



# Ministry of Defence

Ministry of Defence  
Main Building  
Whitehall  
London SW1A 2HB  
United Kingdom

Ref: FOI2017/05825

E-mail: DSA-Enquiries@mod.gov.uk

[REDACTED]

11 July 2017

[REDACTED]

Thank you for your email of 12 June requesting the following information:

*"I request a copy of the full report from the first Gliders CAMO audit carried out in December 2013 (MAA reference was CAMO/CERT/2012/051).*

*I also request copies of the following documents:*

*a. MAA Advisory Letter MAA/Enf/15/04, which required the Gliders CAMO to be ready for another full Initial Approval audit by 04 Dec 15.*

*b. 22 (Trg) Gp Duty Holder Advice Notes (DHANs) 086 Update 1 dated 30 Jan 15 and 100 date 27 Nov 15 - Approvals for return to flight operations for limited numbers of post Airworthiness Recovery Programme Vigilant and Viking aircraft "*

I am treating your correspondence as a request for information under the Freedom of Information Act 2000 (FOIA).

A search for the information has now been completed within the Ministry of Defence, and I can confirm that all the information in scope of your request is held.

The information you have requested can be found attached, but some of the information falls entirely within the scope of the absolute exemptions provided for at sections 40 (Personal Data) of the FOIA and has been redacted.

Section 40(2) has been applied to some of the information in order to protect personal information as governed by the Data Protection Act 1998. Section 40 is an absolute exemption and there is therefore no requirement to consider the public interest in making a decision to withhold the information.

If you are not satisfied with this response or you wish to complain about any aspect of the handling of your request, then you should contact us in the first instance at the address above. If informal resolution is not possible and you are still dissatisfied then you may apply for an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail [CIO-FOI-IR@mod.uk](mailto:CIO-FOI-IR@mod.uk)). Please note that any request for an internal review must be made within 40 working days of the date on which the attempt to reach informal resolution has come to an end.

---

If you remain dissatisfied following an internal review, you may take your complaint to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not normally investigate your case until the MOD internal review process has been completed. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website, <http://www.ico.org.uk>.

Yours sincerely

DSA Secretariat





Commodore P A Chivers OBE  
Head of Oversight and Approvals

**Military Aviation Authority**

Juniper 0, #5003,  
MOD Abbey Wood (North),  
BRISTOL,  
BS34 8QW

Military Network: [REDACTED]  
Telephone: [REDACTED]  
Email: DSA-MAA-OA-Hd@mod.uk  
[www.gov.uk/maa](http://www.gov.uk/maa)

Group Capt [REDACTED] RAF  
OC 2 FTS  
2 FTS HQ  
RAF Syerston  
NEWARK  
NG23 5NG

Reference: MAA/Enf/15/04

07 September 2015

---

**MAA ADVISORY LETTER – Glider Continuing Airworthiness Management Organization**

**Issue**

1. Over the past 21 months, the MAA has been working closely with your Glider Continuing Airworthiness Management Organization (CAMO) but progress towards CAMO Approval has been slow. The MAA has closely monitored CAMO activity through numerous on-site visits (including an initial approval audit in Nov 13) and regular correspondence with CAMO staff. Throughout this period, a number of Corrective Action Requirements (CARs) have been raised, with extensions being granted to associated Corrective Action Plans (CAPs) and CAR deadlines due to CAMO resource being involved in the Glider recovery programme<sup>1</sup>. Recently, at the request of your MOD Continuing Airworthiness Manager (MOD CAM), the CAMO approval audit scheduled for Jun 15 was cancelled.

2. During the most recent visit by my Continuing Airworthiness Approvals Team to RAF Syerston<sup>2</sup>, it was confirmed that all work on the Glider Continuing Airworthiness Management Exposition (CAME) has ceased due to staff effort being prioritised to support the Viking and Vigilant recovery programmes<sup>3</sup>. As a result, the fulfilment of CAMO tasks has been significantly reduced; I also note the findings of the last 22 (Trg) Gp IQA<sup>4</sup> which indicated many CAMO activities had stalled due to essential CAMO personnel being diverted from Continuing Airworthiness (CAw) roles in direct support of contractor recovery activities.

3. I am concerned this lack of CAw management has the potential to manifest as an increase in RtL for those Vigilant gliders now cleared to fly. This situation could be exacerbated as the operating fleet expands with additional Vigilant gliders from the Serco GMS recovery programme and Viking aircraft from the Southern Sailplanes recovery activity<sup>5,6</sup>. The MAA are also aware of an upcoming Framework Agreement for Technical Support (FATS) contract to recover a considerable number of Viking gliders (~54), potentially before Apr 16. It is further noted that with your endorsement and associated risk assessment, Southern Sailplanes are currently operating

---

<sup>1</sup> As a result of the pause in flying as reported within DHAN 086.

<sup>2</sup> 10–12 Jun 15. Aim of visit to close out Serco Glider Maintenance Section (GMS) Corrective Action Reports (CARs) to enable the granting of an unconstrained MRP Part 145 MAOS Approval.

<sup>3</sup> Included as an observation in the corresponding MAA MRP Part 145 MAOS report for MAA\_15\_MAOs\_1501\_1 Surveillance Audit dated 01 Jul 15.

<sup>4</sup> 22 (Trg) Gp IQA report GLD 2015/1.

<sup>5</sup> Glider MOD CAM Engineering Glider Recovery Priorities email dated 16 June 2015 17:57.

<sup>6</sup> Serco GMS Form 2 dated 29 Jun 15 proposing an expansion of the Serco MRP Part 145 MAOS Approval to include RAF Topcliffe and RAF Kirknewton as additional Line and Base locations.



under an MAA Waiver<sup>7</sup> which expires 30 Sep 15; the MAA have not been made aware of any activity to progress a MAOS approval or request a further review of this waiver.

4. Evidence to support this potential increase in RtL has been substantiated during recent audit actions by my CAW Approvals Team whilst closing out a Serco Glider Maintenance Section (GMS) CAR<sup>8</sup>. Errors with the issue and control of the Vigilant Recovery Routine Technical Instruction<sup>9</sup> were discovered whereby 2 different versions of the same document (both with the same release date) were in circulation. Whilst this is for the Project Team to resolve, pro-active management of this type of technical information is a core CAMO task.

5. Accordingly, and in light of the seriousness of the overall situation, this MAA Advisory Letter is being issued to formally record the position and requires specific action to address the delays in achieving CAMO approval. Previous correspondence from 22 (Trg) Gp CAE<sup>10</sup> details CAMO resource allocation with associated recovery timelines that are not considered acceptable to the MAA (CAME submission to the MAA NLT 11 Dec 15). It is acknowledged that recent 22 (Trg) Gp CAE direction<sup>11</sup> may improve CAME production and CAMO approval timelines.

### **Action Required**

6. You are required to produce a resourced CAP to address the delays in achieving CAMO approval; this CAP is to be provided to the MAA by 05 Oct 15. The CAP should document how and by when 2 FTS intends to satisfy fully the requirements of the RA 4900 series of regulations, adequately resource CAMO activity and also include a route map to achieving CAMO approval. It should articulate clearly the activity required, together with suitable owners and timescales to address each action. Delivery of this CAP will be monitored by the MAA through engagement with your MOD CAM.

7. Due to the planned expansion of the Viking and Vigilant Glider fleets and supporting Serco GMS maintenance activity, it is the expectation of the MAA that the Glider CAMO will be ready to undertake a CAMO approval audit by 04 Dec 15. In addition, you are reminded of the requirement<sup>12</sup> for the MOD CAM to present evidence of a full annual assurance cycle prior to the audit.

### **Timing**

8. Urgent. Action required by 05 Oct 15.

### **Summary**

9. The Glider CAMO has demonstrated a significant lack of progress towards Approval and the associated control of Glider CAW activity through implementation of defined CAMO tasks. Given the expected expansion of the Glider fleet and the potential for increased RtL, there is an urgent need for you to review the situation and produce a CAP to address the shortcomings regarding CAME progression, fulfilment of CAMO functions and CAMO Approval. Failure to comply with this Advisory Letter within the timescales given may lead to further sanction.

---

<sup>7</sup> MAA AWE\_2015\_034.

<sup>8</sup> UK.MAA.MAOS.1501.CAR 16 dated 5 Jan 15.

<sup>9</sup> RTI/VIGILANT/035D.

<sup>10</sup> 22Trg Gp-FT CAE(ODH) email dated 29 July 2015 10:33.

<sup>11</sup> 22TrgGp-FT CAE(ODH) Glider CAME and Assurance email dated 25 August 2015 12:36.

<sup>12</sup> MAA/O&A/Mgt/CAMO/LFE dated 01 Nov 13.



Distribution:

MA to AOC 22 (Trg) Gp  
CAE to AOC 22 (Trg) Gp  
MOD CAM 2 FTS

MA to D MAA  
MA to D Tech  
MAA-OA-DepHd1  
MAA-OA-DepHd2  
MAA OA-CAW



**Audit Reporting and Follow Up**

<b>MAA Audit Report</b>			
<b>Project Security classification:</b>	Unclassified		
<b>Project(s) Title:</b>	CAMO/CERT/2012/051		
<b>CAMO:</b>	Vigilant T Mk 1 and Viking T Mk 1		
<b>Completed by:</b>	Mr [REDACTED]	<b>Date:</b>	16 Dec 2013
<b>Reviewed by:</b>	Cdr [REDACTED] RN	<b>Date:</b>	17 Dec 2013
<b>Audit title and ref:</b>	CAMO/CERT/2012/051		
<b>Audit client:</b>	DG MAA		
<b>Audit team:</b>	Mr [REDACTED]	<b>Post:</b>	MAA Audit Lead
	Lt Cdr [REDACTED] RN	<b>Post:</b>	MAA Auditor
<b>Principal Auditees:</b>	Gp Capt [REDACTED]	<b>Post:</b>	DDH
	Wg Cdr [REDACTED]	<b>Post:</b>	22 Gp MOD CAM
	Wg Cdr [REDACTED]	<b>Post:</b>	Glider Eng SO1
	Sqn Ldr [REDACTED]	<b>Post:</b>	SO2 Safety
	Sqn Ldr [REDACTED]	<b>Post:</b>	22 Gp CAMO QM
	Sqn Ldr [REDACTED]	<b>Post:</b>	SO2 EFT
	Sqn Ldr [REDACTED]	<b>Post:</b>	CMT
	WO [REDACTED]	<b>Post:</b>	22 Gp WO Ass
	FS [REDACTED]	<b>Post:</b>	FS EFT
	Mr [REDACTED]	<b>Post:</b>	Hullavington Team Ldr
	Mr [REDACTED]	<b>Post:</b>	SERCO Trg
	Mr [REDACTED]	<b>Post:</b>	MFTS PT
	Mr [REDACTED]	<b>Post:</b>	SERCO Chf Eng (part time)
	Mr [REDACTED]	<b>Post:</b>	SERCO Maint Ctrlr
	Mr [REDACTED]	<b>Post:</b>	SERCO QA
Mr [REDACTED]	<b>Post:</b>	MFTS PT	
Mr [REDACTED]	<b>Post:</b>	SERCO Docs Ctrl	
Mr [REDACTED]	<b>Post:</b>	3 FTS QA	
<b>Audit dates:</b>	25 Nov to 10 Dec 13		



