i.e. Towards the location of the proposed East Pye Solar installation. The transposition of the prescribed circuits, is to reduce circuit conflict between the two airfields. **(See Appendix B: Local Map TIB & Priory Farm)**

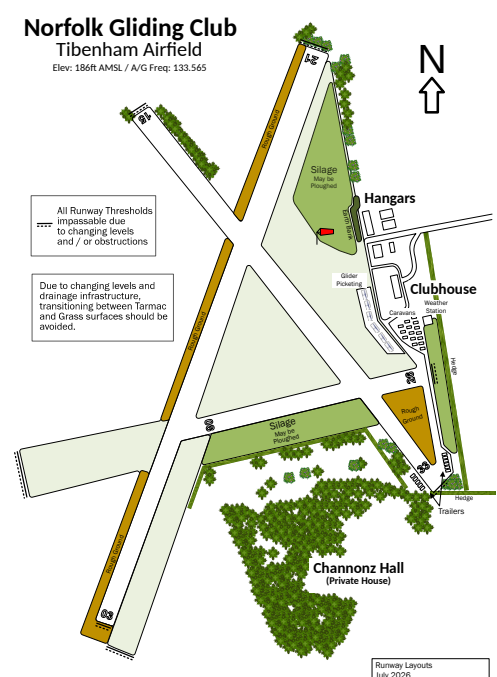


Figure 1: Tibenham Airfield Layout

The proposed imposition by National Grid of the ‘Norwich to Tilbury’ ‘Pylons to the West of Priory Farm, will only increase the importance of this circuit separation.



Figure 2: Tibenham Airfield Complex from the NE

Tibenham airfield is home to:

‘Norfolk Gliding Club’ (NGC) providing Glider and Motor-Glider Instruction, utilising both Winch and Aerotow launch methods, operates a fleet of single and two seaters gliders, the latter being used for gliding instruction and operates a Robin DR400 Powered Tug aircraft used in the aerotowing operation. NGC also provides launch facilities to owners of privately owned gliders and motor-gliders.

Flight Training East Anglia (FETA) providing powered flight instruction to PPL, NPPL level as well as capability to provide Aerobatics, Night Flying and Instrument Rating tuition.

Both the operations noted above also provide trial flight experiences to members of the paying public.

Tibenham airfield also hosts a significant number of privately owned powered aircraft, housed in a number of purpose built hangars, that have been provided by NGC to expand and sustain Tibenham's aviation operation.

Due to the excellent facilities provided by both the airfield and NGC, a number of other aviation and non-aviation activities have been attracted to Tibenham, these being:

- Cloud9 – Airfield catering operation,
- Two Commerical Ballooning operations,
- MOD Helicopter Refuelling operation,
- Para-Motors,
- Remote Control Models (Both Propeller and Jet powered),
- Drive10 – providing driving tuition to youngsters in a safe, controlled environment.
- RoSPA motorcycle advanced training events.

Due to its location, the excellent facilities and particularly the length of its runways, Tibenham regularly attracts many visiting aircraft from across the UK, ranging from Micro-Lights through to 9-seater Turboprop aircraft (Pilatus PC-12).

It can be seen that due to the combination of both gliding and powered and other aviation activities, some of which operate simultaneously, the range of aircraft that can utilise Tibenham's long runways and the proximity of the adjacent Priory Farm airstrip, the flight environment is a complex one.

Tibenham Based Aircraft

Aircraft based at Tibenham Airfield include: (Not an exhaustive list ...)

- Norfolk Gliding Club Fleet comprising of:
 - Three two-seater training gliders
 - Two single-seater gliders
 - Robin DR400 Powered Aircraft¹ – used to carry out Aerotow launches.
- Flight Training East Anglia Fleet comprising of:
 - Robin R2112
 - Cessna 172- Skyhawk
 - Yakovlev Yak-52

1 Whilst performing as an Aerotow Tug, the Robin DR400 experiences a reduced climb-out performance.

- Privately Owned Gliders which can be further broken down into:
 - Pure Gliders
 - Self Sustaining Gliders (ASW28-18e, HpH 304S ‘Shark’) - which have an engine but are unable to take-off using engine power and therefore are launched by Winch or Aerotow.
 - Self Launching Gliders² (HpH 304 TS ‘Twin Shark’, Stemme S10) – which can take off under their own power and then retract the engine/propeller to become a ‘pure’ glider.
 - Motor Gliders² (Falke SF25, Grob G109) - which can take off under their own power.
- Powered SEP Aircraft (SEP – Single Engine Propeller):
 - Bi-Planes³ – Tiger Moths, Flitzer, de Havilland DH.87B Hornet Moth, Boeing Stearman
 - A number from the ubiquitous Cessna and Piper range of GA aircraft: Piper PA28, Cessna 182.
 - Vans -RV6
 - Euro-Fox

Whilst this is not a complete list of the aircraft types currently operating out of Tibenham – as owners buy / sell / move aircraft, this list will change and may include aircraft of more or less advanced types, it is an example of the range of aircraft that are and can be accommodated by Tibenham’s’ operation.

It is the NGC Directors confirmed intention to continue expanding the facilities available at Tibenham Airfield, which is planned to include an on-site Aviation Service organisation, which will then attract owners of many differing types of aircraft.

Complex Environment.

Due to the co-existent Gliding and Power operations, the proximity of Priory Farm, which constrains Tibenham’s circuits, the surrounding geographic constraints: the residential areas of Sneath Common, Great Moulton, the Mainline Railway and the surrounding industrial and agricultural complexes together with the existence of the Pylons to the East of the airfield, all contribute to Tibenham operating in a very complex aviation environment.

With Gliders not having the ability to climb or maintain height at will, Tibenham’s glider circuits, exist closer in to the airfield. To avoid any conflict with Glider traffic, Tibenham’s Power Circuits are transposed to exist further out than they would be in a purely Power only environment.

2 Self Launching Gliders and Motor Gliders need to be considered when assessing Engine Failure After Take-Off (EFATO) events.

3 Due to their design / age, Bi-Planes have a reduced climb-out performance compared to other General Aviation (GA) aircraft.

Power pilots also need to be flexible in their circuits should a glider urgently need to return to the airfield. UK Rules of the Air dictate that Power needs to give way to Gliders. This may see Power pilots needing to ‘orbit’ or ‘go around’ to allow gliders to land before completing their own approach and landing.

Tibenham’s aviation environment will become even more complex should National Grid’s Norwich to Tilbury Pylon project be given the go ahead and even more so, should the East Pye’s proposals go ahead unchecked.

Circuits at Tibenham

This Written Representation will repeatedly reference the aviation term ‘Circuit’. A ‘Circuit’ is a pre-determined path that a pilot will fly when attempting a landing. It is predetermined by shape but not necessarily by size as will be discussed later.

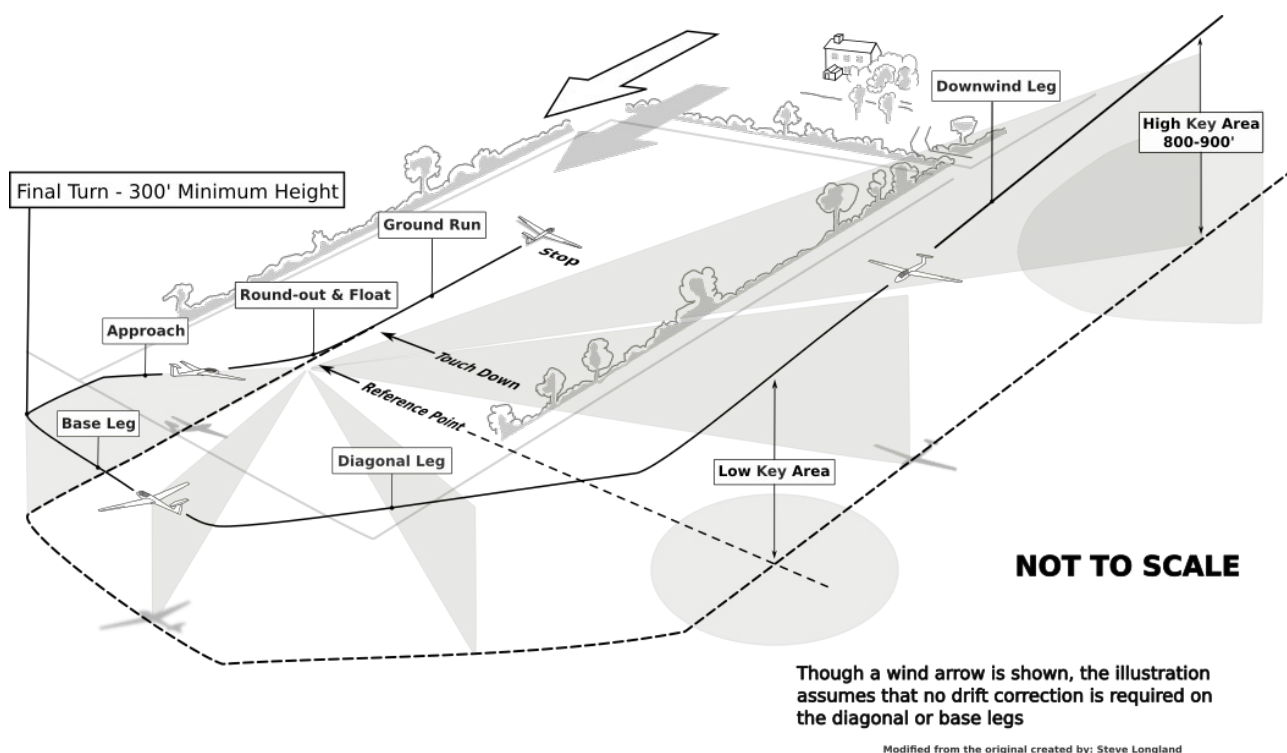


Figure 3: The Ideal Glider Circuit

The above diagram shows an example of an ideal circuit flown by a Glider. The Circuit consists of in order: A Downwind Leg, a Diagonal Leg, a Base Leg, the Approach, the Round-Out & Float, also known as the ‘Flare’ in the Power world and the Ground Run.

Pilots of both Powered Aircraft and Gliders, may need to modify the width of their circuits i.e. will change their heading, during the Downwind Leg, due to weather conditions that they experience at the time. If a pilot finds that the descent rate is less than expected due to atmospheric ‘lift’, they may widen their circuit. Conversely, if they find the descent rate is greater than expected due to

experiencing ‘atmospheric sink’. they may narrow their circuit width. Indeed Glider Pilots experiencing severe ‘sink’ may turn sharply towards the airfield in an effort to ensure a safe landing.

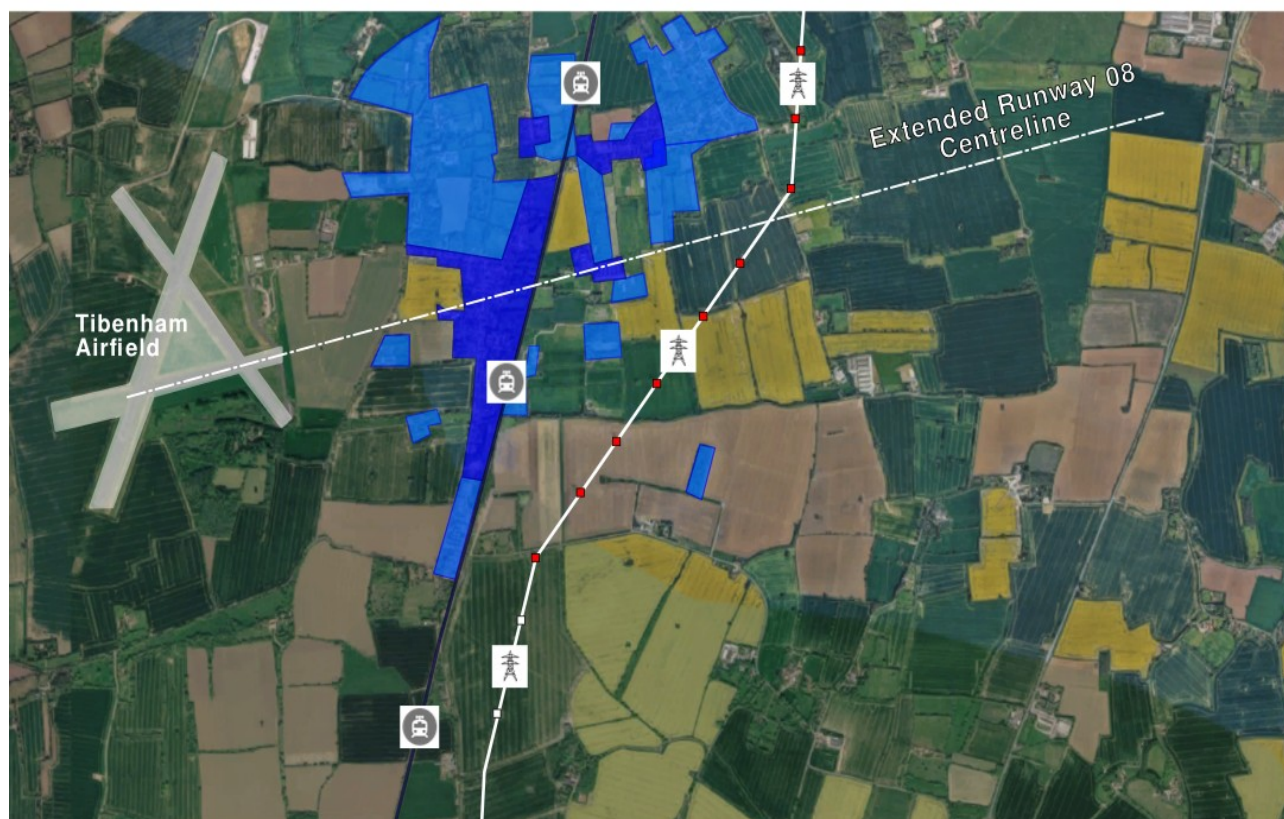
As mentioned above, Tibenham’s Power Circuits are larger and outside of the prescribed Glider circuits, with these Power Circuits being larger than they would be in a purely Power only environment, as they have been moved further out to avoid any conflict with the Glider traffic on their inside.

The close proximity of the Priory Farm airstrip also means that Tibenham circuits are transposed predominately to the East of the airfield and therefore closer to the Applicant’s proposed infrastructure.

Power Infrastructure Maps in the Vicinity of Tibenham Airfield

The following maps show the current situation regarding landing options following a EFATO from Tibenham's Runway 08. Subsequent maps show how these options would be severely eroded by the East Pye proposals.

Map 1 – The Current Situation



Map 1 shows the currently available landing options to the East of Tibenham, should an aircraft utilising Tibenham's Runway 08 suffer an Engine Failure After Take-Off (EFATO). The airfield is shown in White with the extended centre line of Runway 08 drawn towards the East.

The **Dark Blue** shading denotes areas deemed unsuitable for a forced off-airfield landing as identified by the Applicant' in their '*High Level Investigative Report*' Revision 1 March 2026. NGC believe that the Applicant has been overly restrictive in identifying those areas unsuitable for a forced off-airfield landing – See next paragraph.

The **Light Blue** shading denotes additional areas deemed unsuitable for a forced off-airfield landing as identified by NGC, using local knowledge and the use of more up to date mapping. These include areas that support: industrial, agricultural and residential use, together with those areas which are densely wooded or are small fields surrounded by high hedges and trees. All of which, good practice and public safety dictate, should be avoided when selecting an area for an off-airfield landing.

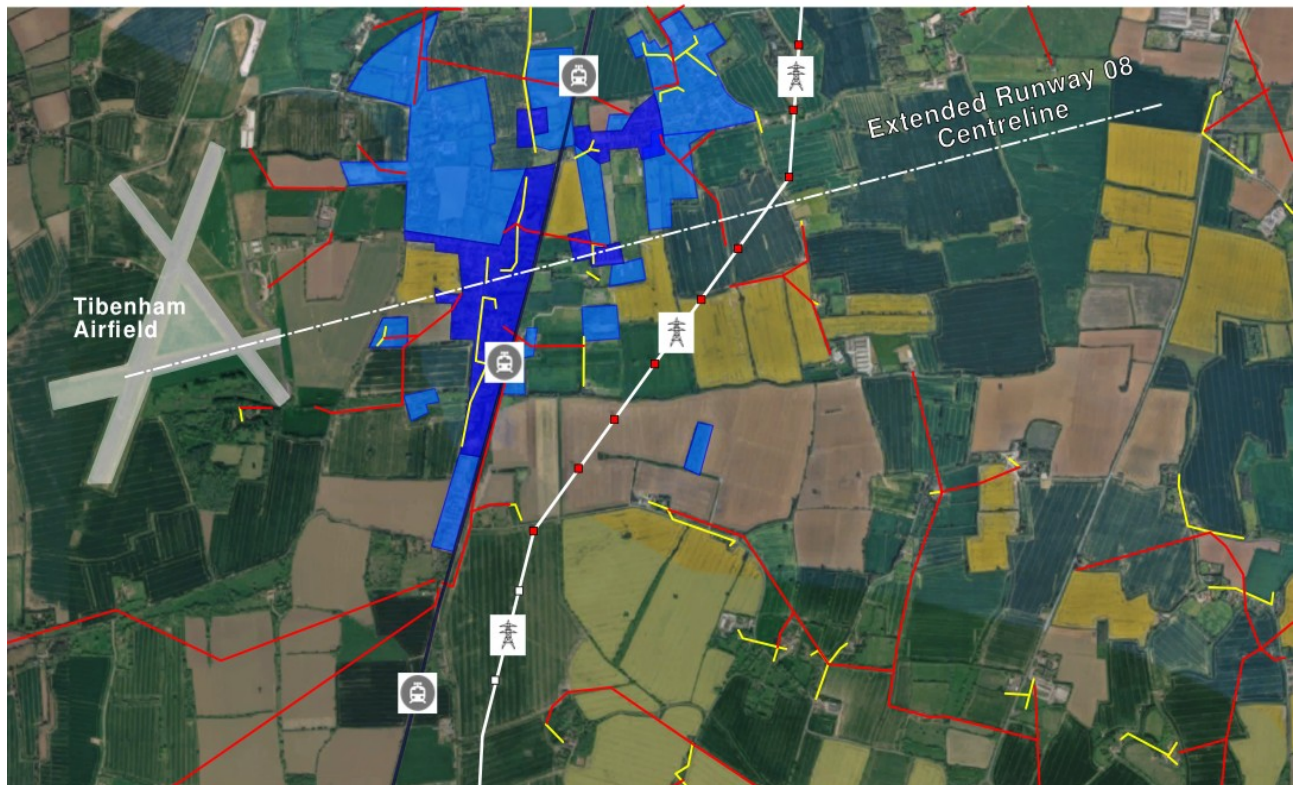
Detailed maps of those additional areas identified by NGC as being unsuitable for a forced off-airfield landing are shown in **Appendix C - NGC Unlandables** . Examination of these images will clearly show why these areas have been identified as being unsuitable for an off-airfield landing.

The London to Norwich Mainline Railway line runs North / South immediately adjacent to the Blue area representing the main residential area of Sneath Common.

The dog-leg line of existing 400kV Pylons is shown running North / South to the East of the airfield and consists of high voltage power lines and Pylons of up to 58 metres in height.

This map shows that, assuming an ailing aircraft has sufficient remaining power and manoeuvrability to avoid the local villages and areas of residential use, there are more than sufficient options available between the airfield and under the existing pylons should an aircraft suffer an EFATO when operating from Tibenham's Runway 08.

Map 2 – The Current Situation + UK Power Network Overhead Lines & Infrastructure



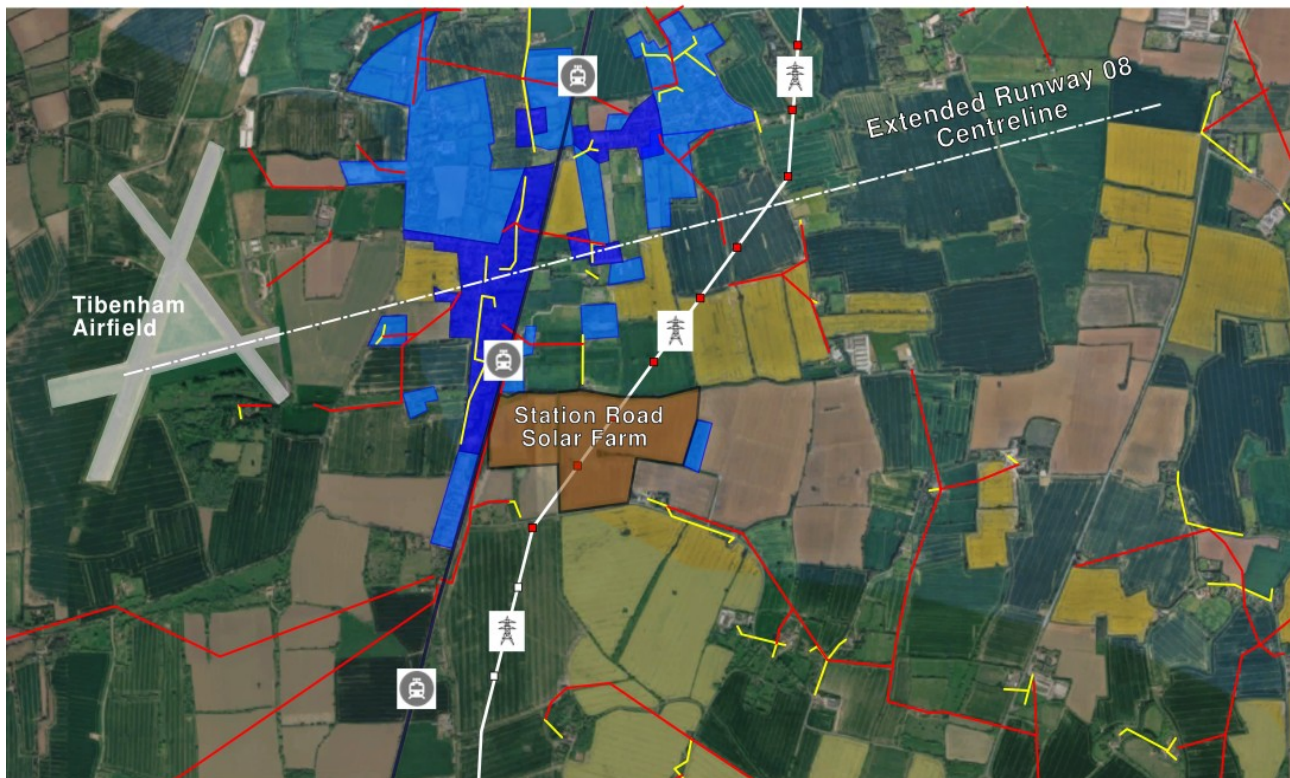
Map 2 shows the same area but with the addition of the existing UK Power Networks Low Voltage - LV (Yellow) and High Voltage - HV (Red) Overhead Power lines (Information taken from the publicly available UK Power Networks Infrastructure Map).

This map above shows that the options available are reduced somewhat by the existing UK Power Networks overhead power lines and associated infrastructure: Transformers / Switches / Support Poles etc.

It does however show there are still more than sufficient options available between the airfield and towards/under the existing Pylons, should an aircraft suffer an EFATO when operating from Tibenham's Runway 08.

The existence of the UK Networks HV & LV Power Lines has been omitted from the Applicant's 'High Level Investigative Report'.



Map 3 – Station Road Solar Farm

Map 3 shows the location of the fields that will be taken up by the planned and approved ‘Station Road Solar Farm’. South Norfolk Council previously approved planning consent for this installation - 27th June 2025.

In the decision report produced by South Norfolk Council following approval of the Station Road Solar Farm application, it is stated in response to NGC’s objections regarding reduced forced land-out options, that:

“..with the exception of the built development on the western side of the railway line (to the west of the site), the application side is currently part of a wider tapestry of agricultural land within the vicinity of the airfield.”

This will no longer be the case should the The Applicant’s proposals go ahead.

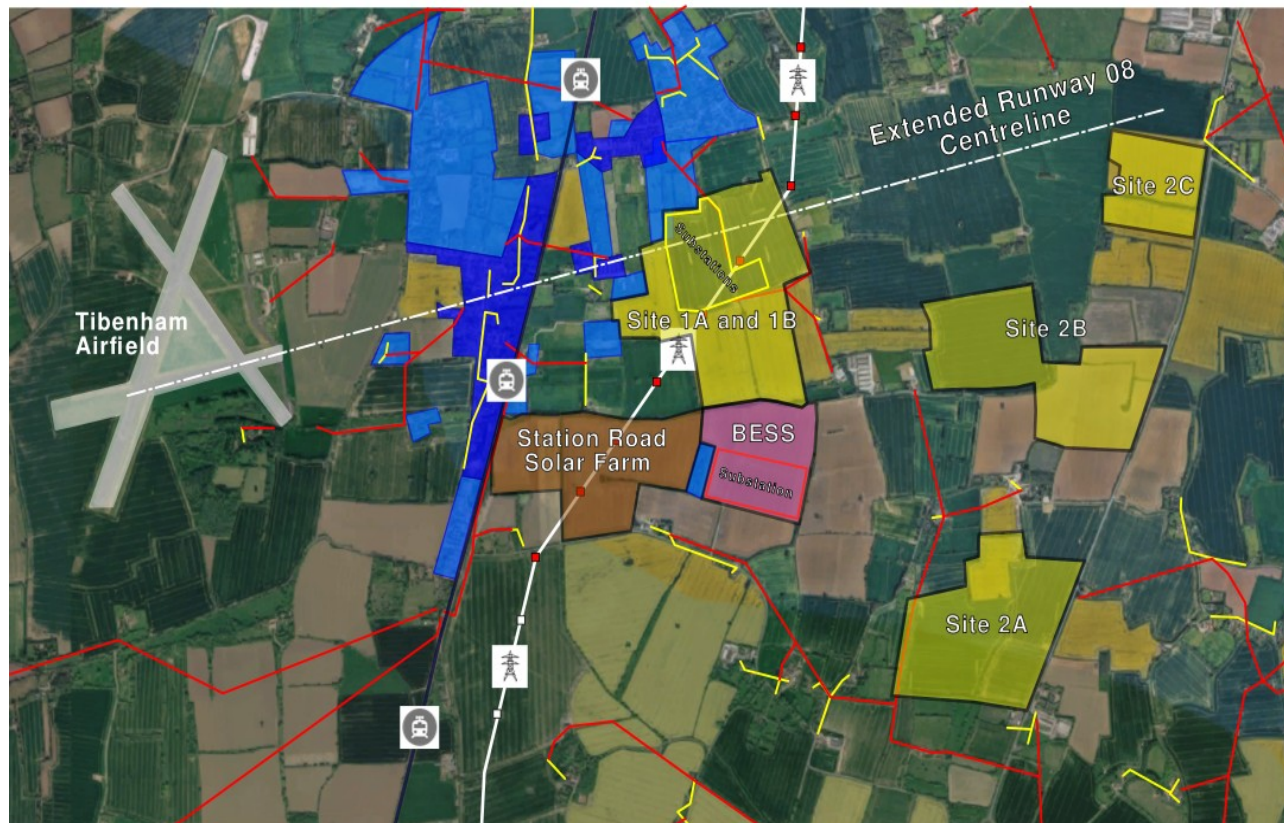
Although not directly part of the East Pye proposals, the Station Road infrastructure has a bearing on the EFATO land-out options available and should not have been ignored.

The existence of the Station Road Solar Farm will reduce the number of options available for a forced off-airfield landing, however a number of options still remain close to the runway 08 centreline.

There was no mention of the Station Road installation in the ‘High Level Investigative Report’ nor the applicant’s ‘Glint & Glare’ report, nor is there any discussion/assessment on what would

be the effects that the combined existence of East Pye and the Station Road Solar Farms would have on operations from Tibenham Airfield.

Map 4 – East Pye Proposals



Map 4 shows the same area with the addition of the East Pye proposals: Solar Panels (Sites 1A, 2B, *2), BESS, 2 x East Pye 400kV Substations and 1 x National Grid 400kV Substation.

Here it can be seen that the East Pye proposals, would significantly reduce the number of fields available for a forced off-airfield landing such that there would be very few EFATO landout options remaining.

Especially concerning is the location of the East Pye and National Grid 400kV Substations which would exist directly on Tibenham's runway 08 extended centreline.

Although its very likely to affect operations from Tibenham Airfield, NGC have not been provided with any information or consulted on the 400kV Pylon Realignment Project that is required for the National Grid Substation and we are therefore unable to display details of that realignment here and are unable to comment on its impact.

From a layman's point of view The Applicant's proposals do not make a great deal of sense and for those of us who have a significant amount of aviation experience, (Gliding for more than 30 years, Instructing for more than 20 of those years and also a British Gliding Association Accident

Investigator) this seems an extremely inappropriate location for such energy infrastructure and would impose an unacceptable increased risk for the pilots, crew and passengers of aircraft operating out of Tibenham airfield.

National Grid Pylons

The following table contains information on the National Grid Pylons that are currently located in the vicinity of Tibenham Airfield, giving details of heights and distance from the affected 08 Runway.

