

**The Model Air Launched Weapon Release (ALWR)**

**Presentation of the Model Text**

A.1 In the 'model' text the following conventions are used:

A1.1 All normal text, including headings, will be used as shown.

A1.2 Italic text within brackets thus *{example}* is used to show where text appropriate to a specific Release is required, and be replaced or deleted before issue of the final document.

A1.3

*Italic text presented within shaded boxes, as this example, provides guidance on the required content.*

A1.4

Where normal text is shown within double-line boxes, as in this example, mandatory content is defined, but the presentation is not specified.

A1.5 Where a table is shaded and italic text is used, as below, this indicates that it is an example of an acceptable format.

|                            |                           |                  |                         |                                 |                              |
|----------------------------|---------------------------|------------------|-------------------------|---------------------------------|------------------------------|
| <i>Modification<br/>No</i> | <i>Not<br/>Authorised</i> | <i>Essential</i> | <i>Affects<br/>ALWR</i> | <i>Affects<br/>Publications</i> | <i>No Effect on<br/>ALWR</i> |
|----------------------------|---------------------------|------------------|-------------------------|---------------------------------|------------------------------|



**OFFICIAL when completed**

**The Model Air Launched Weapon Release (ALWR)**

**Contents**

Parts

Preliminary Pages

ALWR

Part 1 – Airworthiness and Document Management

Part 2 – ALW Specific Information

Part 3 – Air System Specific Information

Part 4 – Additional Information and Modifications

{*Security Classification*} |

*Cover Page*



**OFFICIAL when completed**

*{Weapon Identifier, usually Type and Mark} |*

**ALWR**

*{Issue Status} |*

*{ALWR Reference} |*

*Cover Page*

**Preliminary Pages**

The preliminary pages of the ALWR are to contain the following sections:

**Classified Supplement:** When the document is a Classified Supplement, then the following statement is inserted at the **head of this page** as it is vital that Supplement and main document are coherent at all times:

**“This document is the Classified Supplement to the ALWR for the {weapon identifier}. This Supplement will be read in conjunction with the main document {document reference}”**

**List of Contents**

List of contents to be provided, to a level of detail as required by the {relevant ALW Delivery Team (DT)}, but the chapter headings are mandatory.

**Classified Supplement:** When the document is the main ALWR and there is a Classified Supplement, the following statement will be inserted at the **end** of the list of contents, and the reference included at A.8.2.3:

Classified Supplement – There is a Classified Supplement to this ALWR, issued under a separate distribution.

**List of Amendments**

An amendment list must be provided to record all amendments made to the ALWR

| Amendment Number | Date | Detail of Change |
|------------------|------|------------------|
|                  |      |                  |
|                  |      |                  |
|                  |      |                  |
|                  |      |                  |

**List of Effective Pages**

An important element of document control is ensuring that the document is complete and has been correctly maintained. Therefore the ALWR will have a List of Effective Pages which will be updated by every amendment.

| Page | Issue / Amendment |
|------|-------------------|
|      |                   |
|      |                   |
|      |                   |
|      |                   |

| Page | Issue / Amendment |
|------|-------------------|
|      |                   |
|      |                   |
|      |                   |
|      |                   |

## List of Abbreviations and Acronyms

*The ALWR must provide a consolidated list of the abbreviations and acronyms used throughout the document as an aid to the reader. Where appropriate, this list will include specific labels and / or captions that are used to define limitations (in which case they must reproduce the presentation in the ALW exactly in relation to (mis-)spelling and capitalisation and not follow any particular style conventions in use in the ALWR).*

## Definition of Terms

*It is important to the use of the ALWR and the overall Airworthiness of the Air System that there is a clear and common understanding of the terms used within the ALWR. Therefore, every ALWR will have a section dealing with the Definition of Terms. Wherever practicable, the definitions used are to be as contained in the following sources, listed in order of precedence:*

- a *North Atlantic Treaty Organization (NATO) Allied Ordnance Publication 38 (AOP-38) – NATO Glossary of Terms & Definitions concerning the Safety & Suitability for Service of Munitions, Explosives and Related Products.*
- b *NATO Allied Administrative Publication 6 (AAP-6) – The NATO Glossary of Terms and Definitions.*
- c *Joint Doctrine Publication 0-01.1 – United Kingdom Supplement to the NATO Terminology Database.*

## Presentation of Warnings, Cautions and Notes

*The convention used for presenting Warnings, Cautions and Notes within the ALWR needs to be explained. The appropriate statement will be selected from the following:*

The Warnings, Cautions and Notes are placed as close as practicable to the relevant limitation / procedure.