<b>Audit locations:</b>	RAF Syerston, RAFC Cranwell, Hullavington VGS, Bldg 1300
<b>Audit scope, criteria and objectives:</b>	<ol style="list-style-type: none"> <li>1. MAA audit question set covering the RA 4900 Series (MRP Part M Sub Part G) continuing airworthiness management responsibilities.</li> <li>2. The objective was to evaluate the adequacy and effectiveness of the Vigilant T Mk 1 and Viking T Mk 1 CAMO and ensure, through the content of the submitted CAME, that the organization is compliant with the requirements of MRP Part M Sub Part G.</li> <li>3. This audit did not include assessment of MRP Part M Sub Part I (Military Airworthiness Review Process (MARPP)). This will need to be assessed and approved at a subsequent date, once the MARPP regulations have been implemented by 22 Gp with regards to Viking and Vigilant gliders.</li> </ol>
<b>Description of approach and methodology:</b>	<ol style="list-style-type: none"> <li>4. Desktop review of the CAME and supporting documents referenced in the CAME conducted prior to the on-site visit (OSV). Feedback was provided to the SO2 EFT CAMO on a MAA Form 7, this highlighted the lack of clarity of key posts carrying out MRP Part M Sub Part G activity and detail of what procedures were being followed. This was being actioned by the CAMO prior to the OSV.</li> <li>5. On-site assessment was conducted, consisting of interviews with key personnel undertaking CAMO activity on behalf of the MOD CAM. During these interviews personnel were requested to either demonstrate compliance with a procedure or provide hard copy evidence to support any statements they made. Records of each interview and copies of evidence presented to the MAA audit team have been retained and are held as separate enclosures in supporting evidence folders.</li> </ol>
<b>CAMO Engagement:</b>	<ol style="list-style-type: none"> <li>6. Prior to the OSV the MAA conducted an informal discussion with 22 Gp SO2 EFT and FS EFT, on 22 Oct 13. The purpose of this meeting was to discuss the scope and conduct of the OSV and inform the CAMO of the shortcomings of the submitted exposition, identified during the desk top review.</li> <li>7. The MOD CAM should discuss the findings of this approval application with the relevant stake holders in order to determine and agree the actions required to address the identified shortfalls against the MRP. This will ensure that the CAMO is able to adequately demonstrate compliance with the requirements of MRP Part M Sub Part G, through an effective CAME.</li> <li>8. This report contains 6 Level 2 findings,</li> </ol>
<b>Areas of strength:</b>	<ol style="list-style-type: none"> <li>9. All personnel within SERCO GMS undertaking MRP Part M Sub Part G activity were conducting their business to a good standard, and there were no immediate airworthiness concerns that needed to be addressed. These personnel clearly demonstrated compliance with regulation, local procedures and fully embraced the CAMO concept.</li> <li>10. FS EFT is carrying out assurance visits at the VGS sites and has already begun to identify shortfalls in existing processes and procedures. A more formal plan is required to establish a route to rectify the shortfalls.</li> <li>11. The establishment of FTRS MOD CAM and FS CAM posts at RAFC Cranwell will strengthen the CAMO and place responsibility at the correct location with the DDH IAW RAs.</li> <li>12. When interviewees were asked if CAMO added value to airworthiness, there was a positive response from all.</li> </ol>
<b>Summary of Findings:</b>	<ol style="list-style-type: none"> <li>13. At the time of the approval visit the MOD CAM was not co-located with the DDH in accordance with RA 1016(1) and no Alternative Acceptable Means of Compliance has been applied for. <b>(Level 2 Finding, RA 1016, CAMO/CERT/2012/051/001)</b></li> <li>14. The approval team were unable to satisfy themselves that the CAME clearly articulated the organization's scope of work or fully detailed the procedures for how the</li> </ol>



	<p>CAMO ensures compliance with MRP Part M Sub Part G regulation in accordance with RA 4943(1).</p> <p><b>(Level 2 Finding, RA 4943(1), CAMO/CERT/2012/051/002)</b></p> <p>15. It was unclear to the audit team how the CAMO established that they have sufficient suitably qualified and experienced personnel for the expected work or how the competence of personnel was being assessed and recorded in accordance with RA 4945(3).</p> <p><b>(Level 2 Finding, RA 4945(3), CAMO/CERT/2012/051/003)</b></p> <p>16. During the audit it was evident from the personnel interviewed that the CAMO was in not in control of all aspects of continuing airworthiness management in accordance with RA 4947(1).</p> <p><b>(Level 2 Finding, RA 4947(1), CAMO/CERT/2012/051/004 )</b></p> <p>17. The approval team were unable to establish how the CAMO quality system would verify the continued adequacy and effectiveness of all continuing airworthiness processes underpinning the MRP Part M Sub Part G regulated activities in accordance with RA 4951.</p> <p><b>(Level 2 Finding, RA 4951, CAMO/CERT/2012/051/005)</b></p> <p>18. Faults reported, or those discovered during scheduled maintenance, on the Vigilant T Mk 1 and Viking T Mk 1 are not managed by a Military Maintenance Organization or MRP/Mil Part 145 Approved Maintenance Organization in accordance with RA 4947(1)(e).</p> <p><b>(Level 2 Finding, RA 4947, CAMO/CERT/2012/051/006)</b></p>
<p><b>Other issues requiring attention:</b></p>	<p>19. It is understood that DQAFF are contracted to conduct independent audit activity at GMS. However, the audit team could find no evidence of this, therefore it could not be established whether all contracted maintenance is captured within DQAFF's contracted scope of activity. The required gap analysis between contracted maintenance activity and DQAFF tasking has yet to be conducted.</p> <p>20. The audit team will require early engagement between the new incumbent of the MOD CAM post to identify roles and responsibilities of the new CAMO, including the subsequent interaction of the CAMO QM in support of new MOD CAM.</p> <p>21. The audit team were unable to identify the configuration status report, CSR. This needs to be identified and articulated correctly in the CAME.</p> <p>22. There was evidence that there was a lack of maintenance programme analysis. The audit team was notified of a RCM contract that was about to be signed off by the PT. The evidence of this will be reviewed at the CAP surveillance visit,</p> <p>23. The audit team noticed during the interviews that there was a lack of orders being reviewed to identify if changes to maintenance programme is required and that orders are being followed to conduct aircraft maintenance, ie it is not necessarily approved data.</p>
<p><b>Conclusions:</b></p>	<p>24. The organization currently lacks maturity and the oversight and control required for the issue of a MRP Part M approval. Therefore, the MAA will conduct a further initial approval visit once the DDH is content that the findings have been adequately addressed, the CAMO has full control of all MRP Part M activity and a full compliance audit against the MRP requirements has been conducted by the CAMO Quality Manager.</p> <p>15. The MOD CAM must respond to these findings with a Corrective Action Plan (CAP) or closure within 28 days from release of this report. Formal MAA approval of 22 Gp Glider CAMO will <b>not</b> be issued until all findings have been closed or a MAA agreed CAP is in place.</p>



28 Jan 14

See Distribution

**DUTY HOLDER ADVICE NOTE (DHAN) 86 UPDATE 1 PREPARED BY SO2 GLIDING HQ 2 FTS  
VIGILANT RETURN TO FLYING OPERATIONS - AT RAF SYERSTON ONLY**

Reference: 20140417-DHA/86.

1. **Originator.** 2 FTS.
2. **Decision Required.** The ODH is invited to endorse the proposed COA at para 11.
3. **Background.** At Ref the decision was made to 'pause' Viking and Vigilant operations as the airworthiness of both platforms could not be assured.
4. **Stakeholders.**
  - a. DDH – OC 2 FTS.
  - b. UK MFTS – TAA.
  - c. D/TAA.
  - d. 2 & 3 FTS CAE & MODCAM.
  - e. SERCO Glider Chief Engineer.
  - f. SERCO Glider Accountable Manager.
  - g. Air Safety Manager (DDH).
  - h. Senior Operator (DDH).
5. **Technical Analysis.** At Ref the following significant issues that compromised the assurance of airworthiness of the Vigilant were identified:
  - a. Aircraft Document Set (ADS).
    - (1) Lack of configuration control.
    - (2) Workforce carrying out unauthorised maintenance and modification activities.
    - (3) Independent inspections not being carried out on vital ac systems.
  - b. Progression of SI(T)s and 756s had not been managed effectively.
  - c. Lack of an effective Quality Management System (QMS).
6. **Route to Airworthiness.** The Release to Service (RTS) for Vigilant remains valid.<sup>1</sup> The ac will have been base-lined against a package of SI(T)s to ensure conformity to the Certificate of

---

<sup>1</sup> Confirmed by the DRTSA at the ASSWG on 2 Oct 14



Design and compliance with approved modifications. At the ASSWG, the ODH was fully briefed by the Type Airworthiness Authority (TAA), Aircraft Maintenance Organisation (AMO), and MoD CAM against the 4 pillars of airworthiness<sup>2</sup> and summarised below:

a. **TAA.** The Safety Assessment report has been revised and the single hazard log separated into 2 type specific logs; the Vigilant report was signed by the TAA on 9 Dec 14 and has been accepted by the DDH. This process has been evaluated against the loss model and independently assessed with operator ameliorations cross-referenced to the Platform Unified Risk Register (PURR). Further work has shown that Structurally Significant Items (SSI) Hazard Evaluation Reports (HER) show this risk is bounded. The DDH DASOR Review Gp TOR has been revised and improved processes developed for hazard management. All airworthiness associated F765s have been actioned and released. Additional resource is being recruited and the D TAA is confident this will be sufficient to provide the requisite support for sustainment. The main issue of concern centres on the Illustrated Parts Catalogue (IPC) and ensuring that only approved parts are installed on ac during the period from re-commencement of flying operations until the publication of a revised IPC which is due by Apr 15. Since the ASSWG, a process has been developed to provide this assurance. It is intended to fit FLARM to the Vigilant fleet and this work is taking place in parallel with recovery action; it will be delivered at the earliest opportunity. At the direction of the ODH, 'Federated' sites will only operate with FLARM equipped aircraft providing further mitigation against the loss of separation (mid-air collision) risk.

b. **AMO.** Annex A details the airworthiness issues that led to the grounding of the glider fleets. Although time was not allocated to determine root cause, the AMO as increased the size of its team both at workshop and managerial level. Additionally, they have brought in external consultants to help them develop their quality management system and to develop a safe system of work within the AMO. The ethos of the workforce has improved significantly evidenced by a notable increase in detailed fault reporting. The AMO is investigating various options to increase GRP capacity. To provide future engineering services the AMO is considering a 'blended' approach which entails increasing the workforce at RAF Syerston at the expense of its external sites; external site employees will be required to conduct major servicing at RAF Syerston providing the opportunity to ensure standardisation and cross-pollination of best practice. This approach is at variance with the ODH's view that all major servicing should be conducted centrally at RAF Syerston and is therefore a subject for further consideration before the commencement of operations at 'Federated' sites. The AMO's top priority has been MAOS approval which is a prerequisite to the resumption of flying. Though MAOS compliance at RAF Syerston has yet to be achieved following the MAA audit of 22-23 Dec 14, it has been indicated that once the Corrective Action Requirement (CAR) Action Plan has been endorsed, the MAA will issue an initial approvals certificate.

c. **MODCAM.** Ten airworthiness issues called into question both the type and continuing airworthiness of the platform. Annex A details the issues and outlines the recovery plan to regain assurance. Both the preventative and corrective actions that have taken place to recover each of these 10 airworthiness issues, along with a summary statement from the AMO, TAA and MODCAM, are detailed at Annex B. These issues have either been satisfied or have work strands in place that are sufficiently developed to allow for a return to flying. In addition to AMO MAOS approvals, MODCAM's concern was of having sufficient resource to conduct the continuing airworthiness RA 4947 tasks. In the short term, sufficient resource can be provided from within CAMO stakeholders to manage the continuing airworthiness for a small fleet at Syerston. In the med/long term, the

---

<sup>2</sup> Competence, Recognised Standards, SMS and Independence



MODCAM will recruit additional staff and develop the CAMO sufficiently to achieve MAA approval both at Syerston and at federated sites.

