The Check Pilot is responsible for ensuring the aircraft is loaded within the Weight & Balance Limitations and the Aircraft has a Valid Flight Permit. If the Flight Permit is not valid, then a valid Certificate of Fitness of Flight (NMAI/AW/007) must be signed by the Inspector (valid for 30 days) prior to the Check Flight. Prior to flight, the Check Pilot should also ensure:

- they hold a valid licence and medical for aircraft being flown
- insurance is in place for the flight
- they are familiar with the Aircraft POH or equivalent
- weather is suitable for the intended flight
- the pre-flight inspection has been completed
- they have identified and assessed the risks associated with this check flight

1) Aircraft Details			
Registration		Serial Number	
Manufacturer		Model	
Engine Make & Model		Engine Serial Number	
Propeller		Pitch	
Check Pilot		NMAI Number	

2) Aircraft Weights (Kg)	
Aircraft Empty Weight	
Fuel	
Crew & Ballast	
Aircraft Gross Weight:	

3) Check Flight Details			
Date		Airfield Location	
Runway Surface		Runway Condition	
Wind		Visibility	
Temperature		QFE	
Runway in Use			

4) Cockpit	SATIS	UNSATIS	N/A
Switches and Controls Correctly Positioned			
Switches and Controls Correct Sense			
Switches and Controls Correctly Labelled / Placarded			
Hatches and Harnesses Condition			
Hatches and Harnesses Functional			
Comments:			

5) Start-Up	SATIS	UNSATIS	N/A
Engine Start-up Time			
Mag Drop Left and/or Right			
Carb Heat Operation			
Idle RPM			
Brakes			
Steering			
Flight Controls Full & Free			
Comments:			

6) Takeoff & Climb	SATIS	UNSATIS	N/A
MAX Static RPM			
Control During Takeoff			
Control During Flap Retraction			
Control During Climb			
Climb Rate at best rate of climb speed (V_Y)			FPM
Time to Climb 1000ft at V_Y (generally 500ft to 1000ft)			Seconds
Comments:			

7) Handling	SATIS	UNSATIS	N/A
Straight & Level Flight			
Elevator Trim			
Aileron Trim			
Rudder Trim			
Max Bank Angle Turn (Left & Right)			
Sideslip LH Aileron / RH Rudder			
Sideslip RH Aileron / LH Rudder			
Comments:			

8) Low Speed Handling & Stalling	SATIS	UNSATIS	N/A
Handling at Approach Speed			
Stall Speed Flaps Up			
Stall Flaps Up Handling			
Stall Speed Flaps Down			
Stall Flaps Down Handling			
Comments:			

9) High Speed Flight	SATIS	UNSATIS	N/A
Placarded V_{NE}			
Maximum Speed Achieved			
High Speed Handling			
Flexwing Only - Recovery from Spiral Dive (Max 1.5 Rotations).			
Comments:			

10) Instrumentation	SATIS	UNSATIS	N/A
ASI & Altimeter			
Other Flight Instruments			
Engine Instruments			
Other Systems			
Comments:			

11) Approach & Landing	SATIS	UNSATIS	N/A
Handling on Approach			
Landing			
Engine Shut Down Time			
Comments:			

Check Pilot Declaration

I hereby certify that on behalf of the Aircraft Owner, I have check flown this Aircraft. The flight was conducted with the aircraft as presented and in accordance with the above check schedule. All check results were carefully logged and the aircraft displayed no unsafe or abnormal flight characteristics.

I hereby recommend that a Flight Permit should (circle) **BE GRANTED / BE REFUSED**

Check Pilot Signature _____

Date _____

Guidance on Completing a Check Flight

This guidance material does not form part of form NMAI/AW/023 and maybe updated from time to time separately to the revision status of that form. The information below is provided for guidance only and the pilot remains responsible for the conduct of the flight at all times. Feedback is welcome through the CTO or to techoffice@nmai.ie

The aim of a check flight is to assess if the aircraft performs in accordance with the flight manual, POH or equivalent and that the aircraft exhibits no unsafe handling characteristics. The check pilot has the opportunity to make a comment on each section of the form. A comment is not mandatory but can be used to record any details relevant to that section. It may also be used to record a parameter that may be close to a limit, but does not exceed it. This will allow the owner rectify if desired.

While the check flight form is designed to try and cover as many parameters across the entire NMAI fleet of aircraft as possible, on certain aircraft types additional checks may be required as specified in the flight manual, POH or equivalent. In this case, the check pilot should note the item in the relevant comments section.

A tick [✓] should be placed under the SATIS, UNSATIS or N/A box as required. Where the N/A box is 'greyed out', a tick must be placed in the SATIS or UNSATIS box. The N/A box is provided in case the aircraft being checked does not have the related system e.g. brakes, flaps etc. Many checks will not apply to flexwing types. If an item is deemed to be UNSATIS, a comment should be made in the box to enable rectification. A free text box is provided in some cases to record specific values such as start-up time, idle RPM, stall speeds etc. **As aircraft in the NMAI fleet use various units of measurement please specify the unit, e.g. mph, kts, kmh etc.**

Each number below corresponds to the related section of the Check Flight Report form. Check pilots should familiarise themselves with manoeuvres required prior to any check fight. The safe conduct of the flight remains the check pilot's responsibility at all times and the aircraft shall always be operated within the limitations specified in the flight manual, POH or equivalent. Priority should always be given to flying the aircraft first and then recording check flight details. Technology can be used to aid recording e.g. use of cameras, intercom recorder etc.