Or

The Warnings, Cautions and Notes are called out and numbered within each sub-section, and placed at the end of the relevant sub-section within each Part.

Or

The Warnings, Cautions and Notes are called out and numbered within each Part, and placed at the end of the relevant Part.

## Distribution

*Necessary to ensure amendments are promulgated to all document holders*

### Action:

{Sponsor - Head Equipment Capability}

{ALW Delivery Team Leader (DTL)}

{Host Air System's TAA(s) and RTSA(s) - so that they can include weapon limitations in the Air System's RTS}

{Manufacturer / Designer - for comparison with original design assumptions and limits} |



**Information:**

{*Aviation Duty Holders*}

{*Resident Project Officers - for information*}

{*OC Defence Aircrew Publications Squadron - for comparison with Aircrew documentation data (under the delegated authority of relevant DTLs)*}

{*Air Warfare Centre - for generation of operational performance information*}

{*Military Aviation Authority - [DSA-MAA-Cert-ES4-ArmSys@mod.gov.uk](mailto:DSA-MAA-Cert-ES4-ArmSys@mod.gov.uk) - for information*}

{*Defence Ordnance Munitions and Explosives (OME) Safety Regulator - [DSA-DOSR-Assurance-ATL@mod.gov.uk](mailto:DSA-DOSR-Assurance-ATL@mod.gov.uk) - For OME assurance aspects*}

{*Defence Ordnance Safety Group (DOSG) – for ordnance aspects*}

{*Collaborative foreign users - for comparison with their own certification documentation*}

{*Weapons Engineering DT - [DESWpnsEng-Airworthiness@mod.gov.uk](mailto:DESWpnsEng-Airworthiness@mod.gov.uk) - for input to the ALWR Library and records*}

**ALWR**

I certify that the ALW, described at Part 2 of this document, has been assessed for Carriage, Release and Jettison (CR&J) within the environmental<sup>1</sup> and performance<sup>2</sup> envelopes defined in Part 3 on the Air System(s) nominated below; that any associated Risks and Hazards have been identified and bounded; and that the necessary limitations and mitigations have been included in Part 3 of this ALWR.

- {eg Typhoon FGR4}
- {F-35 B Lightning II}
- {MQ-9 Reaper UAS}
- {etc}
- {etc}

The ALWR only remains valid provided the Weapon, Ordnance, Munition, Explosive (WOME) has been stored, transported, handled and maintained in accordance with the Manufacture to Target / Disposal Sequence (MTDS) and the Weapon's SECR and OAS.

{Signature}

{Name}        [[

DT LoAN Holder {weapon identifier}        [[    {Date} ]]

*All ALW Releases to use a common standard of wording*

<sup>1</sup> The environmental envelope is the measured or predicted levels of shock, buffet, flutter, vibration, Nz, intra-store effects, rf, etc, for the nominated Air System type(s) that the ALW qualification programme and Safety and Environmental Case Report (SECR) and OME Safety Review Panel (OSRP) Assurance Statement (OAS) were based on. This data is derived from the ALW User Requirement Document / System Requirement Document (URD / SRD) and agreed in liaison with the Air System TAA.

<sup>2</sup> The performance envelope is the CR&J heights, speeds, dive angles, acceleration and roll-rate limits, etc, as defined in the Equipment's SECR and OAS / CofD for each Air System type / SRD and agreed in liaison with the Air System TAA.

## Part 1 - Airworthiness and Document Management

### 1.1 Introduction

1.1.1 **Purpose.** This ALWR is the certification by the *{ALW DT LoAN holder}* that an acceptable SECR and OAS have been prepared and maintained for *{weapon identifier}* and its equipment, and that this ALWR can form the basis for a formal approval of *{weapon identifier}* for operation on the Air System types stated in Part 3. The ALWR provides the limitations within which Airworthiness and Safety in the role are declared and have been verified by a Safety Assessment analysis (SECR and OAS).