7. **Current Situation.** All AMO efforts are being concentrated on obtaining MAOS approval and generating a serviceable Vigilant ac that has passed all the RTIs. A second ac is in the process of being generated and a third ac is being identified for recovery. Assuming the MAA accept the CAR Action Plan which has been forwarded and issue a MAOS Certificate, it is intended to fly a single Vigilant ac from 4 Feb 15 and to progress with Phases 1 & 2 of the Operational Plan as further ac become available. Future DHAN updates will be issued for operations at Federated Vigilant sites and the return of the Viking. It should be noted that initial ac, dependant on the amount of rectification work carried out, may not have day-glo markings on the wing surfaces. This is to avoid nugatory engineering work pending a follow-on DHAN for the formal removal of the day-glo markings based on conspicuity reports that demonstrate that these markings actually decrease ac conspicuity.

8. **Summary of Requirements for First Flight.** Detailed below are the issues that are required to be met before a resumption of Vigilant flying at RAF Syerston.

- a. **MAOS Approval.** To be satisfied. Awaiting endorsement of CAR Action Plan and issue of MAOS Certification. Clearance procedure detailed in COA at para 11.
- b. **Valid TAA Safety Assessment.** Satisfied. Revised report signed on 9 Dec 14 and accepted by the DDH.
- c. **Serviceable ac.** Satisfied. Ac will have undergone the glider recovery package.
- d. **10 Initial Airworthiness Issues at Annex A must be Resolved.** Satisfied. Shown at Annex A, detailed at Annex B.
- e. **Current aircrew.** Satisfied. Ac will be captained by OC Stds who is in current flying practice.

9. **Current Risk Level and Controls.** There has been no change to the operating risk levels held by the DDH/ODH in the PURR, which are deemed Tolerable and ALARP. An operator return to flying analysis has been conducted through the BowTie methodology which overlays the extant PURR and shown at Annex C.

10. **Operational Plan.** When sufficient ac are available the return to flying plan is based on a measured phased approach detailed below:

- a. **Phase 1 (Feb – May 15).** Five Vigilant ac operating at RAF Syerston for CGS re-currency on type and training. CGS instructor flying currency has been maintained throughout the 'pause' through use of RAFGSA assets of similar type.
- b. **Phase 2 (Feb 15 – onwards).** VGS Flying Executives of site due to be re-activated attend RAF Syerston for refresher training.
- c. **Phase 3 (Jun 15 – Sep 15).** Re-generation operations (in the form of re-currency and flying consolidation/instructor SCT) commence at 4 'Federated Sites' under the supervision of a CGS instructor. The Vigilant sites are RAF Topcliffe and RAF Little Rissington. All instructors will have undergone refresher ground school and required to have passed a ground examination appropriate to their instructional category. CFS will conduct an operational review of the VGS prior to flying operations with cadets being recommended and subject to approval through a DHAN update.
- d. **Phase 4 (Sep 15 - Sep 16).** Phased introduction of remaining VGS sites.



11. **Proposed COA.** Resume Vigilant flying operations at RAF Syerston only from 04 Feb 15 with the following conditions met:
- a. The MAA has issued its initial MAOS Approvals.
  - b. The DDH informs the ODH that the AMO meets MAOS together with any engineering caveats.
  - c. The DDH receives final endorsement from the ODH (by e-mail) of the COA.
12. **Alternate COA.** Nil. Before a resumption of operations MAOS approval is required.
13. **Proposed Risk Level.** The Risk to Life (RtL) is not altered for the COA at Para 11.

#### CAE (DDH) Comments

The engineering risks are as follows:

- Adopting New Standards & Procedures - This will be the first time that the ac have been maintained and managed correctly for a number of years and, whilst MAOS accreditation has been achieved, there will be a heightened level of risk until the standards and procedures are fully embedded.
- Cultural Change - We do have evidence that an unsafe culture has existed and that a number of change programmes have been implemented to create and sustain a safe working culture. Again these changes have recently been implemented and so there will be some inherent risk until these changes have fully bedded in.
- CAMO Approval - The CAMO is not yet fully established. The MODCAM is aiming to apply for CAMO approval (at Syerston only) by end Mar 15. Until then, a SQEP panel was convened that determined that sufficient resource existed in the short term to manage the continuing airworthiness of a small fleet of Vigilants.
- Skill Fade - The AMO will not have performed frontline ops since Apr 14.
- Identifying Unknown Unauthorised Changes – With ref. to the TAA comments at Annex B, not being able to carry out comparison checks at this stage will reduce the likelihood of identifying anomalies, however, RTI 37 is already sufficiently robust and ZH 206 has undergone the RTI twice and been independently checked by the BMAR team twice.

The TAA, the AMO accountable manager and I have declared that our organisations are fit for purpose and able to deliver safe and airworthy Vigilant gliders at Syerston only. Additionally, the MAA will have issued a MAOS approval (subject to acceptance of the CAR Action Plan) and my Airworthiness Review Team will have carried out an independent visual check before rebuilding. Finally, a significant amount of work has been invested in rectifying years of poor standards and practices and imbuing a positive safety culture. Whilst these improvements are palpable, great care will be taken in monitoring the safe return to flying.

I am content that, from an airworthiness perspective, Vigilant operations can commence at Syerston.

**Rank and Name:** Wg Cdr [REDACTED]  
**Post:** 2 FTS CAE & MoDCAM  
**Date:** 28 Jan 15



### SO (DDH) Comments

As the author of this update I have been intimately involved in the detail of the recovery programme. Ac have been baselined to a common standard and, following Defence Airworthiness Team guidance, future airworthiness assurances have been put in place. The flying recovery programme is measured, fully supervised and appropriate for a volunteer organisation and mirrors to a certain extent the model utilised by 3 FTS following the pause in Tutor operations. Appropriate governance, rules and regulations have been refreshed, approved, distributed and understanding tested. FLARM will provide additional Situational Awareness to ameliorate the loss of separation risk but it must be borne in mind that the equipment is not a substitute for proper lookout procedures; hence why it is admissible to allow operations at Syerston with CGS instructors ahead of fleet fitment. The improved DASOR Review/Hazard identification process will ensure that technical issues are more formally addressed than was hitherto the case. Concerns that the MO's workforce could slip back into its 'normalised' ways of working can be alleviated by the fact that the MO will be under the close scrutiny of the CAMO and that the MAA will be conducting a further MAOS audit in 6-months time as part of its approvals process. 2 FTS is ready to re-commence Vigilant operations.

**Rank and Name:** Sqn Ldr [REDACTED]  
**Post:** SO2 Gliding  
**Date:** 28 Jan 15

### DDH Comments

I have reviewed the evidence and analysis in this DHAN and noted the comments of my SO and CAE. Much work has been conducted to reach this stage and the MO is in a far better position from the situation it was in prior to the pause. I consider the risks identified in Annex B are minimal and I assess them as ALARP and tolerable. Though MAOS approval has yet to be attained I fully anticipate MAA endorsement of the remedial action plan to be granted before we meet our planned return to flight date. Recommending operations now will send a strong message to the ACO and the service community at large and I am content to support the proposed COA at para 11.

**Rank and Name:** Gp Capt [REDACTED]  
**Post:** DDH  
**Date:** 28 Jan 15

### 22 (Trg) Gp Air Safety Cell

**DHAN Ref:** 86

Having reviewed the detail contained a controlled RTF for Vigilant would be appropriate.

**Rank and Name:** Wg Cdr [REDACTED]  
**Post:** SO1 ASAR ASM  
**Date:** 28 Jan 15

## ODH CAE Comments

Considerable activity has been undertaken by the engineering community to address the underlying causes of the pause in glider flight. MAOS accreditation of the AMO<sup>3</sup> has been a major step forward, as has effective engagement with Grob as the OEM. I am content that, in line with the 4 pillars of airworthiness, the community is competent, works to recognised standards (using approved data) within a safety management system<sup>4</sup> and has been subjected to independent scrutiny. Furthermore, in line with the key assurance elements at Annex A, the airworthiness of individual aircraft can be established once the recovery package of RTIs has been completed and they have been subject to BMAR. Similarly, the strength of GRP repairs has been ascertained through thorough testing and engagement with the SMEs. Although more needs to be done to update the ADS and aid identification of parts, education of the workforce, supported by robust processes, will allow this to be undertaken in parallel with a gradual return to Vigilant flight at RAF Syerston. The evidence provided by AMO, PT and CAMO staff at Annex B, accords with my understanding and should be subjected to QA over the next 6 months. I believe that the only way to genuinely test glider engineering governance is through a phased return to flight and am therefore supportive of the CoA at para 11.

However, I must caution that the glider engineering recovery is at a crucial phase and remains fragile. All 3 organisations<sup>5</sup> must be resourced appropriately to support simultaneous recovery and flight activity on Vigilant now and Viking in the future. Gaps within the AMO (qty 9) and the potential removal of MS personnel from the PT will place the recovery in jeopardy and must be carefully managed. In order to underpin continuing airworthiness the MODCAM and his team<sup>6</sup> will complete the glider CAME NLT 31 Mar 15 and take an active role in managing the risks he has identified in his comments. I will continue to work with the DDH, TAA and the AMO engineering director to ensure that the glider recovery continues at a timely and sustainable pace.

**Rank and Name:** Gp Capt [REDACTED]

**Post:** CAE 22(Trg) Gp

**Date:** 28 Jan 15

---

<sup>3</sup> Expected imminently from MAA based on Serco CAR response.

<sup>4</sup> DAEMS and an approved QMS for the AMO.

<sup>5</sup> CAMO, PT, AMO.

<sup>6</sup> Intent is to establish a dedicated MODCAM/CAE for 2FTS, 22(Trg) Gp CAMO establishment already increased by 2 posts.



### **SO (ODH) Comments**

This has been a difficult period for the glider community, necessitating a long hard look at how it does business. The system has now been completely deconstructed, examined, treated and reconstructed to deliver airworthy aircraft with a framework where the level of risk is now both Tolerable and ALARP. I commend the effort made by those involved to get us to a point where we can fly and I am heartened to see a change of culture is growing. Clearly this will need focus and management drive across the organisation to keep on track.

I remain concerned that the focus of this work has been exclusively on engineering activity. The aircrew must recognize the part they have played in allowing standards and practises to slip over the years. Emphasis must now be placed on improving the aircrew reporting culture and their knowledge of their responsibilities to uphold a sound airworthiness strategy by questioning processes and procedures that underpin the safety of the aircraft they fly. This work will take time and will be progressed in line with the contractor and does not affect the return to flying decision.

