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Norwich to Tilbury EN020027

Response to REP2-029

Relevant Representation Reference Number [REDACTED]

Summary

This response to the Applicant's document AENC-NG-CNS-REP-0290 has been prepared and submitted by [REDACTED] on behalf of Norfolk Gliding Club, owners and operators of Tibenham airfield

The background to this response is reviewed with reference to the lack of meaningful engagement by the Applicant, the elements of miss-representation in the SoCG and the decision to withhold information from the consultation last year that would have enabled significant progress towards completing the SoCG

In respect of the Applicants responses within REP2-029 to our Written Response REP1-254 we have identified some queries and their need for clarification. We question the Applicant's continued reference to their Airfield Impact Assessment given the advice provided by the CAA AAT as shown in Appendix A. We review the CAA's CAP 1059 guidance 'Safety Management Systems', identified by the Applicant as it applies to Norfolk Gliding Club and Tibenham airfield

We also consider the Applicant's comment that in the event of a forced landing it should be possible to land before or beyond the overhead line, ignoring completely the possibility of neither being an option and colliding with the overhead line an inevitability. This is a subject covered in some detail by Dr Mark Eddowes of Eddowes Aviation Safety Ltd in his report that accompanied our Written Representation

In the context of Policy and Guidance we question what might be termed "reasonable" when we compare the closure of operational runways on aviation safety grounds, contrary to NPS EN-1 para 5.5.50, with design-led changes to the proposed route

Reference to NPS EN-1 para 4.2.15 also shows that the exception to the presumption of consent exists where residual impacts present an unacceptable risk to human health.

In our conclusion we show that the only feasible way forward is that of design-led mitigation by the Applicant to remove the proposed overhead line from within our 5km safeguarding zone

Background to the response

From the inception of this project the recurring comments, be they from members of the public, affected land owners, councils and businesses relate to a lack of meaningful engagement by the Applicant

This is particularly true of their engagement with Norfolk Gliding Club.

Within the initial consultation of 2023 and again in that of 2024 the Applicant agreed to provide information which has never appeared. Even the so called 'targeted consultation' of early 2025 was just a presentation by the Applicant as to how they had listened and made changes. In reality they were minor tweaks and ignored the main issue of aviation safety arising from the proximity of Tibenham airfield to Priory Farm airfield and the proposed pylon route which was then acknowledged by the Applicant as an outstanding issue

One of those main issues, identified during the 2023 and 2024 consultations, was the attitude of the Applicant to the advice and guidance provided by the Civil Aviation Authority (and others) with respect to aviation safety

This was brought into focus in the summer of 2025 by the publication of two draft documents, the Statement of Common Ground and the Airfield Impact Assessment, followed shortly after that by a proposal for another consultation which would be held jointly with Norfolk Gliding Club, Priory Farm Airfield and the Applicant

In reviewing the draft documents, it became obvious that expert advice and guidance provided by the CAA and other professional bodies was being ignored in favour of the less experienced opinion from the Applicant's aviation consultants.

Examples of some of the confliction between the Applicants view and the expert advice and guidance are shown in appendix A. It is by no means an exhaustive list and some of the content has been reproduced from previous submissions to aid clarity

In an effort to understand why this should be and therefore progress both the SoCG and AIA the two airfields proposed an agenda for the consultation scheduled for August 7th 2025 as follows

Item 1 – Route Development Rationale

National Grid to provide a documented statement (with copies to both Norfolk Gliding Club and Priory Farm Airfield) explaining why the expert guidance from the Civil Aviation Authority (CAA), British Gliding Association (BGA), General Aviation Awareness Council (GAAC), and others was disregarded in favour of the less experienced advice of ASA when developing the proposed pylon route near Tibenham.

Item 2 – Aviation Safety: EFATO and Aborted Aerotow Risk Mitigation

Engine failure after take-off (EFATO) and the danger of aborted aerotows represents the most serious aviation safety risk to our pilots given the proposed alignment's proximity to both airfields. As the airfields cannot be relocated, we require National Grid, as the 'Agent of Change', to present mitigation proposals to address this hazard. As stated previously, our position is that mitigation should take the form of:

- A re-alignment of the route to beyond the Tibenham 5 km safeguarding zone, or
- Undergrounding of the route within the safeguarding zone.