The Pylons were recently refurbished, with work completed in May 2024

The following Pylon Information is in part taken from the publicly available National Grid Database - 'Towers'dbf'

NG Tower Asset No	Tower Height (m)	NG Line Series	Year of Installation	Pylon Distance From R/W 08 T/O Point (m)
4YM143	49.65	L6	1968	1,870
4YM144	50.30	L6	1968	1,680
4YM145	48.02	L6	1968	1,540
4YM146	48.98	L6	1968	1,590
4YM147	51.02	L6	1968	1,700
4YM148	53.54	L6	1968	1,850
4YM149	55.10	L6	1968	2,070
4YM150	56.38	L6	1968	2,300
4YM151	57.80	L6	1968	2,550
4YM152	56.85	L6	1968	2,700
4YM153	53.32	L6	1968	2,820



Figure 1: Pylon Distances from Take-Off Point Runway 08

The diagram above shows the distances in kilometres to relevant National Grid Pylons from the take-off point of Tibenham's Runway 08.

Pylon Construction

The Pylons are of the Steel Lattice type, each carrying 18 high voltage power lines in 6 groups of 3, rated to carry 400kV and are up to 57.8m tall.

Following the refurbishment, it is assumed that the cables are of the more modern composite construction- Aluminium Conductor Steel Reinforced (ASCR), with a steel core providing the mechanical tensile strength needed to hold the heavy weight of the cable across long spans, while the outer aluminium strands carry the high-voltage electrical current.

The top wire which is strung across the top-most point of the Pylons, is constructed out of high-strength, weather-resistant bare metal, designed to handle structural tension and massive electrical surges. It is typically made from:

- Galvanized steel strands
- Aluminium-clad steel (providing both high strength and good conductivity)

The wire at the top serves two main critical engineering functions:

- **Lightning Protection:** Because it sits at the highest point, it acts as a continuous lightning rod. When lightning strikes, it hits this top wire instead of the live power lines below. The electrical surge is immediately redirected down the steel frame of the pylon and dissipates into the ground.
- **Fiber-Optic Communication:** On modern grid networks, this wire is often replaced with an OPGW (Optical Ground Wire).

Although not carrying electrical current, this 'top wire' being of high strength, still constitutes a danger to any aircraft with which it comes into contact. Attempting to over-fly the Pylons following an EFATO event, in close proximity to this 'top-wire' is extremely hazardous.

Pylon Realignment

During the Jan'26 meeting, NGC were informed by the Applicant that a Pylon Realignment would be required (presumably to accommodate the imposition of the National Grid and East Pye Substations to the North of Site 1A).

DCO Document **APP-040** 6.1.4 Environmental Statement Volume 1: Chapter 4 – The Scheme (Revision 1) - gives the following information related to the Pylon Realignment:

Electricity Pylons	Number	Up to four new pylons (of which three would be associated with the repositioning of existing pylons and up to 1 new pylon).
	Height	Up to 61m above ground level.

As of the date of the submission of this Written Representation (Early Oct'26), NGC have not been included in any discussion or consultation regarding the Pylon Realignment Project and have also been unable to find any details in the DCO Library, relating to the this project, which has been allocated as being part of the Applicant's Solar project - Work No: 5,. As such NGC are unable to make any judgment as to if these changes will or will not impact the operations from Tibenham Airfield.

High Level Investigative Report

The 'High Level Investigative Report' produced by the Applicant, is as the title describes – a high level, low in detail discussion on the impact that the Applicant's energy installations will have on Tibenham Airfield's operation.

In being at a very high level, it makes a number of unsubstantiated misleading claims, uses an inappropriate EFATO example, references non applicable European aviation documents, omits major existing and planned energy infrastructure, whilst using an arbitrarily restrictive 2km 'baseline' area, together with photographic evidence of other solar installations in an attempt to justify the implementation of the Applicant's proposals.

The omissions include; the existence of the adjacent 'Station Road Solar Farm', National Grid's 400kV Pylons located to the east of Tibenham airfield and running through the area of the proposed energy installations and the plethora of UK Power Networks' High and Low Voltage power cables and infrastructure that is strung across and adjacent to the fields in the vicinity of Tibenham Airfield.

The following discussions, reference the various document sections of the Applicant's 'High Level Investigative Report'.

'High Level Investigative Report' Section 3.1.1 - 'Engine Failure After Take-Off'

This section starts off by using the definition of 'Engine Failure After Take Off ' (EFATO) as taken from the Civil Aviation Authority's **CAST Advice Note 5** which also gives advice to designers of Renewable Energy Developments which are planned to be located near to UK airfields and was produced by the CAA's Combined Aerodrome Safeguarding Team (CAST).

Here the 'High Level Investigative Report' quotes two points relating to EFATO events, taken from **CAST Advice Note 5**:

- “It is recommended that a pilot does not conduct a turn greater than 45 degrees straight ahead.”

NGC Comment:

It should be understood that this advice relates to the point at which the EFATO Event occurs. That is to say that the 45 degree turn restriction should be applied at the point that the engine failure occurs, not from the end of the take-off runway as suggested by the 'High Level Investigative Report' image at Figure2.

- “There is no defined safeguarding area for an EFATO, however, considering the above, an area extending 45 degrees either side of the extended runway centreline can be established.”

NGC Comment:

The CAST Advice Note 5 goes on to say “There is no given distance for this area ...” where the 'High Level Investigative Report' Figure 2 and the description of the

‘Assessment’ used by the ‘High Level Investigative Report’, limits discussion to 2km from the end of Runway 08. In imposing this 2km limit, a large proportion of the Applicant’s proposals, together with the existence of the ‘Station Road Solar Farm’ and the effects of the National Grid Pylons to the East of the Airfield, are effectively excluded from the High Level assessment.

This 2km limit was not applied to the assessment of the impact of the Applicant’s proposals on Seething Airfield’s operation.

Key to the maps used in this document section:



'High Level Investigative Report' Section 3.2 - 'Assessment'

Baseline Assessment Areas

The area that has been selected for assessment by the Applicant within the 'High Level Investigative Report' has been restricted arbitrarily, to a 2km arc from the threshold of Tibenham's runway 08, contrary to the advice contained in **CAST's Advice Note 5**. There is no discussion as to where the 2km limit was sourced or why it was chosen.

The areas within the 30° & 45° take-off splays, limited to 2km from the threshold of Tibenham's Runway 08 are described by the Applicant as the 'Baseline Sectors'.

No such equivalent 2km limit was applied to the assessment produced by the Applicant when investigating impacts to Seething airfield's operation [DCO Document: APP-223].

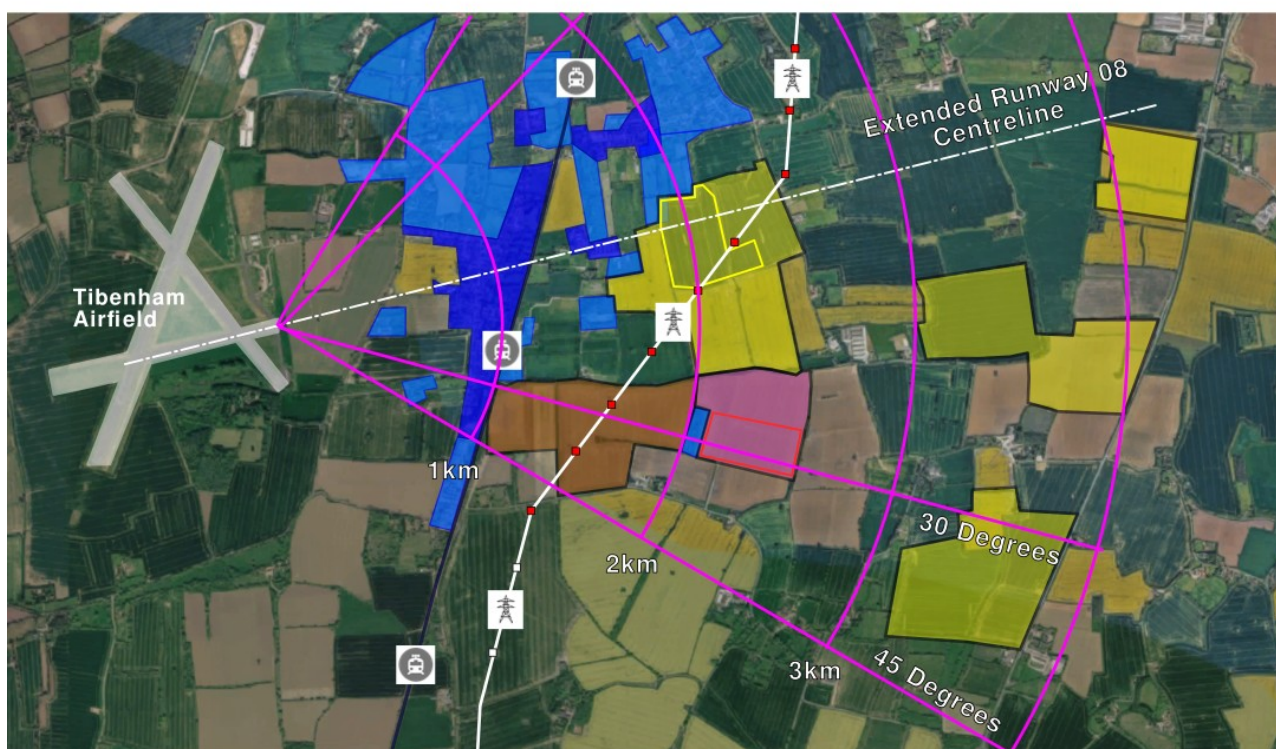


Figure 1: Tibenham Runway 08 – 30° & 45° Take-Off Splays

A truer representation of the area around Tibenham, showing the location of the Applicant's proposals including the 'Station Road Solar Farm' installation together with the existing *National Grid Pylons* and *Main Line Railway*, can be seen in the above diagram.

NGC do not recognise or accept this arbitrary 2km limit as being appropriate when assessing flight operations from Tibenham Airfield due to:

- The complexity of the aviation environment within which Tibenham operates; Mixed Gliding and Power, proximity to Priory Farm and the proposed Norwich to Tilbury Pylons.

- The surrounding geographic limitations (Sneath Common, Great Moulton, Main Line Railway and the existing Pylons)
- The complexity and location of the proposed East Pye & National Grid energy infrastructure (Solar Panels & multiple Substations directly on the centreline of Tibenham's Runway 08).

Such a limit is also specifically negated in the CAA's **CAST Advice Note 5** and appears to have been chosen by the Applicant to exclude a vast majority of the proposed infrastructure from any assessment (Panels, Substations and the BESS).

The existence of the '**Station Road Solar Farm**' is shown in Light Brown in the Figure above.

Although the '*Station Road Solar Farm*' exists within the arbitrary 2km limit as used by the 'High Level Investigative Report', it has been omitted from all diagrams and discussions contained within it. Similarly, the existence of the National Grid Pylons which form a substantial barrier to any aircraft attempting to clear the area covered by the Applicant's proposals have also been completely omitted.

There is no justification for the imposition of this arbitrary 2km limit. The reason why it is necessary to ignore the Applicant's imposition of this arbitrary 2km limit becomes more apparent, when assessing engine failure scenarios (See Document Section: **Runway 08 EAFTO Analysis**).

Areas unsuitable for an emergency off-field landing

The 'High Level Investigative Report' then goes on to detail areas within the 30° and 45° take-off splay of Tibenham's Runway 08 which are deemed to be unsuitable for an emergency off-airfield landing, stating that these have been selected as "*The most significant areas i.e. areas of dense population, dwellings and non-residential buildings have been considered*"

Again these have been limited using the arbitrary 2km limit.

NGC's view, is that the Applicant have been overly selective when it came to deciding which areas are unsuitable for an emergency off-field landing.

Using local knowledge and the use of more up to date mapping, NGC have produced an additional selection of areas that should be deemed unsuitable for an emergency off-airfield landing. These include areas that support: industrial, agricultural and residential use, together with those areas which are densely wooded or are small fields surrounded by high hedges and trees. All of which, good practice and public safety dictate, should be avoided when selecting an area for an off-airfield emergency landing.

The following figure shows both the areas originally selected within the 'High Level Investigative Report' (Dark Blue – the 30° and 45° areas have been combined) overlaid with those areas selected by NGC (Light Blue).

Detailed maps of those additional areas identified by NGC as being unsuitable for a forced off-field landing are shown in **Appendix C - NGC Unlandables** . Examination of these images will clearly show why these areas have been identified as being unsuitable for an off-field landing.

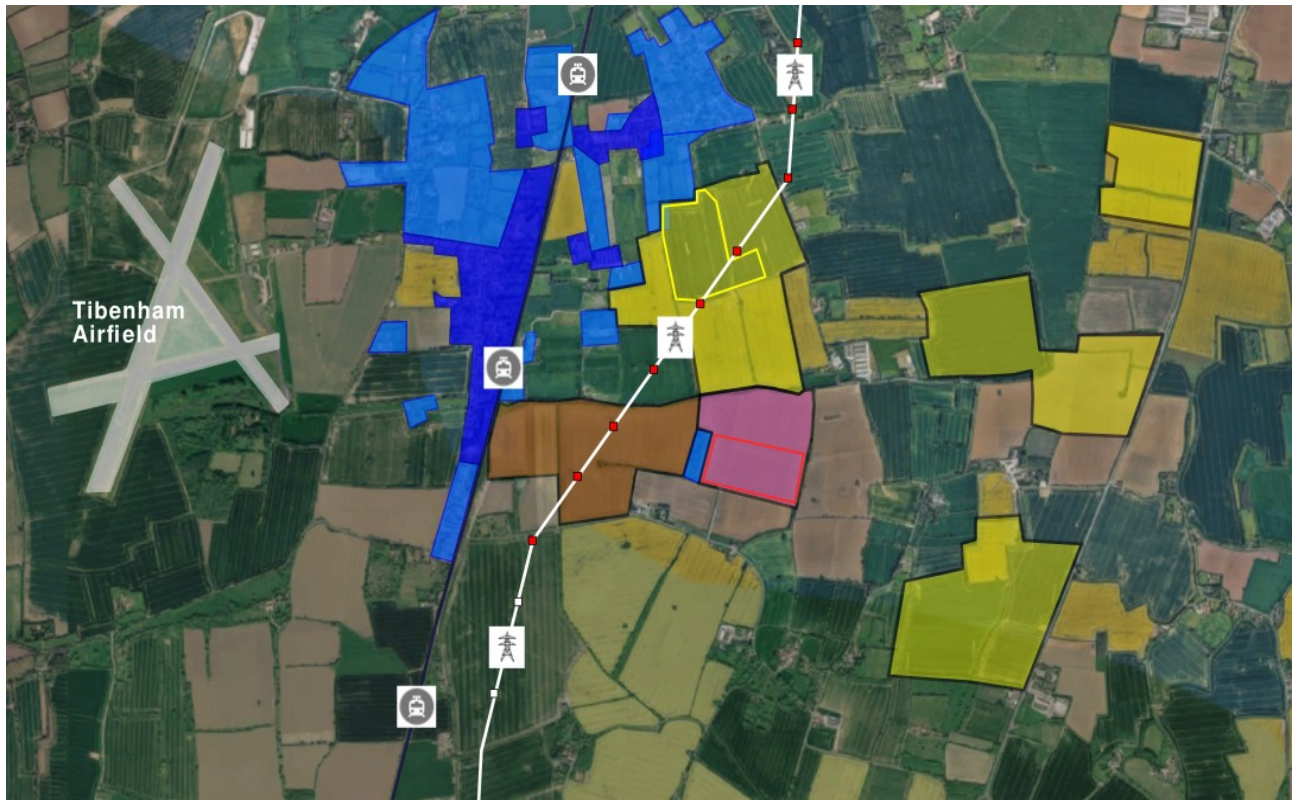


Figure 2: Unsuitable Areas for an emergency off-field landing (Combined)

'High Level Investigative Report' Table 1 - Percentage of land occupied by proposed development

This table once again imposes the arbitrary 2km limit and as discussed above, excludes a majority of the proposed development together with other Energy Infrastructure in the vicinity of Tibenham Airfield ('Station Road Solar Farm' & National Grid's Pylons). There is no discussion as to where this 2km limit was sourced from nor any acceptance that it is contrary to the recommendation given by the CAA's **CAST Advice Note: 5** .

The 2km limit is not deemed appropriate when investigating aviation activities in the vicinity of Tibenham Airfield.

As such this table contains no information relevant to an EFATO event.

'High Level Investigative Report' 300' Engine Failure Calculated Example

The paragraph following Table 1 goes on to describe a single EFATO calculated example:

- 300' EFATO Event at the 2km point

It should be noted that this example does **not** utilise the same criteria as that utilised for similar assessments in document **APP-223 - EN0110014-000085-7.28 Potential Impact on Seething Aerodrome Forced Landing Options**.

The criteria used in the Seething impact report are shown below:

Table 1: Runway 24 EFATO forced landing options criteria

Airborne point	600m from the start of runway 24
Aircraft climb rate	500 feet per minute at a ground speed of 60 knots, i.e. a climb gradient of 500ft per nautical mile or 8.2%
Aircraft best glide	Glide ratio of 8:1 from the point of performance engine failure i.e. a descent gradient of 12.5% or 760ft per nautical mile
Potential forced landing	Those within +/-45° of the fields climbout heading i.e. between 195° and 285° for aircraft departing from runway 24

Note: This information is taken directly from the **APP-223 - EN0110014-000085-7.28 Potential Impact on Seething Aerodrome Forced Landing Options** and hence references Seething's Runway 24. The runway of concern at Tibenham is 08.

The example contained in the 'High Level Investigative Report' describes a 300' Engine Failure event with this occurring 2km from the end of runway 08.

To achieve the suggested 300' as far out as the 2km point used in the example, an aircraft flying at 60 knots, would be required to achieve a restricted climb rate of only 277ft per nautical mile, which is approaching half the climb rate that was used in the assessments of Seething's EFATO events of 500ft per nautical mile.

The aircraft would have to actually achieve a worse climb rate than the 277ft per nautical mile stated above, as the 2km point in the example, is taken from the end of runway 08, and **not** from the 600m take-off point as used in the Seething EFATO analyses, which would have been 66m further back, demonstrating another inconsistency between the treatment of Seething and Tibenham.

The aircraft in this 'High Level Investigative Report' 300' EFATO example would also struggle to clear the power-lines which lie directly ahead on the Runway 08 centreline.

Using the original criteria for the climb-out as used in the Seething impact report: a climb rate of 500' per nautical mile at 60 knots, an aircraft taking off from Runway 08 would reach the 300' mark, at 0.6nm / 1.11km from the take off point – a little over halfway to the arbitrary 2km marker of the somewhat contrived 'High Level Investigative Report' example.

The aircraft would then be able to travel another 730m (8:1 descent rate from 300') before reaching the ground for a total distance of approx. 1.84km and would therefore be unable to reach the arbitrary 2km reference used in the 'High Level Investigative Report' example.

The diagram below shows the calculated 300' EFATO scenario, utilising the original criteria from the Seething impact report, with the 300' EFATO event occurring at 0.6nm or 1.11km after take-off, not the 2km of the example, the aircraft then travelling another 730m meters on its 8:1 decent as denoted by the red arc and reaching approximately 1.84km from the take-off point. The aircraft would also have to negotiate the 3m high steel palisade fencing that is proposed to surround the Applicant's infrastructure sites.

This is being denoted as an approximate distance value, as this is the distance at which the aircraft would reach the point over the ground at which it would need to commence a 'flare'. There will then be a subsequent distance over which the aircraft will slow down, before 'touching-down' followed by an indeterminate distance of 'ground run' before coming to a rest.

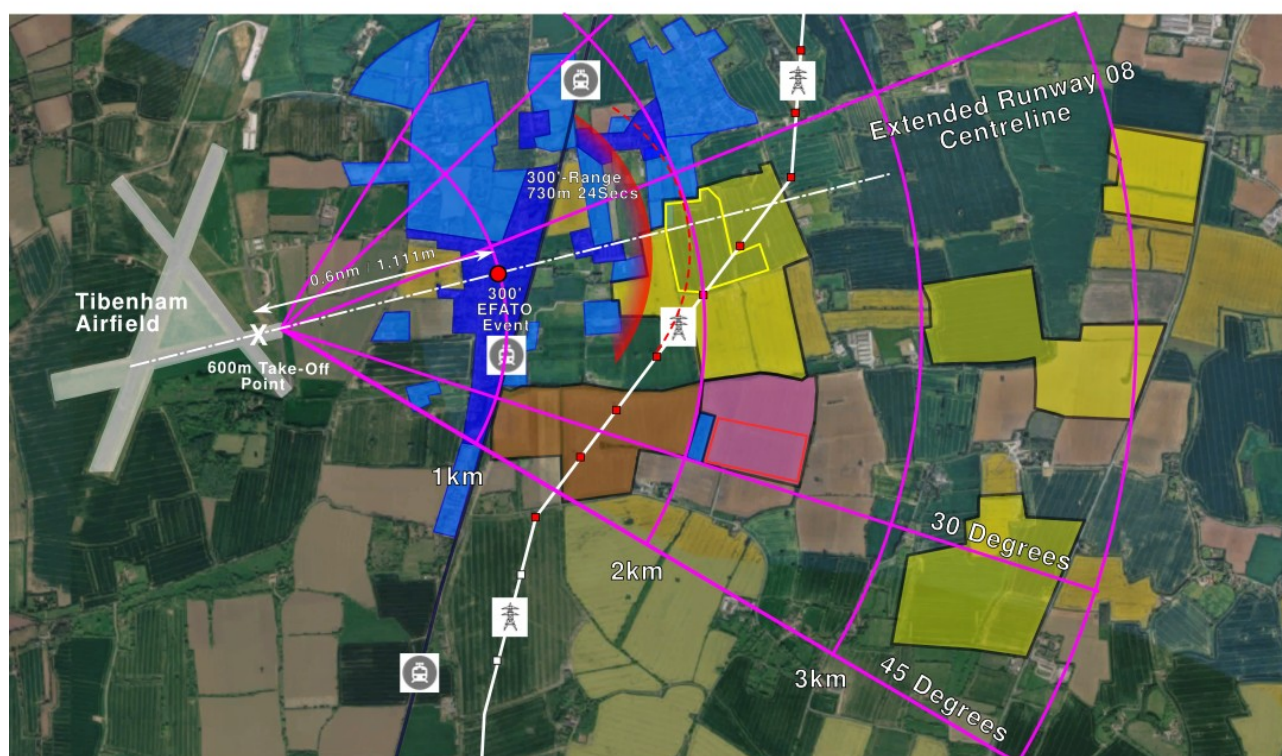


Figure 3: Calculated 300' EFATO Event

This extended distance is shown in the diagram above as a Red Dotted line located in front of the 45 degree EFATO Range arc and shows the extended reach an aircraft is likely to have following a 300' EFATO event. An estimated 200m extended reach has been assumed, which gives a total distance of 2.04km from the take-off point.

From this diagram, it can be seen that the aircraft will indeed reach the area covered by the proposed solar panels and will have no capability to fly beyond them, contrary to the suggestion given by the example in the High Level Investigative Report.

The following diagram shows a profile comparison between the 300ft EFATO example given in the 'High Level Investigative Report' and that calculated using the 'Seething Criteria'.

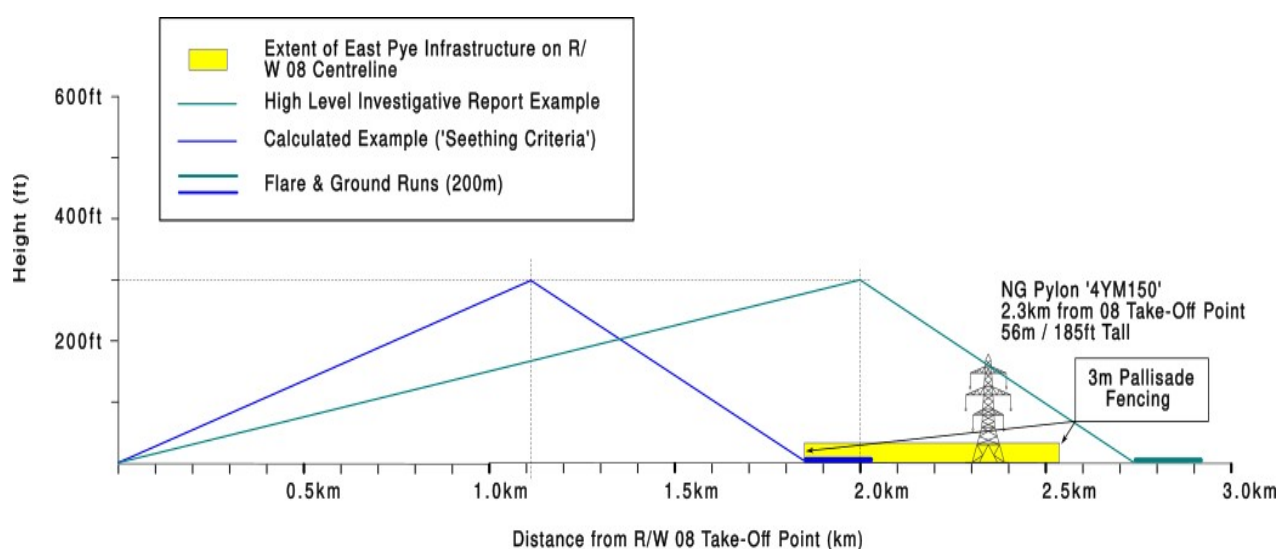


Figure 4: Comparative 300' EFATO Profiles

The narrative around the report's example, incorrectly suggests that heights below the 300ft case do not need to be considered and references an EASA document: '*Easy Access Rules for Air Operations*'. The report then goes on to quote this document as saying: "*It is accepted that performance accountability for engine failure need not be considered until a height of 300 ft is reached*" – See Report Footnote 5.

Two comments on this assertion:

1. EASA documents and standards do not directly apply to UK aviation operations. The UK abides by regulations and standards as laid out in the Air Navigation Order (ANO) which is the main legal framework that governs civil aviation safety and operations in United Kingdom airspace.
2. The quote taken from the EASA document is from section '*GM1 CAT.POL.A.310 Take-off obstacle clearance – **multi-engined** aeroplanes*' and therefore does not apply to any powered aircraft currently based out of Tibenham airfield which are exclusively **Single**

Engine Piston aircraft. (SEP). Demonstrating a lack of understanding on the part of the Applicant's consultant as to which aircraft types are based at Tibenham.

The example used in the 'High Level Investigative Report', demonstrates another instance where Tibenham is being treated very differently to Seething, where new/different criteria have been used in the 'High Level Investigative Report' example, presumably in an effort to make the Applicant's proposals look less of a problem for aircraft using Tibenham's runway 08.

The 'High Level Investigate Report' makes no attempt to provide a full analysis of EFATO events at the 100', 200', 300 & 400' as per the Seething impact report. Had the Applicant carried out a full analysis, they would have understood that the example given in the 'High Level Investigate Report' was indeed **not** the 'worst case' as the report suggests.

Due to this disparity, NGC have produced its own analysis of EFATO Events utilising the same criteria that was used in the impact assessment for Seething Airfield. (See Document Section: **Runway 08 EAFTO Analysis**)

High Level Investigate Report – Conclusion

The report's conclusion, starts off by reiterating the assertion that the area of the proposed development is *"less than 10% of the land within the recommended and advised sectors following EFATO and GLF, out to 2,000m from threshold 26"*.¹

NGC do not recognise the arbitrary 2km limit / baseline that the Applicant's consultant has applied. It does not comply with advice contained in the CAA's CAST Advice Note 5: and is not deemed appropriate when viewing the local geography in the vicinity of Tibenham Airfield. It was also not applied to Seething's impact analysis.

The 2km limit appears to have been imposed exclusively to exclude a vast proportion of the Applicant's proposals from any form of appraisal or investigation.

From the analysis carried out by NGC, it can be seen that the Applicant's Proposals would remove almost all options for a safe off-airfield landing following an engine failure at heights of 300ft & 400ft, when taking off from Tibenham's Runway 08.

The High Level Report's EFATO Conclusion, then goes on to reference CAP 738 confirming that *"new obstacles, such as the proposed development, should be considered in the event of emergency scenarios"* but as mentioned above, the report does not address the full range of failure scenario's, instead, only discussing a single, somewhat contrived example.

¹ Although here the report quote references Runway 26, we suspect that this should have been Tibenham's Runway 08 which is the take-off direction most affected by Applicant's Proposals

The Conclusion then attempts to downplay the effects that the proposed development will have, by stating that *“Tibenham Airfield, regularly operate in environments where traffic, obstacles in the form of vegetation and buildings, and sometimes restricted airspace exist within the vicinity of the extended runway centreline”* without acknowledging that the development proposed by the Applicant will remove a large number of the currently available off-airfield emergency landing options.

NGC accepts that there are certain obstructions that already exist close to the centreline of runway 08. The residential areas of Sneath Common and Great Moulton have been in existence for many many years, possibly for as long as the airfield has been in operation and the Pylons were installed nearly 60 years ago (in 1968). The Applicant’s proposals are new, and will remove a majority of the available forced off-airfield landing options.

Note: Restricted Airspace does not constitute a danger to pilots – if Restricted Airspace is in place pilots either avoid flying through the restricted areas or comply with the conditions of the restrictions. Such Airspace Restrictions are also temporary and do not form a physical barrier to a safe landing following an EFATO event.

The Conclusion then suggests that other airfields coexist safely with Solar implementations and provides images of both Beccles and Turweston airfields. Without further details of what if any mitigations the solar developers put in place or what restrictions the airfields were then put under, NGC can’t comment on the veracity of these examples.

Turweston

However from the images alone, it is clear that the Turweston development has been implemented with little/no consideration for a low level EFATO event when using Turweston’s Runway 27 and as such could easily be held up as an example of poor development and bad planning.