**Rank and Name:** Gp Capt [REDACTED]

**Post:** ADFT

**Date:** 29 Jan 15

### **ODH Comments**

This has been an extremely difficult period for all involved in ACO glider operations. I echo the comments of the CAE and SO and am pleased that we have now reached a position where a Vigilant can now be flown safely. In parallel the development of No 2 FTS and its HQ in particular will allow for greater control over the task, standards of flying and engineering and command. That the AMO has achieved MAOS accreditation, developed the maintenance capacity of the glider support enterprise and established vigorous, regular and production relationship with Grob are enormous benefits. We will need to maintain a strong lens on the following aircraft recoveries to ensure the standards only increase.

Given all the above, extensive dialogue at all levels and with all stakeholders and the independence of CAMO, MAA and DFT staff, I am content that a small fleet of Vigilant gliders are authorised to operate at RAF Syerston.

I require a regular report on progress of flying, on continuing and improving high standards of AMO maintenance and covering the re-generation of the 4 federated operating sites. I also require a further DHAN to prove flying operations beyond those authorised above.

**Rank and Name:** AVM A M TURNER

**Post:** AOC 22(Trg) Gp and ODH

**Date:** 30 Jan 15

Annex:

- A. Initial Airworthiness Issues.
- B. Detail of Airworthiness Issues.
- C. Return to Flying at RAF Syerston Analysis Bowtie

Distribution:

22 Trg Gp

PSO  
DFT  
ADFT (SO ODH)  
CAE (ODH)  
FT SO1 Eng & Logs  
FT ASAR ASM SO1  
FT ASAR FJ SO3  
FT SO2 Eng 2 & 3 FTS

MAA

OA-CAW  
OA-CAW-CAMO1a

DES

CA-Dir MA

UK MFTS

Hd  
TAA TL  
D TAA  
Glider EA

HQAC

Comdt

HQ 2 FTS

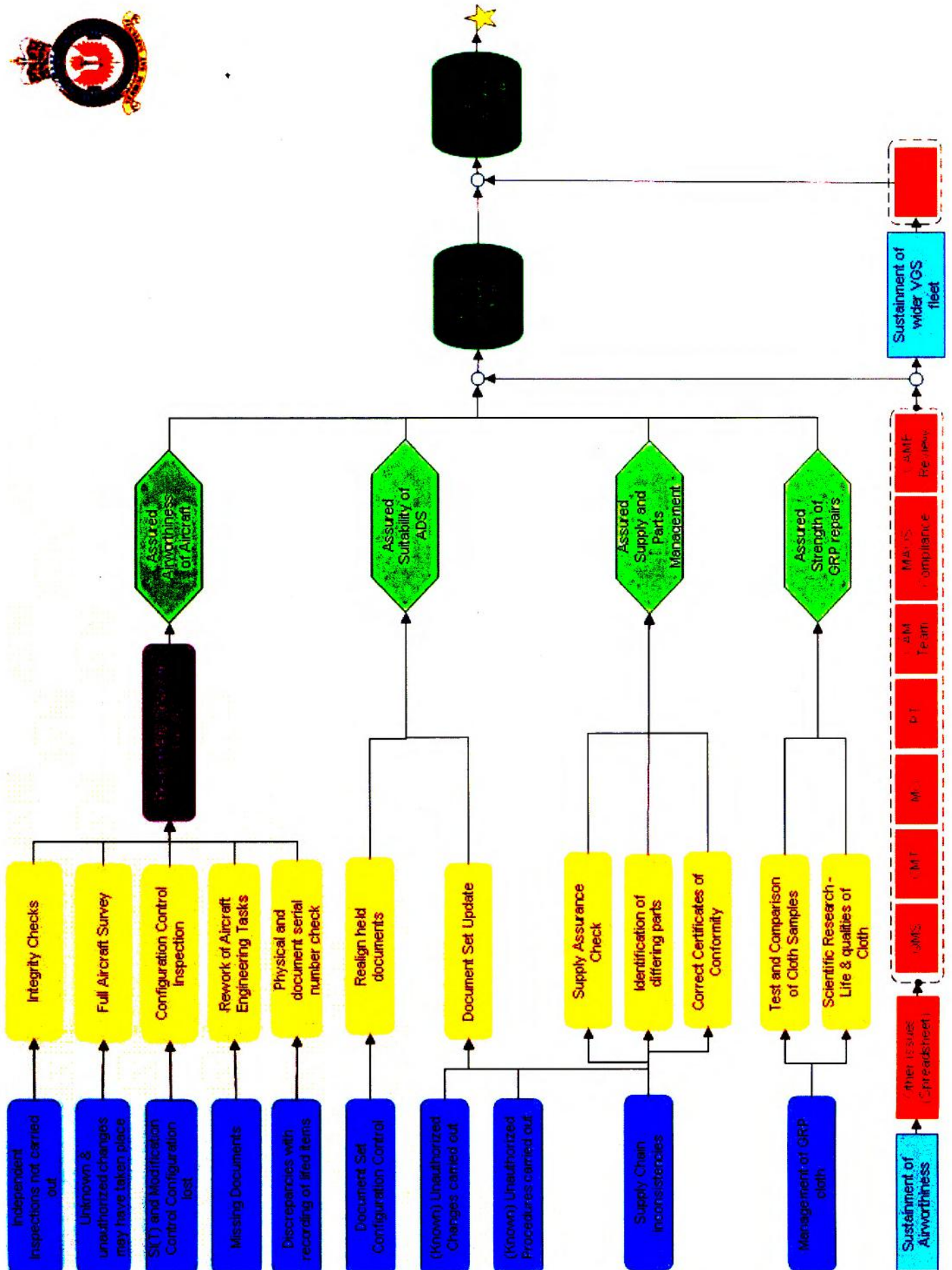
OC (DDH)  
CAMO (DDH CAE)  
Wg Cdr Flying (ASM)  
Eng 1 (Contract DO)  
SO2 ASAR  
SO2 Gliding (DDH – SO)  
CAM SO2  
OC CGS

SERCO

Chf Air Eng ([REDACTED]@serco.com)  
Contract Mgr ([REDACTED]@serco.com)  
GMS Chf Eng



INITIAL AIRWORTHINESS ISSUES



**DETAIL OF AIRWORTHINESS TASKS**

<b>Airworthiness Issue</b>	<b>Independents Inspections not being carried out</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Integrity Checks have been carried out on all vital systems.			
<b>Maintenance Organisation</b>				
<b>Corrective Actions</b>	The MO has increased the size of its management team with some positions also replaced. The authorisation process has been reinvigorated and now sits within the MOE. The QMS is now fully functional and a full time Serco QM position specifically for GM has been established.			
<b>Preventative Actions</b>	<ol style="list-style-type: none"> <li>1. Some areas were not adequately identified as requiring independents therefore the MO have instigated them and the ADS will be amended by the TAA in due course.</li> <li>2. In cases where staff feel independents may be required but they are not stated Glider Aviation Engineering Routine Directives (GAERD) inform personnel of the process.</li> <li>3. Additional and independent checks of paperwork to ensure the correct completion of paperwork is being carried out.</li> <li>4. Staff have received 'table top' refresher training in independents and Serco staff from other sites have been to GM to provide additional support.</li> </ol>			
I am content that the MO actions taken have reduced reoccurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective Actions</b>	The ADS has been reviewed and it was found that the requirement for independent inspections was specified inconsistently within maintenance procedures, although correctly specified for systems within the relevant Topic 5A2.			
<b>Preventative Actions</b>	Action has been taken to remove the requirement for independent inspections from within maintenance procedures. To avoid the potential for confusion the systems that require independent inspection are detailed only in the relevant Topic 5A2, as detailed in MAP-01, Chap 6.10.			
The TAA is compliant with current regulation.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15



<b>MODCAM</b>				
<b>Preventative Actions</b>		On completion of the recovery package each aircraft will undergo an Airworthiness Review (shown as the purple tile in Annex A) before being released for flight. Part of this process includes a paperwork check which will ensure that, if a vital system has been disturbed, there is supporting paperwork to demonstrate that an independent check has been carried out. This Airworthiness Review is carried out on an annual basis and so will continue to provide assurance that independent checks are being carried out.		
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has achieved MAOS approval (subject to acceptance of the CAR Action Plan) at Syerston and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name	Post	Signature	Date
	Wg Cdr [REDACTED]	2 FTS CAMO	Original signed	28 Jan 15

<b>Airworthiness Issue</b>	<b>Unknown and unauthorised changes may have taken place.</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Full aircraft surveys (against a pseudo baseline aircraft) have been carried out.			
<b>Maintenance Organisation</b>				
<b>Corrective Actions</b>	All personnel have undergone HF training and Part 145 training. Furthermore, many briefings have taken place to ensure that personnel are aware of the importance of maintaining aircraft iaw the ADS. A RTI had been drafted using ZH206 as the pseudo aircraft and this RTI will be carried out on all aircraft. The RTI was initially drafted by the MO, who has been open and transparent identifying unknown and unauthorised changes.			
<b>Preventative Actions</b>	Continuation training and toolboxes talks with managers and engineering staff at the ac each morning will be provided throughout the year. The restructuring of the organisation by assigning team leaders and supervisors will enhance the quality aspects of the work undertaken.			
I am content that the actions taken by the MO has reduced reoccurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective Actions</b>	The TAA has issued Vigilant RTI 37 to assess all aircraft for potential unauthorised changes and discrepancies, and to ensure structural integrity. This instruction has been up-issued to improve and clarify the survey process. The TAA will review results of the RTI to assess risk of potential unauthorised changes. Comparison checks allow potential unknown unknowns to be identified. For ZH206 no comparison can be undertaken; however, providing the aircraft completes all other mandated checks to a thorough and satisfactory standard, it will be serviceable. Risk remains with potential unknown unknowns but this can be assessed and accepted by the DDH.			
<b>Preventative Actions</b>	The TAA has procedures in place to ensure that any design or configuration change is properly approved, authorised and introduced in a controlled manner. Audit activities are scheduled to assure these procedures are effective. No change can be authorised without TAA agreement – unauthorised changes must be stopped.			
TAA processes ensure that the type airworthiness component of this activity is managed satisfactorily.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15



<b>MODCAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has achieved MAOS approval (subject to acceptance of the CAR Action Plan) and the that the TAA has declared that the ADS is now fit for purpose. Wrt the risks associated with the comparison element of RTI 37, please see the CAE's comments in the main body.				
<b>Accountable Person</b>	Name	Post	Signature	Date
	Wg Cdr [REDACTED]	2 FTS CAMO	Original signed	28 Jan 15

<b>Airworthiness Issue</b>	<b>SI(T) and Modification Configuration Control Lost</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	A repeat of all relevant SI(T)s and an inspection to confirm if modifications have been embodied has been carried out and recorded. Additionally, the survey against the pseudo baseline is a compare and contrast activity that will identify if there are any configuration issues.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	All Engineering Instructions will be carried out within the prescribed timescales as directed. The MO's processes will ensure that all EI are captured and correctly recorded on the appropriate documentation			
<b>Preventative</b>	Additional staff in the Tech Documentation area has increased capacity to facilitate improved configuration control.			
I am content that the actions taken by the MO has reduced reoccurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	The TAA has issued Vigilant RTI 36 to check the configuration of each aircraft. This RTI has been up-issued to improve and clarify the inspection process. Compliance with the RTI will ensure the true configuration of all aircraft is identified and recorded accordingly. Any discrepancies of SI(T) or modification status will be addressed.			
<b>Preventative</b>	The TAA has procedures in place to ensure that SI(T)s and modifications are properly approved, authorised and issued in a controlled manner. New procedures are being introduced to ensure that follow-up action is being completed satisfactorily. Audit activities are scheduled to assure these procedures are effective. The Local Technical Committees and Configuration Control Boards will ensure modifications are managed appropriately. The SI(T) working group will ensure accurate status of all technical instructions is controlled and monitored.			
Adherence to existing and new procedures will ensure that the TAA has accurate information about the reported SI(T) and modification status of the fleet.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15