Item 3 – Cost Comparisons

We request that National Grid provide the following cost information for each of the route configurations:

- The cost of the current proposed route segment through the 5 km safeguarding zone.
- The cost of re-aligning the route outside the 5 km safeguarding zone.
- The cost of undergrounding the route as it passes through the 5 km safeguarding zone.
- The overall cost of the full Norwich to Tilbury project.

In her email of August 5th 2025 [REDACTED] of LSTC acting on behalf of the Applicant wrote

I am pleased that [REDACTED] was able to confirm our acceptance of your proposed agenda, noting his point regarding our need to discuss and understand some comments and interpretations further at the meeting. We also recognise your willingness to discuss and consider revisions to the SoCG to ensure it is reflective of our respective positions.

In the event, these documents were withheld and after some general discussion the consultation was adjourned to allow the Applicant to reconsider and provide both airfields with the agreed information. To date that information has not been supplied and therefore

both ourselves and Priory Farm Airfield are unable to agree to either of their respective SoCGs or AIAs

Response to the points raised by the Applicant in REP2-029

Introduction

The proposed pylon route represents a 200ft electrified wall cutting off 25% of the area covered by Norfolk Gliding Clubs safeguarding zone and only 1,700m from each of the ends of two runways. As such the emergency landing opportunities afforded by the land to the west of those runways would be reduced to a level below the minimums advised by the Civil Aviation Authority making their use unsafe

This proposal is therefore contrary to EN-1 para 5.5.50

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.

And that view is supported by EN-1 para 4.2.15 where the unacceptable risks to health provide for an exception to the presumption of consent

The following comments relate to those made by the Applicant within REP2-029 and for clarity use the same paragraph numbers

5 - Safeguarding

The response states that

'the Applicant has duly considered the aerodrome's defined safeguarding zone'

but then refers only to two runways and appears to ignore the rest.

Whilst Tibenham has six asphalt runways, it also has seven grass runways primarily used for gliding and in the event of any type of launch failure, gliders will land on any runway, or the grass in between, from any direction and from any height making the use of the restrictions imposed by the OLS approach meaningless. Emergency landings of this nature are practised on a regular basis by all glider pilots at Tibenham

What evidence is there to show what form their 'consideration' took?

The Applicant makes multiple references to their Aviation Impact Assessment but the CAA AAT advised the Applicant in 2024 and 2025 that this approach was flawed (see Appendix A). Why did the methodology continue to be used?

There is also the concern with regard to the cumulative effects in that if this 200ft electrified wall is built through our safeguarding zone it would make objections to future proposals difficult to pursue. Such a proposal has been submitted for a large solar farm to the east of the airfield which if constructed would also restrict operations in that direction

7 and 8 Aviation Safety Risks

In their response

The Applicant strongly agrees that the significance of any risk of the Project as a hazard to aviation is of fundamental importance to establishing whether the risk can be accepted, or if mitigation is required

But then, quoting CAP 1059 Risk Tolerability Matrix, suggests

The risk likelihood is low and could be accepted subject to review and mitigation if appropriate

The Applicant claims that the risk likelihood is low (but doesn't define low) and that it "could be accepted" whilst failing to acknowledge that the outcome of such a risk and the subsequent collision would probably be fatal

The CAA recognise the aerodrome operator as "having expert opinion of the safety of the airfield with respect to potential new obstacles". As such we have a duty of care to all of our users and the Risk Matrix provides a useful tool to determine the tolerability of that risk

The matrix is based on two elements (see Appendix C for an extract of CAP 1059)

The classification of Risk Severity

The classification of Risk Likelihood

In my 50 years of flying I have twice witnessed an aircraft colliding with cables but have been unable to find either of these within the AAIB database. There are entries that identify collisions with cables and engine failures with emergency field landings with varying outcomes but no comprehensive list

With respect to the two accidents I witnessed, both aircraft were damaged beyond repair and written off

