

# Project Specific Certification Plan

Applicant: **[Applicant name]**

Project: **[Project name]**

Document reference: **[Document reference]**

CAA Reference **xx/21B/xx**

*This template has been designed to assist applicants. Applicants are encouraged to amend the template and sample wording where necessary to suit their Type Certificate programme. Text in blue italics (like this text) is intended to provide guidance to the applicant and should be deleted from the issued version of the PSCP. Text in red should be amended by the applicant as needed to reflect the correct details of the programme/PSCP.*

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## 2 REVISION HISTORY

Revision	Date	Change
Template	1 July 2016	Initial Draft

### 3 PURPOSE/SCOPE

The purpose of this PSCP is to define and document a certification programme between the Civil Aviation Authority of New Zealand (CAANZ) and Applicant to expedite the issue of a **standard category/restricted** Type Certificate (TC) for the **[Aircraft name]** in accordance with NZCAR Part 21 Subpart B.

The CAA Work Request associated with this TC project is **xx/21B/xx**.

### 4 AGREEMENT

The ACU and Applicant agree to the provisions of this PSCP as indicated by the signature of their duly authorised representatives.

<b>Applicant Project Manager:</b>		
Name:	Signed:	Date:
<b>Applicant Project Sponsor:</b>		
Name:	Signed:	Date:
<b>CAA Project Engineer:</b>		
Name:	Signed:	Date:
<b>CAA Project Sponsor:</b>		
Name:	Signed:	Date:

#### 4.1 Effectivity

This PSCP shall become effective upon endorsement by the CAANZ and the Applicant's Project Manager in Section 4. It will continue in effect throughout all phases of the project unless it is superseded, revised, or terminated. This PSCP may be amended by mutual agreement in accordance with agreed procedures.

#### 4.2 Amendment of this document

As a minimum, the PSCP will be reviewed at the beginning of each phase to ensure it is up to date.

Minor changes to the PSCP can be signed for by the CAA and Applicant Project Managers. Changes which require additional resource, alteration in Certification Basis or methods of compliance require Project Sponsor signature.

### 5 REFERENCES

The documents referenced by this PSCP are as follows;

- **XXXX Rev x dated xx xx xxxx**

*The references should only contain documents that are referred to by the PSCP. It should not be a list of documents that may have current or future relevance to the certification project but are not referred to elsewhere in the PSCP.*

DRAFT

## 6 DESIGN DESCRIPTION

*Guidance for the level of detail in the description is contained in section 6 of AC21-7. Delete any sections that are not applicable to the aircraft*

### 6.1 Description of type design

*The XXXX is a X seat... Should include a description of the intended operating environment (i.e. part 91, 121, 137 etc), kinds of operation (i.e. day VFR/IFR etc.)*

#### 6.1.1 Proposed operating limitations

*[examples below are not a definitive list]*

*Day and Night VFR operations only*

*Vne =*

*MCTOW = xxx lb*

*Empty Weight (approx.) = xxx lb*

*Required crew =*

*Maximum certificated passengers =*

#### 6.1.2 Engine

XXX

Type Certificate Details:

NZ Type Acceptance Details:

#### 6.1.3 Propeller

XXX

Type Certificate Details:

NZ Type Acceptance Details:

#### 6.1.4 Rotor

XXX

#### 6.1.5 Tail rotor

XXX

#### 6.1.6 Gearbox

XXX

#### 6.1.7 Airframe Structure

XXX

**6.1.8 Flight control system**

*XXX Include top level schematics of the system*

**6.1.9 Electrical System**

*XXX Include top level schematics of the system*

**6.1.10 Avionics & instruments**

*XXX Should refer to the instrument panel layout and navigation/communications equipage*

**6.1.11 Air data system**

*XXX Include top level schematics of the system*

**6.1.12 Fuel System**

*XXX Include top level schematics of the system*

**6.1.13 Oil System**

*XXX Include top level schematics of the system*

**6.1.14 Hydraulic System**

*XXX Include top level schematics of the system*

**6.1.15 Cabin layout**

*XXX*

**6.1.16 Climate control &/or Pressurisation System**

*XXX Include top level schematics of the system*

**6.1.17 Undercarriage**

*XXX*

**6.1.18 Optional equipment to be certificated as part of the TC program**

*XXX*

**6.1.19 Three view drawing**

*XXX*

**6.1.20 Significant, novel or unusual design features**

*XXX*

**6.1.21 Aircraft level System Safety Assessment/Functional Hazard Assessment**

A preliminary aircraft level SSA/FHA has been attached as Annex **XX** to this PSCP.