Beccles

With regards to Beccles airfield, it should be noted, that a recent planning application for an Anabiotic Digester (AD) on land close to the centreline of Beccles Runway 27, was rejected by the Planning Inspectorate on appeal (*Appeal Ref: APP/V3500/W/24/3354097 Land at Copland Way, Ellough, Beccles, Suffolk, NR34 7TL Decision Date: 8th April 2025*) where aviation safety following an EFATO event was a major factor in the rejection.

In the decision document, the Inspector stated that:

“the AD Plant would further erode an already constrained area for a forced / emergency landing. In an environment where flying training is taking place with inexperienced pilots, that significantly increases the risk of an aircraft carrying out a forced landing colliding with the proposal, causing serious injury or a fatal accident”

Which mirrors very closely the situation in which Tibenham finds itself following the Applicant’s proposals, where options available for a forced off-airfield landing are being further constrained.

In recognising that Beccles is an airfield where pilot training is carried out (As also happens at Tibenham), the Planning Inspectorate later went on to state that :

“aircraft are at their most critical phases of flight after departure and prior to landing and this is a regular activity during pilot training and low hour pilots using this airfield. These circumstances were not disputed. To my mind, Beccles Aerodrome operates under a dynamic training situation, with a variety of aircraft, where the departure path has already been limited”

and ..

“Pilot training at Beccles Aerodrome involves a significant amount of circuit flying, which is repetitious take offs and landings. The increased obstacle environment may make such circuits more complicated and increase the risk of a collision either at take-off or landing, between an aircraft and flammable materials within the AD Plant.”.

As mentioned in the **Survivability** section of this document, the chances of surviving a forced landing into either the Solar Panels or one of the proposed Substations, would be extremely low.

During the planning appeal the appellant, modified the original site layout to provide a 20m wide strip of land that would provide an ‘*aviation clearance zone*’ which would exist on as similar a heading as possible to that of the affected runway.

However the Inspector went on to dismiss this as being insufficient due to the determination that :

“the real issue is with ‘low hours’ pilots, those who hold a licence but do not have much experience. A low hours’ pilot would struggle to land in such a limited space.”

Note: Had it been deemed acceptable by the Inspector, this 20m wide ‘*aviation clearance zone*’ would have been insufficiently wide enough for at least two of the aircraft types that are currently based at Tibenham: ‘Stemme S10’ & HpH 304TS ‘Twin Shark’, which have wingspans of or exceeding 20m. Another Motor Glider type: Grob G109 has a wingspan of 17.4 metres and would have only just over a metre clearance at each wing-tip within the suggested 20m wide ‘*aviation clearance zone*’.

The full adjudication can be read on the Planning Inspectorate’s website by searching for ‘**Appeal Ref: APP/V3500/W/24/3354097**’.

Haddon Road Solar Park / Sibson Aerodrome

In a separate instance, a planning appeal relating to ‘Haddon Road Solar Park’ (Appeal Ref: APP/H0520/W/25/3369356 Land East of Billing Brook and North and South of Peterborough Road, Haddon, PE7 3TT) was refused, with the Planning Inspectorate’s decision citing aviation safety concerns (On both Glint & Glare and EFATO issues) as contributory factors leading to the refusal.

The full adjudication can be read on the Planning Inspectorate’s website by searching for ‘**Appeal Ref: APP/H0520/W/25/3369356**’.

In the instances of the Beccles and Haddon Road Solar Park planning appeal refusals mentioned above, it should also be noted that, although the affected airfields have their own unique factors affecting the day to day running of these airfields, the two airfields operate in a simplex environment, one that provides aviation facilities exclusively for powered aircraft, without having the added complexity of a simultaneous Gliding activity operating from the same location as happens at Tibenham.

Botley West Solar Farm / London Oxford Airport

The proposed 'Botley West Solar Farm' planning application has completed the PINS process and the ExA's report was sent to the Secretary of State Energy Security and Net Zero on 10th Feb'26.

Since when, the Secretary of State Energy Security and Net Zero has extended the decision timeline beyond the usual 3 months with a decision is yet to be published.

London Oxford Airport's safe operation was affected by the 'Botley West Solar Farm' proposals with the original master-plan containing Solar Panels on the centreline of the airport's Southerly runway. During the consultative process, London Oxford Airport alerted the Applicant of an EFATO incident and requested an alteration to the proposed layout sufficient to safeguard an area of land under the approach and departure route south of the airport in order to allow for safe emergency landing.

This resulted in a new proposed solution which included the removal of 39ha of solar panels to create the suggested safeguarding zone.

Which raises the questions as to why the original proposals did not consider the possibility of EFATO events.

In addition, none of the solar projects affecting the airfields mentioned above, appear to include any proposals for energy Substations or Battery Storage Solutions close to the airfields, as is the case for the Applicant's proposals near Tibenham.

Engine Failure After Take-Off Analysis

This document section contains an NGC analysis of Engine Failure After Take-Off (EFATO) events from Tibenham's Runway 08, utilising the same criteria that was previously used in the Applicant's impact assessment for Seething Airfield's Runway 24.

Note: No equivalent analysis for Tibenham EFATO Events was carried out by the Applicant.

The criteria used for the Seething Impact assessments being:

Table 1: Runway 24 EFATO forced landing options criteria

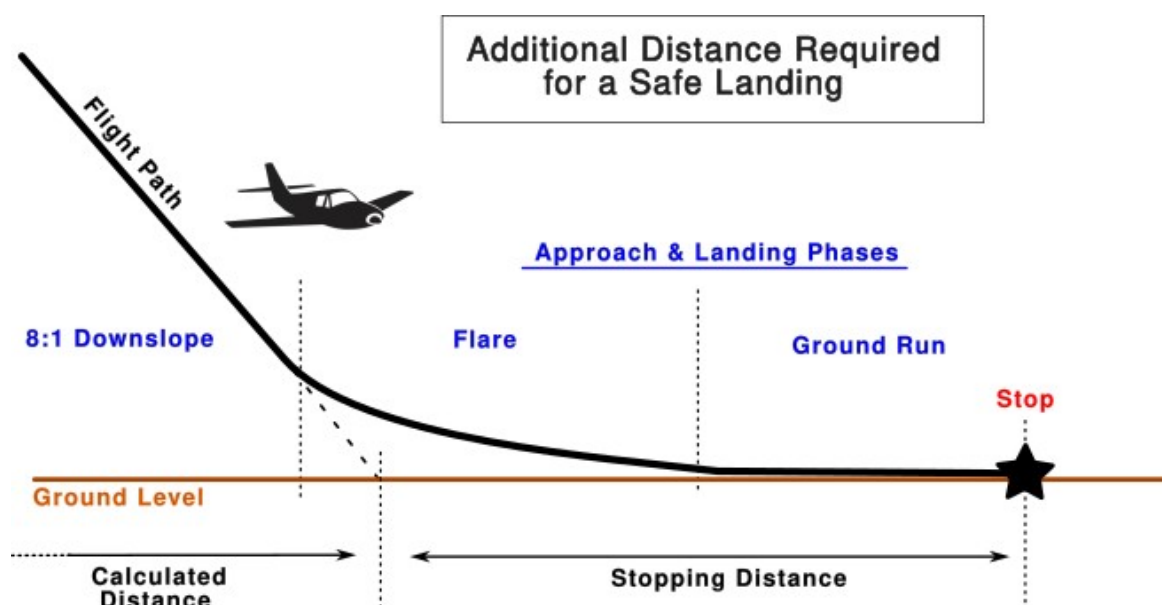
Airborne point	600m from the start of runway 24
Aircraft climb rate	500 feet per minute at a ground speed of 60 knots, i.e. a climb gradient of 500ft per nautical mile or 8.2%
Aircraft best glide	Glide ratio of 8:1 from the point of performance engine failure i.e. a descent gradient of 12.5% or 760ft per nautical mile
Potential forced landing	Those within +/-45° of the fields climbout heading i.e. between 195° and 285° for aircraft departing from runway 24

Note: This information is taken directly from the ***APP-223 - EN0110014-000085-7.28 Potential Impact on Seething Aerodrome Forced Landing Options*** and hence references Seething's Runway 24. The runway of concern at Tibenham is Runway 08.

As per the Seething impact document, assessments have been made at heights of 100ft, 200ft, 300ft and 400ft above the elevation of the runway at Tibenham Airfield.

Downslope Assessment Limitation

By exclusively utilising the ratio of the downslope (8:1 in this case), it should be noted, that the EFATO Range calculation used by the Applicant, both in the single example in the 'High Level Investigative Report' relating to Tibenham and in the examples used in the Seething Impact report, do not reflect the full distance that an aircraft will travel before coming to a complete rest but instead represents the distance from the EFATO event to where the aircraft would impact the ground, should the pilot not attempt the carry out a safe landing by 'flaring' the aircraft.



The figure above shows an aircraft reacting to an emergency approach & landing following an EFATO Event. The pilot will descend the aircraft on a glide slope (8:1 from the Seething Impact Report) that allows the aircraft to fly at a sufficient airspeed allowing it to remain in the air and retain control authority which allows the pilot to safely manoeuvre the aircraft as needed.

Nearing the ground the pilot will 'Flare' the aircraft to: avoid impacting the ground at speed and bring the airspeed of the aircraft back to the lowest possible airspeed whilst still remaining in control of the aircraft. This ensures that the aircraft touches down with the lowest possible energy, essential in an emergency situation.

As the aircraft slows down and loses energy, it will slowly descend to the ground to a 'Touchdown'. At this point, the aircraft is no longer flying but still has forward momentum which will see it moving forward in the 'Ground Run'. Through friction with the ground surface and the braking effect that the pilot may apply using the aircraft's braking system, the aircraft then slows down until it comes to a complete stop.

Depending upon the prevailing weather / wind / ground conditions, it is estimated that the distance travelled by a landing aircraft could be up to an additional 200-250 metres.

See Appendix D EFATO Distance Calculation Method – for information on method used to calculate the landing distances.

EFATO Assessment of Lower Performance Aircraft

To account for the lower climb-out performance of a number of aircraft types, currently based at Tibenham : Bi-Planes, Glider-Tug Aerotow Combination, Motor-gliders etc. NGC have included an additional set of EFATO Analyses.

In these analyses, the climb-out performance reduction has been estimated at 20%.

Thus, using the 'Seething Criteria' of taking 1 Nautical Miles to reach 500ft, these lower performance aircraft take 1.2 Nautical Miles to achieve the same height.

Glider-Tug Aerotow Combinations

As noted above, the Glider-Tug Aerotow Combination has been included in the -20% analyses category, as any EFATO event suffered by an aerotow combination would have a direct impact on the Tug aircraft even after the Glider has detached.

The glider, due to its better glide performance may have more options for a forced off-airfield landout but this is not guaranteed.

The British Gliding Association's instructors manual also states that gliders should not initiate a turn below 300ft and therefore in a low level aborted aerotow, a straight ahead landing is still the only recommended option for the glider.

Once the glider has released, the Tug aircraft has the same limited landout options imposed upon it, as if it was not originally part of the aerotow combination.



Figure 1: An Aerotow 'Combination' - Just after take-off

UK Power Network HV & LV infrastructure

Although the UK Power Networks HV & LV infrastructure of poles, cables and other paraphernalia constitute a danger for any aircraft attempting to perform a forced off-airfield emergency landing, for the sake of clarity, these have been omitted from the following EFATO diagrams.

For details of this infrastructure in the vicinity of Tibenham Airfield, see document section '*Power Infrastructure Maps in the Vicinity of Tibenham Airfield*'.

Key to the maps used in the NGC EFATO analyses:

	Position of the EFATO Event
	Extent of the Glide down to the ground following an EFATO Event – 45° either side of the runway centreline from the position of the EFATO
	As above but including a 200m Flare / Ground Run
	Areas identified by the Applicant, as being unsuitable for an off-airfield landing.
	Additional areas identified by the NGC, as being unsuitable for an off-airfield landing.
	Location of proposed Solar Panel Arrays and associated Substations
	Location of the proposed Battery Energy Storage System (BESS) and associated Substation.
	Location of the Station Road Solar Farm development
	Existing Pylon Route
	Main Line Railway

Tibenham Runway 08 – 100ft EFATO Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 100ft would see no impact from the Applicant's proposed energy installations.

The aircraft would take 370m to reach 100ft, with an 8:1 downwards glide-slope distance of an additional 240m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 810m and would not reach the extent of the Applicant's proposed energy installations.

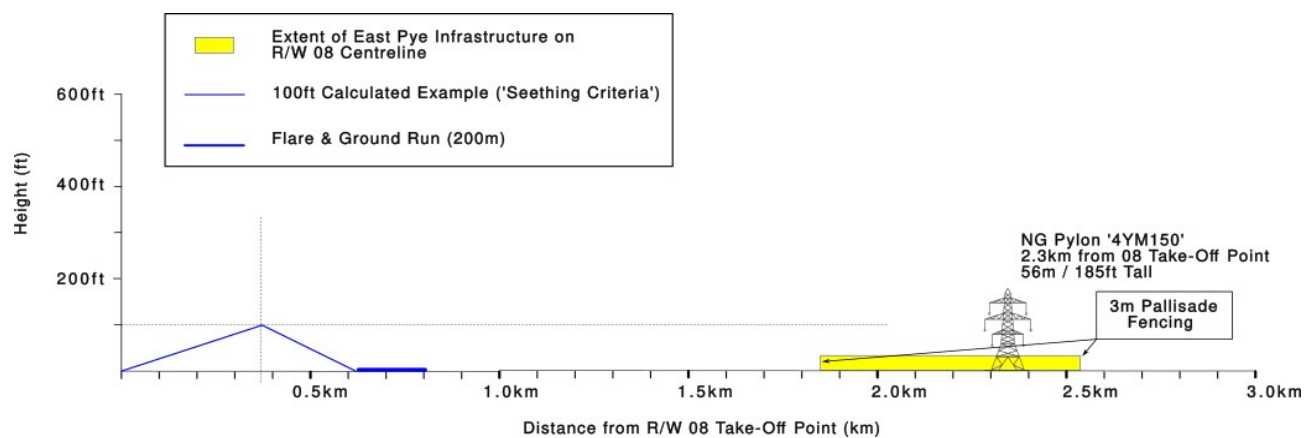
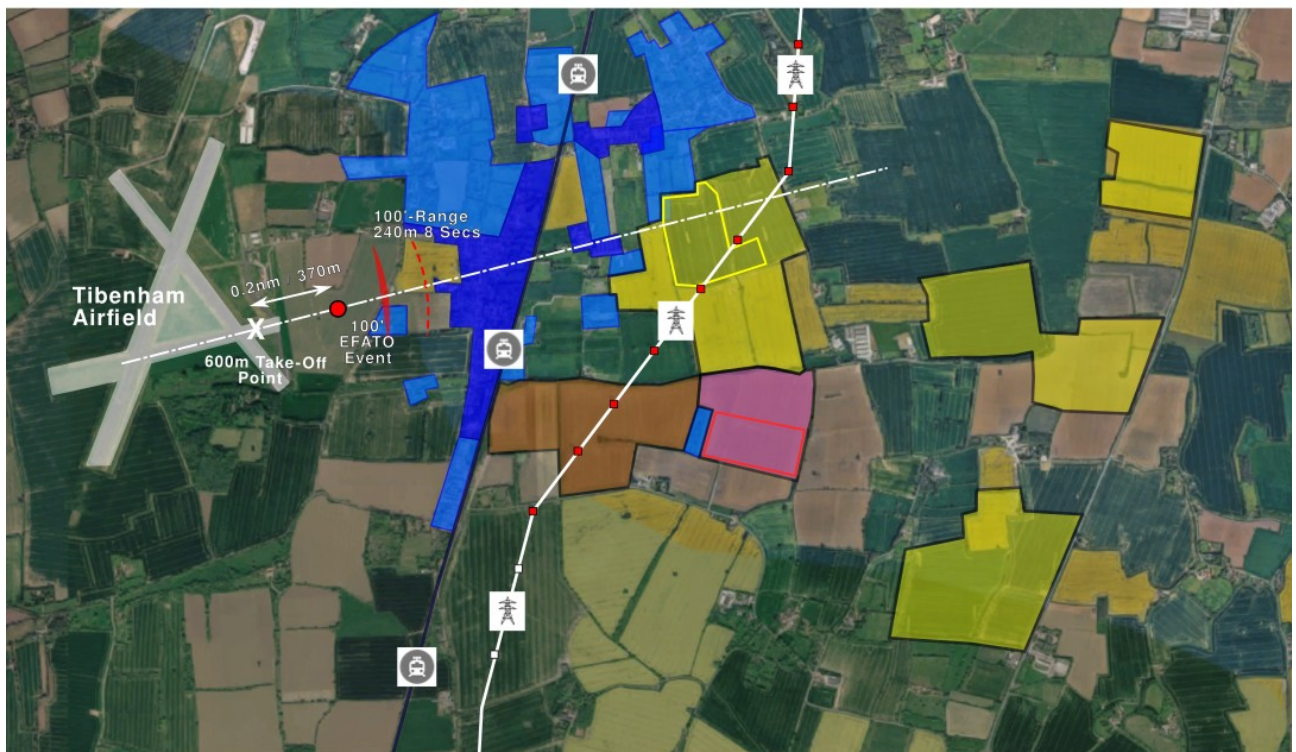


Figure 2: Map & Profile of a 100ft EFATO Event - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 100ft would not have their forced off-airfield landout options constrained by the Applicant's installations.

Tibenham Runway 08 – 200ft EFATO Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 200ft would see no impact from the Applicant's proposed energy installations.

The aircraft would take 741m to reach 200ft, with a downslope distance of an additional 485m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 1.43km and would not reach the extent of the Applicant's proposed energy installations.

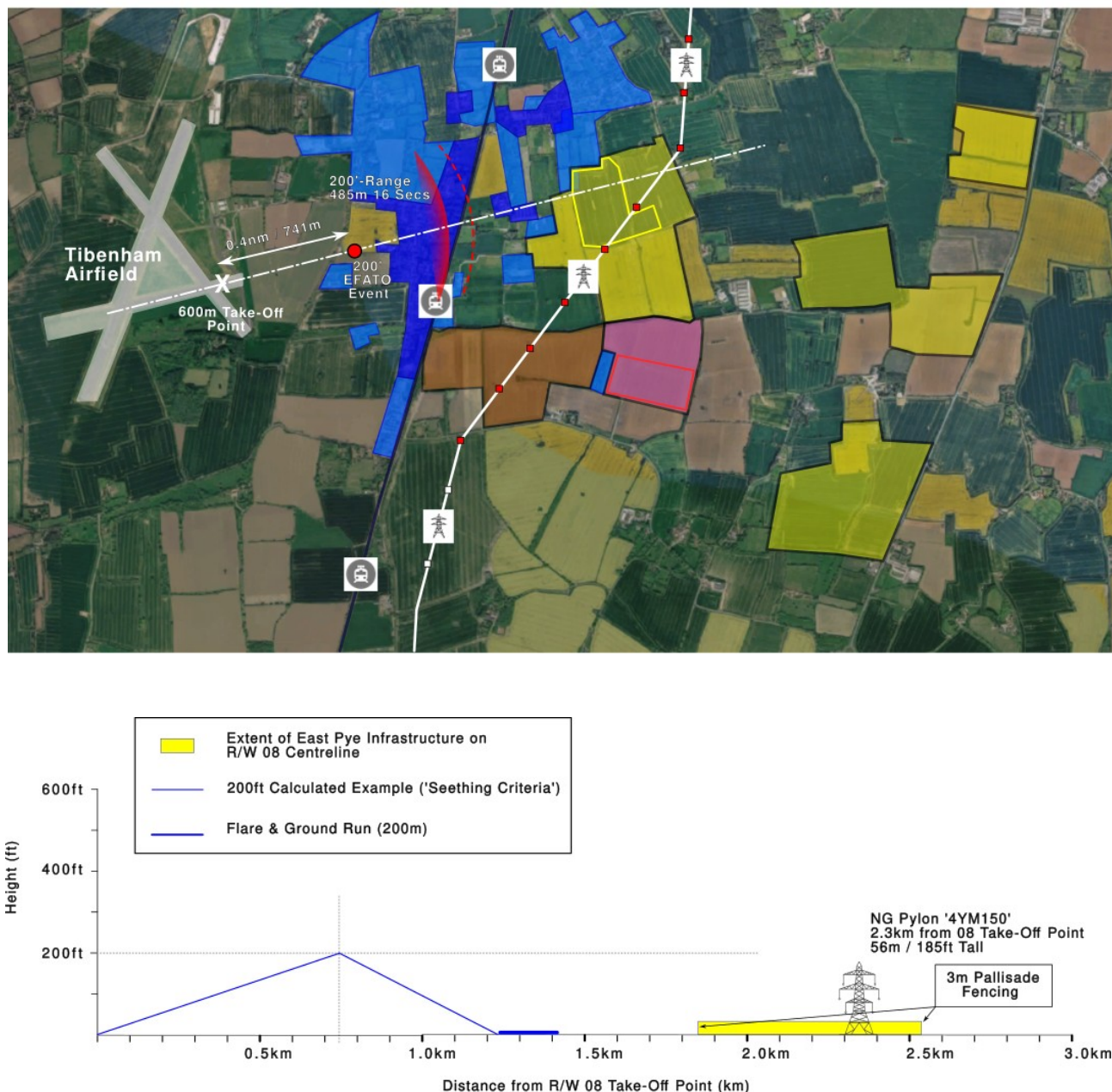


Figure 3: Map & Profile of a 200ft EFATO Event - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 200ft would not have their forced off-airfield landout options constrained by the Applicant's proposed energy installations.

Tibenham Runway 08 – 300ft EFATO Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 300ft would be severely impacted by the existence of the Applicant's proposed energy installations.

The aircraft would take 1.11km to reach 300ft, with a downslope distance of an additional 730m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 2.04km and would reach the extent of the Applicant's proposed energy installations.

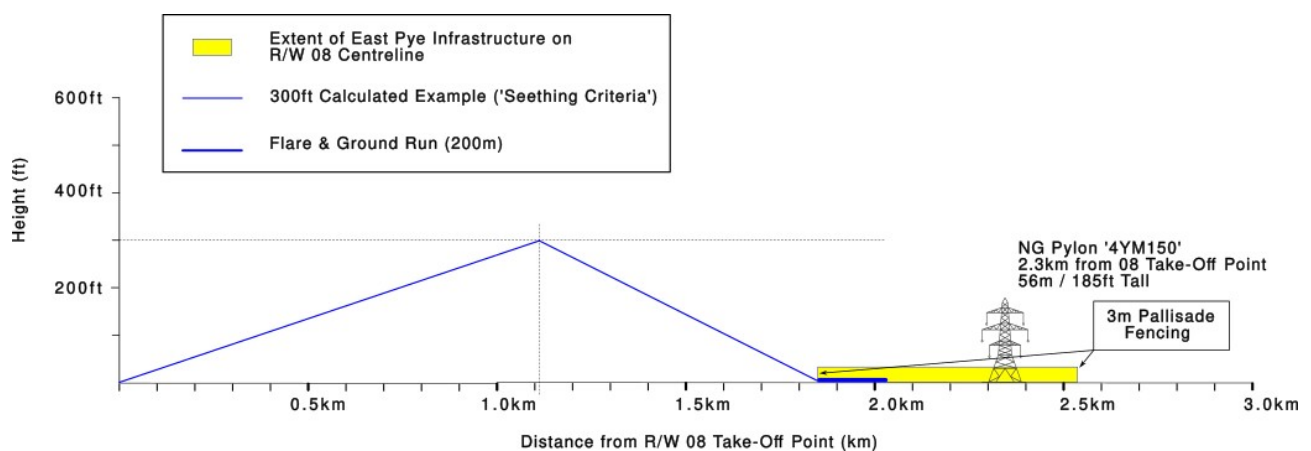
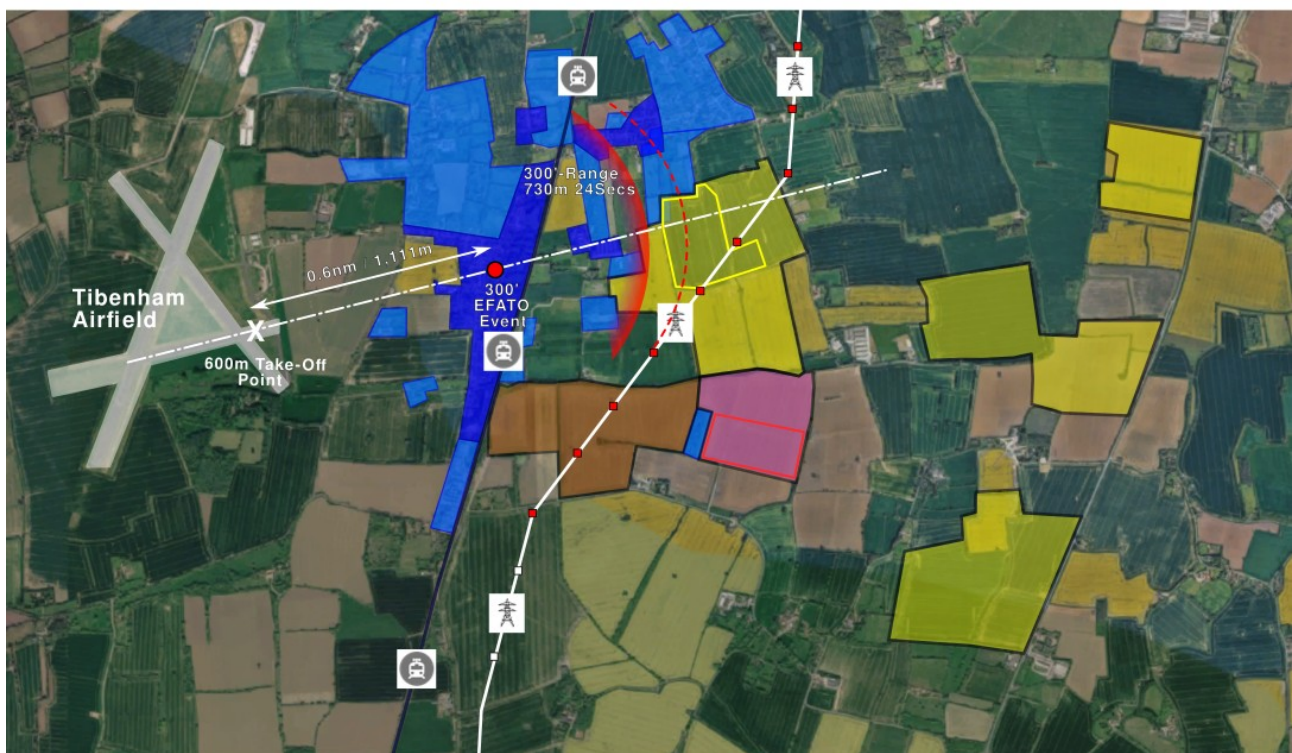


Figure 4: Map & Profile of a 300ft EFATO Event - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 300ft would have their forced off-airfield landout options severely constrained by the Applicant's proposed energy installations and experience a markedly reduced choice of options for a forced off-airfield landing.

In this instance, if the pilot were able to increase their rate of descent, in an effort to land before reaching the Applicant's energy infrastructure, the resultant increase in airspeed, would increase the additional distance taken whilst 'flaring' the aircraft and would most likely see the aircraft still reaching the extent of the Applicant's proposed energy installations.

Tibenham Runway 08 – 400ft EFATO Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 400ft would be severely impacted by the existence of the Applicant's proposed energy installations.

The aircraft would take 1.48km to reach 400ft, with a downslope distance of an additional 975m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 2.66km and would reach the extent of the Applicant's proposed energy installations.