1.1.2 **Amendment.** Amendments will be promulgated automatically to the agencies detailed within the distribution list. Suggestions for amendment are to be forwarded to:

### 1.2 Responsibilities

1.2.1 The Designer responsibilities for the weapon are listed below:

*{Overall Weapon}*                      *{Weapon Manufacturer and contact details}*

*{Other directly-contracted designers who have a role in maintaining the configuration control of the weapon and associated equipment, (eg Motor Manufacturer, Guidance or other major system or Co-ordinating Manufacturer)}*

The *{weapon identifier}* will be managed through-life by the following agencies:

- *{Equipment Capability Sponsor}* – Responsible for Equipment Capability and potential performance improvements.
- *{Delivery Team}* – Development, acquisition and through-life management of the weapon system with engineering and logistic support.
- *{User (or multiple Users)}* – Weapon operation and training In-Service. Feedback on weapon operation and all support implementation aspects.

### 1.3 Incident and Fault Reporting

Refer to MAM-P & DSA 02.OME<sup>3</sup> and “any other weapon-specific special requirements”

<sup>3</sup> Refer to DSA 02.OME – Defence Ordnance, Munitions and Explosives (OME) Regulations.



**Part 2 – ALW Specific Information**

*This part of the ALWR contains details of the weapon design, performance and limitations on its operational use.*

*Part 3 is for limitations that affect the use of the weapon when fitted to an Air System, while the limitations in Part 2 are always applicable. Thus, limitations that have an impact on the operation of the weapon / Air System combination are to be included in Part 3.*

*All limitations are to be expressed in a manner that allows them to be complied with by the Aircrew or ground-crew as appropriate. The conditions pertaining to a particular limit are to be expressed unambiguously. Where the meaning of a term is not formally defined it must be explained. Conflict, or perceived conflict, of information will be avoided.*

*This part of the ALWR covers those limitations that are related to the hardware or systems of the weapon. Only limitations that have an impact on the safe handling, Maintenance or airworthy operation of the weapon, to a required performance standard, within Service use, are to be included. They are to be expressed in a manner that allows them to be complied with by personnel (ground or Aircrew). The conditions pertaining to a particular limit are to be expressed unambiguously.*

*Where system limitations are wholly described in Part 2 they need not be repeated in Part 3. System limitations must be comprehensively covered under the relevant heading.*

*Air System-specific limitations must be presented in Part 3.*

**2.1 Description**

The {*weapon identifier*} is an {*weapon description*}, procured against {*reference to agreed characteristics or User Requirements Document (URD) against which contract was let*} for use by {*Service operator*} in the following roles:

**Refer to the weapon Certificate of Design (CofD), OAS and weapon Concept of Operations (CONOPS).** Also list the roles in which the weapon can be used, (ie Air-To-Air, Air-To-Ground, Anti-armour, hardened target etc).

{*Primary Roles*}

{*Secondary Roles*}

{*Tertiary Roles*}

The {*weapon identifier*} is designed to meet the requirements of {*design standard (eg Def Stan 00-056), US Military Specifications, STANAGs, etc*}. It is manufactured in {*country of origin*} by {*manufacturer*} under {*arrangements to ensure manufacture is to design*}. Exceptions to these design standards are detailed in the {*Certificates of Design*} identified in Parts 2 and Part 3 for specific Air System integration.

**2.2 Weapon Description and Associated Operating Equipment**

**Refer to weapon CofD (eg the weapon is described in detail at Reference and weapon’s SECR and OAS for detail)**

*Brief physical overview of the weapon, with size, method(s) of CR&J, data links, guidance, associated support (eg loading). If available, refer to APs for details of construction, procedures etc.*

*Include details of:*

*ALW Variants (operational round, practice round, drill / other training round)*

Key Safety features, fuzing etc.  
 Launchers  
 Other equipment (eg planning tools) needed to use weapon

### 2.3 Weapon Interface Control Documentation

**Refer to the generic Interface Control Document (ICD) for the weapon and the method of configuration control. Air System-specific ICDs will be detailed in Part 3.**