Of the total of four occupants, two were fatally injured, one spends the rest of her life in a wheelchair and the fourth recovered to a degree of normality after months of treatment and hospital visits. Using the Risk Severity table in CAP 1059, I would view the Aviation definition of risk severity as 'Catastrophic'

The assessment of Risk Likelihood is somewhat subjective and the available statistics described above do little to help clarify matters. Furthermore, the meaning attributed to each of the five categories is somewhat general. However, if we assume that the likelihood would fall somewhere between 'Occasional' (Likely to occur sometimes (has occurred infrequently)) and 'Remote' (Unlikely to occur but possible (has occurred rarely)) then we are able to apply this to the matrix

The result is that the risk tolerability is identified as 'Unacceptable' and expanded to show that

The risk is unacceptable and major mitigation measures are required to reduce the level of risk to as low as reasonably practicable

Bearing in mind EN-1 and the requirement to ensure that safety, operations and capabilities are not adversely affected by new energy infrastructure, we would suggest that the only feasible approach is primary design-led mitigation rather than pilot aware measures.

With respect to the proximity of the proposed route to Tibenham and Priory Farm this would involve the overhead line being realigned to outside our 5km safeguarding zone or undergrounded whilst passing through the zone

7 and 8 Aerotow clearances are adequate

The Applicant continues to refer to the Aviation Impact Assessment to arrive at the conclusion that the impacts (risks) are not significant and clearances are adequate

As identified earlier and expanded in Appendix A the CAA AAT regards this approach as flawed and unsafe

In test flights carried out in September 2025 over a number of aerotow launches towing a variety of gliders with pilots of varying skills the combination failed to reach an adequate height over the line of the proposed pylons on about one third of the flights.

Whilst we agree that powered aircraft **should** be able to take off with a sufficient safety margin that risk acceptability is not determined by an aerodrome operator supplying a preferred clearance number. The hazard, whatever the flight type, arises from emergency and abnormal scenarios where clearance is not controllable and primary design-led mitigation is therefore required

7 and 8 Land safely before or beyond

Engine Failure After Take-Off (EFATO) is considered one of the most critical emergency situations in aviation due to low altitude, low speed and limited time for assessment and recovery

In REP2-029 the Applicant identifies

the key risk assessment factor in terms of the effect of the Project is consideration of whether there is sufficient distance from the overhead line for the pilots of tug and glider aircraft to manoeuvre and land safely, before or beyond the overhead line in a forced landing event

There is no specific point in the take-off stage of a flight at which some sort of EFATO type incident might occur and when it does there **may** be opportunities for the pilots to land before reaching the overhead line or to fly (glide) over it and land beyond. But the critical factors to consider are the portions of the flight in between – when it may be too high to land before and too low to fly over?

In his report (submitted with the NGC Written Representation) Dr Mark Eddowes of Eddowes Aviation Safety Ltd considers this possibility and concludes that the risk is too high and mitigation is required

Using the CAP 1059 Risk Tolerability Matrix quoted by the Applicant earlier the result is still the same and the only feasible solution is design-led mitigation with the proposed line being realigned to outside our 5km safeguarding zone or undergrounded whilst passing through the zone

7 and 8 Glider competitions

Gliding competitions are an integral component of the sport for many glider pilots where speed and efficiency are crucial to performance and success. That success can lead to the pilot being selected to represent the country as a member of the British team in international events

These competitions are not just a sport but also enable the pilots to hone their skills with many of whom may be or may become commercial aircraft pilots of which there is a severe shortage.

The proposed overhead alignment would prevent the safe use of runway 26 for aerotows and the use of runway 08 for competition finishes where the pilots of the higher performance gliders would be crossing the proposed line at 100ft, half the height of the pylons.

The majority of glider pilots are working during the week and fly on weekends and days off. Competitions only run for a finite number of days (usually two weekends and the five days between) and with the vagaries of the British weather potential competitors would be put off by the possibility of not being able to fly on a good day because the wind was in the wrong direction.