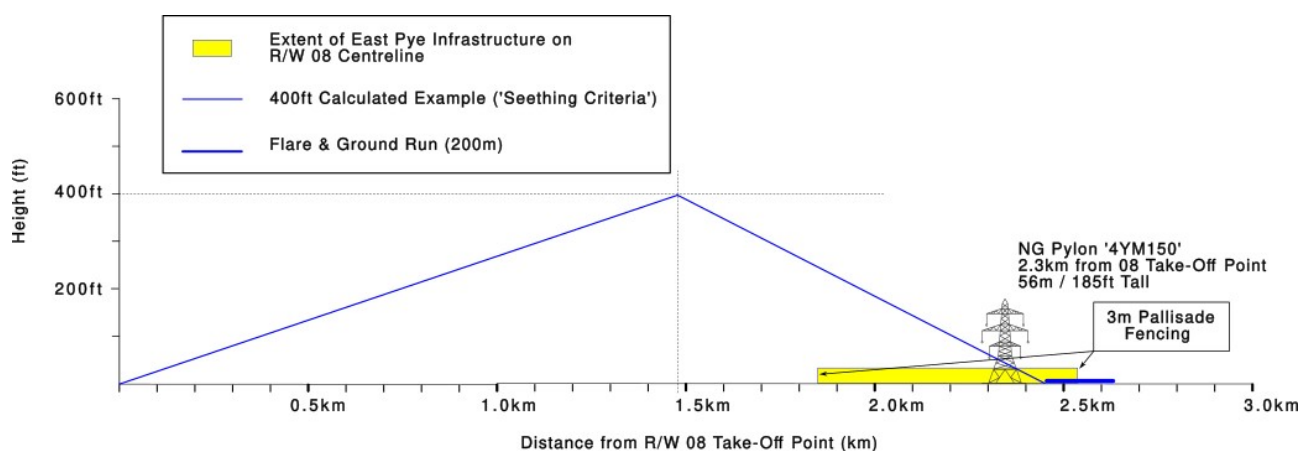
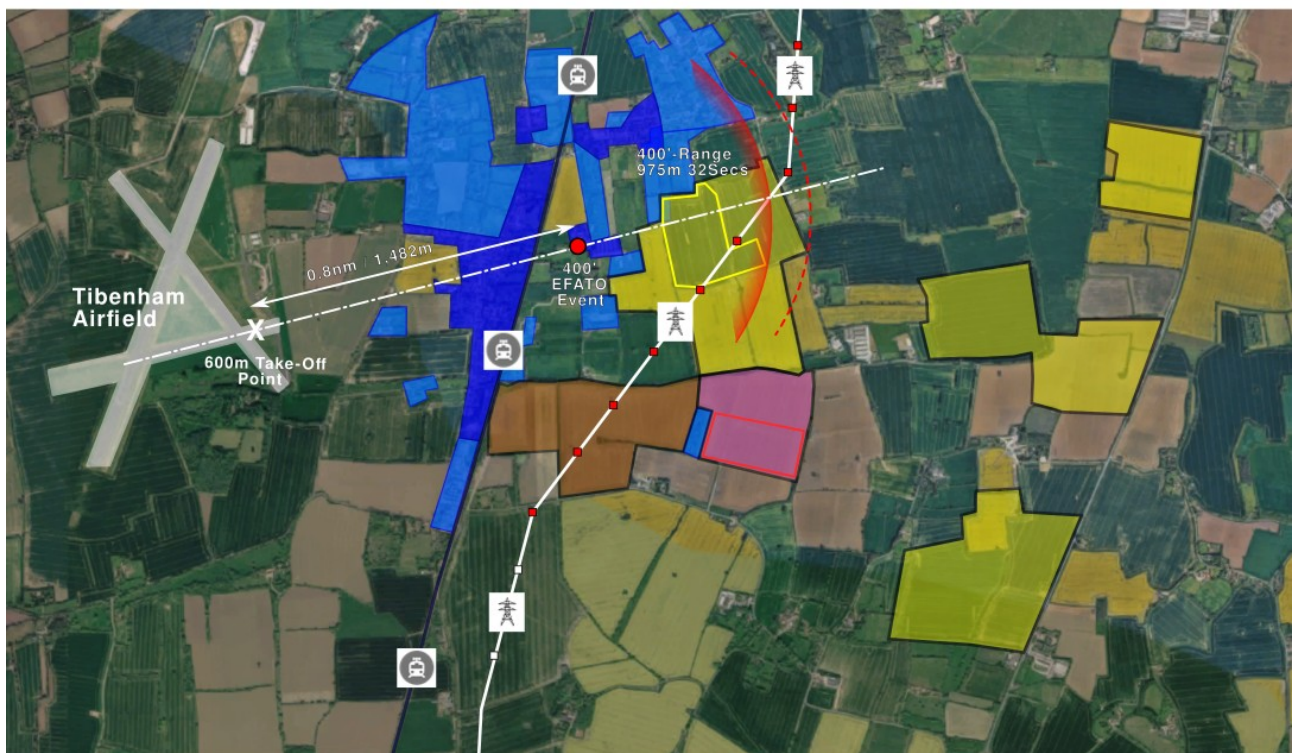


Figure 5: Map & Profile of a 400ft EFATO Event - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 400ft would have their forced off-airfield landout options severely constrained by the Applicant's proposed energy installations and experience a markedly reduced choice of options for a forced off-airfield landing.

In addition, the existence of the Pylons will be a factor in the options available to the pilot. The existence of the Solar Panels and Substations will exclude options to land underneath the Power-lines. The Pilot may then need to attempt an unrecommended 'Turn-Back', in an effort to avoid hitting the 400kV power-lines but may not have sufficient height to do so

The Applicant's 'High Level Investigative Report' quotes "The Private Pilot's Licence Course" which says:

"Experiments have shown that up to 1,400ft of height may be needed to complete the turn back to the runway".

Tibenham Runway 08 – 100ft EFATO -20% Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 100ft following a climb-out at a reduced climb rate of -20%, would see no impact from the Applicant's proposed energy installations.

The aircraft would take 444m to reach 100ft, with an 8:1 downwards glide-slope distance of an additional 240m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 884m and would not reach the extent of the Applicant's proposed energy installations.

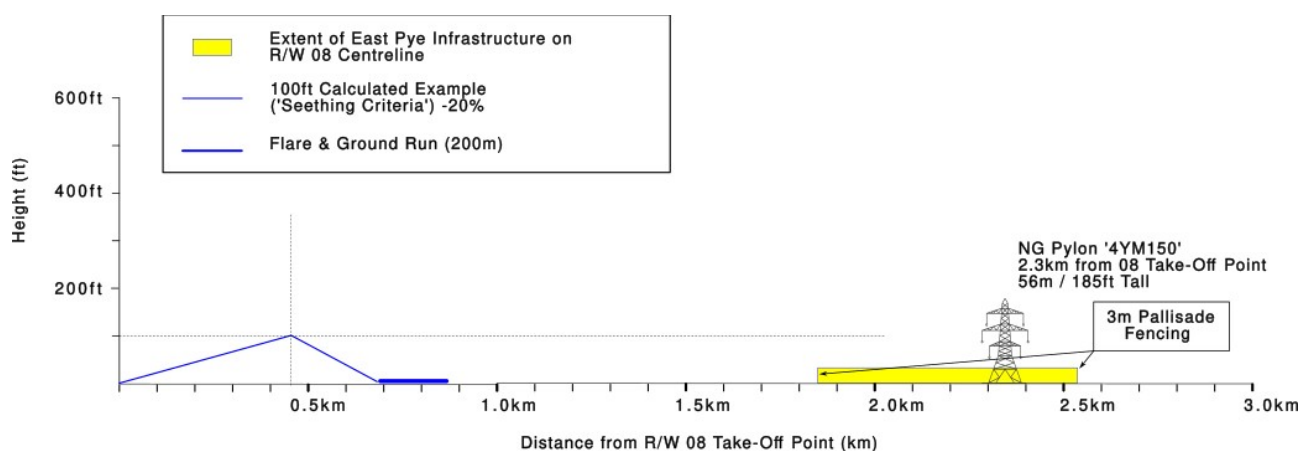
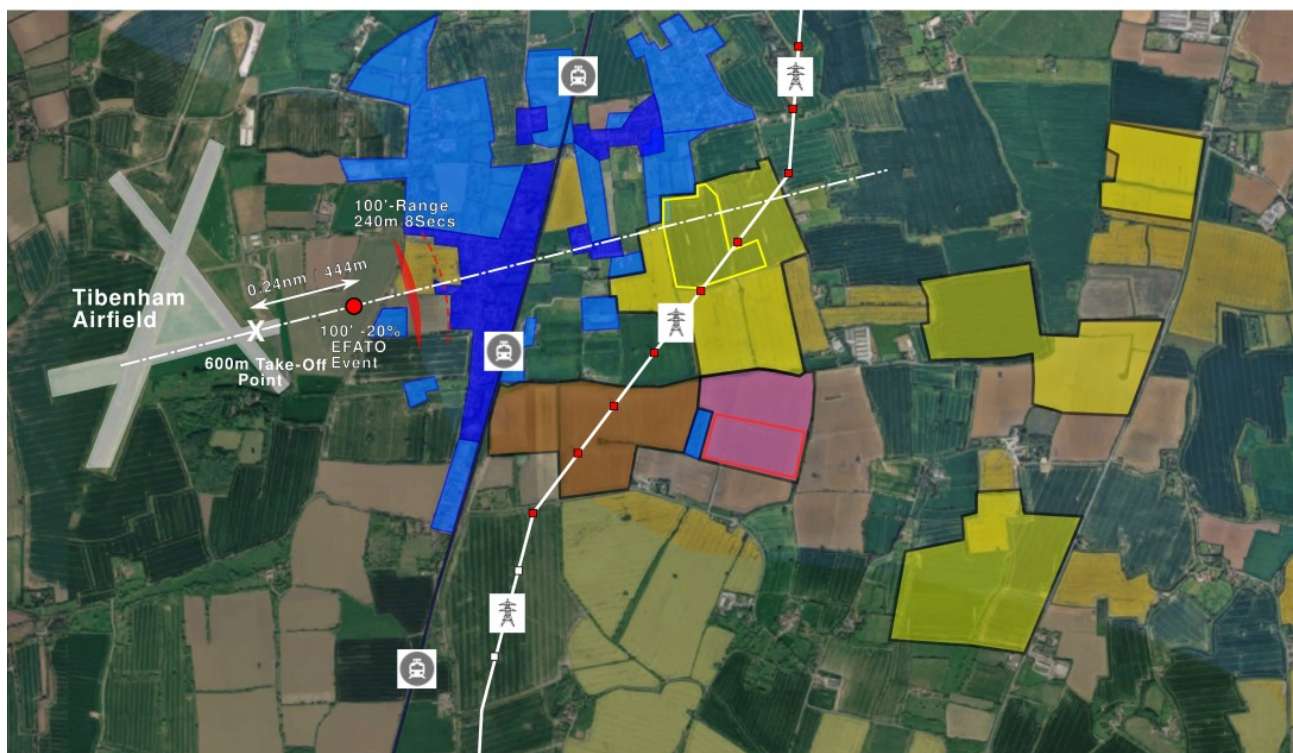


Figure 6: Map & Profile of a 100ft EFATO Event -20% - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 100ft after a -20% reduced rate climb out, would not have their forced off-airfield landout options constrained by the Applicant's proposed energy installations.

Tibenham Runway 08 – 200ft EFATO -20% Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 200ft following a climb-out at a reduced climb rate of -20%, would see no impact from the Applicant's proposed energy installations.

The aircraft would take 889m to reach 200ft, with an 8:1 downwards glide-slope distance of an additional 485m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 1.57km and would not reach the extent of the Applicant's proposed energy installations.

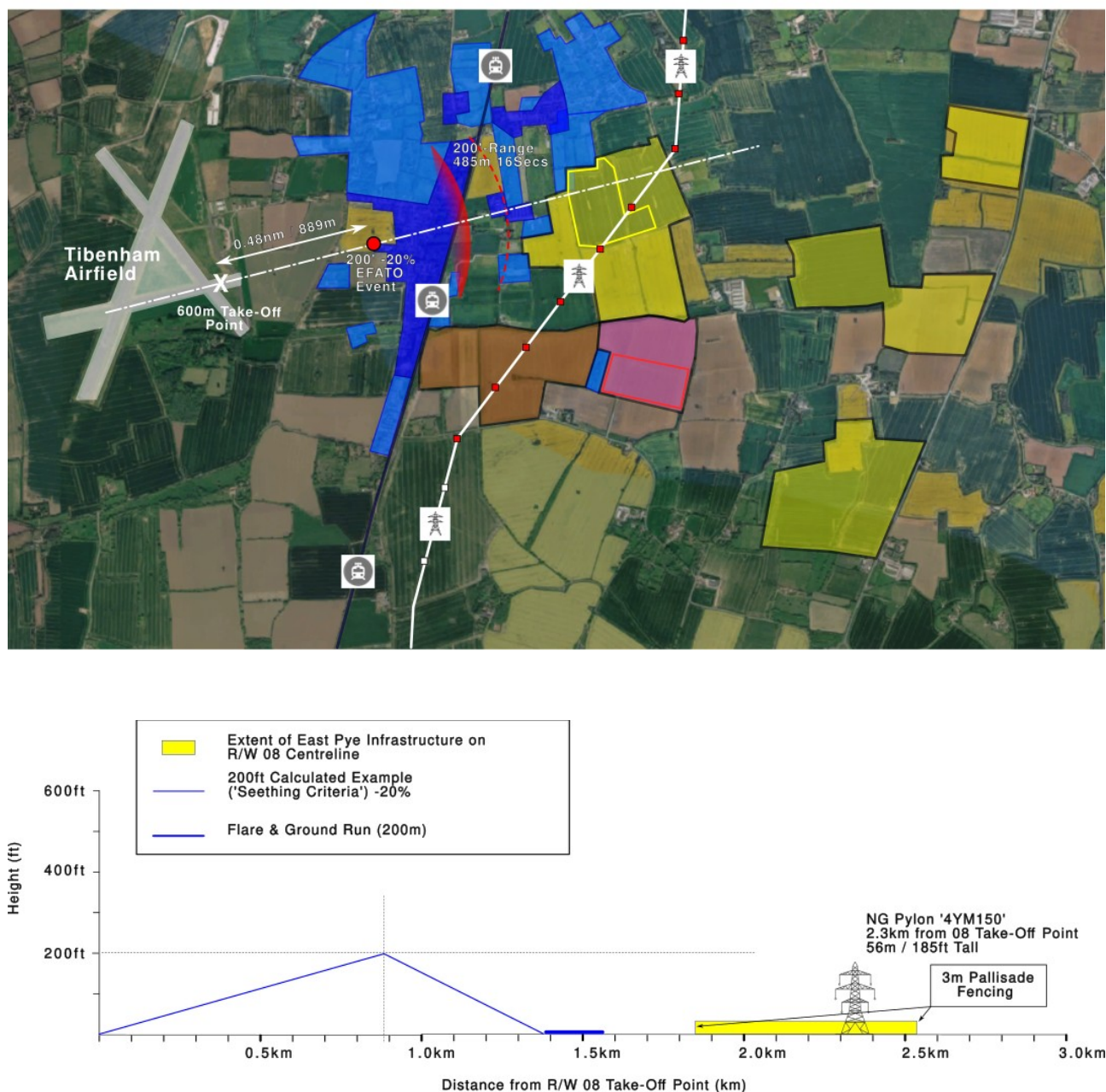


Figure 7: Map & Profile of a 200ft EFATO Event -20% - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 200ft after a -20% reduced rate climb out, would not have their forced off-airfield landout options constrained by the Applicant's proposed energy installations.

Tibenham Runway 08 – 300ft EFATO -20% Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 300ft following a climb-out at a reduced climb rate of -20%, would be severely impacted by the existence of the proposed East Pye installations.

The aircraft would take 1.33km to reach 300ft, with an 8:1 downwards glide-slope distance of an additional 730m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 2.26km and would reach the extent of the Applicant's proposed energy installations.

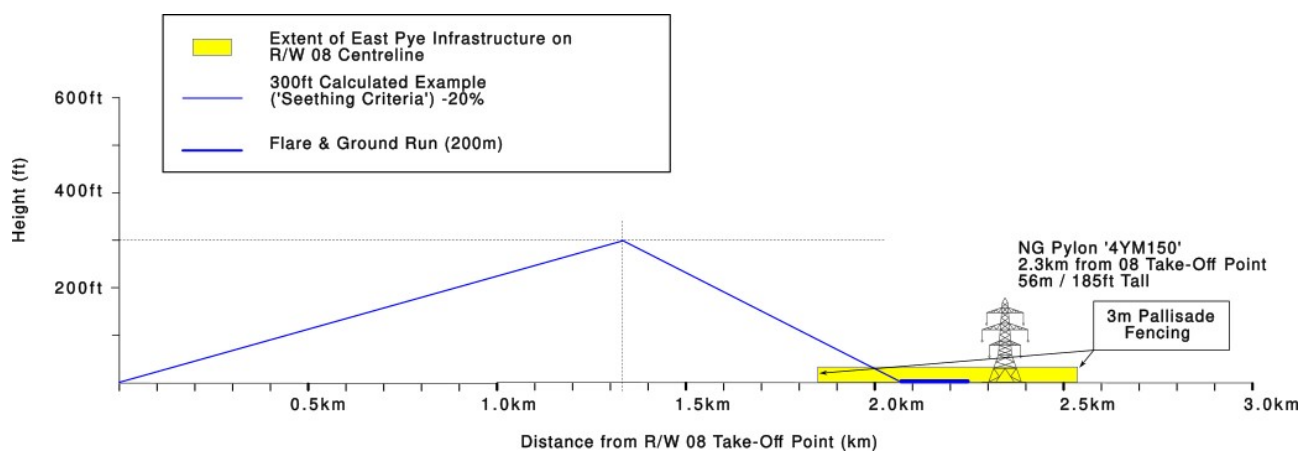
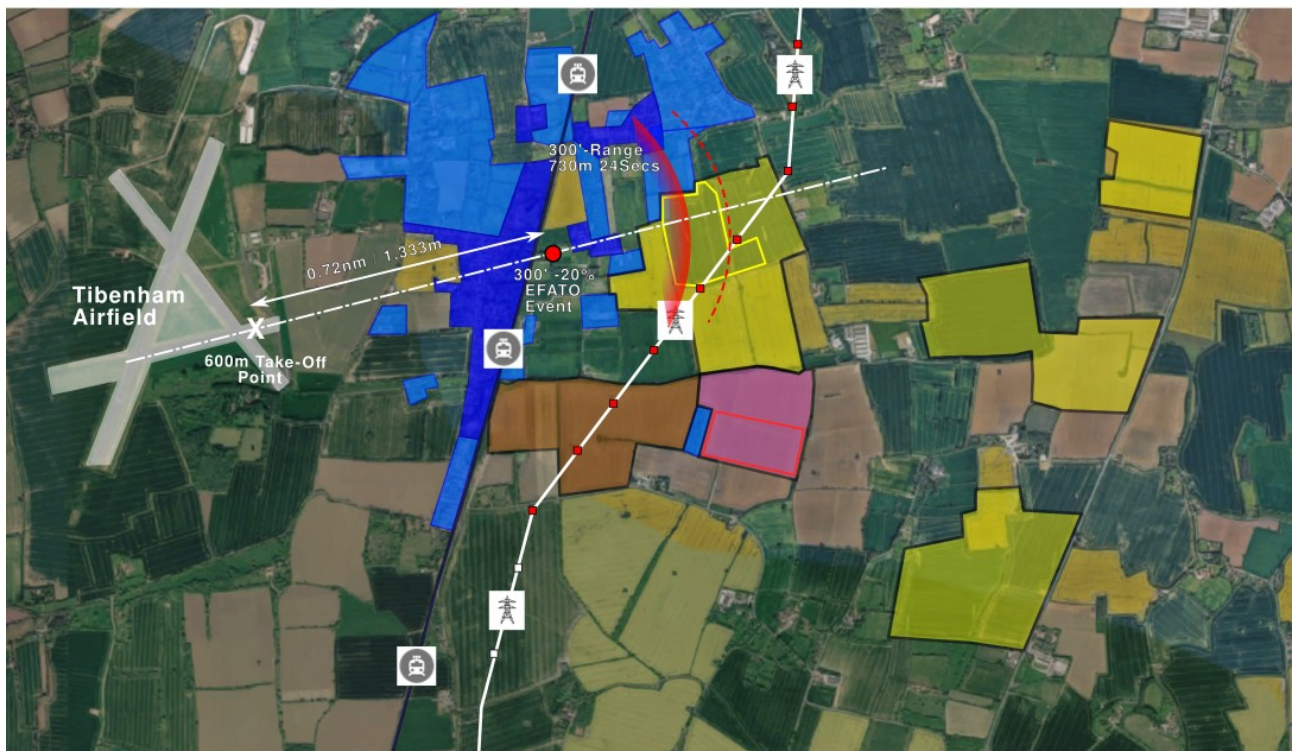


Figure 8: Map & Profile of a 300ft EFATO Event -20% - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 300ft after a -20% reduced rate climb out, would have their forced off-airfield landout options severely constrained by the Applicant's proposed energy installations and experience a markedly reduced choice of options for a forced off-airfield landing.

In this instance, if the pilot were able to increase their rate of descent, in an effort to land before reaching the Applicant's Solar Infrastructure, the resultant increase in airspeed, would increase the additional distance taken whilst 'flaring' the aircraft and would most likely see the aircraft still reaching the extent of the Solar Infrastructure.

In addition, the existence of the Pylons will be a factor in the options available to the pilot. The existence of the Solar Panels and Substations will exclude options to land underneath the Power-lines. The Pilot may then need to attempt a non-recommended 'Turn-Back' in an effort to avoid hitting the 400kV power-lines but may not have sufficient height to do so

Tibenham Runway 08 – 400ft EFATO -20% Event

Using the criteria detailed above, an aircraft utilising Tibenham's Runway 08, experiencing an EFATO Event at 400ft following a climb-out at a reduced climb rate of -20%, would be severely impacted by the existence of the Applicant's proposed energy installations.

The aircraft would take 1.78km to reach 400ft, with an 8:1 downwards glide-slope distance of an additional 975m, plus an additional 200m for the 'Flare' and 'Ground Run' – totalling 2.95km and would reach the extent of the Applicant's proposed energy installations.

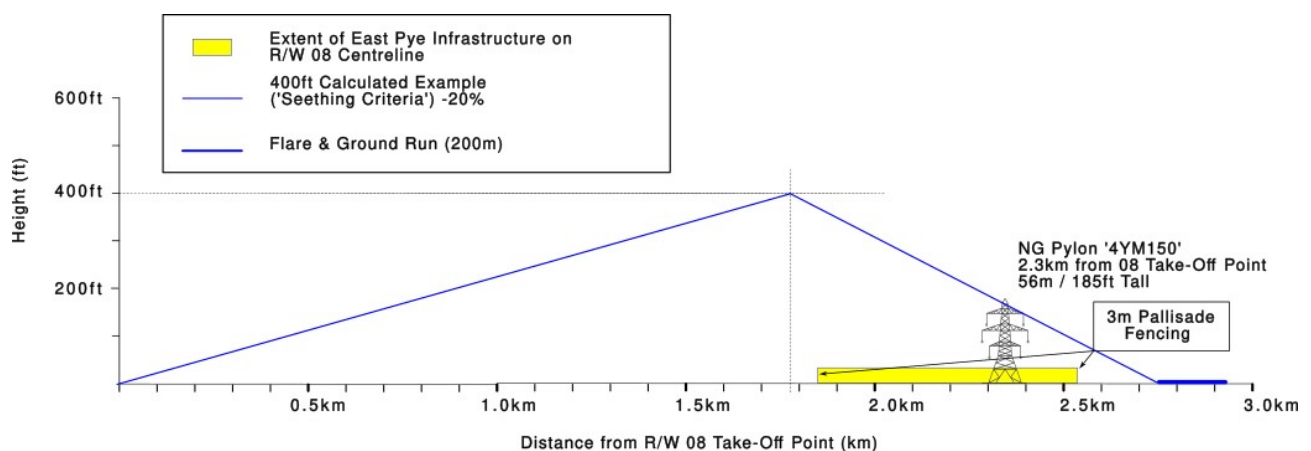
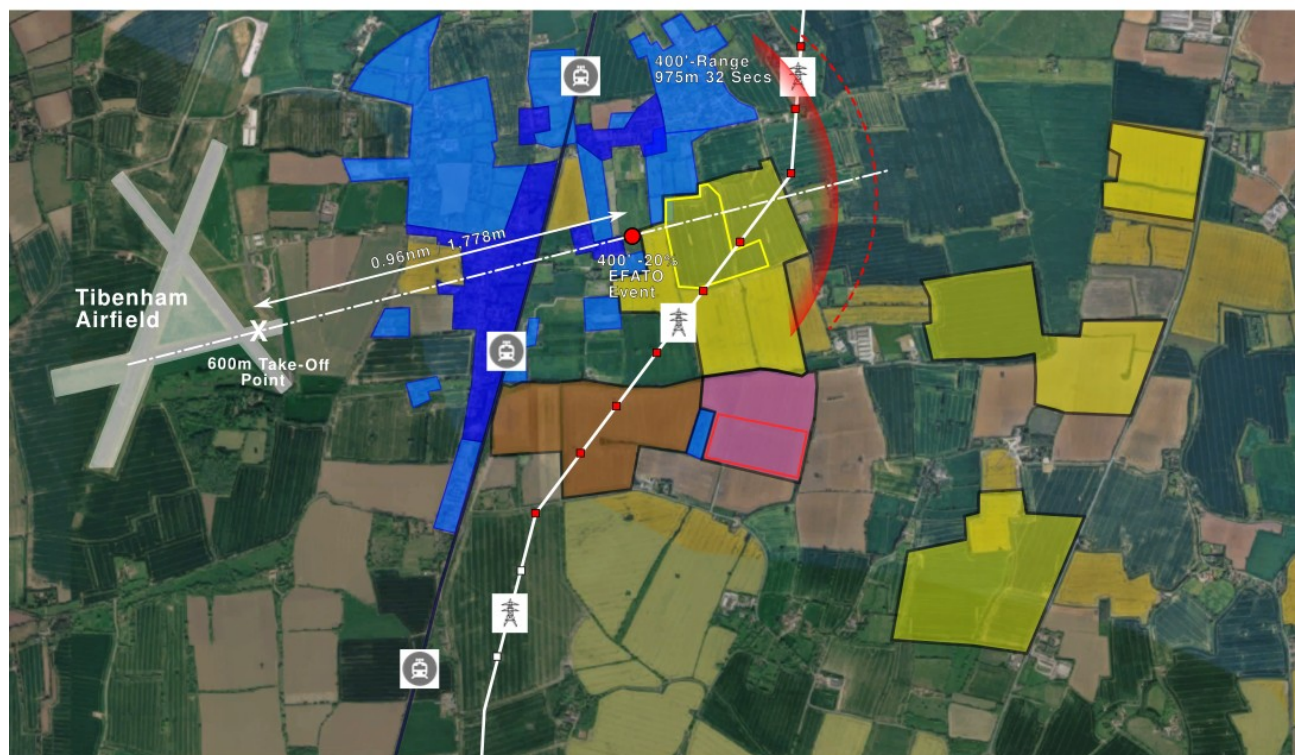


Figure 9: Map & Profile of a 400ft EFATO Event -20% - Tibenham R/W 08

The pilot of an aircraft suffering an EFATO on departure from runway 08 at 400ft after a -20% reduced rate climb out, would have their forced off-airfield landout options severely constrained by the Applicant's proposed energy installations and experience a markedly reduced choice of options for a forced off-airfield landing, effectively leaving just one option available.

In addition, the existence of the Pylons will be a factor in the options available to the pilot. The existence of the Solar Panels and Substations will exclude options to land underneath the Power-lines. The Pilot may then need to attempt an non-recommended 'Turn-Back' in an effort to avoid hitting the 400kV power-lines but may not have sufficient height to do so

The following tables summarise the EFATO Event Analysis:

The first grouping summaries EFATO scenarios utilising a 500ft per 1 Nautical Mile climb out rate

Height of EFATO Event (ft)	Distance from T/O Point (nm)	Distance from T/O Point (m)	Glide Distance (m)	Total Distance (m)	Time to Gnd from EFATO Event (Secs)	Total Distance2 (m)	Impacted by existence of East Pye Solar ?
100	0.2	370	240	610	7.9	810	No
200	0.4	741	485	1226	15.8	1,426	No
300	0.6	1,111	730	1841	23.7	2,041	Yes
400	0.8	1,481	975	2456	31.6	2,656	Yes

Total Distance2 Includes: Distance from T/O Point (m) + Glide Distance (m) + Stopping Distance of 200m

This grouping summaries the scenarios utilising a climb out rate of 500ft per 1 Nautical Mile - reduced by 20% accounting for the lower performance of Aerotows / Vintage Aircraft / Motor Gliders.

Height of EFATO Event (ft)	Distance from T/O Point (nm)	Distance from T/O Point (m)	Glide Distance (m)	Total Distance (m)	Time to Gnd from EFATO Event (Secs)	Total Distance2 (m)	impacted by existence of East Pye Solar ?
100	0.24	444	240	684	7.9	884	No
200	0.48	889	485	1374	15.8	1,574	No
300	0.72	1,333	730	2063	23.7	2,263	Yes
400	0.96	1,778	975	2753	31.6	2,953	Yes

Total Distance2 Includes: Distance from T/O Point (m) + Glide Distance (m) + Stopping Distance of 200m

See Appendix D – for information on method used to calculate the distances shown above.

Summary of the EFATO Profiles for Tibenham Runway 08

Consisting of Climb-Out, Unpowered 8:1 Descent and 200m Flare / Ground Run. ('Seething Criteria')

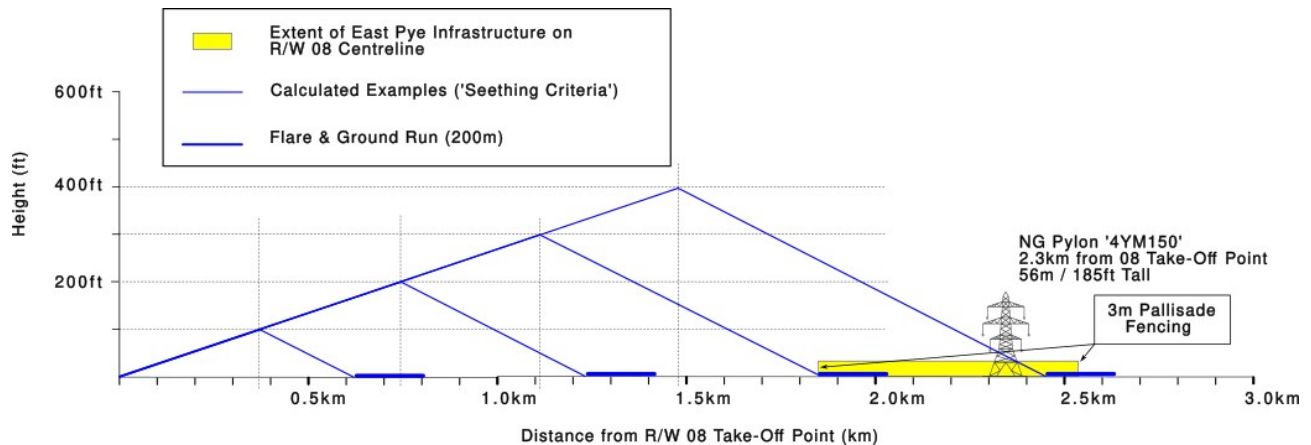


Figure 10: EFATO Profile Summary - Tibenham Runway 08

Summary of the EFATO Profiles -20% for Tibenham Runway 08

Consisting of Climb-Out, Unpowered 8:1 Descent and 200m Flare / Ground Run. ('Seething Criteria' -20%) - accounting for the reduced climb-out performance of various aircraft based at Tibenham Airfield.