## 7 PROJECT STAKEHOLDERS

The Applicant for the TC is:

Applicant's name

TC Applicant's address

(CAA participant No. XXXX)

The supporting Part 146 certificated Design Organisation is:

Design Organisation's name

Design Organisation's address

(CAA participant No. XXXX)

The Applicant's designated Project Manager is XXXXX. The Applicant's Project Manager is the Applicant's point of contact for all administrative matters concerning the TC.

The Applicant's key project team members are:

Certification Member	Discipline	Phone No.	E-mail
	<i>Project Manager</i>		
	<i>Project Executive</i>		
	<i>Noise &amp; emissions, structures &amp; mechanical systems</i>		
	<i>Structures &amp; mechanical systems)</i>		
	<i>Avionics &amp; electrical systems</i>		
	<i>Structures &amp; mechanical systems</i>		
	<i>Maintenance and inspection</i>		
	<i>Flight test &amp; operations</i>		
	<i>Vibration &amp; fatigue</i>		
	<i>Flight test engineer</i>		
	<i>[Add individuals as required by the project: the list above is intended to trigger thoughts and is not authoritative.]</i>		

The CAA's nominated Project Manager is XXXXX. The CAA Project Manager is responsible for the day-to-day conduct of the certification activities on behalf of the Director. All contact on certification matters, including supply of documentation and the scheduling of visits and tests, shall be addressed through the Project Manager.



The CAA's key project team members are:

Certification Member	Discipline	Phone No.	E-mail
	<i>CAA Project Manager</i>		
	<i>CAA Project Executive</i>		
	<i>CAA Project Director</i>		
	<i>Noise &amp; emissions, structures &amp; mechanical systems</i>		
	<i>Structures &amp; mechanical systems</i>		
	<i>Avionics &amp; electrical systems</i>		
	<i>Structures &amp; mechanical systems</i>		
	<i>Maintenance and inspection</i>		
	<i>Flight test &amp; operations</i>		
	<i>Vibration &amp; fatigue</i>		
	<i>Flight test engineer</i>		
	<i>[Add individuals as required by the project: the list above is intended to trigger thoughts and is not authoritative.]</i>		

The Type Certification Board (TCB) is established to ensure adequate levels of project governance and adherence to the approved PSCP throughout the TC process. In order to ensure that the TCB has adequate executive authority and to foster a partnering approach to certification, both the CAA and the Applicant should be represented on the TCB with membership consisting of the following representatives:

Type Certification Board Members			
CAA		Applicant	
XXXX	Project Executive	XXXX	Project Executive
XXXX	Project Director	XXXX	Project Manager/ Engineer
XXXX	Project Manager		

Changes to the above project personnel must be notified to all parties, and a replacement nominated and agreed upon by amendment to this PSCP.

## 7.1 Applicant Responsibilities

The Applicant shall be responsible for—

- i) Proposing the means of compliance with the nominated airworthiness design standards.
- ii) Demonstrating that the type design complies with the airworthiness design standards.
- iii) Notifying the CAA Project Lead as soon as practicable of the dates and locations of all conformity inspections and compliance tests, including flight tests.
- iv) Supplying to the CAA all necessary data, including the compliance checklist and all the documentation listed in the Master Data List.
- v) Obtaining and maintaining certification as a CAA Part 146 Design Organisation and Part 148 Manufacturing Organisation, and complying with the Part 146 / 148 Expositions when conducting any activities in relation to the TC project.