<b>MODCAM</b>				
<b>Preventative</b>	New SI(T) working groups, chaired by the PT but with CAM Support will provide an improved oversight to areas such as follow-up actions which have been of previous concern.			
	Future Airworthiness Reviews will check for appropriate evidence to show that all relevant SI(T)s and MODs have been carried out and are evident on both aircraft and in documentation. These checks will provide another layer of assurance that processes are working and configuration is maintained.			
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has achieved MAOS approval (subject to acceptance of the CAR Action Plan) and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name	Post	Signature	Date
	Wg Cdr [REDACTED]	2 FTS CAMO	Original signed	28 Jan 15

<b>Airworthiness Issue</b>	<b>Missing documents</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Archived documentation for each aircraft has been reviewed. Where work orders are missing a re-work of the task has been called up so that signatures are evident against a task.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	Processes are in place to ensure paperwork is correctly returned in an expedient and secure manner.			
<b>Preventative</b>	Processes are in place has reduced the risk of ac documentation going missing or will identify missing paperwork thus allowing the MO to take action.			
I am content that the process in place has reduced the occurrences of missing paperwork to ALARP.				
<b>Accountable Person</b>	Name: [REDACTED]	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	The TAA will assist the MOD CAM and MO where appropriate to assess the impact of missing documentation.			
<b>Preventative</b>	The difficulties associated with managing hard copy documentation at dispersed sites and with volunteer staff is recognised. The TAA will work with the operator and maintenance community to determine whether an electronic logistics system that complies with MAP-01 Chap 7.3 is feasible.			
The control and safe keeping of maintenance documentation is not a TAA responsibility.				
<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post D/TAA	Signature Original signed	Date 28 Jan 15
<b>MODCAM</b>				
The vast array of documents already produced has tested the control of documents.				
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has stated that its workforce is now competent and that it can manage documents.				
<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post 2 FTS CAMO	Signature Original signed	Date 28 Jan 15



<b>Airworthiness Issue</b>	<b>Discrepancies with recording of lifed items</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Serial numbers of all lifed items fitted to the aircraft have been checked against log cards and the engineering database			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	The Topic 5A1 depicts all components that have a life and a subsequent Engineering Log Card.  Log cards and the tree of knowledge are updated when components are replaced.			
<b>Preventative</b>	During the Level G and Level K checks details are taken from the Tree of Knowledge and checked against the section 7 of the F700C and the short forecast log.			
I am content that the actions taken by the MO has reduced reoccurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	The relevant Topic 5A1 for each platform has been checked and lifed components are properly identified.			
<b>Preventative</b>	The TAA will assist the MO and MOD CAM where appropriate.			
It is not a TAA responsibility to locally manage lifed components.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15
<b>MODCAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has stated that its workforce is now competent and that it can manage lifed items.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date 28 Jan 15

<b>Airworthiness Issue</b>	<b>Management of GRP Cloth</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	All SSIs have been checked as part of RTI 037			
<b>Maintenance Organisation</b>				
<b>Corrective Actions</b>	The management of Cloth and resins has been investigated by the GRP Bay and they have processes in place for ensuring only in-life products are used.			
<b>Preventative Actions</b>	The GRP Bay has a process to ensure that cloth and resins are within life and have traceability.  Their processes will be audited.			
I am content that the actions taken by the MO has reduced reoccurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	Instructions and guidance have been reviewed. Although covered by a 2(R)1 leaflet, it is considered more suitable to include SSI guidance in a separate publication. SSI checks are carried out as part of RTI action.			
<b>Preventative</b>	A Topic 5V is being produced for each platform as part of the current RCM and Topic 5 review.			
The actions being taken should ensure that clear and unambiguous guidance is available to the MO.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15
<b>MODCAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has stated that its workforce is now competent and that it can manage GRP cloth.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date 28 Jan 15



<b>Airworthiness Issue</b>	<b>Supply Chain Inconsistencies</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	No on aircraft recovery action.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	F760 will be raised for all supply chain inconsistencies.			
<b>Preventative</b>	9 F760 were raised in 2014.  2 F760 were raised thus far in 2015.			
The MO has processes in place to inform the authorities of inconsistencies identified by them but this should only be the last line of defense.				
<b>Accountable Person</b>	Name ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	A review of the spares supply organisation has been carried out with no significant findings. All components supplied have traceability up to the point of issue to the MO. Component changes are now properly reported to UKMFTS TA TGSA. Correct reporting will ensure that any anomaly is identified and necessary corrective action carried out.			
<b>Preventative</b>	Regular supplier review meetings have been instigated. Quality checks will be introduced to add assurance. A full review and update of the IPC will be undertaken with the DO to address all known anomalies and to ensure robust process for change management.			
The changes introduced should ensure that component or part number changes are identified and approved prior to component issue to the MO.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15
<b>MODCAM</b>				
The involvement of the 22(Trg) Gp Logs FS will provide additional oversight and assurance to supply chain activities.				
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has achieved MAOS approval (subject to acceptance of the CAR Action Plan) at Syerston and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date 28 Jan 15

<b>Airworthiness Issue</b>	<b>Document Set Configuration Control</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	No on aircraft work required			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	All Vigilant APs were recalled and their amendment state checked and updated accordingly. Additionally, the MO has requested additional APs where there are shortfalls.			
<b>Preventative</b>	The MO had recruited an additional person to assist with the control of APs, doubling the staff in that department. This individual has produced a system to ensure APs are amended in a timely manner and they have an auditable trail demonstrating that any amendments have been incorporated.			
I am content that the actions taken by the MO will ensure ADS configurations.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	<p>Insufficient print runs for publication amendments due to incorrect distribution list being held by DSDA-Forms and Pubs Bicester. A review of the holding by the MO has been undertaken which will be forwarded by the MO to DSDA to update the distribution list.</p> <p>Ensure that all parties involved in the delivery of a printed amendment to the MO (e.g Bicester &amp; Cranwell) reflect the same details in numbers of copies required. This is currently not the case and results in the MO receiving limited copies and/or not being able to update all held copies in unison. Whilst this is not an immediate issue, the inconsistencies do not lend themselves to effective control of the ADS.</p>			
<b>Preventative</b>	DSDA-Forms and Pubs Bicester will be contacted for print quantities once their distribution list has been updated prior to sending amendments for print and distribution.			
With the current reviews and procedures the ADS will be kept up to date, subject to the MO submitting UFRs.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15



<b>MODCAM</b>				
		CAMO Self Assurance checks will be carried out in this area.		
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has stated that its workforce are competent and that the TAA has declared that he has effective ADS mgt procedures in place.				
<b>Accountable Person</b>	Name	Post	Signature	Date
	Wg Cdr [REDACTED]	2 FTS CAMO	Original signed	28 Jan 15

<b>Airworthiness Issue</b>	<b>Known Unauthorised Changes Carried Out</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	All previous unauthorised changes have been approved with either a concession or entry via AIL into the ADS.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	<p>The MO has been open and honest by highlighting any known unauthorised changes.</p> <p>As mentioned above all personnel have undergone HF training and Part 145 training. Furthermore, many briefings have taken place to ensure that personnel are aware of the importance of maintaining aircraft law the ADS and not stepping outside the ADS.</p>			
<b>Preventative</b>	Continuation training and toolboxes talks will be provided throughout the year. The restructuring of the organisation by assigning team leaders and supervisors will enhance the quality aspects of the work undertaken.			
I am content that the actions taken by the MO will prevent reoccurrence.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	<p>Unsatisfactory Feature Reports have been raised, triaged and actioned as appropriate to ensure short-term changes with AILs released.</p> <p>Unauthorised changes are reviewed when reported. Subject to DO approval and maintenance of configuration, the changes can be accepted. Without DO approval or if the change introduces a configuration deviation the unauthorised change is to be removed from the aircraft.</p>			
<b>Preventative</b>	<p>The TAA has procedures in place to ensure all approved changes are properly authorised to manage changes to the ADS. The Topic 5 series for both platforms is being completely reviewed as part of the RCM. Both DOs have been engaged and a Topic 1, 2, 3 and 6 review is scheduled for 2015.</p>			
With procedures and additional resource in place the MO personnel should have the confidence that suggestions for change will be assessed and implemented, or a reason given for non-acceptance in a timely manner.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15

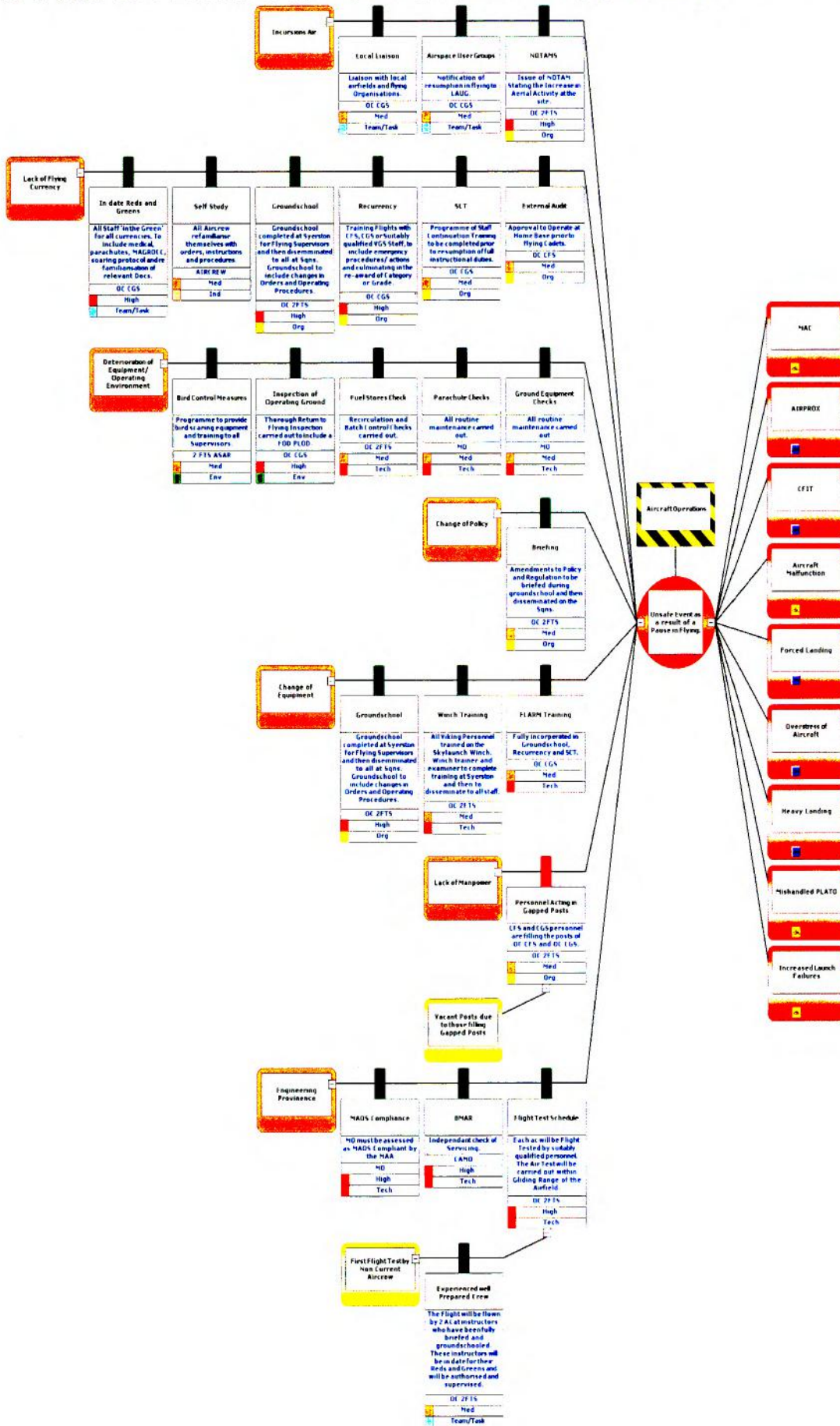


<b>MODCAM</b>				
		The MO personnel were particularly honest in highlighting areas which they now understand to be an unauthorised change.		
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has achieved MAOS approval (subject to acceptance of the CAR Action Plan) at Syerston and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name	Post	Signature	Date
	Wg Cdr [REDACTED]	2 FTS CAMO	Original signed	28 Jan 15