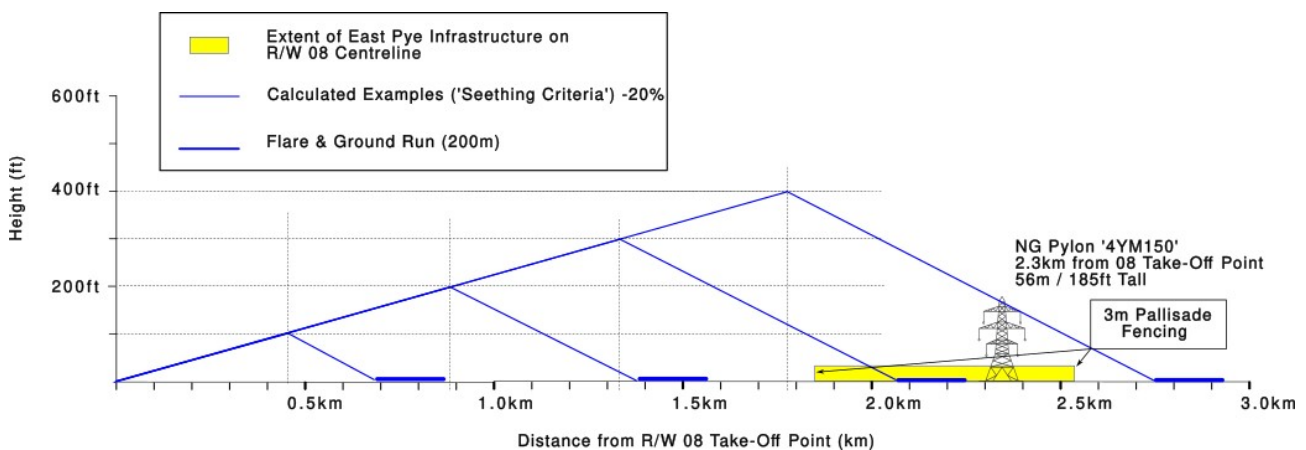


Figure 11: EFATO Profile -20% Summary - Tibenham Runway 08

The 'Impossible Turn'

The 300ft and 400ft EFATO scenarios calculated above, show that pilots suffering such an event when taking off from Tibenham's Runway 08, will have very few options directly ahead of them as these will be occupied by Applicant's Solar infrastructure (Both Panels and Substations).

At these heights, pilots may also have to negotiate the existing Pylons to the East of Tibenham. Attempting to fly over these with little margin for safety or stretching the glide is not recommended, as any misjudgment could lead to impacting the Pylon structure or worse still, the 400kV power cables.

A better option, which is only available prior to implementation of the Applicant's proposals, is to lower the nose, fly faster and land in the empty fields under the Pylons and power cables. However due to lateral spread of the Applicant's proposals, this option will largely have been eradicated once the Panels and Substation have been implemented.

With few options available directly ahead pilots may be tempted to risk turning back to the airfield, to avoid landing amongst the Applicant's energy Infrastructure or impacting the Pylons. In power flying circles this is known as the 'Impossible Turn'. Many GA pilots have lost their lives in attempting to complete such a manoeuvre.

The Applicant's own documentation quotes "The Private Pilot's Licence Course" which says:

"Experiments have shown that up to 1,400ft of height may be needed to complete the turn back to the runway".

Using the 'Seething Criteria', it can be seen that even if successful in completing a 180 degree turn without losing any height (again an impossible task), the aircraft will still have insufficient height to get back to the airfield. The 500ft climb-out in 1 nm approximates to a 12.2:1 upslope, if the unpowered downslope is 8:1, which is significantly worse than the climb-out rate, there is insufficient height to get back.

Other downsides to turning back:

- To turn through 180 degrees using a rate 1 turn takes **60 Seconds**.
The time to descend from 400ft at 60 knots with an 8:1 downslope takes **32 seconds**.
- Using a higher rate of turn increases the aircraft's stall speed which may result in the aircraft entering a stall or a spin.
- Due to the 'Startle Effect', an average pilot's reaction time can mean that it takes anything up to 4 seconds before they recognise the EFATO event and begin to take action.
- In the unlikely event of being able to successfully complete a 180 degree turn, the aircraft is now heading 'Downwind' and consequently has a higher ground speed, which is not conducive to a safe off-airfield landing. In Tibenham's case, the pilot is also now heading at low level towards the main line railway and the residential areas of Sneath Common beyond.

EFATO is an 'Emergency Event'

When assessing Engine Failure After Take-Off (EFATO) events, it is key to understand that these are an 'Emergency Event'. Although pilots would have been trained on how to deal with such events, they will probably be experiencing a real EFATO for the very first time.

Previously, EFATO training scenarios would have been carried out in such a way, as to not endanger the pilot / instructor and arranged such that the aircraft could easily be recovered back to a normal flight regime and not need to complete an off-airfield landing.

In a real life instance, the pilot may have to plan for a 'controlled' crash – or at least one that is the most survivable: Land wings level, don't hit anything.

The tables above also show the time it takes in seconds, for an aircraft to descend to the ground at an 8:1 downslope at 60 knots. For a 300' EFATO Event at both the nominal and reduced climb-out rates, both of which are impacted by the existence of the Applicant's proposed Solar infrastructure, this time is only 24 Seconds. These timings do not include time lost due to the 'startle factor' that such events would incur.

During this time the pilot will need to make some key judgement calls, not the least of which is 'where best to attempt a landing', as well as having to carry out several important actions to prepare the aircraft for a hopefully survivable landing: Set the flaps, turn off the fuel & electrics, tighten straps, make a 'mayday' call but only if there's time. The key element is to fly the aircraft in such a way that a survivable landing is a possibility.

With the Applicant's infrastructure in place, this aim may not be a reality ...

Partial Power Loss

The CAA recently produced CAP3270¹ which deals with the issue of ‘Partial Power Loss’ and as a consequence of the occurrences of this type of engine failure, has introduced partial power loss training into both initial and refresher training.

CAP3270 makes interesting reading, a few relevant quotes are provided here...

“A total engine failure is something pilots have been taught for several decades. It is clear, decisive, and—ironically—simpler to handle. However, a partial power loss is something altogether more insidious.”

“Such scenarios have contributed to serious accidents, particularly when the partial power loss occurs close to the ground. Attempting to continue flight, troubleshoot, or maintain altitude with insufficient or deteriorating power can quickly result in loss of control, often with fatal consequences. “

“Studies indicate that partial power losses occur far more frequently than total power failures.”

“At low levels where sufficient space within the airfield boundary is unavailable, there may not be time to do anything other than to treat the partial loss in the same way as a full loss of power. Where you cannot land within the airfield boundary, continue flying the aircraft and conduct an off-field landing.”

“Turnback options in partial power loss events are extremely hazardous and should only be considered if significant height and sufficient power remain to maintain height without concern. It is nearly always safer to limit low level manoeuvring and land ahead.”

The key take-aways from CAP3270, is that Partial Power Loss events occur far more frequently than full power loss events and therefore the loss of available off-airfield landing options will be felt more keenly, more often.

Inexperienced pilots, such as those who are being trained under ‘Flight Training East Anglia’ (FTEA) based at Tibenham, will take longer to notice, diagnose and take the appropriate action following a partial or total failure event. Less time to deal with a failure and lower experience do not make a good mix.

1 CAP3270 - Stay in Control: Partial Power Loss - CAA Issued 28th July 2026

Survivability

Survivability following an EFATO off-airfield landing into the proposed East Pye infrastructure has not been discussed within the 'High Level Investigative Report'.

The Solar panels are due to be in existence for 60 years, with the Substations active for a longer, indeterminate length of time, during which period, an EFATO event from Tibenham's' Runway 08 is highly likely to occur. Indeed an EFATO event occurred at Tibenham during March 2025. So it is more a matter of when such an event will occur, rather than if.

A crash landing into standing Solar Panels is likely to involve severe damage to the aircraft, caused by the panel's structure and upright stanchions. The aircraft's fuel tanks (which could contain a significant amount of fuel, this being the initial phase of a planned flight) would likely to be punctured, creating a cloud of vaporised fuel around the crash site. Sparks from the sudden disconnection of the solar panel electrical connections, could see this fuel cloud ignited. The survivability of a crash landing into solar panels is likely to be poor.

A crash landing into the proposed 400kV Substation, would entail the same factors as described above, but with the added factor of the extremely high voltage. GA aircraft, are primarily manufactured from aluminium or with more modern aircraft, carbon fibre, both of which are highly electrically conductive, thus the survivability of such a crash into a substation would we suspect, approach zero.

Attendance by the Emergency Services to a crash into the Solar Panels, would also see members of the Emergency Services being put at high risk, due to the proximity of live electrical connections. This situation would be even more acute, should the crash occur into one of the proposed substations where voltages of up to 400kV may be present.

It would be likely that the Emergency Services would need to pause all rescue efforts until they have confirmation that all electrical power has been isolated from the surrounding energy infrastructure, before attempting to help the pilot, passengers and crew of any crashed aircraft, with the delay reducing survivability further.

Collaboration & Engagement

The UK Government's 'Overarching National Policy Statement for Energy (EN-1)' states:

5.5 Civil and Military Aviation and Defence Interests

5.5.1 *All aerodromes, covering civil and military activities, as well as aviation technical sites, meteorological radars and other types of defence interests (both onshore and offshore) can be affected by new energy development.*

5.5.2 *Collaboration and co-existence between aviation, defence and energy industry stakeholders should be strived for to ensure scenarios such that neither is unduly compromised.*

5.5.5 *UK airspace is important for both civilian and military aviation interests. It is essential that new energy infrastructure is developed collaboratively alongside aerodromes, aircraft, air systems and airspace so that safety, operations and capabilities are not adversely affected by new energy infrastructure. Likewise, it is essential that aerodromes, aircraft, air systems and airspace operators work collaboratively with energy infrastructure developers essential for net zero. Aerodromes can have important economic and social benefits, particularly at the regional and local level, but their needs must be balanced with the urgent need for new energy developments, which bring about a wide range of social, economic and environmental benefits.*

This WR document section describes NGC's view of the Collaboration & Engagement steps that have been carried out relating to the proposal put forward by East Pye Solar and their consultants and uses the tabled listing of engagement provided by the Applicant in their **.PDA-006 Position Statement on Aviation Revision 1 Sept 2026**

Text in Black are the views of the Applicant contained in the above document.

Text is **Red** are the views/comments of Norfolk Gliding Club

Abbreviations used below:

G&G	= Glint & Glare
EFATO	= Engine Failure After Take-Off
NGC	= Norfolk Gliding Club
PP	= Pager Power – The Applicant's Consultant
PPT	= PowerPoint – Microsoft's Presentation Software

Date / period	Nature of engagement	Summary of engagement
28 October 2024	Non-statutory consultation via email	Pre-application consultation regarding glint and glare, EFATO and thermal updrafts. Email contained a request for airfield circuit information to enable them to produce a G&G study.

		<u>No mention of non-G&G issues.</u>
26 November 2024 - January 2025	Non-statutory consultation via email	Further pre-application consultation, with an initial response received from NGC on 26 November 2024. Emails back and forth with the Applicant's consultant, confirming that they had limited aviation expertise but were able to use the G&G software. <u>No replies to the non-G&G issues</u>
23 January 2025	Non-statutory consultation via on-airfield meeting. Meeting initiated by NGC due to Consultant's continued confusion over circuits	On-airfield meeting to discuss concerns regarding glint and glare and additional aviation matters. PPT presentation by NGC showing the approx. circuit patterns, G&G, EFATO, Birds and Thermal Plume. <u>One way flow of information.</u> <u>No discussion of non-G&G issues</u>
January 2025 to June 2025	Non-statutory consultation	Engagement to establish key receptors to be considered within the glint and glare assessment. The technical information required to model the receptors for the glint and glare assessment could not be confirmed by the airfield at this stage. Despite emails attempting to explain the complexity of NGC's operations and circuits the Applicant's consultant continued to ask for precise heights and rates of descent which are not appropriate in the General Aviation / Gliding worlds. <u>Again no reference to non-G&G issues</u>
July 2025	Statutory Consultation	NGC provided an objection to the Glint and Glare Report during statutory consultation, the Applicant's response to the points raised in this report are provided in Consultation Report Appendix 10: Section 47 Applicant Response Table [APP-034] at code EPS2_EF_023.
October 2025	Email to EPS following the lack of response to	Extract from email from NGC to the Applicant's consultant:-

	NGC's July 2025 objections and notification by them of changes to site 1.	"As I pointed out to you at that meeting (January 2025) the proposed locations of the site 1 panels are within the Engine Failure After Take Off (EFATO) area of our safeguarding zone when using our east runway and represent a significant risk of a fatal accident in that event In order therefore to respond would you please advise • Is there going to be a statutory consultation with Norfolk Gliding Club as identified by the NPPF. • Why was the briefing given to you and Ian Douglass ignored. • Why have you not responded to our response on the flawed glint and glare study carried out by Pager Power."
November 2025 to December 2025	Various emails to EPS	NGC raised questions relating to the lack of engagement given the potential for fatal accidents resulting from EFATO type incidents and the lack of a meaningful G&G study by PP. Agreement to have a face-to-face meeting at the airfield in January.
5 January 2026	Non-statutory consultation via on-airfield meeting	On-airfield meeting at which the technical information required to model the receptors for the glint and glare assessment was confirmed by the airfield. Appendix B of the High Level Investigative Report [APP- 222] contains the Tibenham Airfield circuit dimensions shared by Norfolk Gliding Club, which were confirmed as applicable to the Scheme at an onsite meeting on 5 January 2026, showing the Applicant has engaged directly with NGC and used their information to inform the assessments. Here the Applicant is just confirming that they had received information that had already been provided to them some time before and does not confirm either collaboration or engagement. At the meeting the Applicant's consultant advised

		that a new/updated G&G Report would be provided within 2 weeks of the meeting as the original was heavily based on that from other project. This new G&G Report was not presented to NGC before it was included in the DCO Application documentation. The G&G assessment submitted as part of the ES Vol 3 Appendix 18.1 is not a new study and still appears to mostly be the original study with additional pages, During the meeting there was a discussion regarding the increased risks that the Applicant's proposals would create, together with possible mitigation options. In spite of the clear evidence of increased risk, <u>no mitigations</u> were included in the DCO Application documentation. At this meeting the Applicant let it be known that they planned to go forward with the DCO Application by early March (In 8 Weeks time) – this suggested that the meeting was a 'tick-box exercise' and nothing about the scheme was likely to change. <u>This was later borne out by the DCO Application which contained no mitigation.</u> The High Level Investigative Report [APP- 222] was not presented to NGC before it was included in the DCO Application documentation. With both the High Level Investigative and the latest version of the G&G Reports not being sent independently to NGC but instead being included in the documents sent with the DCO submission, ensured that there was a delay before NGC had view of these important documents as they remained unavailable until after the application was accepted by the ExA. At the Jan'26 meeting, the Applicant also confirmed that National Grid had taken up the option to implement it's 400kV Substation immediately on the centreline of Tibenham's Runway 08, and that this would entail a 'Realignment' of the Pylons which will potentially have a direct affect on the operations at Tibenham. As of the date of NGC's WR submission (Early Oct'26), NGC has
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		received no further details / information nor been involved in any discussions relating to this realignment. We have also been unable to find any details of this realignment in the DCO documents.
Ongoing	General Comments	Comparing the engagement process relating to EFTAO Scenarios between Tibenham and Seething Airfields, it can be seen that the Tibenham engagement was initiated later (Seething's Impact report was commissioned 5 th Nov'25) and led to the Applicant only producing a restrictive 'High Level' report, which contained no meaningful assessment of EFATO events at Tibenham and which was not issued until Mar'26.

To summarise, only two face-to face meetings have taken place between the Applicant and NGC, Both were at the request of NGC. The first meeting dealt exclusively with Glint & Glare, whilst the Jan'26 meeting was effectively used by the Applicant, to inform NGC that the design was now fixed and that the DCO submission would go ahead by early Mar'26.

In doing so, the Applicant did not comply with the requirements on collaboration, as laid down in the *Overarching National Policy Statement for Energy (EN-1)*.

With no mitigations put in place following the Jan'26 meeting, the resulting DCO application adversely affects the safe operation originating from Tibenham Airfield, in direct contravention of EN-1 Section 5.5.5.

Glint & Glare

From Pager Power's (The Applicant's Glint & Glare consultant) own website:

"The two terms 'glint' and 'glare' refer to the unwanted reflection of the Sun's rays from materials capable of producing specular reflections, such as solar panels or glass."

Definitions

- **Glint:** A momentary or brief flash of bright light. It usually happens when the source or the observer is moving (such as sunlight reflecting off a car window into a moving driver's / pilot's eyes).
- **Glare:** A continuous or sustained source of excessive brightness. It usually happens when the observer is stationary or slow-moving or remains in the path of the reflected light (such as sunlight reflecting off a stationary building façade or solar array).



Figure 1: Glare from the Sun and a Body of Water

Figure 1 shows the effects of glare resulting from a combination of the low Sun and a small body of water located in the vicinity of Tibenham Airfield. The image was taken on 19th Dec'25 at 15:49 when the Sun was low in the sky. Admittedly, a fair proportion of the glare is generated by the position of the Sun, however this image demonstrates clearly that glare is also produced by ground based features, due to reflections from a body of water or a Solar Array.

It should be noted that if the proposed Solar Panels selected by the Applicant are to be of the Tracking type, each day, when the Sun is close to its zenith, the entire area of Solar Panels will be arranged such that the panels are 'flat' and will therefore approximate to a body of water, producing similar reflections to that shown above.

Although in some powered aircraft, glare from the Sun can be mitigated with shades or visors, these tend not to be useful in dealing with glare from ground based features.

It can be seen from the image how the Glare negatively affects the ability of the pilot to detect other aircraft immediately ahead. The detection of any aircraft approaching from the straight ahead position is likely to be delayed until the aircraft is very close, with the possibility that its detection is too late to take avoiding action and as a result, a collision may occur.

Glint & Glare Report

NGC have several concerns regarding the production of the Glint & Glare Report as detailed in the following document sections.

NGC / The Applicant / PagerPower Meeting Jan'2026

During late 2025, NGC had concerns regarding the lack of engagement given the potential for fatal accidents resulting from EFATO type incidents and the lack of a meaningful G&G study.

Subsequently NGC & the Applicant agreed to have a face-to-face meeting at the airfield in January.

At the meeting, the Applicant's Consultant advised that a new/updated G&G Report would be provided within 2 weeks of the meeting as the original was heavily based on that from another solar project.

This updated version of the G&G Report was not sent independently to NGC but instead was included in the documents sent with the DCO Application. This ensured that there was a delay before NGC had view of the updated G&G Report, as it remained unavailable until after the application was accepted by the ExA.

The G&G assessment submitted as part of the ES Vol 3 Appendix 18.1 is not a completely new study and still appears to mostly be the original study with additional pages.

Panel Type Decision

From DCO Document **APP-040** 6.1.4 Environmental Statement Volume 1: Chapter 4 – The Scheme (Revision 1) – The Applicant are yet to decide on whether the Solar Arrays will consist of:

- Option A: Single-Axis Tracker Panels (Tracker Panels)
The Single Axis Tracker panels will be aligned in north south rows, and incline to the east or west up to a maximum inclination of 60 degrees from horizontal.
- Option B Fixed South Facing PV Arrays (Fixed Panels)
The Fixed panels will be aligned in east west rows, and slope towards the south at a fixed slope of 10 to 35 degrees from horizontal.
No details have been ascertained as to what angle(s) will be used for the Applicant's Site 1A & 1B which are in close vicinity to Tibenham Airfield. The G&G Assessment has been carried out utilising a single elevation angle of 25 degrees.

This raises concerns regarding the validity of the Glint & Glare assessment as these two panel types present significantly different G&G scenarios when it comes to assessing the effects on aircraft operating out of Tibenham.

The Applicant's G&G consultant states that it was "*retained to assess the possible effects of glint and glare with respect to both fixed and single-axis tracking (SAT) panels from a ground-mounted solar photovoltaic development*".

However this would entail two sets of results: one for Single-Axis Tracker Panels and another for the Fixed South Facing PV Arrays where it appears that only one set of results is presented.

Differences in Panel Types

The following examples serve to differentiate the effects between the two panel types:

- **Single-Axis Tracker Panels (Tracker Panels)** are to be aligned in north south rows, and incline to the east or west up to a maximum inclination of 60 degrees from horizontal.

When the sun is at it's zenith and in a southerly position, the Tracker Panels will be at their 'resting' or 'mid-point' angle of zero degrees. Thus the entire solar array will constitute a 'flat' reflective surface. With the Sun to the South, any aircraft approaching from the North will be presented with reflections from the now 'flat' solar arrays.

When aircraft are flying a circuit to land on Tibenham's Runway 03, they will fly a 'Downwind Leg', from the North and will be presented with these reflections.

- **Fixed South Facing PV Arrays (Fixed Panels)** are to be aligned in east west rows, and slope towards the south at a fixed slope of 10 to 35 degrees from horizontal.

When the sun is at it's zenith and in a southerly position, the Fixed Panels will be directly 'face on' to the Sun. Thus the entire solar array will constitute a 'angled' reflective surface facing South. With the Sun to the South, any aircraft approaching from the South, will at a certain point when they have the Sun immediately behind them, be presented with direct reflections from the now 'face-on' solar arrays.

When aircraft are flying a circuit to land on Tibenham's Runway 21, they will fly a 'Downwind Leg', from the South and will be presented with these reflections.

These differencing scenarios are not presented within the G&G Report. The suspicion is that only reflections from Fixed Panels have been assessed and presented in the G&G Report.

This suspicion is borne out in the maps that exist in the Glint & Glare Report, that attempt to show which part of the circuits flown by Tibenham Pilots will be affected by G&G events.

Taking the G&G document Figure 12 which assesses Tibenham's Runway 03 RHD Maximum Power Circuit. - See **AS-026** 6.3.18.1 *Environmental Statement Volume 3: Appendix 18.1 – Glint and Glare Assessment Part 2 (Revision 2)* - Page 34 (Labelled as Page 178).

On the right of the image, a Powered aircraft flying its Downwind Leg portion of the circuit, in a mainly southerly direction, to land on runway 03. The notations on the map show that when flying

past the proposed solar panels, “Reflecting panels (site 2B & 2A) are behind the direction of travel”. This is only the case if the panels are angled to the South, which only occurs with Fixed South Facing panels.

Using the same example of a pilot flying a Runway 03 RHD Maximum Power Circuit, Tracking Panels would create an reflection which would be in a Northerly direction and therefore more likely to cause G&G events for a pilot flying a Southerly Downwind Leg.

No such notations are presented on the map.

This deficiency appears to be carried through the remainder of the maps relating to Tibenham Circuits, contained in the Glint & Glare Report.

Different Treatment of Seething and Tibenham Airfields.

Throughout the Applicant’s assessment process, a common thread has been the differing treatment between Seething and Tibenham airfields. This difference continues into the G&G assessment where Seething appears to have received a more detailed assessment of the effects that the Applicant’s Solar panel installation will have on their operation.

Page 115 – of **AS-025** 6.3.18.1 Environmental Statement Volume 3: Appendix 18.1 – Glint and Glare Assessment Part 1 (Revision 2).

APPENDIX H – DETAILED MODELLING RESULTS

Aviation Receptors

shows the Modelling Results relating to Seething Airfield – SAT Panels Area 9.

There is no corresponding Modelling results presented for Tibenham Airfield.

Field of View Concerns

During previous meetings and in email conversations between NGC and the Applicant’s’ G&G consultant, NGC raised concerns regarding the ‘Field of View’ that was being utilised in the G&G modelling.

The consultant’s view being that Pilots do not routinely look from side to side when flying but instead only look straight ahead and therefore would only suffer G&G effects from the forward direction.

During these discussions, NGC tried to convince the consultant that this was not the case and that Pilots needed to look all around to ensure that no other aircraft are in close proximity to themselves, this particularly in the circuit where there is likely to be a concentration of aircraft.

NGC have seen nothing in the G&G report to suggest that this has been taken on board by the consultant.

Pilot 'Look Out'

Lookout is the primary method of collision avoidance in class G / Open airspace such as that airspace that surrounds Tibenham. This process is commonly known as '**See and Avoid**'.

An effective lookout is one of the most important elements of Airmanship and safety in the air and should be a pilot's highest priority in avoiding collisions with other gliders and aircraft, particularly in and around the circuit, where aircraft naturally congregate and this is why 'lookout' is one of the first skills that a pilot is taught when first starting their flying training.

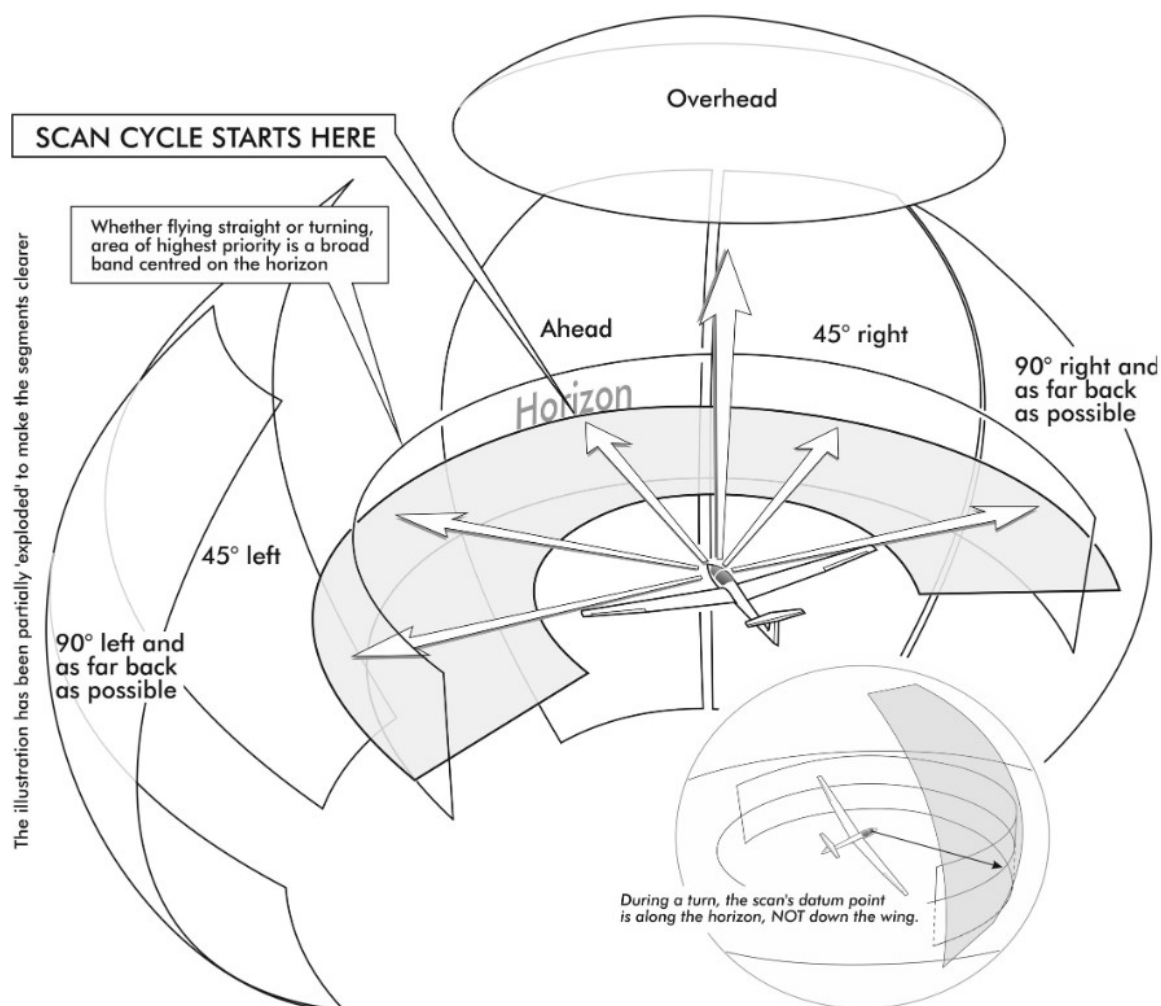


Figure 2: The BGA Scan Cycle

The diagram above shows the Scan Cycle as recommended by The British Gliding Association (BGA) training materials but applies equally well to Power pilots.

Here it can be clearly seen that pilots are trained to perform a complete scan, in all possible directions, both above and below the horizon, in an effort to detect all aircraft in their vicinity whilst adding to the pilot's situational awareness, which in turn, improves flight safety. To do this Pilots have to look all around contrary to the views of the Applicant's G&G Consultant.