## 7.2 Project Communication and coordination

*The applicant should outline how communication between the CAA and the applicant will be handled. AC 21-7 section 6 provides detail on this. This section should include references to a project issues register and a meeting action items register as described by AC 21-7 section 6.*

## 8 CERTIFICATION REQUIREMENTS

### 8.1 Certification Basis

*Note the text below is aimed at standard category aircraft. If the aircraft is to be certificated in the restricted category the text will need to be amended accordingly. Guidance for definition of the certification basis is contained in section 4 of AC 21-7. The subsections below are intended to provide guidance for an initial certification basis. When the certification basis is mature, it is expected that this section will reference out to the G-1 issue paper and the information in the subsections below will be moved from this document into the G-1 issue paper.*

#### 8.1.1 Airworthiness requirements

The applicable airworthiness design standard (Standard Category) specified in CAR Part 21 Appendix C at the application date is:

14 CFR Part XX dated XXXX, as amended through to amendment XX effective XXX.

#### 8.1.2 Special Conditions

The Applicant has identified the following unique or unusual design characteristics which may require the application of special conditions to this TC application:

- a. XXX

Special Conditions will be proposed, as appropriate, in accordance with CAR 21.23 after CAA have conducted a Type Familiarisation activity.

#### 8.1.3 Equivalent Level of Safety

Any airworthiness requirement that is not complied with will be compensated for by factors providing an equivalent level of safety as determined by the CAA in accordance with 21.31(2).

The Applicant has applied for the following equivalent level of safety findings with respect to the certification basis of this TC:

- a. XXX

#### 8.1.4 Exemptions

*Generally, the CAA will not issue exemptions against airworthiness design standards. If the applicant determines that an exemption is required, justification must be provided in accordance with section 37 of the Civil Aviation Act 1990. If not, the following statement is expected:*

At this time the Applicant has not requested any exemptions to the airworthiness design standards.

#### 8.1.5 Aircraft Noise standards

In accordance with CAR Part 21 Rule 21.32(1), the applicable Aircraft Noise standards at the application date are:

XXXX

#### 8.1.6 Aircraft Vented Fuel & Engine Emissions standards

In accordance with CAR Part 21 Appendix C, the applicable Aircraft Engine Emissions standards at the application date are:

XXX

#### **8.1.7 Aeroplane CO<sub>2</sub> Emissions standards**

The Applicant elects to comply with the applicable Aeroplane CO<sub>2</sub> Emissions standards at the application date which are:

XXX

*Delete this sub section if it is not applicable to the application. ICAO has produced a relevant standard within volume III of Annex 16 of the Chicago Convention.*

#### **8.1.8 Additional design review**

In addition, the Director must be satisfied that no feature or characteristic of the product type makes it, when operated in accordance with the flight manual or other prescribed limitations, unsafe for the intended use.

#### **8.1.9 Application and certification basis effectivity**

In accordance with CAR 21.17(b), the TC application and certification basis will remain in effect for a period of XXX years from the TC application date.

### **8.2 Issue resolution**

Where appropriate, the Issue Paper process should be used for managing certification related issues that arise throughout the project. The tracking and management of normal project issues (not certification related) will be done through a project issues tracking list maintained by the CAA and applicant Project Managers.

## 9 COMPLIANCE CHECKLIST

The means and methods of compliance are detailed in the following Compliance Checklist:

Compliance Checklist document XXX, revision X, dated DD-MM-YY

*A template for a compliance checklist is contained within Appendix A1 of AC 21-7. The Compliance Checklist must contain all certification requirements detailed in section 8.*

## 10 CONFORMITY

*The applicant should outline the procedures to assure suitable conformity of all test articles. Section 6.5.8 and 8 of AC 21-7 outlines the expectations for the how to plan and demonstrate conformity. Where the CAA has been identified to undertake conformity activities, the timing and scope of this activity should be clearly laid out such that the CAA may plan effectively.*

## 11 COMPLIANCE

*The applicant should identify all activities that relate to demonstrating compliance with the certification basis. Typically, this may be in the form of compliance inspections, bench tests, ground tests and flight tests.*

*Each planned activity which is to show compliance should be identified within the PSCP. The PSCP should outline the applicant's intent for supplying compliance planning documentation (e.g. flight test plans) for CAA review. It should also identify who (CAA/DDH etc.) will conduct/witness each activity. Initially the PSCP may not include details of the Type Inspection Authorisation (TIA), but as the project progress the PSCP should be updated to reflect the TIA activities.*

*For software and complex hardware aspects the PSCP may reference out to a Plan for Software Aspects of Certification (PSAC) and Plan for Hardware Aspects of Certification (PHAC). Further guidance relating to PSAC and PHACs is at section 6.6 and 6.7 respectively.*