<b>Airworthiness Issue</b>	<b>Known Unauthorised Procedures Carried Out</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	No on aircraft actions			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	As mentioned above all personnel have undergone HF training and Part 145 training. Furthermore, many briefings have taken place to ensure that personnel are aware of the importance of maintaining aircraft iaw the ADS and not stepping outside the ADS. Additionally, some 400+ F765 have been raised to correct any anomalies within the ADS.			
<b>Preventative</b>	Continuation training and toolboxes talks will be provided throughout the year. The restructuring of the organisation by assigning team leaders and supervisors will enhance the quality aspects of the work undertaken.			
I am content that the actions taken by the MO will prevent reoccurrence.				
<b>Accountable Person</b>	Name: ██████████	Post Eng Ops Mgr	Signature Original signed	Date 28 Jan 15
<b>TAA</b>				
<b>Corrective</b>	The TAA has responded to the large number of F765s raised and engaged additional support to produce procedures where required and appropriate. These are vetted before issue and, where urgent, an AIL is issued.			
<b>Preventative</b>	Procedures are in place for the management of F765s. No unauthorised procedure should be followed by the MO – it must be reported to the PT.			
New procedures and additional resource will ensure that F765s are addressed promptly, subject to these being raised by the MO when appropriate.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date 28 Jan 15
<b>MODCAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vigilants at Syerston on the basis that the AMO has achieved MAOS approval (subject to acceptance of the CAR Action Plan) at Syerston and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date 28 Jan 15



RETURN TO FLYING AT RAF SYERSTON ANALYSIS BOWTIE



23 Nov 15

See Distribution

**DUTY HOLDER ADVICE NOTE (DHAN) 100: PREPARED BY SO2 GLIDING HQ 2 FTS**

**RETURN TO FLYING OPERATIONS AT RAF SYERSTON ONLY FOR THE 6 VIKING T MK1 AIRCRAFT UNDERGOING THE TRIAL VIKING RECOVERY PROGRAMME**

1. **Originator.** 2 FTS.
2. **Decision Required.** The ODH is invited to endorse the proposed COA at para 11.
3. **Background.** A decision<sup>1</sup> was made to 'pause' Viking and Vigilant operations as the airworthiness of both platforms could not be assured. Following inspections, Vigilant ac recommenced flying at RAF Syerston only<sup>2</sup> on 6 Feb 15 and a Trial Viking Recovery Programme (TVRP) will shortly produce aircraft for the restart of Viking operations at RAF Syerston.
4. In order to accelerate the recovery of ACO gliders, due to slow progress resulting from resource constraints, a TVRP was contracted through the extant LAFT 2 contract with Babcock. The TVRP was subcontracted to Southern Sailplanes (SS) of Membury. SS are not a MAOS 145 organisation, however, the MAA issued a Waiver<sup>3</sup> for the trial allowing SS to recover 6 Vikings utilising their EASA 145 approvals.
5. **Stakeholders.**
  - a. ADDH – Comdt 2 FTS.
  - b. UK MFTS – TAA.
  - c. D/TAA.
  - d. 2 & 3 FTS CAE & Mil CAM.
  - e. SERCO Glider Chief Engineer.
  - f. SERCO Glider Defence Chief Air Engineer
  - g. Air Safety Manager (ADDH).
  - h. Senior Operator (ADDH).
6. **Technical Analysis.** DHAN 86<sup>4</sup> details the technical issues that led to a 'pause' in fg ops.
7. **Route to Airworthiness.** The Release to Service (RTS) for Viking remains valid.<sup>5</sup> At the ASSWG<sup>6</sup>, the ODH was fully briefed by the Type Airworthiness Authority (TAA), the SERCO Aircraft Maintenance Organisation (AMO), and Mil CAM against the 4 pillars of airworthiness<sup>7</sup> confirming their fitness for purpose. Additionally, SERCO has MAOS approval and a Waiver has been issued

---

<sup>1</sup> [DHAN 086](#)

<sup>2</sup> [DHAN 086 - Update 1](#)

<sup>3</sup> [Southern Sailplanes Wavier - MAA AWE 2015\\_034](#)

<sup>4</sup> [DHAN 086](#)

<sup>5</sup> Confirmed by the DRTSA at the ASSWG on 2 Oct 14

<sup>6</sup> ASSWG 2 Oct 14

<sup>7</sup> Competence, Recognised Standards, SMS and Independence



by the MAA allowing Southern Sailplanes to utilise their EASA 145 approval to recover 6 Vikings. The 6 ac will have undergone the TVRP<sup>8</sup> at SS before commencing fg ops at RAF Syerston.

8. **Current Situation.** 2 ac will shortly be ready for flight acceptance and subsequent issue to the line at RAF Syerston. A further 4 are undergoing the TVRP.

9. **Summary of Requirements for First Flight.** Detailed below are the issues that are required to be met before a resumption of Viking flying at RAF Syerston.

a. **MAOS Approval.** The Vikings will have undergone the TVRP at SS; on the basis of its EASA 145 approval and an MAA Waiver. SERCO will manage the ac once they have been accepted back from SS; under its MAOS approval on the extant Glider Maintenance contract.

b. **Valid TAA Safety Assessment.** Satisfied. Revised report signed in Sep 15 and accepted by the ADDH.

c. **Serviceable ac.** Satisfied. Ac will have undergone the glider recovery package.

d. **10 Initial Airworthiness Issues at Annex A must be Resolved.** Satisfied. Shown at Annex A, detailed at Annex B.

e. **Current Aircrew.** Satisfied. The first ac acceptance airtest will be captained by a suitably-qualified, senior A category instructor who is in current flying practice on equivalent aircraft.

10. **Current Risk Level and Controls.** There has been no change to the operating risk levels held by the ADDH/ODH in the PURR/Bowtie, which are deemed Tolerable and ALARP.

11. **Proposed COA.** Resume Viking flying operations, at RAF Syerston only, for those ac that have undergone the TVRP

12. **Alternate COA.** Nil.

13. **Proposed Risk Level.** The Risk to Life (RtL) is not altered for the COA at Para 11.

---

<sup>8</sup> Airworthiness Recovery package core elements include a Major Maintenance servicing and RTIs 20, 21 and 22.

## CAE (DDH) Comments

The following factors should be considered:

- CAMO Approval. The CAMO is not yet fully established, however, a CAME has been submitted and the Glider CAMO will undergo an Approval Audit in the WC 7 Dec 15. For the intervening period, a substantial amount of work has been carried out to improve our ability to manage and oversee continuing airworthiness management activity. Furthermore, it is my assertion that the CAMO is already sufficiently developed to oversee a small fleet (5/6) of Vikings at RAF Syerston.
- Southern Sailplanes AMO. SS are not MAOS approved for this activity, however, the MAA have issued a Waiver,<sup>9</sup> valid until 31 Dec 15, underpinned by a 22 (Trg) Gp Safety Assessment.<sup>10</sup> Furthermore, Babcock has undertaken a product audit of the first Viking undergoing the TVRP, the CAM Team has reviewed the work carried out by SS on 2 occasions and a BMAR has been carried out. All significant findings from these activities have been resolved.
- SERCO AMO. Notwithstanding the findings that led to the 'pause' in fg ops, the SERCO AMO has undergone a significant change programme and now has MAOS approval. Additionally, SERCO continue to safely operate the Vigilant recovery programme and maintain x4 Vigilants in the forward fleet.
- PT. The PT has expanded significantly in size and is now permanently located at RAF Syerston. These changes have delivered a significant enhancement in airworthiness assurance.

Finally, a significant amount of work has been invested in rectifying years of poor standards and practices and imbuing a positive safety culture. Whilst these improvements are palpable, great care will be taken in monitoring the safe return to flying.

In sum, I am content that the Vikings that have undergone the TVRP are airworthy and that the supporting engineering organisations are able to support their continued operation.

**Rank and Name:** Wg Cdr [REDACTED]

**Post:** 2 FTS CAE & Mil CAM

**Date:** 23 Nov 15

---

<sup>9</sup> [Southern Sailplanes Waiver - MAA\\_AWE\\_2015\\_034](#)

<sup>10</sup> [20150507 Waiver Request SS MAOS Safety Assessment](#)



### **SO (DDH) Comments**

As the author of this update, I have been intimately involved in the detail of the recovery programme. AC have been baselined to a common standard and, following Defence Airworthiness Team guidance, future airworthiness assurances have been put in place. The Viking flying recovery programme is based on that approved for the Vigilant being measured, fully supervised and appropriate for a volunteer organisation and mirrors to a certain extent the model utilised by 3 FTS following the pause in Tutor operations. Appropriate governance, rules and regulations have been refreshed, approved, distributed and understanding tested. FLARM will provide additional Situational Awareness to ameliorate the loss of separation risk but it must be borne in mind that the equipment is not a substitute for proper lookout procedures; hence why it is admissible to allow operations at Syerston with CGS instructors ahead of fleet fitment. The improved DASOR Review/Hazard identification process has already demonstrated that technical issues are more formally addressed than was hitherto the case. 2 FTS is ready to re-commence Viking operations.

**Rank and Name:** Sqn Ldr [REDACTED]  
**Post:** SO2 Gliding  
**Date:** 23 Nov 15

### **DDH Comments**

I have reviewed the evidence and analysis in this DHAN and noted the comments of my SO and CAE. Much work has been conducted to reach this stage and the MO is in a far better position than it was prior to the pause; as evidenced by 6 months of support to Vigilant operations in addition to concurrent recovery work on the Vigilant fleet. I consider the risks identified in Annex B are minimal and I assess them as ALARP and tolerable. I am content to support the proposed COA at para 11.

**Rank and Name:** Gp Capt [REDACTED]  
**Post:** ADDH  
**Date:** 23 Nov 15

### **22 (Trg) Gp Air Safety Cell**

**DHAN Ref:** The DHAN ref allocated is 100.

The case for Viking RTF is thorough and from an AS perspective confers no change in AS Rtl.