### 2.4 Statement of Operating Intent and Usage (SOIU)

**Refer to the weapon URD, SRD, CONOPS, Concept of Employment (CONEMP) and SOIU. Provide the details of the CONOPS and the MTDS (with reference to section 2.11) for a weapon system that will form the SOIU. It will provide details of predicted "g" loads, landings, speeds etc for each carriage hour. Cross-reference must be made to the SOIU for each Air System type as required. Outline the Maintenance support philosophy, referring the reader to appropriate elements of Part C; (eg packaging / containers, storage etc).**

### 2.5 Weapon Service Life

The limitations in parts 2 and 3 are valid for the life of the weapon. The weapon design Service Life is summarised in the following:

**Refer to the Joint Service Munitions Control Register (JSMCR) or weapon-specific (J)AP Topic 5. It is normally derived from the MTDS (see section 2.11) which provides the usage spectrum for the weapon.**

{Table of Service Life figures: Carriage Life, Storage Life (in different environments), Standby Life, assumed usage spectrum for the weapon, etc.}

### 2.6 Weapon Configuration

The design standard and authorised Modifications of {weapon identifier} to which this ALWR applies is given below:

Users of the ALWR are to note that, unless listed or referenced below, a Modification or new item of equipment is not to be fitted or used. In case of doubt, refer to:

{Contact details of Desk Officer dealing with the ALWR}

**Within section 2.6 the weapon configuration will be built up through the sub-sections of:**

#### 2.6.1 Design Standard

**Refer to the Weapon Configuration Status Record (CSR). Definition of the design or build standard of the weapon. If there is more than one manufacturing source then multiple entries will be required.**

List of production Design Standard(s), CSR (formerly Master Record Index) {number and issue state}  
 Statement of the Design Certification procedures applicable to the weapon and ancillary equipment (they may be different)<sup>4</sup>. Design Certificates are then listed in a Table containing the following column headings:

<sup>4</sup> Refer to RA 5103 – Certificate of Design.

- *Weapon / Equipment Type Air System Type and Mark*
- *Type of CofD Issued (eg {Name-of-Designer firm} Form 111)*
- *CofD Serial No*
- *Date of Issue*

## 2.6.2 Weapon Software Standards

*Detail the weapon software standards and configuration control process, cross-referring to the appropriate element of the Designer Modification section 4.5 as required.*

## 2.7 Weapon Performance / Effectiveness

**Refer to the weapon performance model, 6 Degrees of Freedom (DoF) model and ballistic model.** Overview of the optimum operational and maximum potential performance of the weapon, including range, warhead effectiveness, target engagement, etc. If there is a weapon performance / effectiveness model it must be identified with its version number.

*If this item (and the next) demands a high security classification for the ALWR, the use of a classified supplement may reduce the classification of the rest of the document.*

## 2.8 Weapon Delivery Envelope

**Refer to the weapon MTDS and SECR and OAS.** Overview of the release parameters etc. No mention of specific host Air System, as this section is strictly for the weapon's parameters (ie the environments that the ALW has been qualified against)

The weapon is cleared to max / min "g", speed, height, acceleration,  $\alpha$ , temperature, ElectroMagnetic Compatibility (EMC), etc. as set out in the weapon MTDS and weapon's SECR and OAS.

## 2.9 Explosive Hazard Classification

**Refer to the weapon Explosives Storage and Transportation Committee (ESTC) Classification.** Statement of explosive Hazard classification, and any specific explosive related limitations, not covered elsewhere in the ALWR.

*List ESTC Explosive Hazard Classification Codes and Serial Numbers.*

## 2.10 Weapon and Component Security Classification

**Refer to the weapon Security Grading Letter.** Detail the security classification of the weapon, its sub systems and equipment. Also the authority for (automatic) downgrading of Classification (over time).

## 2.11 Manufacture to Target / Disposal Sequence

**Refer to the weapon MTDS.** Describe the MTDS.

*Cross-refer to the NATO AOP 15 Environmental Questionnaire complying with STANAG 4297 and NATO AOP 15)*

## 2.12 Maintenance and In-Service Testing

**Refer to weapon Maintenance plan and procedures.** Detail the Maintenance Policy and In-Service testing with reference to documentation.  
Testing is "In-Service" testing, (eg to determine weapon serviceability / reliability etc) not development testing.