This reluctance would be reflected in reduced competitors to the point where financial viability would be in question contrary to EN-1 and the adverse effect on safety, operations and capabilities

9 Policy and Guidance Context

The Applicant claims

‘compliance with its responsibilities defined in EN-1, undertaking an assessment of potential effects on aviation, and including appropriate mitigations measures as an integral part of the proposed development, ensuring the Project has been designed, where possible, to minimise adverse impacts on the operation and safety of aerodromes’

And that

‘the conclusions of the Applicants impact assessments do not justify changes to the proposed alignment’

But fails to acknowledge paragraph 4.2.15 within EN-1 where the unacceptable risks to health provide for an exception to the presumption of consent

There has been no change to the design of the Project with respect to the proximity and aviation safety risk to Tibenham and Priory Farm airfields since prior to the first consultation in 2023 when the route alignment was published

The assessment methodology employed was advised as being flawed both by the CAA AAT and a number of experienced aerodrome operators, see appendix A

No mitigation measures have been considered by the Applicant who has refused to accept the specialist knowledge and advice of the AAT and the aerodromes operators.

The Applicant refers to

The EN-1 para 5.5.50 requirements on operators to regularly review the possibility of agreeing to make reasonable changes to operational procedures

And

The provisions within para 200 of the NPPF relating to existing businesses not having unreasonable restrictions placed on them as a result of development permitted after they were established

As far as Norfolk Gliding Club is concerned the key word here is “reasonable”. As identified earlier, the proximity of the proposed overhead line would be such that any emergency landing opportunities afforded by the land to the west of those runways would be reduced to a level below the minimums advised by the Civil Aviation Authority making their use unsafe.

The only possible operational change to avoid that situation would be the closure of the two runways which we do not consider “reasonable” when considering the content of the NESCO report referenced in our Written Representation

The Project is contrary to EN-1 in that

It was not developed collaboratively alongside aerodromes
Safety, operations and capabilities will be adversely affected by the Project

10 and 11 Statement of Common Ground (SoCG)

Our understanding of the purpose of the SoCG is that it is an agreement (or otherwise) of the issues as they affect the two parties, in this case the Applicant (National Grid) and the stakeholder (Norfolk Gliding Club)

The Applicant notes

‘The CAA AAT offered no advice on how objective assessments should be undertaken, nor were acceptable clearance or risk thresholds agreed’

In emails to the Applicant in 2024 and 2025 the CAA AAT advised of the issues with the methodology (see appendix A) but the Applicant appears to have rejected this

advice and favoured their own aviation consultants to do just that which perhaps questions the capabilities of those consultants

As mentioned previously, in terms of clearance that risk acceptability is not determined by an aerodrome operator supplying a preferred clearance number. The hazard, whatever the flight type, arises from emergency and abnormal scenarios where clearance is not controllable and primary design-led mitigation is therefore required

10 and 11 Statement of Common Ground (SoCG), content

The Applicant states that

'Proposed tracked changes within section 4 have been suggested (but not accepted) to differentiate between a factual account of consultation events and meetings held, and comments made from a single party's perspective, which we have queried or suggested are re-located to matters under discussion which is considered reasonable'

The wording used in relation to the consultation of 2022 in that section of the SoCG implied that there had been consultation between the Applicant and NGC which would give the wrong impression to the ExA.

Since this document relates to the agreement between the two parties, we added the comment that no such consultation with NGC took place and refused to agree to having it moved to 'matters under discussion' when it was a 'matter of fact'

10 and 11 Statement of Common Ground (SoCG), withheld information

The Applicant

'Does not consider that information has been withheld from the Respondent'

The agenda for the August 7th 2025 consultation between the Applicant, Norfolk Gliding Club and Priory Farm Aviators was agreed by the Applicant in advance – see "Background to the Response" above.

Both NGC and PFA have written to the Applicant following notification that new draft SoCGs would be issued requesting that since the detailed information has not been received by either airfield, would the Applicant please provide duplicate copies by return, or confirm explicitly that National Grid does not intend to provide them

10 and 11 Statement of Common Ground (SoCG), progression

The Applicant

Has sought to progress SoCG discussions, but this has been made conditional on the Respondent's requirements for the Applicant to commit assertions regarding its approach to assessments of impacts and consultation'

Both airfields have requested resumption of the adjourned consultation since September 2025.