**Rank and Name:** Wg Cdr [REDACTED]  
**Post:** SO1 ASAR ASM  
**Date:** 25 Nov 15

### ODH CAE Comments

The primary reason why glider airworthiness was questioned, leading to the 'pause', was a failure of the operation, maintenance and assurance system. Once an aircraft has been through the recovery programme, it is vital that it is operated and maintained within an improved system to prevent its airworthiness from degrading again. The Maintenance Organisation has made improvements to their standards, practices and culture, which already underpin the Continuing Airworthiness of Syerston Vigilant operations. In addition, the CAMO has begun to operate (whilst awaiting MAA approval), providing far greater oversight and assurance of airworthiness activities at Syerston and Southern Sailplanes. Similarly, the Glider PT has now increased in numbers and a surge of mentoring by the D/TAA has improved their processes and decision making skills. Consequently, I recommend that the ODH assesses the RtL of Viking Glider operations at RAF Syerston as Tolerable and ALARP, and that he approves the CoA at para 11.

Prior to operations away from RAF Syerston, it is essential that aircrew servicing and maintenance training, certification and assurance are adequately addressed. That work is ongoing by 2 FTS and the Contractor.

**Rank and Name:** Gp Capt [REDACTED]

**Post:** CAE 22(Trg) Gp

**Date:** 26 Nov 15

### SO (ODH) Comments

2FTS is ready to return to limited Viking operations at Syerston in line with the proposed CoA at para 11. I am content that, on the basis of TVRP cleared ac operating from Syerston only, the resumption of Viking operations is tolerable and ALARP.

**Rank and Name:** Gp Capt [REDACTED]

**Post:** ADFT

**Date:** 27 Nov 15

### ODH Comments

Approved.

**Rank and Name:** AVM A M TURNER

**Post:** AOC 22(Trg) Gp and ODH

**Date:** 27 Nov 15

Annex:

- A. Initial Airworthiness Issues.
- B. Detail of Airworthiness Issues.



Distribution:

22 Trg Gp

PSO  
DFT  
ADFT (SO ODH)  
CAE (ODH)  
FT SO1 Eng & Logs  
FT ASAR ASM SO1  
FT ASAR FJ SO3  
FT SO2 Eng 2 & 3 FTS

MAA

OA-CAW  
OA-CAW-CAMO1a

DES

CA-Dir MA

UK MFTS

Hd  
TAA TL  
D TAA  
Glider EA

HQAC

Comdt

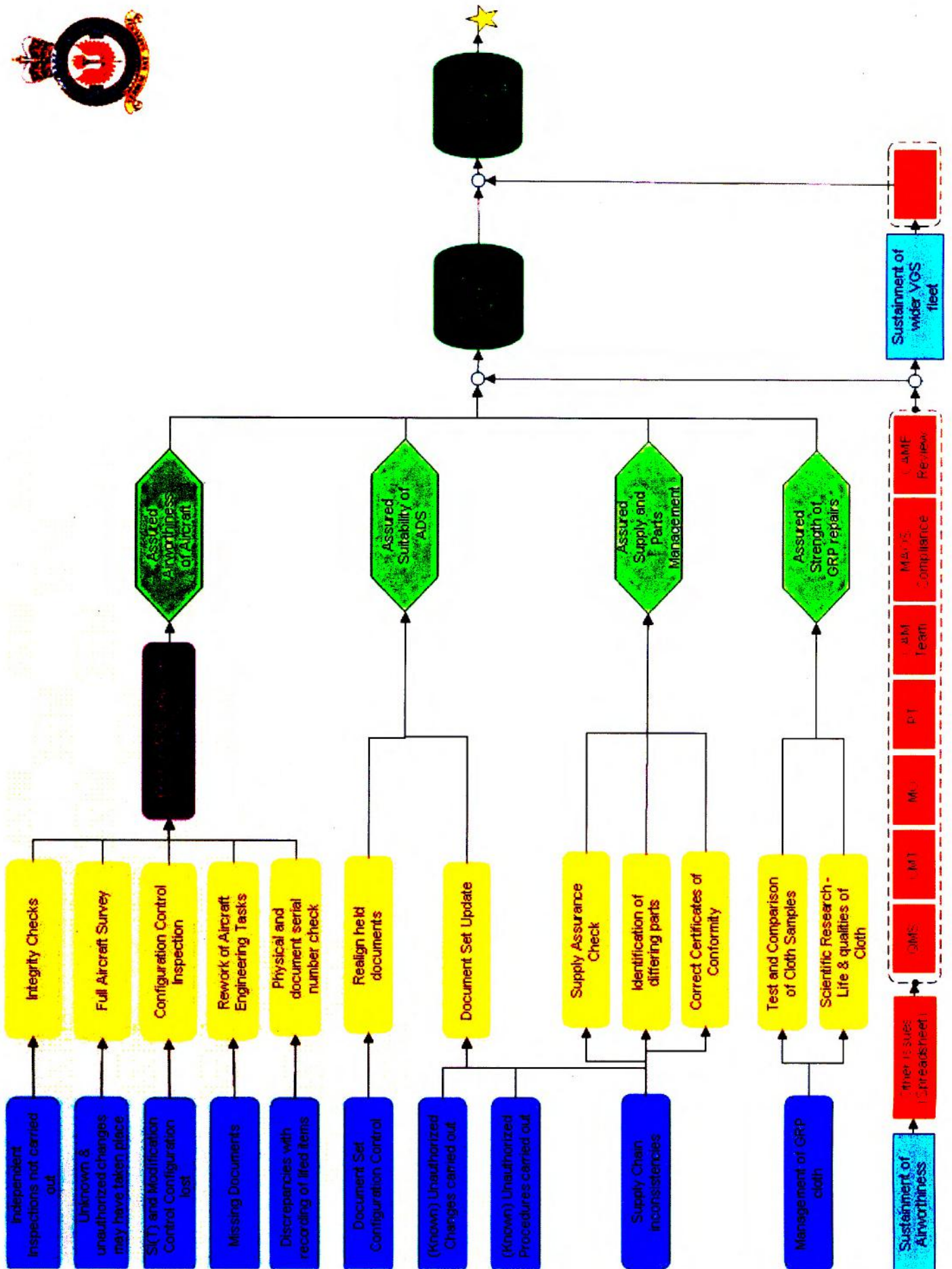
HQ 2 FTS

OC (DDH)  
CAMO (DDH CAE)  
Wg Cdr Flying (ASM)  
Eng 1 (Contract DO)  
SO2 ASAR  
SO2 Gliding (DDH – SO)  
CAM SO2  
OC CGS

SERCO

Chf Air Eng ([REDACTED]@serco.com)  
Contract Mgr ([REDACTED]@serco.com)  
GMS Chf Eng

INITIAL AIRWORTHINESS ISSUES





**DETAIL OF AIRWORTHINESS TASKS**

<b>Airworthiness Issue</b>	<b>Independents Inspections not being carried out</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Integrity Checks have been carried out on all vital systems.			
<b>Maintenance Organisation</b>				
<b>Corrective Actions</b>	The MO has increased the size of its management team with some positions also replaced. The authorisation process has been reinvigorated and now sits within the MOE. The QMS is now fully functional and a full time Serco QM position specifically for GM has been established.			
<b>Preventative Actions</b>	<p>1. Some areas were not adequately identified as requiring independents therefore the MO has instigated these and the ADS will be amended by the TAA in due course.</p> <p>2. Additional and independent checks of paperwork to ensure the correct completion of paperwork are being carried out.</p> <p>3. Staff have received 'table top' refresher training in independents and Serco staff from other sites have been seconded to GMS to provide additional support.</p>			
I am content that the MO actions taken have reduced reoccurrence to ALARP.				
<b>Accountable Person</b>	<b>Name:</b> ██████████	<b>Post</b> Chf Air Eng	<b>Signature</b> Original signed	<b>Date</b> Nov 15
<b>TAA</b>				
<b>Corrective Actions</b>	The ADS has been reviewed and it was found that the requirement for independent inspections was specified inconsistently within maintenance procedures, although correctly specified for systems within the relevant Topic 5A2.			
<b>Preventative Actions</b>	Action has been taken to remove the requirement for independent inspections from within maintenance procedures. To avoid the potential for confusion the systems that require independent inspection are detailed only in the relevant Topic 5A2, as detailed in MAP-01, Chap 6.10.			
The TAA is compliant with current regulation.				
<b>Accountable Person</b>	<b>Name</b> Wg Cdr ██████████	<b>Post</b> D/TAA	<b>Signature</b> Original signed	<b>Date</b> Nov 15
<b>MIL CAM</b>				
<b>Preventative Actions</b>	On completion of the recovery package each aircraft will undergo an Airworthiness Review (shown as the purple tile in Annex A) before being			

	<p>released for flight. Part of this process includes a paperwork check which will ensure that, if a vital system has been disturbed, there is supporting paperwork to demonstrate that an independent check has been carried out. This Airworthiness Review is carried out on an annual basis and so will continue to provide assurance that independent checks are being carried out.</p>
--	---

I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has achieved MAOS approval at Syerston and that the TAA has declared that the ADS is now fit for purpose.

<b>Accountable Person</b>	Name	Post	Signature	Date
	Wg Cdr [REDACTED]	2 FTS MiICAM	Original signed	Nov 15



<b>Airworthiness Issue</b>	<b>Unknown and unauthorised changes may have taken place.</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Full aircraft surveys (against a pseudo baseline aircraft) have been carried out.			
<b>Maintenance Organisation</b>				
<b>Corrective Actions</b>	All personnel have undergone HF training and Part 145 training. Furthermore, many briefings have taken place to ensure that personnel are aware of the importance of maintaining aircraft iaw the ADS.			
<b>Preventative Actions</b>	Continuation training and toolboxes talks with managers and engineering staff at the ac each morning will be provided throughout the year. The restructuring of the organisation by assigning team leaders and supervisors will enhance the quality aspects of the work undertaken.			
I am content that the actions taken by the MO has reduced reoccurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective Actions</b>	The TAA has issued Viking RTI 22 to assess all aircraft for potential unauthorised changes and discrepancies, and to ensure structural integrity. This instruction has been up-issued to improve and clarify the survey process. The TAA will review results of the RTI to assess risk of potential unauthorised changes. Comparison checks allow potential unknown unknowns to be identified. For ZE682 no comparison can be undertaken; however, providing the aircraft completes all other mandated checks to a thorough and satisfactory standard, it will be serviceable. Risk remains with potential unknown unknowns but this can be assessed and accepted by the DDH.			
<b>Preventative Actions</b>	The TAA has procedures in place to ensure that any design or configuration change is properly approved, authorised and introduced in a controlled manner. Audit activities are scheduled to assure these procedures are effective. No change can be authorised without TAA agreement – unauthorised changes must be stopped.			
TAA processes ensure that the type airworthiness component of this activity is managed satisfactorily.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has achieved MAOS approval and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date Nov 15