## 2.13 Weapon Loading and Unloading

**Refer to any relevant procedures.** Generic process, with reference to Part 3 for specific Air System procedures.

## 2.14 Laser Safety

**Refer to weapon's SECR and OAS.** Provide details of all laser Safety, or laser-related limitations.  
If no laser is fitted, or is Air System-mounted, this section will contain the statement:  
"No laser limitations are applicable to this weapon"

## 2.15 Emergency and Contingency Arrangements

**Refer to the weapon's SECR and OAS and WOME Safety instructions.** Emergency and Contingency Arrangements must be reflected in the relevant APs and Aircrew Flight Reference Cards etc.  
This section must indicate that credible emergencies have been addressed and identify the relevant references. At a minimum, it must include reference to procedures for:

- Crash-site Hazards and precautions (environmental and personnel Safety precautions).
- Air System emergencies affecting the weapon (eg emergency removal in event of undercarriage failure).
- Air Systems at non-military airfields (eg additional Safety precautions to protect the public (and protect the weapon))
- Air System landing away-from-base (unplanned).

## 2.16 Other Equipment (optional)

Subject to the ALW DTLs discretion, Modifications or authorizations for any equipment that is fitted to the weapon but is not covered by sub-sections 2.6; (ie "equipment 'not-basic' to the weapon").

The following are possible further sub divisions that are suggested, but others may be used at the discretion of the DTL.

- Role equipment (when applicable)
- Ground Handling and Storage Equipment (when applicable)
- Test Equipment (when applicable)

## 2.17 Related Documents

### 2.17.1 Weapon Document Set

**Refer to MAM-P, MAM-D, Topic 5X, Topic 5A6, etc.** Create entry in the forms as detailed below for all Airworthiness-related documents, including: host Air System RTS, Technical Publications (or Interactive Electronic Technical Publications), etc.

The production design is airworthy when operated by qualified Service personnel within the limitations promulgated in Parts 2, 3 and 4 of this ALWR and in accordance with the information and provisions contained in the following related documents:

{Document} to the latest issue, published and maintained by {publishing organization under the authority of the Air System / ALW DTL} and on behalf of {Director of the appropriate Front Line Command Capability Organization}.

To ensure the continuing Airworthiness of the weapon, it will be serviced and maintained in accordance with:

{Technical Publication reference} to the latest issue, published and maintained by {Technical Publication reference} under the authority of {document sponsor}.

**Note that the weapon product data to support entries in the Air System Document Set(s) must be provided to those responsible for publishing the Air System-specific references, and a robust updating system maintained through life to ensure all appropriate changes are reflected in the complete document chain**

### 2.17.2 Other Documentation (optional)

Other documents referred to in this ALWR which contain information relevant to the Airworthiness of the operation of this weapon are:

{Document Reference} to the latest issue, published and amended by {publication authority} under the authority of {document sponsor}.

The following sub-section is used when appropriate to a main ALWR document that has a Classified Supplement, or to the Supplement itself.

The Classified Supplement {Document Reference}, {Issue}, {Amendment}. Or the main ALWR {Document Reference}, {Issue}, {Amendment}

**Part 3 – Air System Specific Information**

The *{ALW Identifier}* is approved for use within the limits contained in this ALWR on the following Air System types:

Part 3 of the ALWR is for the presentation of weapon information and limitations that are specific to a particular weapon / Air System combination. It is important to note that this ALWR identifies the limits to which the weapon has been cleared and is not a copy of the relevant TAA's statement of the Air System's limits when carrying the weapon. Thus, included in this part are the weapon manufacturer's stated or evaluated safe limits for weapon carriage on a specified Air System but excluded are the integrated CR&J limits for the Air System while carrying this weapon (usually with others).

*It is expected (but will not always be the case) that information for this section will come from the weapon manufacturer's Air System-specific Certificates of Design, while information for the Air System RTS will also be derived from the Air System manufacturer's CofD and Military Permit to Fly and weapon / Air System integration trials.*

**3. Integration Limits for *{Air System Identifier}***

**3.1 Air System Type & Mark**

**Refer to the Weapon CofD.** State the Air System or Air System derivative that the weapon can be fitted to and cross-refer to the associated RTS.