We seem to have a conundrum in that the Applicant is suggesting that NGC has made progress on the SoCG conditional on the supply of the missing information which earlier they say they have supplied

Conclusion

Whilst collecting information to form part of our Written Representation we carried out an extensive review of much of the advice and guidance that has been published by the Department of Transport, the NPPF, the NPS EN-1, the CAA, the BGA, the GAAC and others.

In addition, we commissioned an independent study of the Airfield Impact Assessment and associated safety issues by Dr Mark Eddowes of Eddowes Aviation Safety Ltd and considered a second existing study on safeguarding unlicensed aerodromes authored by Stratten CSL

Our conclusion from the review of all this information from multiple sources is that the safety concerns expressed by both our airfields are valid and contrary to those expressed by the Applicants aviation consultants, ASA.

There is nothing in the Applicant's response to our Written Representation that gives us cause to change that view and their introduction of CAP 1059 only serves to strengthen our conclusions

In brief

The CAA AAT advised the Applicant at least 2 years ago that the AIA approach was flawed and unsafe but no action was taken – see Appendix A

The proposed line cuts through the EFATO splay contrary to the safety minimums required by the CAA making the use of the two runways unsafe – see Appendix B

The Applicant refers to CAP 1059 and the Risk Tolerability Matrix which when applied to this scenario shows the risk as unacceptable – see Appendix C

The only mitigation possible for Norfolk Gliding Club to take is runway closures which they consider unreasonable and contrary to the NPS EN-1 para 5.5.50 and the NPPF para 200

The Applicant on the other hand has three possible choices, all of which would be acceptable to both airfields

Change to an off-shore route thus not only avoiding the issues with respect to our two airfields but also resolving those along the full length of the proposed route

Realign the overground route such that it does not penetrate our 5km safeguarding zone

Underground the route as it passes through our 5km zone which as reported by NESCO in their study is a lower cost option than overground

The CAA state that only the operator of an aerodrome holds expert opinion as to the safety of any proposed obstacles within the vicinity of their aerodrome

Appendix A

Aerodrome Impact Assessment Summary – Take-off Assessment

In his responses of 2024 and 2025 to the Applicant, [REDACTED], Airfield Advisory Team Principle (CAA AAT) advised that:

‘From our earliest engagement, we have provided signal that when considering proposed power line routing, it is not the aircraft performance envelope that is the limiting factor. Therefore, any intimation that a specific type can manoeuvre to avoid such vertical obstructions should be disregarded’

In a subsequent discussion with [REDACTED] he described the approach as ‘flawed methodology’ and an ‘unsafe assessment’ so why does the Applicant continue to use such an approach?

In terms of aerotow take-off and performance he added

‘To some extent, the impacts to Tibenham and Priory farm are interlinked and complex, owing to their close proximity to each other. Tibenham is an important gliding site. I was concerned by suggestions that glider tow aircraft had the performance to climb clear of the proposed powerline infrastructure. Indeed, this suggestion harked back to an earlier time in these discussions when aircraft performance was cited as the cure to any perceived obstacle issue that was identified, as referred to earlier. The reality is that the performance of both glider tow aircraft and gliders, are variable and based on many factors including meteorological conditions such as wind vectors, air temperature and air pressure, gross weight of tow aircraft including pilot and of course the glider and pilot which is being towed’

And in terms of gliding competition flying

‘Furthermore, gliders returning to Tibenham will face challenges in clearing the proposed line for a variety of reasons. Energy management height, speed and range from Tibenham are of course variable and will be impacted by other factors as described above. This has the potential to stop competition flying at Tibenham completely.’

Concluding with

‘As this most important scheme progresses, it will be crucial that aerodrome safeguarding consideration is adequately understood by those considering final route alignment and those that provide aviation guidance. Both licensed and unlicensed general aviation aerodromes are encouraged to take steps to ensure that their sites are not impacted by adverse development.