In carrying out a competent Scan Cycle, close to the Applicant's Solar Arrays, the pilot is prone to G&G effects from solar arrays situated on each side of and below their chosen route. This exposure increases as an aircraft is banked when performing the turns required to fly an accurate circuit as more Solar Array panels become visible below the aircraft.

Note: The Applicant's consultant had previously been sent a copy of this diagram when discussing the 'field of View' issue.

Gliders in particular and many of the aircraft based at Tibenham (especially those with open cockpits or 'bubble' type canopies rather than the more conditional restricted cockpit views associated with high wing aircraft) have excellent all round vision. This allows them to complete a full scan cycle and attain safe situational awareness of what is happening around them. However this also means that they are more prone to the effects of G&G, not only from the forward direction but also from each side.

Glint & Glare Methodology

Document **AS-025** section 4.2.2 *Runway Approach Path and Visual Circuits*

States that:

"The identified aerodromes are GA airfields where aviation activity is dynamic and does not necessarily follow the typical approaches / flight paths of a larger licensed aerodrome or airport"

NGC agrees with this statement and adds the comment that with the addition of the co-existent Gliding operation, aviation activity is even more dynamic and complex.

The document then goes on to say:

"It is not possible to assess every single location of airspace that an aircraft travels in flight around an aerodrome;"

Which NGC believe is more a comment on the restrictions of the software used to assess G&G events which is perhaps more appropriate for use when assessing larger licensed aerodromes and commercial aircraft, which fly prescribed decent profiles and follow flight directions from Air Traffic Control.

Document **AS-025** section 5.2.2 *Key Considerations – Runway Approach Paths*

States that one of the key considerations is:

"The location of glare relative to a pilot's primary field of view (50 degrees either side of the approach bearing).

This does not reflect standard practice, particularly for Glider Pilots.

When on approach, pilots' need to have a complete picture of what is happening around them – 'Situational Awareness'. This entails continuing to perform a good lookout – See NGC's WR section above on 'Pilot Look Out'.

In addition, when on approach, Glider pilots are trained to check to see how much airbrake is in use.

This involves momentarily looking down the length of each wing, at 90 degrees to the direction of travel. On some approaches this will mean pilots looking in the direction of the Solar Panels. Any Glint or Glare event experienced by the pilot, during this critical flight phase could be problematic.

The 50 degree limit also appears to contradict the consultant's own statement regarding **Geometric Modelling Results** section on page 17 (Labelled Page 161) where the following statement is made:

“Reference to the pilot's field-of-view considers 180 degrees (90-degrees either side of the bearing relative to the direction of travel)”

Glint & Glare Results for Tibenham Downwind Legs

The main body of the Glint & Glare report contains G&G results for the Splayed Approaches for each of Tibenham's Runways - See Page 35 (labelled as 'Page 34') of the Glint & Glare Report **AS-025** 6.3.18.1 *Environmental Statement Volume 3: Appendix 18.1 – Glint and Glare Assessment Part 1 (Revision 2)*

However the Glint & Glare results for the associated Downwind Legs for each of Tibenham's Runways, has instead been tucked away in an Appendix: APPENDIX J – SOLAR PHOTOVOLTAIC GLINT AND GLARE STUDY See page 15 (labelled as Page 159) of **AS-026** - 6.3.18.1 *Environmental Statement Volume 3: Appendix 18.1 – Glint and Glare Assessment Part 2 (Revision 2)*

This makes it difficult to see a full view of how widespread the effects of Glint & Glare are for aircraft attempting to land on each of Tibenham's runways.

The following tables contain the same data but consolidated to display both the Splayed Approach and Downwind Leg G&G Results contained in the two separate sections of the original Glint & Glare report. They have also been reformatted/ordered by both Gliding / Power and Runway.

Consolidated Splayed Approach and Downwind Leg Glint & Glare Results - Gliding

Threshold 03 Splayed Approach	Yellow	Threshold 08 Splayed Approach	Yellow
03 RHD Glider Maximum	Yellow	08 LHD Glider Minimum	Yellow
03 RHD Glider Minimum	Yellow	08 LHD Glider Maximum	Yellow
03R RHD Glider Maximum	Yellow	08S LHD Glider Minimum	Yellow
03R RHD Glider Minimum	Yellow	08S LHD Glider Maximum	Yellow
		08L LHD Glider Minimum	Yellow
		08L LHD Glider Maximum	Yellow
Threshold 15 Splayed Approach	Yellow	Threshold 21 Splayed Approach	Yellow
15 RHD Glider Maximum	Green	21 LHD Glider Maximum	Yellow
15 RHD Glider Minimum	Green	21 LHD Glider Minimum	Yellow
15 RHD Glider Maximum*	Green	21L LHD Glider Maximum	Yellow
15 RHD Glider Minimum*	Green	21L LHD Glider Minimum	Yellow
Threshold 26 Splayed Approach	Yellow	Threshold 33 Splayed Approach	Yellow
26R RHD Glider Maximum	Yellow	33 RHD Glider Maximum	Yellow
26R RHD Glider Minimum	Yellow	33 RHD Glider Minimum	Yellow
26 RHD Glider Maximum	Yellow	33R RHD Glider Maximum	Yellow
26 RHD Glider Minimum	Yellow	33R RHD Glider Minimum	Yellow

* These two entries have been duplicated within the Applicant's G&G Report Pages 168 & 169.

Consolidated Splayed Approach and Downwind Leg Glint & Glare Results - Power

Threshold 03 Splayed Approach	Yellow	Threshold 08 Splayed Approach	Yellow
03 RHD Power Maximum	Yellow	08 LHD Power Minimum	Yellow
03 RHD Power Minimum	Yellow	08 LHD Power Maximum	Yellow
Threshold 15 Splayed Approach	Yellow	Threshold 21 Splayed Approach	Yellow
15 RHD Power Maximum	Green	21 LHD Power Maximum	Yellow
15 RHD Power Minimum	Green	21 LHD Power Minimum	Yellow
Threshold 26 Splayed Approach	Yellow	Threshold 33 Splayed Approach	Yellow
26 RHD Power Maximum	Yellow	33 RHD Power Maximum	Yellow
26 RHD Power Minimum	Yellow	33 RHD Power Minimum	Yellow

Here it can be seen that with the exception of the Downwind Legs for Runway 15 (When the Solar Arrays will be behind the aircraft), ALL Downwind Legs experience a ‘Yellow’ category Glint and Glare event as do ALL the Splayed Approaches.

APPENDIX J – SOLAR PHOTOVOLTAIC GLINT AND GLARE STUDY also contains a narrative description starting on Page 15 (labelled as Page 159) of **AS-026** – on which NGC comments below.

The section **Receptors Overview** - Contains an virtually illegible table of data.

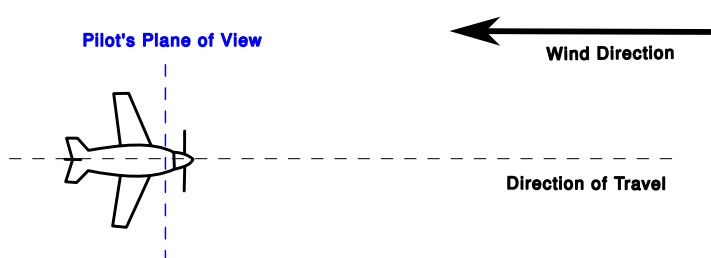
The **Geometric Modelling Results** section on page 17 (Labelled Page 161) make the following statement:

“Reference to the pilot’s field-of-view considers 180 degrees (90-degrees either side of the bearing relative to the direction of travel) Assessment Conclusion states:”

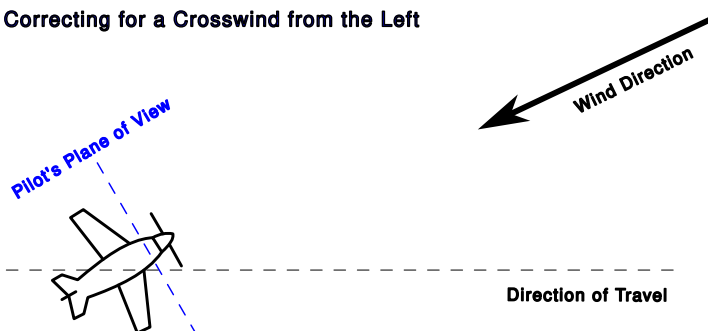
This implies that the field of view has been limited to a horizontal 180 degree sector with no vertical range as would be the case when a pilot would look above and below the horizon during the prescribed lookout process or when looking inside the turn whilst turning.

It also assumes that pilots fly on a predetermined straight line whilst also looking in the direction of travel. This is definitely not the case – due to cross-winds, pilots may need to fly a ‘crabbed’ circuit which entails the pilot pointing the nose of the aircraft into wind and not at 90 degrees to the line of travel. This means that the pilot’s plane of view will not necessarily be in the direction of travel, and can be anything up to 30 – 40 degrees off from this direction.

With No Crosswind



Correcting for a Crosswind from the Left



Pilots may also modify the width of their circuits i.e. will change their heading, during the Downwind Leg, due to weather conditions that they experience at the time. If a pilot finds that the descent rate is less than expected due to atmospheric ‘lift’, they may widen their circuit. Conversely, if they find the descent rate is greater than expected due to experiencing ‘sink’. they may narrow the circuit width. Indeed Glider Pilots experiencing severe ‘sink’ may turn sharply towards the airfield in an effort to reach a safe landing.

This appears to highlight a shortcoming in the application of the software modelling, in as much as it is unable to assess the many different scenarios that apply to a non-licensed GA airfield operations.

The report continues:

“Solar reflections with ‘yellow’ glare are predicted at times when the Sun is low in the sky beyond the reflecting panels. This means that a pilot will likely have a view of the Sun within the same viewpoint of the reflecting solar. The Sun is a far more significant source of light, and therefore the glare originating from the proposed development will not be significant”

This is only true of the Tracking Panels, Fixed Panels will reflect the sun's rays back towards the pilot when flying towards the panels with the sun directly behind the aircraft.

“For the majority of circuits and approaches, effects would be fleeting due to their short duration along the visual circuits and the restricted size of the reflecting panel area”

Although the initial glint may be ‘fleeting’, a Yellow category event is defined as having the ‘Potential for temporary after-image’. This image may linger for some time and if the initial ‘glint’ occurred during a Downwind Leg portion of the circuit, it may be followed by another ‘Glint’ event when entering the splayed approach.

It is not clear as to how the panel area is ‘restricted’?. Excluding the area of the Substations & BESS, Solar Panels will cover the remainder of Sites 1A & 1B.

“It is expected that operational measures already used by pilots to mitigate the effects of direct sunlight could potentially be used to mitigate the effects of solar glare from the panels. The instances of ‘yellow’ glare could potentially be operationally accommodated, subject to consultation with Norfolk Gliding Club.”

Again only valid for the Tracking Panels. No such consultation/discussion has so far taken place.

Station Road Solar Farm

Section 6 - HIGH-LEVEL ASSESSMENT OF CUMULATIVE EFFECTS of the Glint & Glare Report is described as presenting “analysis of cumulative effects of solar reflections, from the existing and proposed solar developments in the surrounding area in respect to shared receptors between the Scheme and the existing development.”.

A map is then presented showing a single unidentified alternative development (Figure 9 Page:61) some way to the North of Tibenham Airfield.

In producing this document section, the Applicant’s consultant has completely omitted the existence of the previously approved **20MW 37 hectare Station Road Solar Farm** which is slated to be implemented immediately adjacent to East Pye’s Battery Energy Storage System (BESS), close to Sites 1A & 1B.



Figure 3: Location of the Station Road Solar Farm

Planning approval for the Station Road Solar Farm was given by South Norfolk District Council on 27th June 2025.

During the planning process for the Station Road Solar Farm, NGC raised objections to the development on the grounds, amongst others, that EFATO options would be reduced. The planning officer, in approving the development refuted these objections as the development “*is currently part of a wider tapestry of agricultural land within the vicinity of the airfield.*”.

If the Applicant’s proposals proceed, this will no longer be the case.

It is not understood how a 37 hectare/ 20MW Solar Farm, which is to be located immediately adjacent to the Applicant’s proposals and is therefore very likely to have a bearing on the operations from Tibenham Airfield, could be omitted in this way.

The DCO Library contains Document **APP-116** 6.3.2.4 *Environmental Statement Volume 3: Appendix 2.4 – Cumulative Schemes (Revision 1)*

‘Station Road Solar Farm’ is the very first entry in Table 1.4: *Long and Short List of Cumulative Schemes* within **APP-116**. Details state that there is a partial overlap with the Applicant’s sub-site 1C and that both the Construction and Operation of this project are ‘Likely’.

The omission of the ‘Station Road Solar Farm’ from consideration within the Applicant’s Glint & Glare assessment, raises serious concerns as to validity of the Glint & Glare Report.

Note: Station Road Solar Farm’s existence was also omitted from the Applicant’s **APP-222** - 7.27 *High Level Investigative Report (Revision 1)* which purports to investigate the impacts of Engine Failure After Take-Off (EFATO) and Glider Launch Failure (GLF), thermal updraughts, and wind shear and turbulence, upon aviation activity associated with Norfolk Gliding Club at Tibenham Airfield.

More details on the ‘Station Road Solar Farm’ can be found in **Appendix E** of this Written Representation.

Thermal Plume

On the Topic of Thermal Plume, the applicant's **APP-222: 'High Level Investigative Report'** provides little by way of detailed consideration of the potential impact of thermal plume and heat induced turbulence. The assessment in APP-222 is high level and opinion based and is not considered an appropriate level of analysis given the potential safety issues.

Section 4.2 of APP-222 states that, in comparing the heat given off from open fields and hills, "*In comparison to solar panels which produce relatively uniform heat over a localised area, the resulting thermals lack the strength to significantly impact a glider's activity.*" without providing any evidence to support this statement. Also, as the proposed Solar Panels are going to cover entire fields the effects of the resultant Thermal Plumes are going to be widespread.

It should be noted that the Easterly wind direction that dictates the use of Tibenham's Runway 08, which is directly affected by the Applicant's proposed energy infrastructure, would see Thermal Plumes originating from the infrastructure inclined towards Tibenham's location and therefore being more of an issue for Tibenham based aircraft.

Section 4.2 of APP-222, also states that "*it is not anticipated that panels would reach temperatures significantly greater than the surrounding ground*".

It is believed that current solar panels efficiency is typically in the region of 15%- 20%, with much of the remainder lost to heat. Given that most of the panels around Tibenham will replace agricultural fields, it does not follow that the temperature would be similar to that of the surrounding ground.

In any event it does not take a great temperature difference to generate a Thermal Plume.

The Investigative Report also does not give any consideration to the effects that intercepting Thermal Plumes will have for low experienced pilots or those pilots under instruction for whom abrupt changes in updraughts will have a potentially startling effect.

APP-222 conclusions are not robustly evidenced and the potential risk has not been adequately considered.

Bird Strike

Tibenham regularly experiences the arrival of large flocks of crows and gulls, possibly due to the extent of open grassland that constitutes the airfield and its relative closeness to coastal regions.

These flocks in turn attract large predators, Buzzards and Red Kites which are regularly seen in the vicinity of the airfield.

NGC, is concerned that other birds will be displaced from those fields which will be taken up by Solar Panels and the other energy infrastructure and instead, see them congregate on the airfield, as it becomes one of the few remaining areas of open grassland, increasing the likelihood of a bird strike event.

EN-1 Section 5.5.41 states:

In addition, consideration of developments near aerodromes should take into account the following factors:

- *Bird Strike Risk – Aircraft are vulnerable to wildlife strike, in particular bird strike. Birds and other wildlife may be attracted to the vicinity of an aerodrome by various types of development, for example, large buildings with perching/roosting opportunities for birds. It is therefore important that infrastructure, buildings and other elements from energy installations, as well as environmental mitigation are designed in such a way so as not to increase the bird strike risk to the airport for developments within 13km (this can vary).*

Document Summary

The Scheme

By placing multiple Substations, BESS and Solar panels associated with Site 1A & 1B directly on the centreline of Tibenham's Runway 08, the Applicant appears to have completely ignored the existence of a busy active airfield.

This unfortunately appears to be a common strategy used by developers of large UK energy infrastructure projects, where they believe that their project's interests take precedence over all and any existing amenities or residential properties.

Developers then expect the affected amenities to either cease the activities they have been carrying out for decades or modify them to such an extent that they may no longer be viable.

We unfortunately have previous experience of situations like when dealing with the proposed Norwich to Tilbury Pylons project.

By placing the energy infrastructure where it is currently proposed, will severely increase the risks to pilots, passengers and crew of any aircraft utilising Tibenham's runway 08.

Power Infrastructure Maps

NGC has produced a series of maps (summarised here) showing the extent of current and planned energy infrastructure projects in the vicinity of Tibenham airfield and comparing them to show how the Applicant's proposed Solar infrastructure will severely restrict options for a forced off airfield landing

Map 1 below shows the current situation including:

- Areas identified by the Applicant in their 'High Level Investigative Report', as being unsuitable for an off-airfield forced landout (Light Blue)
- Additional areas identified by NGC as being unsuitable for an off-airfield forced landout (Dark Blue)
- Location of the planned and approved 'Station Road Solar Farm' (Brown)
- Location of UK Power Networks LV (Yellow) and HV (Red) Overhead lines

From this it can be seen that there are currently sufficient options available close to the extended centreline of runway 08, between the airfield and towards and under the existing pylons to the East of the airfield, should an aircraft suffer an EFATO when operating from Tibenham's Runway 08.

Map 2- shows the situation should the Applicant's proposals go ahead and shows how they would significantly reduce the number of fields available for a forced off-airfield landing such that there would be very few EFATO landout options remaining.

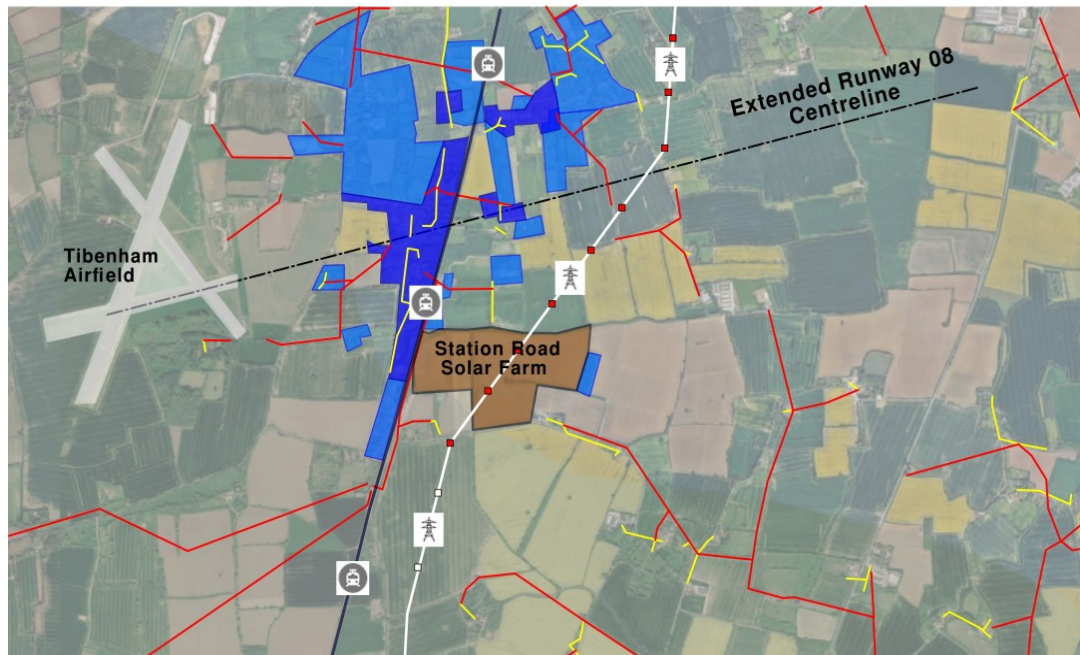


Figure 1: Map1 - Before East Pye

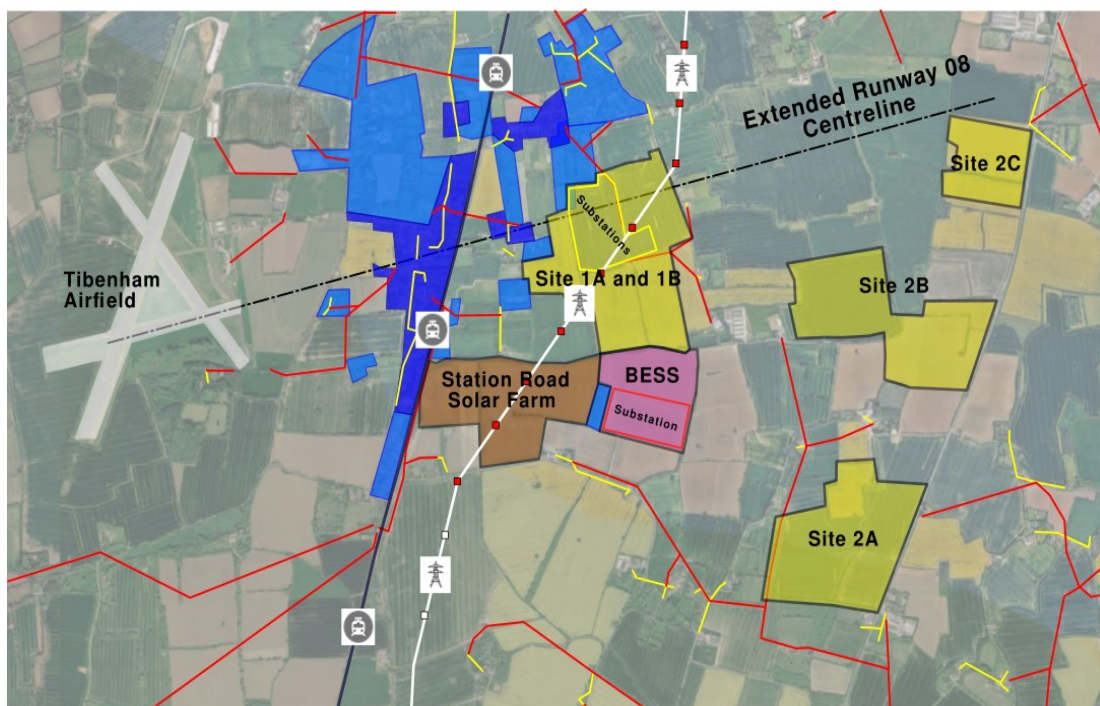


Figure 2: Map 2 - After East Pye

Further details of the increased risks that the Applicant's proposals will impose on Tibenham based aircraft can be seen when analysing Engine Failure scenarios in NGC's WR Section 8: *Runway 08 EFATO Analysis*

National Grid Pylons

This section of NGC's WR details information on the existing National Grid Pylons which lie to the East of Tibenham Airfield, running in a roughly North/South alignment. The Pylons run through both the planned and approved 'Station Road Solar Farm' and the Applicant's proposed Site 1A & 1B.

The Pylons are between 1.54km and 2.82 from the take-off point of Tibenham's Runway 08.



Figure 3: Pylon Distances from Take-Off Point Runway 08

The existence of the Pylons was not mentioned or considered in the Applicant's 'High Level Investigative Report' which NGC see as a serious omission due to their effect of EFATO forced landing options.

Pylon Realignment

During the Jan'26 meeting, NGC were informed by the Applicant that a Pylon Realignment would be required (presumably to accommodate the imposition of the National Grid and the Applicant's Substations to the North of Site 1A) and is likely to comprise up to four new Pylons, of which three

would be associated with the repositioning of existing pylons and up to 1 new pylon. These will be up to 61 metres in height.

As of the date of the submission of this Written Representation (Early Oct'26), NGC have not been included in any discussion or consultation regarding the Pylon Realignment Project and have also been unable to find any details relating to the project that is allocated as part of the East Pye Solar project - Work No: 5. As such NGC are unable to make any judgment as to whether these changes will impact flight operations from Tibenham Airfield.

Collaboration & Engagement

Below is a brief chronological schedule of the interactions that took place between the Applicant and NGC.

1. Initial contact with NGC was made by the Applicant via email **Oct'24**, requesting airfield information with a view to the Applicant producing the required Glint & Glare report.
2. Between **Nov'24 and Jan'25** various emails were exchanged on the same topic. No answers were provided by the Applicant on non-Glint & Glare issues.
3. Due to NGC's concerns regarding the consultant's confusion / non-understanding of circuits utilised by GA and Glider traffic at Tibenham, a face-to-face meeting took place **23rd Jan'25**. Again no discussion on any non-Glint & Glare issues.
4. Between **Jan'25 – Jun'25** another exchange of emails, again only concerning themselves with Glint & Glare.

Up until this point the Applicant and their Consultant had almost exclusively restricted discussions to only those issues associated with production of the Glint & Glare Report.

5. **Oct'25** Email from NGC to the Applicant concerned about the lack of any response to NGC's Jul'25 Objection.
6. **Nov'25-Dec'26** Another email exchange where NGC raised questions relating to the lack of engagement given the potential for fatal accidents resulting from EFATO type incidents and the lack of a meaningful G&G study by the Applicant.
7. This resulted in an agreement to have a face-to-face meeting at the airfield in Jan'26.
8. At this meeting the Applicant let it be known that they planned to go forward with the DCO Application by early Mar'26 (8 Weeks from the meeting) – this suggested that the meeting was a 'tick-box exercise' and nothing about the scheme was likely to change. This was later borne out by the DCO Application which contained no mitigation.

At the same meeting, the Applicant also confirmed that National Grid had taken up the option to implement it's 400kv Substation immediately on the centreline of Tibenham's Runway 08, and that this would entail a 'Realignment' of the Pylons which will potentially have a direct affect on flight operations at Tibenham.

As of Oct'26, NGC have received no further details / information nor been involved in any discussions / consultation relating to this realignment. Other than outline information contained in **APP-040 6.1.4 Environmental Statement Volume 1: Chapter 4 – The Scheme (Revision 1)**, NGC have been unable to find any details of this realignment in the DCO documents.

9. **Mar'26** The applicant submitted the DCO Application with no mitigations relating to Tibenham Airfield.

Failure to Carry Out an EFATO Analysis

By not carrying out a full and thorough Engine Failure After Take-Off (EFATO) analysis and only producing a '*High Level Investigative Report*', the Applicant has given little consideration to the consequences of emergency engine failure scenarios and have attempted to restrict any analysis to an unacceptable, arbitrary 2km limit from the airfield, which just happens to exclude a majority of the Applicant's energy infrastructure in the vicinity of Tibenham Airfield.

Due to this failure, NGC have taken upon itself to carry out its own EFATO Analysis - See Section 5 *Runway 08 EFATO Analysis* of NGC's Written Representation Oct 2026.

However this feels as though we are doing the work that the developer and consultants should have done themselves as a matter of course. Other than it would show the development in a bad light, it is not understood why a developer, aware of the existence of an active airfield would not carry out such an investigation.

It is welcomed that the ExA, in its DCO Document **PD-006 Examining Authority's Written Questions 1 (ExQ1)**, the Applicant has been requested to provide details in relation to emergency landing scenarios and it is hoped that this will include a full and thorough examination of the various engine failure scenarios, similar to that, that was carried out for Seething Airfield. We look forward to comparing the results with that of our own analysis.

It is NGC's view that the '*High Level Investigative Report*' has also been very restrictive in selecting which areas are deemed unsuitable for a forced off-airfield landing. Again NGC have taken upon itself to investigate this further and using local knowledge and more up to date mapping than appears to have been used in the '*High Level Investigative Report*'. NGC have identified a number of additional areas into which a forced off-airfield landing should be avoided. See- *Appendix C - NGC Unlandables* of NGC's Written Representation Sept 2026.

Disparity of Treatment between Seething and Tibenham Airfields

The approach used by the Applicant in its dealings with Tibenham, contrasts drastically with that of Seething Airfield, which is also affected by the Applicant's proposed Solar project.

In this instance, the Applicant engaged with Seething at an early stage, commissioned an aviation consultant to prepare a full EFATO analysis of Seething's affected runway, which in turn, led to the

consultant concluding that several of the Applicant's proposals affected the safe operation of flights from Seething.

Mitigations were then proposed and accepted by the developer, such that changes were then made to the solar infrastructure proposals in the vicinity of Seething Airfield. It should be noted that no mitigations around Tibenham were proposed following publication of the cursory '*High Level Investigative Report*'.

The treatment of Tibenham Airfield has been very different. Engagement relating to the local infrastructure (with the exception of Glint & Glare) was later and Tibenham was only deemed worthy of a cursory 'High Level Investigative Report' rather anything more substantial.

Compared to Seething, Tibenham operate in a far more complex aviation environment, operating mixed Gliding and Power operations, with active training operations for both disciplines, together with Ballooning, an MOD helicopter fuel replenishment operation and other aviation activities. Tibenham also have to contend with the proximity of another local airfield at Priory Farm, with whom we work together well. However its existence does mean that Tibenham's circuits are transposed to the Eastern side of the airfield i.e. towards the the Applicant's proposed infrastructure, to avoid any conflict with flight traffic from Priory Farm.

There has been no indication from the Applicant explaining the reasons why the disparity between the treatment of Seething and Tibenham exists.