**3.2 *{Air System Identifier}* SOIU**

**Refer to the Air System RTS.**

**3.3 Configuration Requirements.**

**Refer to Air System RTS.** Detail configuration requirements (ie Air System carriage equipment, any Air System specific Modification state of weapon and Air System Modifications essential to support the weapon).

**3.4 *{Air System Identifier}* Interface Control Document**

**Refer to the specific ICD for weapon / Air System combination.**

**3.5 *{Air System Identifier}* Limitations and Constraints.**

Detail weapon integration limitations and constraints for this specific host Air System. May include:

- Airborne carriage and / or flight hour limitations
- CR&J limitations
- Mission management, or other data transfer limitations
- Gun firing, including effect on missile of blast, vibration and inertia loads
- Adjacent weapon considerations
- EMC limitations
- Telecommunications Electronics Material Protected from Emanating Spurious Transmissions (TEMPEST) limitations

**3.6 {Air System Identifier} Certificates of Design**

*Refer Air System CofD. Cross-Refer to the Certificates of Design that are specific to the weapon and its equipment for this Air System type. They will be detailed in section 2.1.*

**3.7 {Air System Identifier} Thermal Effects on Airborne Conventional Armament Stores and Equipment (TEACASE) Limitations**

*The TEACASE limitations are necessary to ensure that ALW do not exceed their nominated upper or lower temperature limits during air carriage. Liaison with the DOSG Air Weapons Advisory Committees will be required to generate these data.*

**3.8 {Air System Identifier} Air System Self Damage (ASD)**

*This section will provide information to the Air System DT on the weapon characteristics which could pose a Risk of damage to the launch Air System or other nominated Air Systems following successful ALW release, arising from the timely detonation of the weapon at the point of arming or at the target as detailed in ASD Note 12. Liaison with the DOSG Air Weapons Advisory Committees will be required to generate these data.*

*Include any limitations on pre- and post-launch weapon settings, launch and post-launch management required to avoid Air System self-damage, or damage to Air System in the same formation. It must address the case where the weapon detonates on arming and cover Air System self-damage prior to propulsion initiation (or failure) whilst in the vicinity of the Air System. It must include any work carried out or statement made describing the debris pattern when the weapon successfully engages a target.*

**3.9 {Air System Identifier} Air Weapons Ballistics**

*This section will provide information to the Air System DT on Weapon Danger Areas, as defined in DSA 02.OME, for nominated weapon releases. Liaison with the DOSG Air Weapons Advisory Committees will be required to generate these data.*

**3.10 {Air System Identifier} Document Set****3.11 {Air System Identifier} Misfire, Hang Fire and Hang Up Procedures**

**Part 4 - Additional Information and Modifications**

**4.1 Temporary Information**

*The purpose of Part 4 of the ALWR will enable any information of a temporary nature to be managed. Each element of Part 4 will have been derived from a supplementary SECR and OAS, and will provide information (limitations) on one or more aspects of the weapon system operation. Examples are an Operational Emergency Clearance (OEC) for the employment of the weapon on an Air System type not covered in Part 3, or an OEC for a Modification to the weapon.*

- *A record of all (past and present) temporary ALWR information.*
- *The definition of the applicability of each change (eg weapon batch number, Operational Evaluation Unit flying only, named exercise).*
- *The arrangements for withdrawal of each change (eg calendar, embodiment of a Modification, formal clearance).*
- *A definition of the parts of the weapon document set affected by each change.*
- *The location of the temporary information.*

*The ALW DTL has the option to place the temporary information entirely within Part 4 of the ALWR, or to use insert pages in the appropriate places throughout the weapon documentation set, whichever method is best suited the particular circumstances.*

**4.2 Service Derived Information**

*Part 4 of the ALWR is for recording and giving authority to Service-derived information, such as authorisations and limitations related to the introduction of a In-Service Design Modification (DM). If, as is likely, there is no Service-derived information for a particular weapon, then this section must contain the statement:*

*"There is no Service-derived information for {weapon identifier}".*

**4.3 Audit Trail**

*[Not part of promulgated ALWR]*

**4.3.1 Information Audit**

● *Part 4.3.1 contains the data that enables the content of Parts 1, 2, 3 and 4 to be auditable and traceable. It will be maintained by the ALW DTL throughout the life of the weapon. Some elements may exist as databases in their own right.*