A misconception is that unlicensed sites do not require such consideration. The fact is that the vast majority of general aviation aerodromes are unlicensed and are not

officially safeguarded. This simply means they are not afforded a 'call in' opportunity in the event that a development they have raised concerns about, is permitted.

It should not be assumed that such aerodromes have not already achieved adequate levels of safeguarding. Or, that any changes to their environment caused by development, will not adversely impact their operation'.

Aerodrome Impact Assessment Summary – Runways

Under the heading OHL in Splay from runway 26 pylons RG56 – 59 are identified. The applicants accompanying drawings 01_220101_97 Rev A, and 01_220101_91 Rev A show the splay to be in the order of +/- 5° either side of the extended centreline.

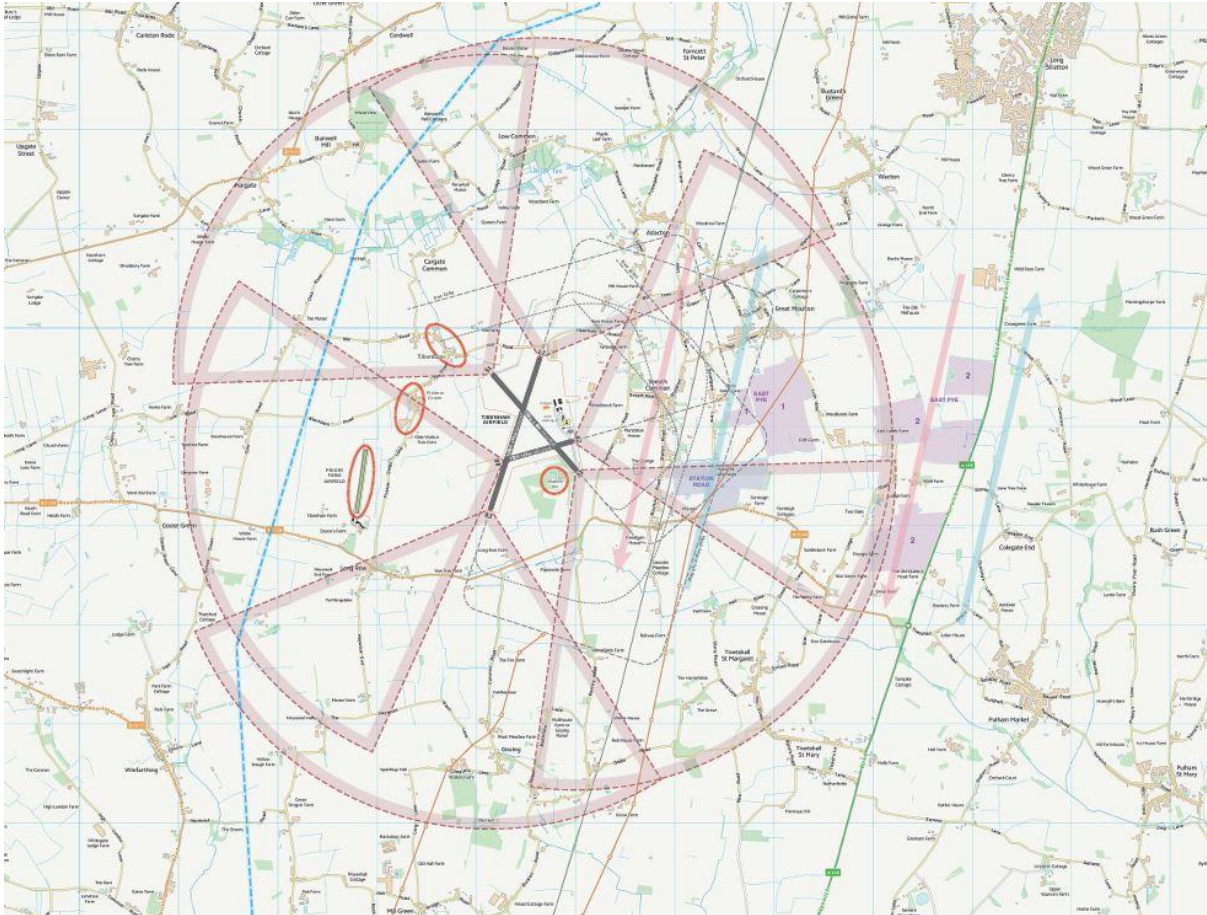
CAA guidelines state that the splay should be +/- 30° and that greater margins should exist where the airfield is used for flight training such as at Tibenham. Why are these values not being used?