### 11.1 Test Articles

### 11.2 Compliance Inspections

*Specific guidance on compliance inspections can be found at section 6.5.9 and 9 of AC21-7.*

### 11.3 Testing

*Due to the scope and quantity of testing required for a TC project, a separate master test schedule is recommended to be included as an annex to the PSCP. The annex should detail all proposed compliance testing and when it is planned for. Further guidance in relation to testing is contained in section 10 of AC21-7.*

#### 11.3.1 Flight Tests

*The applicant should address how flight test activities will be conducted and reference out to specific flight test plans as necessary. This should include a plan to gain the necessary approvals/certification from the CAA to facilitate the flight*

tests to include Special Category - Experimental Certificate of Airworthiness in accordance with the requirements of rule 21.193 and CAA AC21-3 and test pilot(s) approval(s) in accordance with the requirements of rule 19.405 and CAA AC19-1.

Any common information to all flight test plans may be contained in the PSCP, e.g. the test vehicles, areas of operation, risk management strategies.

Further guidance on flight testing elements are presented at section 11 of AC 21-7.

### 11.3.2 CAA Flight Testing

In accordance with rule 21.35(b), the requirement for a CAA flight test audit should be acknowledged and as the project matures, detailed plans for this activity should be developed and documented in the PSCP or a reference to it. Further guidance is presented at section 11.3 of AC 21-7.

### 11.3.3 Function and Reliability Testing

An outline of the applicant's function and reliability testing should be documented. Guidance for this is available at section 11.8 of AC21-7.

## 12 CERTIFICATION DOCUMENTATION

All certification documents are listed in the Master Document List (MDL) [Reference, revision status and date].

It is recommended that the following information is captured in the MDL for each document: Title, Document reference, identification of whether the document contains descriptive or substantiating data, revision status, date.

The CAA will approve the MDL, Flight Manual (limitations) [Reference, revision status and date], and Instructions for Continuing Airworthiness (Airworthiness Limitations) [Reference, revision status and date].

All other documents should be suitably authorised in accordance with Civil Aviation Rules and the organisations exposition. A high-level description of how documents will be authorised should be included within this section.

## 13 CERTIFICATION SCHEDULE

[applicant name] will convene a Type Certification Board (TCB) meeting at significant stages of the project. Required TCB meetings are detailed in the TC programme schedule.

The [applicant name] and the CAA have agreed the following schedule for the TC project:

[Schedule document XXX, revision X, dated DD-MM-YYYY]

The project schedule should closely align to the TC project phases described in AC 21-7 Product Certification—Type Certificates and will include dates for the identified applicant and CAA deliverables and milestones including but not limited to issue papers, conformity activities, test and inspection activities, documentation for approval and acceptance and anticipated foreign validation.

The schedule will be used to coordinate CAA resources with the programme, therefore more detailed information will allow the CAA to plan their resources more

*effectively to support the programme. It is important for the schedule to be realistic in order that the expectations are set during the programme.*

## **14 PRODUCTION CERTIFICATION**

The Production Organisation is: **[Production Organisation's name]**

**[Production Organisation's address]**

(CAA participant No. **XXXX**)

*This section should be used to identify the organisation producing the prototype articles and subsequent production articles and discuss any relevant arrangements in place between the design and production organisations if there are not the same organisation.*

## **15 CONTINUING AIRWORTHINESS RESPONSIBILITY**

**[Organisation name]** shall be responsible for providing continuing airworthiness support for the **[Aircraft name]** type to all owners and all national airworthiness authorities in countries in which the aircraft is operated, in accordance with rules 21.123(a)(1), 148.61 and 146.61.

*The applicant should also provide a high-level description of how the continued airworthiness of the aircraft will be managed to include collecting investigating and analysing information relating to design and manufacturing defects, reporting under Part 12 and how continued operational safety will be managed.*

## **16 FOREIGN VALIDATION**

*The applicant should lay out any plans to export the type certificated product. Many National Airworthiness Authorities (NAAs) conduct a validation of the type certificate. Early engagement with NAAs is essential to ensuring the validation process runs smoothly as agreements may need to be generated and/or the national airworthiness authority may wish to shadow certification activities.*