<b>Airworthiness Issue</b>	<b>SI(T) and Modification Configuration Control Lost</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	A repeat of all relevant SI(T)s and an inspection to confirm if -modifications have been embodied has been carried out and recorded. Additionally, the survey against the pseudo baseline is a compare and contrast activity that will identify if there are any configuration issues.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	All Engineering Instructions (EIs) will be carried out within the prescribed timescales as directed. The MO's processes will ensure that all EIs are captured and correctly recorded on the appropriate documentation. RTIs conducted by SS.			
<b>Preventative</b>	Additional staff in the Tech Documentation area has increased capacity to facilitate improved configuration control.			
I am content that the actions taken by the MO has reduced recurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective</b>	The TAA has issued Viking RTI 21 to check the configuration of each aircraft. This RTI has been up-issued to improve and clarify the inspection process. Compliance with the RTI will ensure the true configuration of all aircraft is identified and recorded accordingly. Any discrepancies of SI(T) or modification status will be addressed.			
<b>Preventative</b>	The TAA has procedures in place to ensure that SI(T)s and modifications are properly approved, authorised and issued in a controlled manner. New procedures are being introduced to ensure that follow-up action is being completed satisfactorily. Audit activities are scheduled to assure these procedures are effective. The Local Technical Committees and Configuration Control Boards will ensure modifications are managed appropriately. The SI(T) working group will ensure accurate status of all technical instructions is controlled and monitored.			
Adherence to existing and new procedures will ensure that the TAA has accurate information about the reported SI(T) and modification status of the fleet.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
<b>Preventative</b>	Future Airworthiness Reviews will check for appropriate evidence to show that all relevant SI(T)s and MODs have been carried out and are evident on both aircraft and in documentation. These checks will provide another layer of assurance that processes are working and configuration is maintained.			
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has achieved MAOS approval and the that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date Nov 15



<b>Airworthiness Issue</b>	<b>Missing documents</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Archived documentation for each aircraft has been reviewed. Where work orders are missing a re-work of the task has been called up so that signatures are evident against a task.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	Processes are in place to ensure paperwork is correctly returned in an expedient and secure manner.			
<b>Preventative</b>	Processes are in place that has reduced the risk of ac documentation going missing or will identify missing paperwork thus allowing the MO to take action.			
I am content that the process in place has reduced the occurrences of missing paperwork to ALARP.				
<b>Accountable Person</b>	Name: [REDACTED]	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective</b>	The TAA will assist the MOD CAM and MO where appropriate to assess the impact of missing documentation.			
<b>Preventative</b>	The PT will support the relevant stakeholders in developing this area.			
The control and safe keeping of maintenance documentation is not a TAA responsibility.				
<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
	The vast array of documents already produced has tested the control of documents.			
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has stated that its workforce is now competent and that it can manage documents.				
<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post 2 FTS CAMO	Signature Original signed	Date Nov 15

<b>Airworthiness Issue</b>	<b>Discrepancies with recording of lifed items</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	Serial numbers of all lifed items fitted to the aircraft have been checked against log cards and the engineering database			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	<p>The Topic 5A1 depicts all components that have a life and a subsequent Engineering Log Card.</p> <p>Log cards and the tree of knowledge are updated when components are replaced.</p> <p>RTIs conducted by SS.</p>			
<b>Preventative</b>	During the Level G and Level K checks details are taken from the Tree of Knowledge and checked against the section 7 of the F700C and the short forecast log.			
I am content that the actions taken by the MO has reduced recurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective</b>	The relevant Topic 5A1 for each platform has been checked and lifed components are properly identified.			
<b>Preventative</b>	The TAA will assist the MO and MOD CAM where appropriate.			
It is not a TAA responsibility to locally manage lifed components.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has stated that its workforce is now competent and that it can manage lifed items.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date Nov 15



<b>Airworthiness Issue</b>	<b>Management of GRP Cloth</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	All SSIs have been checked as part of RTI 022			
<b>Maintenance Organisation</b>				
<b>Corrective Actions</b>	The management of Cloth and resins has been investigated by the GRP Bay and they have processes in place for ensuring only in-life products are used.  RTIs conducted by SS.			
<b>Preventative Actions</b>	The GRP Bay has a process to ensure that cloth and resins are within life and have traceability.  Their processes will be audited.			
I am content that the actions taken by the MO has reduced recurrence to ALARP.				
<b>Accountable Person</b>	Name: ██████████	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective</b>	Instructions and guidance have been reviewed. Although covered by a 2(R)1 leaflet, it is considered more suitable to include SSI guidance in a separate publication. SSI checks are carried out as part of RTI action.			
<b>Preventative</b>	A Topic 5V is being produced for each platform as part of the current RCM and Topic 5 review.			
The actions being taken should ensure that clear and unambiguous guidance is available to the MO.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has stated that its workforce is now competent and that it can manage GRP cloth.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date Nov 15

<b>Airworthiness Issue</b>	<b>Supply Chain Inconsistencies</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	No on aircraft recovery action.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	F760 will be raised for all supply chain inconsistencies.			
<b>Preventative</b>	All demands for spares will be through the correct channels and any inconsistencies will be reported directly to the Authority.			
The MO has processes in place to inform the authorities of inconsistencies identified by them but this should only be the last line of defence.				
<b>Accountable Person</b>	Name: [REDACTED]	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective</b>	A review of the spares supply organisation has been carried out with no significant findings. All components supplied have traceability up to the point of issue to the MO. Component changes are now properly reported to UKMFTS TA TGSA. Correct reporting will ensure that any anomaly is identified and necessary corrective action carried out.			
<b>Preventative</b>	Regular supplier review meetings have been instigated. Quality checks will be introduced to add assurance. A full review and update of the IPC will be undertaken with the DO to address all known anomalies and to ensure robust process for change management.			
The changes introduced should ensure that component or part number changes are identified and approved prior to component issue to the MO.				
<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
The involvement of the 22(Trg) Gp Logs FS will provide additional oversight and assurance to supply chain activities.				
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has achieved MAOS approval at Syerston and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post 2 FTS CAMO	Signature Original signed	Date Nov15



<b>Airworthiness Issue</b>		<b>Document Set Configuration Control</b>		
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>		No on aircraft work required		
<b>Maintenance Organisation</b>				
<b>Corrective</b>		All Viking APs were recalled and their amendment state checked and updated accordingly. Additionally, the MO has requested additional APs where there are shortfalls.		
<b>Preventative</b>		The MO has recruited an additional person to assist with the control of APs, doubling the staff in that department. This individual has produced a system to ensure APs are amended in a timely manner and they have an auditable trail demonstrating that any amendments have been incorporated.		
I am content that the actions taken by the MO will ensure ADS configurations.				
<b>Accountable Person</b>	Name: ██████████	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective</b>		The publications held by the AMO were reviewed against a master set held by the TAA and amended where necessary to bring them to the approved issue state. Additional publications were provided where necessary.		
<b>Preventative</b>		The approval, printing and distribution process for publications and amendments has been reviewed. Problems had arisen because of the numerous stages in the process which are managed by several different organisations. There was no oversight of the complete process and no feedback system to identify and resolve issues. Action is being taken to improve the distribution process and introduce reviews. For example, the issue of local management instructions and, where possible, audits of the distribution process.		
The ADS will be kept up to date, providing the AMO submits UFRs iaw extent requirements and processes.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
		CAMO Self Assurance checks will be carried out in this area.		
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has stated that its workforce are competent and that the TAA has declared that he has effective ADS mgt procedures in place.				
<b>Accountable Person</b>	Name	Post	Signature	Date

	Wg Cdr [REDACTED]	2 FTS CAMO	Original signed	Nov 15
--	-------------------	------------	-----------------	--------



<b>Airworthiness Issue</b>	<b>Known Unauthorised Changes Carried Out</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	All previous unauthorised changes have been approved with either a concession or entry via AIL into the ADS.			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	<p>The MO has been open and honest by highlighting any known unauthorised changes.</p> <p>As mentioned above all personnel have undergone HF training and Part 145 training. Furthermore, many briefings have taken place to ensure that personnel are aware of the importance of maintaining aircraft iaw the ADS and not stepping outside the ADS.</p>			
<b>Preventative</b>	Continuation training and toolboxes talks will be provided throughout the year. The restructuring of the organisation by assigning team leaders and supervisors will enhance the quality aspects of the work undertaken.			
I am content that the actions taken by the MO will prevent reoccurrence.				
<b>Accountable Person</b>	<b>Name:</b> ██████████	<b>Post</b> Chf Air Eng	<b>Signature</b> Original signed	<b>Date</b> Nov 15
<b>TAA</b>				
<b>Corrective</b>	Formal Technical Queries have been raised for all unauthorised changes. These changes have been reviewed by TAA staff and, where appropriate, the DO. Changes approved by the TAA and/or DO have resulted in publication amendment action, using AILs if necessary, and concessions. Where a change has not been approved the aircraft reverts to the build standard in the ADS. This ensures that the configuration of each aircraft is known, all changes have been formally reviewed by SQEPs with the necessary authority to approve the decision, and formal ADS amendment action has been taken.			
<b>Preventative</b>	The TAA personnel are aware of the procedures in place to ensure all formally notified and initiated changes are properly reviewed and authorized. For example, an ADS change requires 'sign off' by an LoAA holder and, for Topic 1, 3 and 6 changes, input from the DO. Topic 2 changes require 'sign of' by an LoAA holder. Topic 5 changes are, where appropriate, subject to formal RCM analysis and all changes need 'sign off' by an LoAA holder. All SI(T)s require 'sign off' by an LoAA holder. Service or Designer modifications require approval through a formal LTC and CCB process.			
With procedures and additional resource in place the MO personnel should have the confidence that suggestions for change will be assessed and implemented, or a reason given for non-acceptance in a timely manner.				

<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
The MO personnel were particularly honest in highlighting areas which they now understand to be an unauthorised change.				
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has achieved MAOS approval at Syerston and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name Wg Cdr [REDACTED]	Post 2 FTS CAMO	Signature Original signed	Date Nov 15



<b>Airworthiness Issue</b>	<b>Known Unauthorised Procedures Carried Out</b>			
<b>Recovery Actions and Statements</b>				
<b>Aircraft</b>	No on aircraft actions			
<b>Maintenance Organisation</b>				
<b>Corrective</b>	As mentioned above all personnel have undergone HF training and Part 145 training. Furthermore, many briefings have taken place to ensure that personnel are aware of the importance of maintaining aircraft iaw the ADS and not stepping outside the ADS.			
<b>Preventative</b>	Continuation training and toolboxes talks will be provided throughout the year. The restructuring of the organisation by assigning team leaders and supervisors will enhance the quality aspects of the work undertaken.			
I am content that the actions taken by the MO will prevent recurrence.				
<b>Accountable Person</b>	Name: ██████████	Post Chf Air Eng	Signature Original signed	Date Nov 15
<b>TAA</b>				
<b>Corrective</b>	The TAA has responded to the large number of F765s raised and engaged additional support to produce procedures where required and appropriate. These are vetted before issue and, where urgent, an AIL is issued.			
<b>Preventative</b>	Procedures are in place for the management of F765s. No unauthorised procedure should be followed by the MO – it must be reported to the PT.			
New procedures and additional resource will ensure that F765s are addressed promptly, subject to these being raised by the MO when appropriate.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post D/TAA	Signature Original signed	Date Nov 15
<b>MIL CAM</b>				
I am content that this issue is managed sufficiently to fly a small fleet of Vikings at Syerston on the basis that the AMO has achieved MAOS approval at Syerston and that the TAA has declared that the ADS is now fit for purpose.				
<b>Accountable Person</b>	Name Wg Cdr ██████████	Post 2 FTS CAMO	Signature Original signed	Date Nov 15