Proximity of Priory Farm

Priory Farm located 1km to the west of Tibenham. The mid-point of Priory Farm's runway is just 800m East of the proposed line route. As described in our July 2024 assessment, this will result in pilots including students directly overflying the lines at low height and airspeed at multiple points within their airborne circuit pattern. The circuit pattern cannot be flipped to easterly directions because of Tibenham's proximity.

Appendix B

Tibenham airfield overlaid with EFATO splays Splay extends 3km from the end of the runway



Note

Tibenham airfield is shown in dark grey in the centre of the picture

To the left the three ellipses identify the locations of Priory Farm Airfield and two villages

Further left again is a blue line representing the proposed alignment of the pylons

Under normal circumstances the emergency landing area (splay) from an EFATO type incident is described as 30° either side of the extended centreline for 3km from the end of the runway

However, where an airfield is being used for flight training such as Tibenham, CAP 793 advises that a greater allowance should be made. This map demonstrates the area covered by a 50° splay extending 3km from the end of the runway

Figure 2 Risk severity classifications

SEVERITY OF CONSEQUENCES		
Aviation definition	Meaning	Value
Catastrophic	Results in an accident, death or equipment destroyed	5
Hazardous	Serious injury or major equipment damage	4
Major	Serious incident or injury	3
Minor	Results in a minor incident	2
Negligible	Nuisance of little consequence	1

Determining the likelihood: Using the table in Figure 3 the likelihood of the connecting rod becoming detached was determined and this was more subjective. Determining the likelihood should be based on any current mitigation measures in place and the effectiveness of those measures related to the risk identified. The existing mitigation measures to stop the connecting rod becoming detached included an aircraft service manual instruction to wire lock the connecting rod bolt and a requirement for a duplicate inspection.

On this occasion both mitigation measures failed and although this sort of error is relatively rare there was evidence to support a conclusion that the likelihood of the connecting rod becoming detached in this particular case was *Remote* (Likelihood Value 3).

Figure 3 Risk likelihood classifications

LIKELIHOOD OF OCCURRENCE		
Qualitative definition	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur but possible (has occurred rarely)	3
Improbable	Very unlikely to occur (not known to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Note: The definitions used in figure 3 are an example only. You may find it more useful to define quantitative definitions, such as, number of events in a given time period or events per number of flights depending on your type of operation.

Determining the risk tolerability: Using the risk assessment matrix in Figure 4, if the risk is determined to be Catastrophic (5) and Remote (3) the risk would be classified in the Unacceptable category.

Figure 4 Risk Tolerability Matrix

Risk Likelihood	Risk Severity				
	Catastrophic 5	Hazardous 4	Major 3	Minor 2	Negligible 1
Frequent 5	Unacceptable	Unacceptable	Unacceptable	Review	Review
Occasional 4	Unacceptable	Unacceptable	Review	Review	Review
Remote 3	Unacceptable	Review	Review	Review	Acceptable
Improbable 2	Review	Review	Review	Acceptable	Acceptable
Extremely improbable 1	Review	Acceptable	Acceptable	Acceptable	Acceptable

UNACCEPTABLE: The risk is unacceptable and major mitigation measures are required to reduce the level of risk to as low as reasonably practicable.

REVIEW: The level of risk is of concern and mitigation measures are required to reduce the level of risk to as low as reasonably practicable. Where further risk reduction/mitigation is not practical or viable, the risk may be accepted, provided that the risk is understood and has the endorsement of the Accountable Manager.

ACCEPTABLE: Risk is considered acceptable but should be reviewed if it reoccurs.

Further mitigation measures: As the risk was in the Unacceptable category, major mitigation measures were required to reduce the level of risk to as low as reasonably practicable. The Safety Committee identified a number of further mitigation measures (see Figure 1, further mitigation measures).