Design Feature Options

Since going to the DCO stage in March 2026, the application contains a number of fundamental Design Feature Options. These being:

- Options - Single-Axis Tracker Panels (Tracker Panels) or Fixed South Facing PV Arrays (Fixed Panels).
- Construction of Array Conversion Units / Inverters consisting of Inverters, Transformers and Switchgear as being either 'integrated' / 'containerised' or housed in individual stand-alone cabinets.
- 400kV Substations will use either Gas insulated switchgear or Air insulated switchgear.¹
- In addition, the selection by National Grid of the northern option for their 400kV Substation contained within Site 1A & 1B requires a Pylon Realignment project with up to 4 new pylons and possibly, an indeterminate number of temporary Pylons.

The lack of any clear decision by the Applicant on which of these options are to be chosen, has negatively affected the ability of responding organisations such as NGC as well as individuals, to respond fully to the Applicant's proposals, whilst suggesting that Applicant rushed to DCO submission.

¹ Taishan, a manufacturer of Gas Insulated Transformers claims them to be 70%-90% more compact than Air Insulated Transformers, perhaps giving scope to reduce the size of the Substations included in the Applicant's proposals and therefore allow mitigations to be put in place.

Station Road Solar Farm - Omission....

In both the Applicant's; 'High Level Investigative' and the 'Glint & Glare' reports, the existence of the planned and approved '*Station Road Solar Farm*' has studiously been omitted from any consideration or discussion.

This is a serious omission, as the 20MW '*Station Road Solar Farm*' is planned to occupy 36.9 hectares of agricultural land immediately adjacent to the location of the Applicant's Battery Energy Storage System (BESS) & 400kV Substation1 proposals, whilst also existing as the first entry in Table 1.4: *Long and Short List of Cumulative Schemes* contained within DCO Document **APP-116** 6.3.2.4 *Environmental Statement Volume 3: Appendix 2.4 – Cumulative Schemes (Revision 1)*.

Station Road Solar Farm has an impact on operations from Tibenham Airfield which will only increase in severity by the addition of the Applicant's proposals.

The Applicant's Glint & Glare report includes a section entitled '*High-Level Assessment Of Cumulative Effects*' which is described as considering:

'analysis of cumulative effects of solar reflections, from the existing and proposed solar developments in the surrounding area in respect to shared receptors between the Scheme and the existing development.'

– and yet the *Station Road* proposals are completely ignored, even though it is located immediately adjacent to the Applicant's proposals and is similar in size of the Applicant's Site 1A & 1B.

It is NGC's view that the omission of the Station Road Solar Farm from the Applicant's Glint & Glare Report invalidates it's findings.

During the planning process for the *Station Road Solar Farm*, NGC raised objections to the development on the grounds, amongst others, that EFATO options would be reduced. The planning officer, in approving the development refuted these objections as the development "*is currently part of a wider tapestry of agricultural land within the vicinity of the airfield.*".

Had the Applicant's East Pye proposals predated the *Station Road* proposals, it is thought unlikely that this argument would have been up-held and the *Station Road* proposals may subsequently have been refused.

With the Applicant's proposals, we see that this '*wider tapestry of agricultural land*' is now being occupied by the imposition of the Substations and Solar Array that constitute Site 1A & 1B.

Affects on Tibenham's Operation

Any Flight Safety Officer (FSO) of a flying organisation, would have to look at the implications for flight safety, should the Applicant's proposals go ahead.

Which would result in the currently available EFATO landable fields to the East of Tibenham almost completely being occupied the by the Applicant's new energy infrastructure, the SFO would most likely take the view, that use of Tibenham's Runway 08 is no longer a safe and viable option

and recommend to NGC's Management Board that all Power operations from Runway 08 should cease.

The Board may then look for redress for the loss of this amenity.

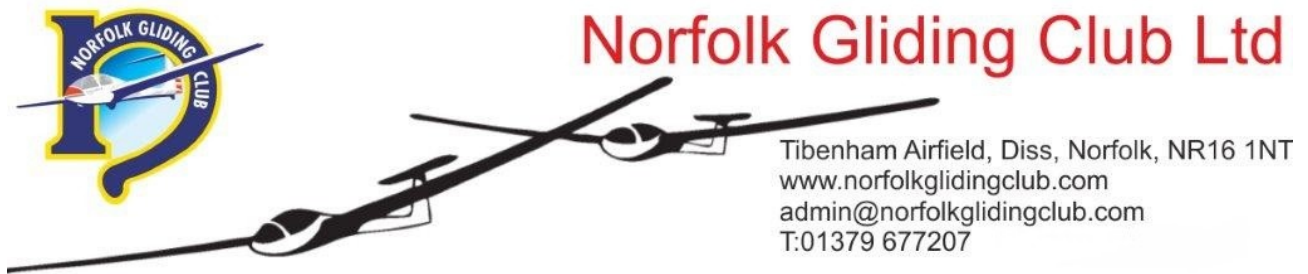
Ceasing operations on Runway 08 would further affect the safe operation at Tibenham as, other non-optimal runways would have to be used in wind directions that previously would have dictated the use of Runway 08.

Pilots would also see Tibenham as being a less attractive location to base their aircraft, if they foresaw that certain wind directions would entail additional risk.

Section 5.5.5 of EN-1 includes the statement:

“UK airspace is important for both civilian and military aviation interests. It is **essential** that new energy infrastructure is developed collaboratively alongside aerodromes, aircraft, air systems and airspace **so that safety, operations and capabilities are not adversely affected by new energy infrastructure.**“

NGC do not believe that the Applicant has complied with this crucial requirement.



East Pye Solar Farm EN0110014

Interested Party Reference Number [REDACTED]

**Written Representation Summary V2.0 on behalf of
Norfolk Gliding Club**

NGC Written Representation Summary

The Scheme

By placing the multiple Substations, BESS and Solar panels associated with Site 1A & 1B directly on the centreline of Tibenham's Runway 08, the Applicant appears to have completely ignored the existence of a busy, active, General Aviation / Gliding airfield.

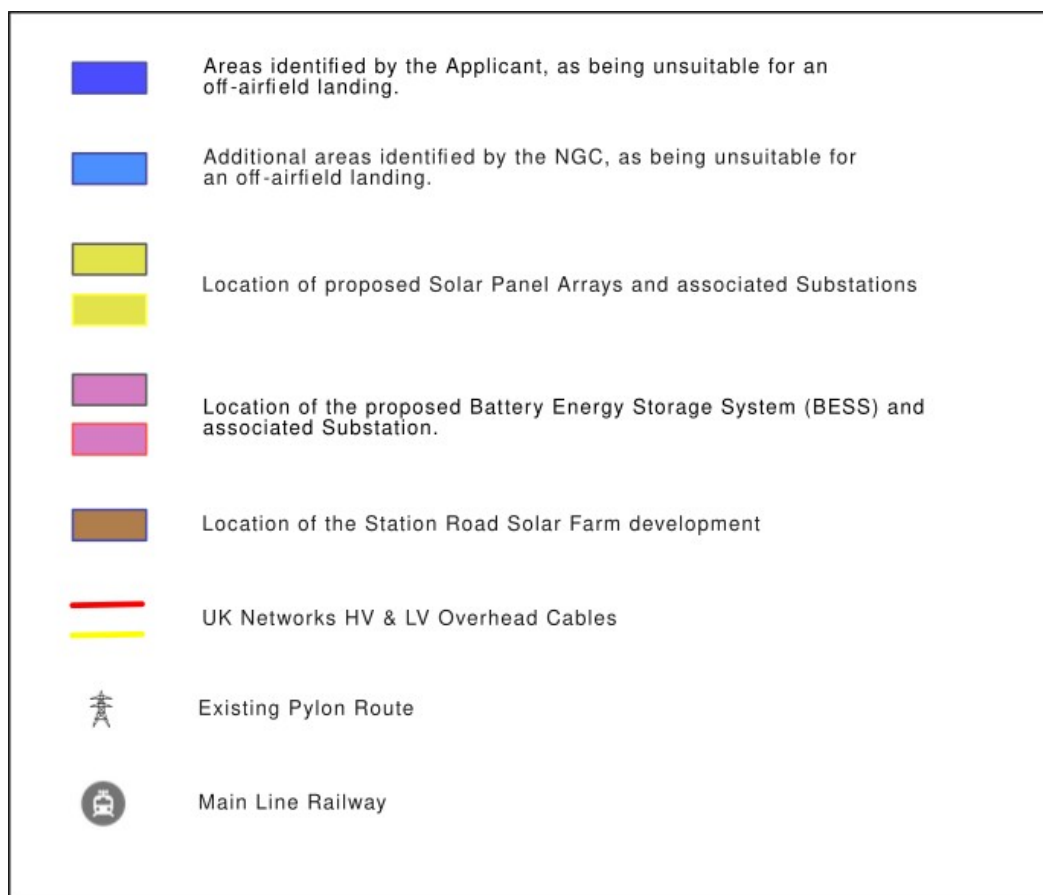
This unfortunately appears to be a common strategy used by developers of large UK energy infrastructure projects, where they believe that their project's interests take precedence over all and any existing amenities or residential properties.

Placing the energy infrastructure where it is currently proposed, will severely increase the risks to pilots, passengers and crew of any aircraft utilising Tibenham's runway 08.

Power Infrastructure Maps

NGC has produced a series of maps (summarised here) showing the extent of current and planned energy infrastructure projects within the vicinity of Tibenham airfield. These clearly show how the Applicant's proposed Solar infrastructure will severely restrict options for a forced off-airfield emergency landings.

Map Key:



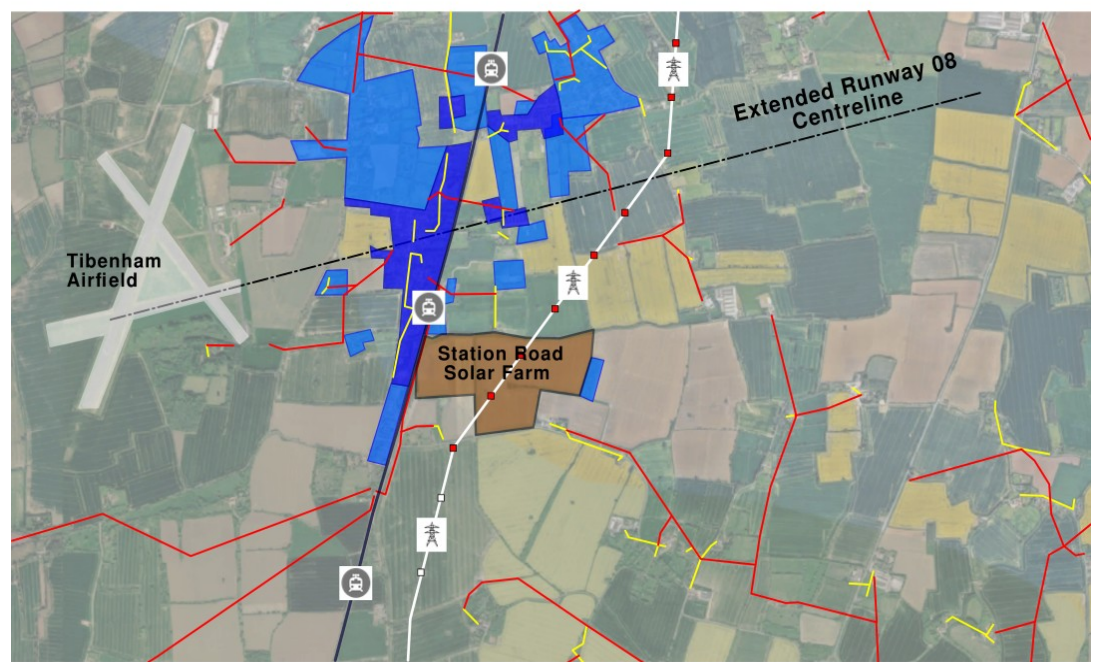


Figure 1: Map1 - Before East Pye

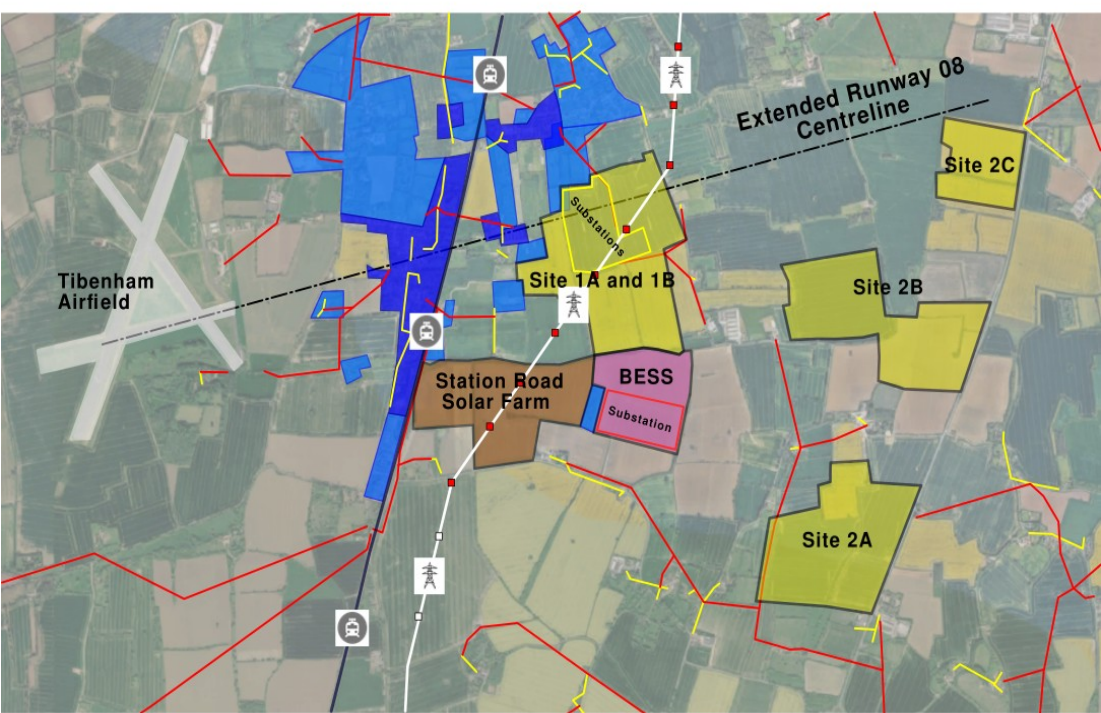


Figure 2: Map 2 - After East Pye

National Grid Pylons

This section of NGC's WR, details information on the existing National Grid Pylons which lie to the East of Tibenham Airfield running in a roughly North / South alignment.



Figure 3: Pylon Distances from Take-Off Point Runway 08

The High Level Investigative report contains no acknowledgment of the existence of these Pylons.

During the Jan'26 meeting, NGC were informed by the Applicant that a Pylon Realignment would be required including a number of new Pylons

To date, NGC have not been included in any discussion or consultation regarding the Pylon Realignment.

Collaboration & Engagement

Contrary to the requirements laid down in Overarching National Policy Statement for Energy (EN-1) the applicant failed to adequately collaborate with NGC.

Initial contact with NGC was made by the applicant via email in **Oct'24**, requesting airfield information with a view to the applicant producing the required Glint & Glare report.

Between that date and Jun '25, the Applicant and their Consultant almost exclusively restricted discussions to only those issues associated with production of the Glint & Glare Report.

The first real meaningful discussion did not take place until the meeting in Jan'26, when NGC were informed that National Grid's 400kv Substation would be located immediately on the centreline of Tibenham's Runway 08, that a Pylon Realignment is to go ahead and that the DCO submission would go ahead in 8 weeks time. Effectively saying that the design was now fixed without any prior discussion with NGC

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High Level Investigative Report

It is NGC's view that the 'High Level Investigative Report' is a cursory attempt to assess the impact that the Applicant's proposals will have on Tibenham's aviation activities.

It is a very high level report, makes a number of unsubstantiated misleading claims, uses an inappropriate EFATO example, references non applicable European aviation documents, omits major existing and planned energy infrastructure (400kV Pylons and 'Station Road Solar Farm'), whilst using an unacceptable, arbitrarily restrictive 2km 'baseline' area, contrary to CAA advice, whilst using photos of other solar installations in an attempt to justify the implementation of Applicant's proposals.

Failure to Carry Out an EFATO Analysis

The Applicant did not produce a full and thorough Engine Failure After Take-Off (EFATO) analysis, only producing a 'High Level Investigative Report', giving little consideration to the consequences of emergency engine failures scenarios whilst attempting to restrict analysis to an unacceptable, arbitrary 2km limit.

Due to this failure, NGC has taken it upon itself to carry out an EFATO Analysis.

See NGC WR Section – *Runway 08 EFATO Analysis*

The 'High Level Investigative Report' has also been very restrictive in selecting which areas are deemed unsuitable for a forced off-airfield landing. NGC has again taken it upon itself to carry out a full and proper analysis.

See NGC WR Appendix C – *NGC Unlandables*

Results of NGC EFATO Analysis

The following Data Table and EFATO Profile Summary for Tibenham's Runway 08, show that a pilot's forced off-airfield landout options, for both the 300ft and 400ft EFATO Events, will be severely restricted by the existence of the Applicant's Solar Infrastructure. Resulting in the pilot having to choose between, landing amongst the Solar Infrastructure or attempting an unrecommended 'Impossible Turn'.

Results of NGC's EFATO Analysis

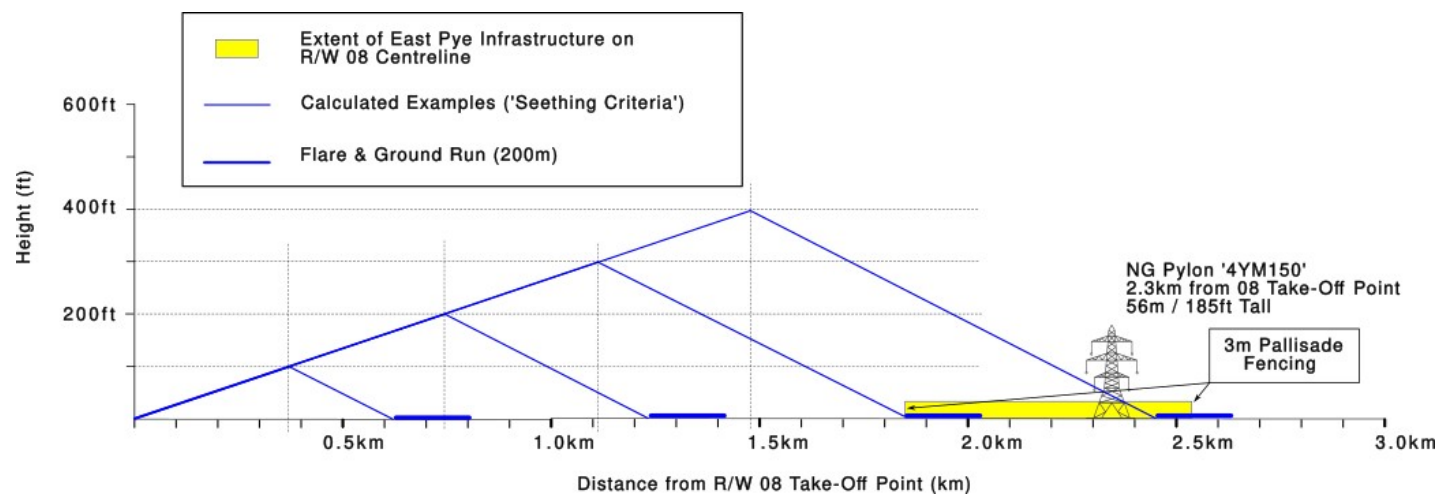
The following table summarises NGC's EFATO Event Analyses:

Height of EFATO Event (ft)	Distance from T/O Point (nm)	Distance from T/O Point (m)	Glide Distance (m)	Total Distance (m)	Time to Gnd from EFATO Event (Secs)	Total Distance2 (m)	Impacted by existence of East Pye Solar ?
100	0.2	370	240	610	7.9	810	No
200	0.4	741	485	1226	15.8	1,426	No
300	0.6	1,111	730	1841	23.7	2,041	Yes
400	0.8	1,481	975	2456	31.6	2,656	Yes

Total Distance2 Includes: Distance from T/O Point (m) + Glide Distance (m) + Stopping Distance of 200m

Summary of the EFATO Profiles for Tibenham Runway 08

Consisting of Climb-Out, Unpowered 8:1 Descent and 200m Flare / Ground Run. ('Seething Criteria')



Disparity of Treatment between Seething and Tibenham Airfields

The approach used by the Applicant in its dealings with Tibenham, contrasts drastically with that of Seething Airfield. The Applicant engaged with Seething at an early stage, commissioned an aviation consultant to prepare a full EFATO analysis of Seething's affected runway, where the consultant concluded that several of the Applicant's proposals affected the safe operation of flights from Seething and mitigations were proposed and accepted by the Applicant.

Tibenham operate in a far more complex aviation environment.

There has been no indication from the Applicant explaining the reasons why the disparity between the treatment of Seething and Tibenham exists.

Station Road Solar Farm Omission....

In both the Applicant's; 'High Level Investigative' and the 'Glint & Glare' reports, the existence of the planned and approved 'Station Road Solar Farm' has studiously been omitted from any consideration or discussion.

This is a serious omission, as the 20MW 'Station Road Solar Farm' is planned to occupy 36.9 hectares of agricultural land immediately adjacent to the location of the Applicant's Site 1A & 1B

The 'High-Level Assessment Of Cumulative Effects' section of the Glint & Glare report completely omits any mention of the Station Road proposals.

It is NGC's view that the omission of the Station Road Solar Farm from the Applicant's Glint & Glare Report further invalidates its findings.

During the planning process for the 'Station Road Solar Farm', NGC raised objections to the development on the grounds that EFATO landout options would be reduced. The planning officer refuted these objections as the development "is currently part of a wider tapestry of agricultural land within the vicinity of the airfield."

With the Applicant's proposals, we see that this 'wider tapestry of agricultural land' is now being occupied by the imposition of the Substations and Solar Arrays that constitute Site 1A & 1B.

Glint & Glare Report

NGC have severe reservations about the G&G Report.

- It was originally based very heavily on a report relating to another solar installation.
- Purports to have assessed the impacts of both Tracking and Fixed panels, when only a single set of results is presented, with maps suggesting that only the Fixed panels were assessed.
- G&G assessment concentrates heavily on the Splayed Approaches (Base Leg and Approach portions of the circuits) and relegates Downwind Legs to an appendix.

- Downplays the results which show, with the exception of the Downwind Legs for Runway 15, ALL Downwind Legs experience a ‘Yellow’ category Glint & Glare event as do ALL the Splayed Approaches. ‘Yellow’ is one category of G&G down from the maximum.
- Shows little understanding of a pilot’s need to carry out a thorough ‘Look Out’ as part of the ‘See and Avoid’ process that keeps pilots safe.
- Completely ignores the existence of the adjacent ‘Station Road Solar Farm’ which raises serious concerns as to validity of the Glint & Glare Report.

Affects on Tibenham’s Operation

With the currently available EFATO landable fields to the East of Tibenham being almost completely occupied by the Applicant’s new energy infrastructure, use of Tibenham’s Runway 08 would be deemed no longer safe and result in the cessation of Power operations from Runway 08.

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Norfolk Gliding Club Ltd



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www.norfolkglidingclub.com
admin@norfolkglidingclub.com
T:01379 677207

East Pye Solar Farm EN0110014

Interested Party Reference Number [REDACTED]

**Written Representation Summary on behalf of
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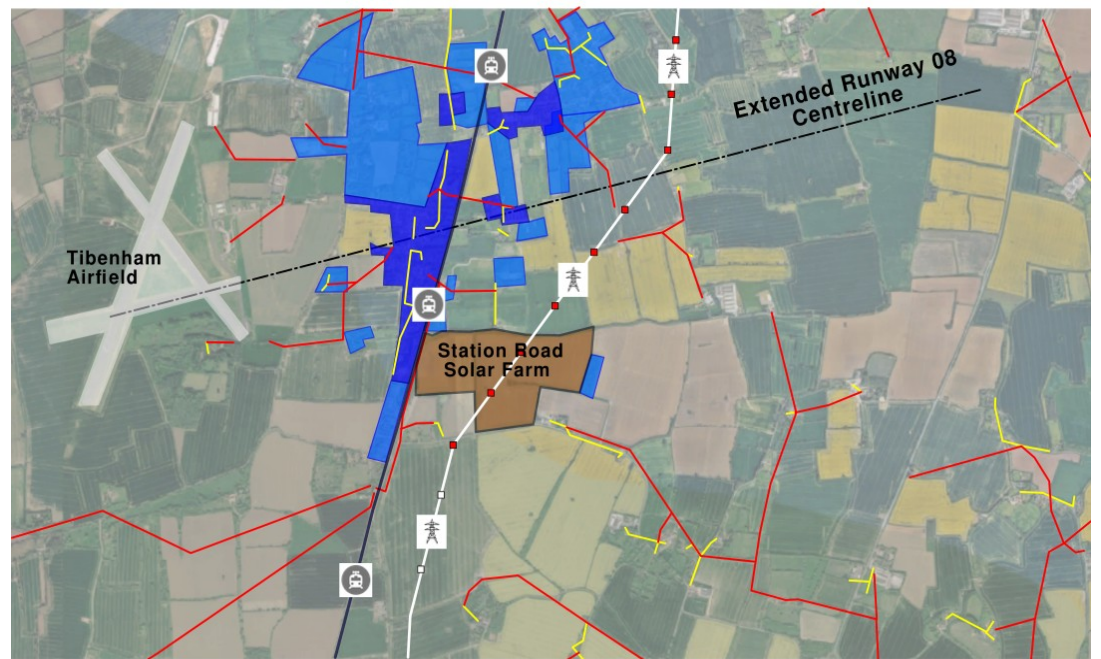


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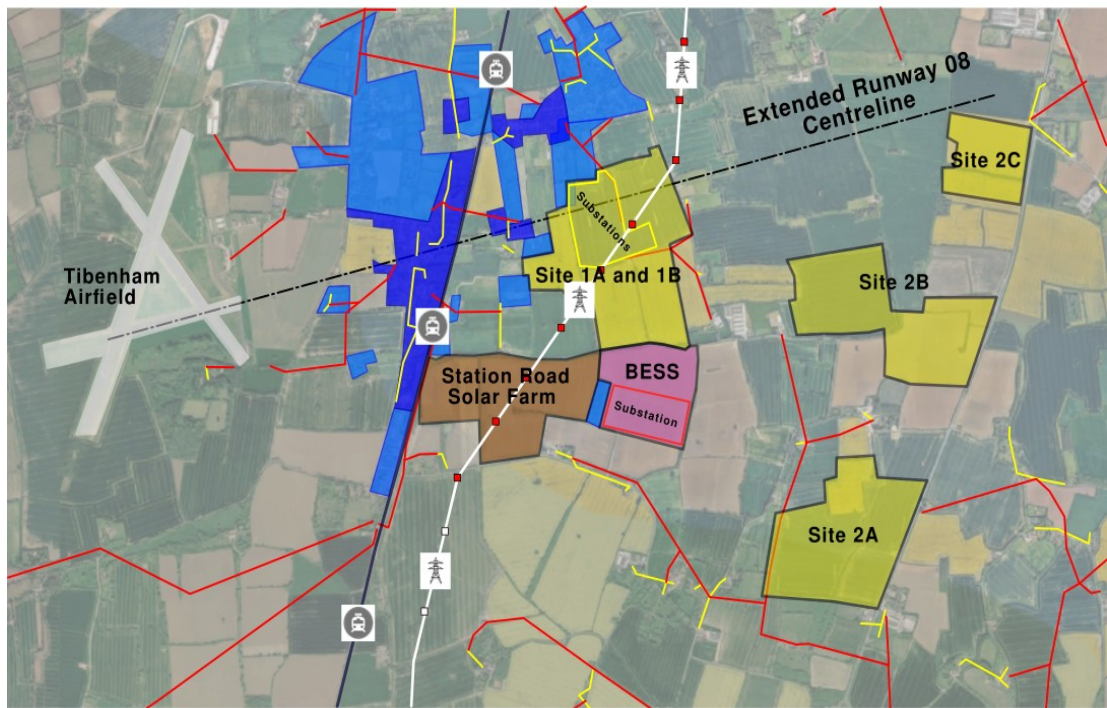


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Tibenham operate in a far more complex aviation environment, operating mixed Gliding and Power operations, with active training operations for both disciplines, together with Ballooning, a MOD

helicopter fuel replenishment operation and other aviation activities. Priory Farm airstrip is also in close proximity to Tibenham which affects Tibenham's circuits.

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With the Applicant's proposals, we see that this '*wider tapestry of agricultural land*' is now being occupied by the imposition of the Substations and Solar Arrays that constitute Site 1A & 1B.

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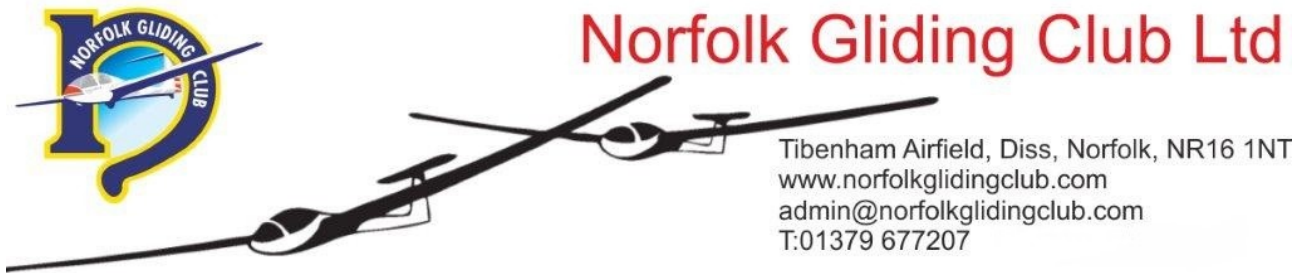
The Board may then look for redress for the loss of this amenity.