1) Aircraft Details

Please make sure this section is fully completed prior to submitting the form to the Tech Office. This can be done in advance of the flight taking place.

2) Aircraft Weights

Pilots should ensure that the aircraft is loaded within weight and balance limitations as stipulated in the flight manual, POH or equivalent. When operating the flight on a Certificate for Fitness for Flight, no person shall be carried in the aircraft unless that person is essential to the purpose of the flight and has been advised of the contents of the authorisation and the airworthiness status of the aircraft. This restriction does not apply if the aircraft has a current Flight Permit

3) Check Flight Details

Record the details of the departure airfield here. Runway surface should be specified (grass, tarmac etc.) and the condition (wet, dry etc.). If no windsock or other weather information is available at the airfield, an estimate should be made based on the prevailing weather and other local meteorological stations. QFE can be obtained by setting the Altimeter to 0 feet and reading off the value on the subscale. A gross error check should be made against the known airfield elevation and QNH for reasonableness.

4) Cockpit

This section can be completed prior to engine start. All controls and switches should be checked for correct operation, suitability, labelling, condition and function. Particular attention should be paid to flight controls and any emergency equipment on board (e.g. BRS).

5) Start-Up

Start-up time should be recorded and the relevant systems checked.

6) Take-off and Climb

Maximum Static RPM should be recorded just before the takeoff run commences when the engine is at operating temperature. Assess the general handling of the aircraft during climb, does is exhibit normal handling characteristics? Establish the aircraft at the best rate of climb speed (V_Y) and record the rate of climb. This can be compared against other check flights to identify any trends in performance. Climb 1000ft at the best rate of climb speed and record how long it takes. This averages out the effects of updrafts and downdrafts and provides a more accurate record of performance.

7) Handling

Handling should be assessed at a safe height in straight and level flight. If trim is installed on any axis, this should be tested to ensure it operates correctly. A maximum bank angle turn should be flown in both directions with any differences noted in the comments section (except for normal aerodynamic differences which may occur e.g. slipstream effect of the engine). The maximum bank angle flown should not exceed that stated in the flight manual, POH or equivalent and in all cases should not exceed 60°. A sideslip should be conducted in both directions to verify correct rigging of the flight controls. Control inputs should be similar in both directions.

8) Low Speed Handling & Stalling

Extreme care should be taken prior to performing these checks. A HASELL check is useful to ensure the aircraft is correctly setup.
H - Height is sufficient for the manoeuvre
A - Airframe is correctly configured (flaps up / down)
S - Security. Harness are tightened, no loose objects in the cabin which could become dislodged and cause injury
E - Engine parameters are within limits (carb heat as required)
L - Location is suitable for the manoeuvre i.e. clear or airspace, built up areas, cloud and danger areas
L - Lookout. Manoeuvre the aircraft to ensure the area you are operating in is clear of other traffic.

Handling should be checked at approach speed to ensure no unsafe or unexpected responses occur. Does the aircraft stall as expected? Any comments such as a wing drop in either direction can be noted in the comments section. A wing drop at the stall would not generally be deemed unsatisfactory unless it was extreme or unusual for the type. e.g. an obvious wing drop to the right in the clean configuration followed by an obvious wing drop to the left with flaps extended may indicate misrigging of the flaps and may require further investigation on the ground.

9) High Speed Flight

Again, care should be taken when completing these manoeuvres. Ideally V_{NE} (maximum speed) should be achieved but this should not be attempted unless in smooth air. The flight controls should become 'stiffer' as speed increases but positive control should always be possible. Due to the drag of most aircraft this will generally be completed while descending with power. Ensure the engine RPM does not exceed the limit.

For flexwing aircraft, the pilot should induce a spiral dive and then recover with positive control inputs. The aircraft should recover within 1.5 rotations after the commencement of the recovery. Care should be taken not to exceed V_{NE}.

10) Instrumentation

This is a check to ensure all instruments have indicated correctly during the check flight. Due to the range of instruments installed on the NMAI fleet of aircraft it is not possible to include a comprehensive list. An instrument deemed UNSATIS does not necessarily mean the aircraft will not be recommended for a Flight Permit unless it is legally required or is necessary for safe operation in the opinion of the pilot. Any inoperative instruments must be placarded as such and recorded in the aircraft logbook.

11) Approach & Landing

Does the aircraft handle as expected on the approach? Engine shut down time should be recorded.

Check Pilot Declaration

Following the check flight ensure the form is fully completed. The pilot should record the outcome of the check, sign and date the form. If the recommendation for Flight Permit is refused, the Owner and Inspector shall be notified and any pertinent details about the flight communicated.