*The minimum that is required is an index of where the following information can be found:*

- *Attribution matrix specifying the source of every element of the earlier parts.*
- *Design documentation (CSR, Certificates of Design, etc).*
- *List of Trials and associated Reports not covered by the design documentation.*
- *Details of any SECRs and OASs relating to the weapon or its systems.*
- *Details of sentencing of trial recommendations.*
- *Other references and base-line data used in generating the first issue.*
- *Details of all changes to the initial issue (amendments and subsequent issues) to include their nature, the reason for their introduction and the individual authorizing their implementation.*



#### 4.3.2 Specialist Advice

*This section provides reference to the specialist advice received for this weapon, whether or not it forms part of the Audit Trail at 4.3.1. To include reference to:*

- *DOSG Safety Advice*
- *OAS Recommendations, Caveats and Provisos*
- *Magazine Safety Statement*
- *Naval Ordnance Safety Statements*
- *Test & Evaluation Reports*

#### 4.3.3 Safety Assessment

**Refer to weapon's SECR and OAS.** *This section provides a reference to the top level Safety Assessment for the weapon, whether or not it forms part of the Audit Trail at 4.3.1.*

#### 4.3.4 Integrated Test, Evaluation and Acceptance (ITEA) Plan

**Refer to the weapon ITEA Plan.** *This section provides a reference to the ITEA Plan for the weapon.*

*Statement as to how the ITEA links with the SECR and OAS.*

*It details:*

*The agency responsible for maintaining the ITEA.*

*The overview of the ITEA.*

*The test methodology.*

*Trials and modelling conducted, including:*

*Safety and suitability trials*

*Flight Trials*

*Weapon performance trials*

*Warhead trials*

*Fuse integration trials*

*Computer modelling, where appropriate*

*6 DoF mathematical modelling*

#### 4.3.5 Non-Compliance / Further Work

**Refer to the weapon URD / SRD.** *This section details the extent to which the weapon fails to comply with the original requirements (URD / SRD) and any outstanding work planned to clear the non-compliance, including statements on those issues that will not be addressed.*

#### 4.3.6 Engineering Actions from Weapon's SECR and OAS

**Refer to the weapon's SECR and OAS.** *The limitations expressed within the ALWR are the procedural mitigations to reduce operating Hazards to an acceptable level. This section will include Advice to User information from the DOSG or information derived from equipment trials that form the procedural information necessary for Safety. These limitations are therefore an output of an implicit, or if the weapon has a formal SECR and OAS. From the SECR and OAS there may well be engineering mitigations in addition to operational ones. It is important that these engineering mitigations, on which the Safety of the weapon is based, are recognised as Safety critical, and are not lost in the general Maintenance actions. The majority of general weapon Maintenance is Safety*

*critical; however, if the Safety of the weapon is based upon any specific engineering actions these must be detailed here.*

*Many of the engineering Hazard mitigations will be fatigue life related, although other engineering actions could result from the SECR and OAS; (eg detection of dormant faults. Moreover, a weapon may have no Safety critical engineering actions).*

#### 4.4 In-Service DM and Alternative Design Organization Modifications (ADOM)

*This will provide a **cross-reference** to a list that is under the configuration control of the Weapon DT, of all In-Service DM / ADOM introduced since the initial design: (ie SMs etc that may be embodied on the weapon).*

*The full list must indicate for each Modification whether it is:*

- *Not Authorised;*
- *Essential;*
- *Affects ALWR;*
- *Affects Weapon Publications;*
- *No Effect on ALWR.*

#### 4.5 OECs and Clearances with Limited Evidence (CLE)

*Identify, by listing or **cross-referencing** to a full list of Special Clearances (See RA 1300 and RA 1330) required to satisfy the operational imperative or detail the shortfalls in evidence for the weapon.*

*The full list must indicate for each special clearance:*

- *OEC / CLE Number;*
- *Applicability;*
- *Withdrawal arrangements;*
- *Affected parts of ADS;*
- *Review date;*
- *Affected Weapon Publications;*
- *No Effect on ALWR.*