Ceasing operations on Runway 08 would further affect the safe operation at Tibenham as, other non-optimal runways would have to be used in wind directions that previously would have dictated the use of Runway 08.

Section 5.5.5 of EN-1 includes the statement:

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NGC do not believe that the Applicant has complied with this crucial requirement.



East Pye Solar Farm EN0110014

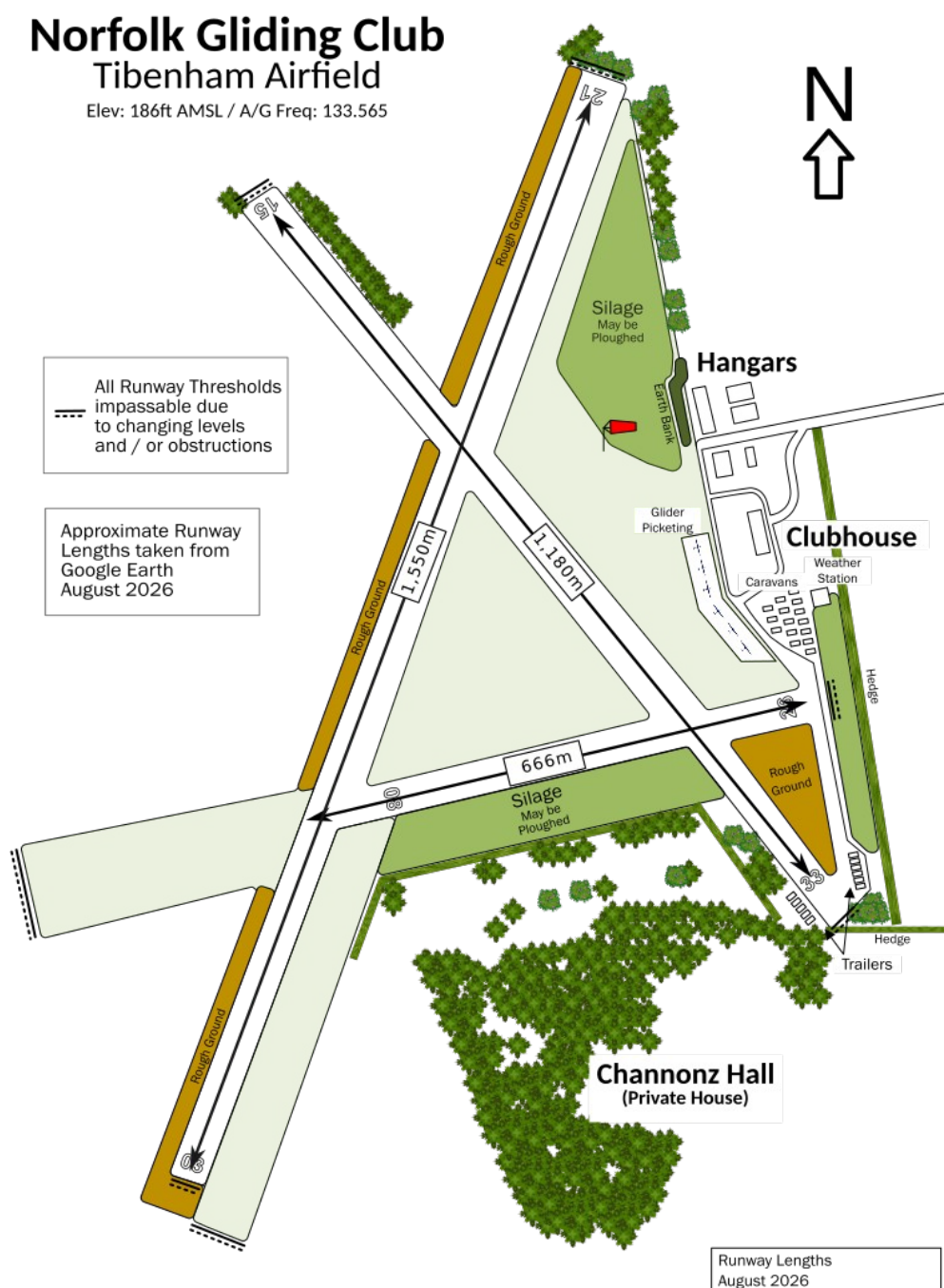
Interested Party Reference Number [REDACTED]

**Written Representation Appendices on behalf of
Norfolk Gliding Club**

Appendix A - Tibenham Airfield Runway Layout & Lengths

This appendix shows details of the tarmac runways available for use by powered aircraft.

Note: Runway 08/26 consists of both Tarmac and Grass sections – Due to these areas becoming waterlogged in Winter and the existence of a ‘step’ at the transition from Grass to Tarmac, the Grass section is not recommended for use by powered aircraft and is utilised only by Gliders when winch launching or landing. Gliders being aerotowed, also commence their Runway 08 Take-Off run from the start of the tarmac section.



Appendix B - Local Map Tibenham & Priory Farm

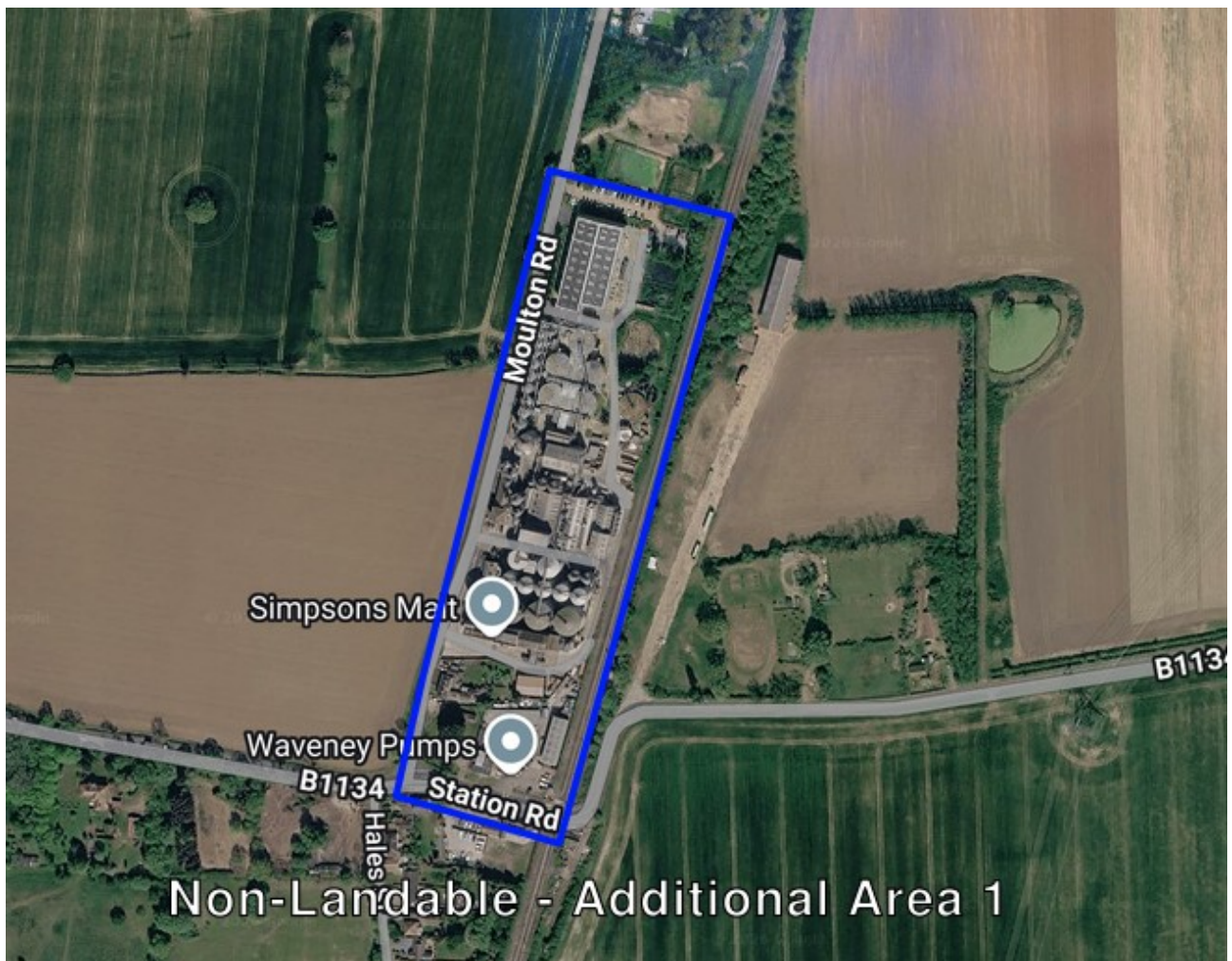
This map shows the proximity of Tibenham Airfield and Priory Farm Airstrip and clearly demonstrates why there is a need to avoid circuit conflict between the two airfields, Tibenham circuits are predominately transposed towards the East, Priory Farms' to the West.

The likely imposition of the Norwich to Tilbury Pylons will only increase the importance of this separation.



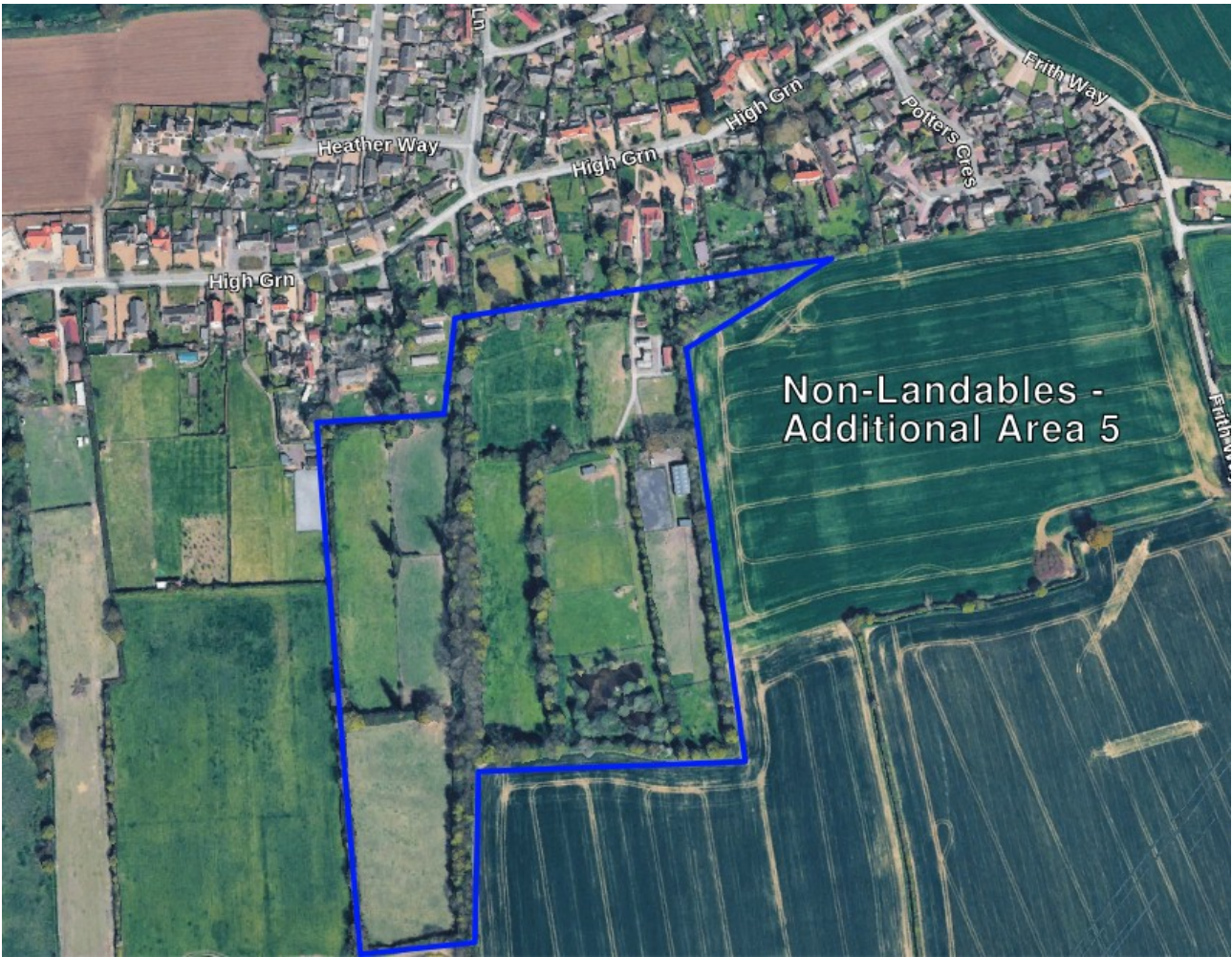
Appendix C - NGC Selection of Areas Unsuitable for an Off-Field Landing

This appendix details those areas judged to be unsuitable for an off-field emergency landing. These are in addition to those identified by the Applicant in their 'High Level Investigative Report': Issue 2 Feb 2026.

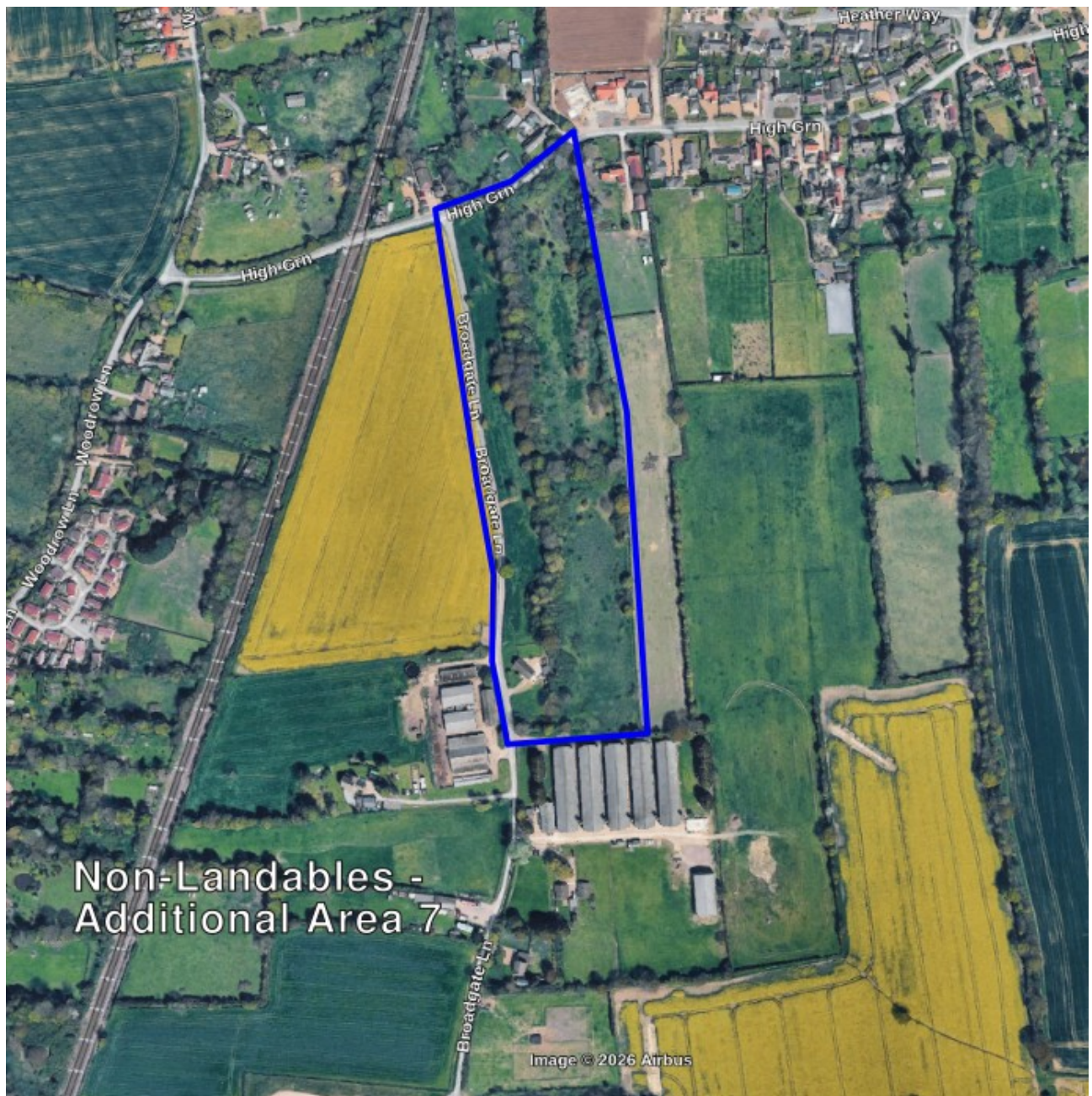




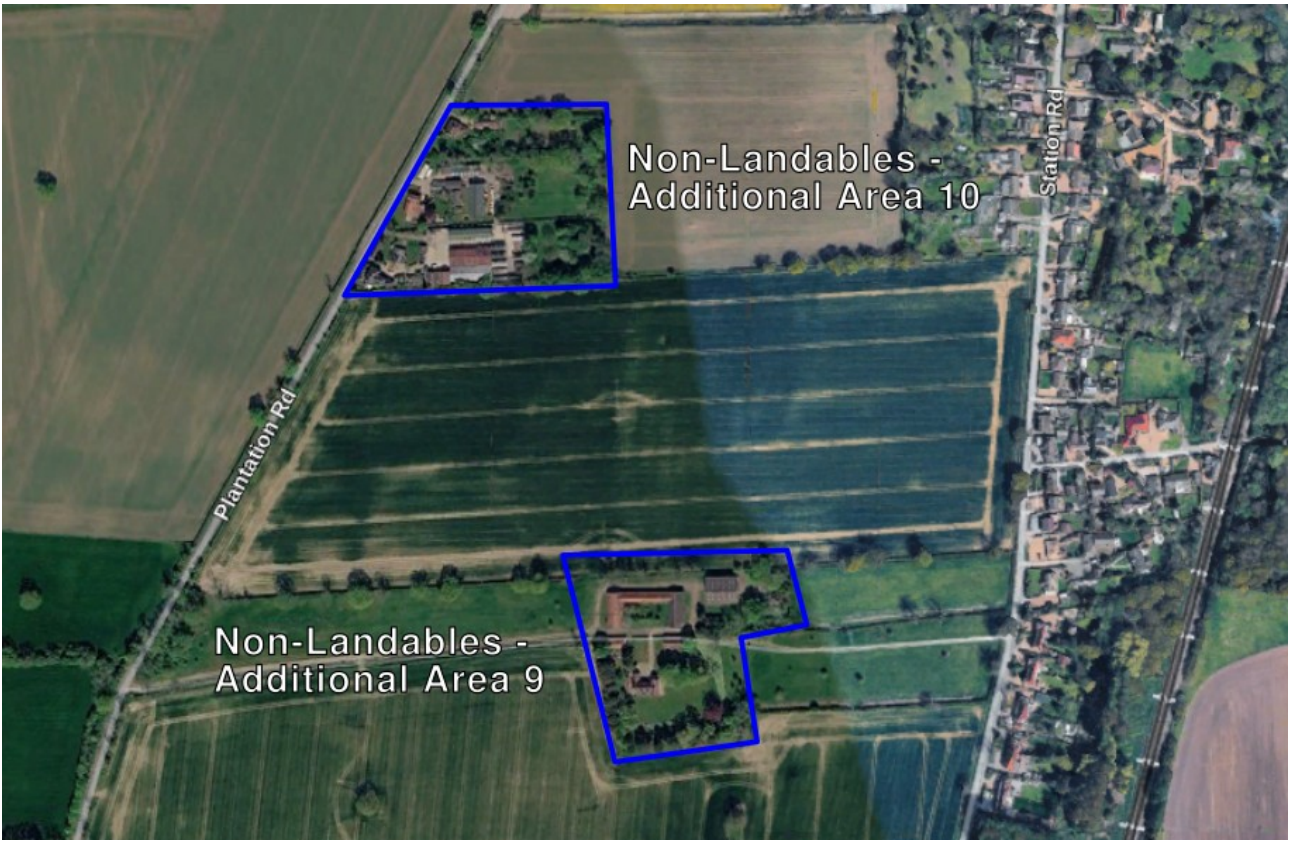


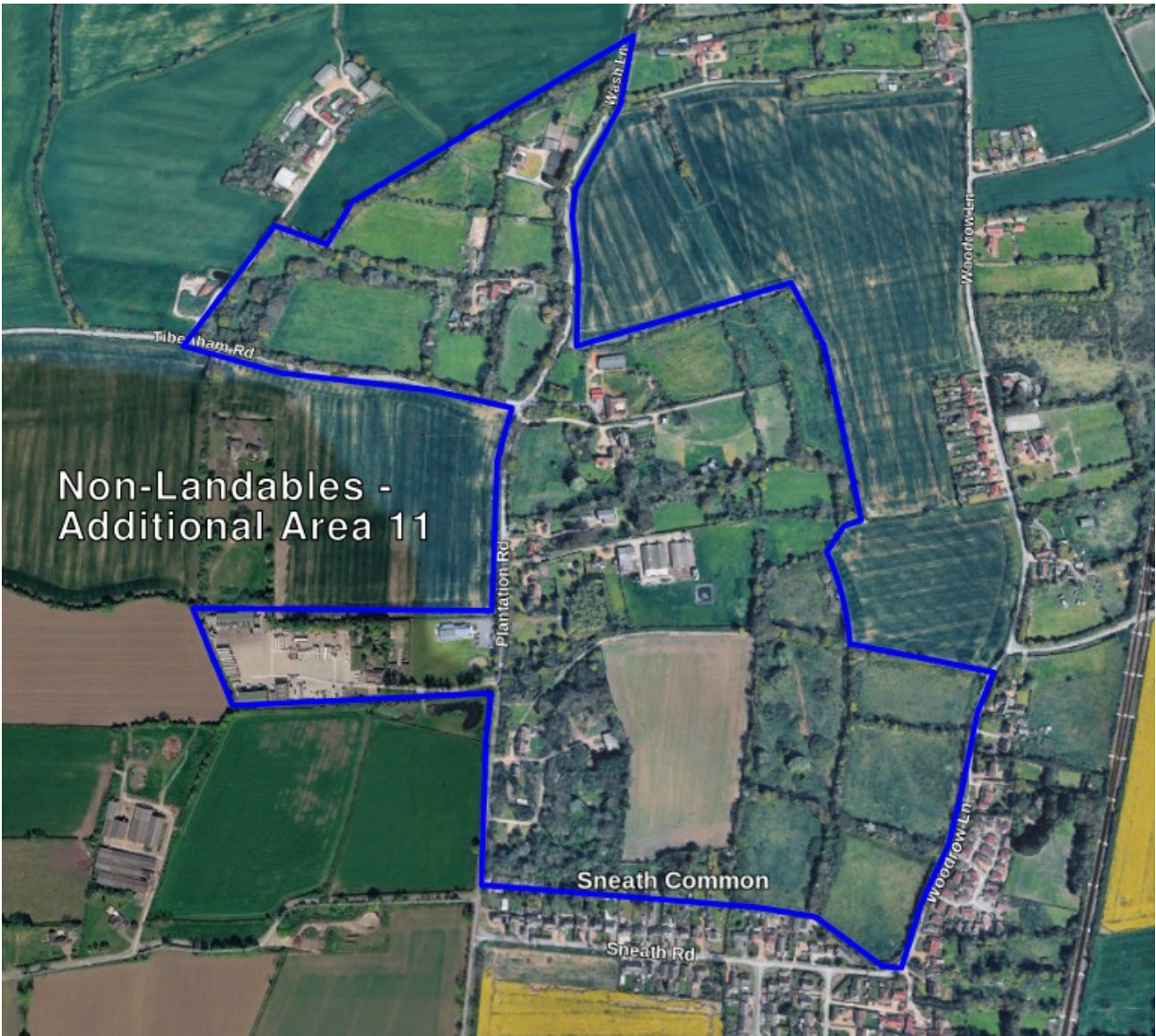
















Appendix D - Method used to calculate the EAFTO Distances

This appendix details the method used to calculate the EFATO distances shown in the EFATO analysis section of NGC's Written Representation Oct'26.

The EFATO scenarios were calculated at EFTAO Event heights of 100ft, 200ft, 300ft and 400ft.

The analysis applied the same criteria as used by the Applicant when analysing the EFATO events at Seething Airfield.

(See DCO Document : **APP-223 - EN0110014-000085-7.28 Potential Impact on Seething Aerodrome Forced Landing Options**)

Airborne point	600m from the start of runway
Aircraft climb rate	500 feet per minute at a ground speed of 60 knots, i.e. a climb gradient of 500ft per nautical mile or 8.2%
Aircraft best glide	Glide ratio of 8:1 from the point of performance engine failure i.e. a descent gradient of 12.5% or 760ft per nautical mile
Potential forced landing	Those within +/-45° of the fields climb-out heading.

Distance to EFATO Event

Calculated using a climb rate of 8.2% or 1:12.2 for each of the EFATO Heights: 100ft, 200ft, 300ft and 400ft.

Distance to Ground

Calculated directly from the EAFTO Event Height at a downslope of 8:1 and so is:

$$[\text{EAFTO Event Height} \times 8]$$

Total Distance

Is simply the sum of the two factors above

$$[\text{Distance to EFATO Event} + \text{Distance to Ground}]$$

Time to Gnd from EFATO Event (At 60 knots and downslope of 8:1)

$$60 \text{ knots} = 1 \text{ nautical mile per minute} = 6,076 \text{ ft per minute}$$

The descent rate at 8:1 is 6,076ft divided by 8 = 759 ft per minute

Time to Gnd (minutes) = EFATO Height ft / 759 ft

Total Distance to Run

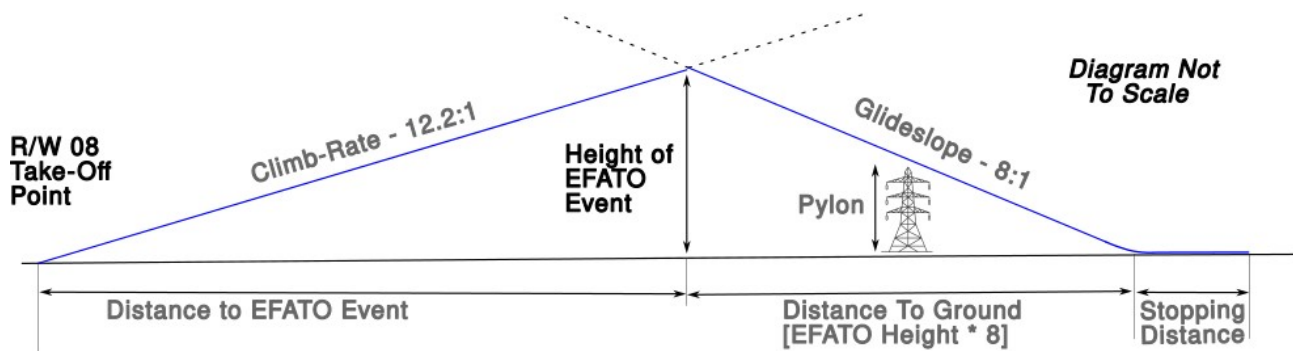
Is simply the sum of the three factors

[Distance to EFATO Event + Distance to Ground + Stopping Distance]

Conversion Factors:

1 Nm = 1,852 m = 6,076 ft

500ft in 1 Nm = 8.23% Upslope = 1:12.2



Appendix E - Station Road Solar Farm

The 20MW ‘Station Road Solar Farm’ is planned to occupy 36.9 hectares of agricultural land immediately adjacent to the location of the Applicant’s Battery Energy Storage system (BESS) & 400kV Substation 1 proposals.

Planning approval for the ‘Station Road Solar Farm’ with conditions, was given by South Norfolk District Council on 27th June 2025.



Figure 1: Location of Station Road Solar Farm

In his decision regarding ‘Engine Failure After Take-Off’ (EFATO) from Tibenham’s Runways 08 and 15, (The decision document references these as Runways 26 & 33) the Planning Officer stated that:

“with the exception of the built development on the western side of the railway line (to the west of the site), the application side is currently part of a wider tapestry of agricultural land within the vicinity of the airfield. Taking account of that and the degree of separation, I am not persuaded the risks presented by the development in relation to occurrences of EFATO are sufficient enough to warrant refusal of the application on these grounds.”

However from the diagram above it can be seen that, should the Applicant’s proposals go ahead, the conditions under which the Planning Officer gave consent for the Station Road Solar Farm, will no longer exist. Had the Applicant’s proposals predated the Station Road

application, it is unlikely that this argument would have been up-held and the Station Road application may subsequently have been refused.

It should be noted that objections to the Station Road Solar Farm were raised by Norfolk Gliding Club, however these were not deemed sufficient to warrant refusal of the application. This even though the Planning Officer had no aviation experience, had not consulted any independent aviation experts and instead relied heavily upon the advice of the applicant's own aviation consultant.