CAO 48.1 (2019) Appendix 1 - Basic Limits

**Operations Manual Supplement Template**

**Version** 1.0 - Month 2021

**Approver** Approver Title

**Review Date** Month Year

**How to use this Operations Manual Supplement Template**

This template is designed to assist operators in developing an Operations Manual document/section/supplement for compliance with Civil Aviation Order 48.1 (2019) (the order) and relevant Appendix of the order.

When developing the Operations Manual supplement, operators are strongly advised to refer to CAAP 48-01 available from the CASA Fatigue Resources webpage. While the CAAP is advisory in nature, the CAAP is referenced multiple times in the order as the CAAP contains highly relevant information and guidance to assist operators in developing a compliant submission.

Given the range of activities which can be conducted by AOCs and the variance in the size and complexity of aviation organisations, this template is generic in nature and may be of more assistance to smaller or less complex operations.

Each operator using this template will need to amend, delete from, and add to the document as appropriate to suit your operation, procedures, organisational structure and so on. Specific items which need to be amended from the template when developing your individual Operations Manual Supplement include:

* where <XXXX> or similar is shown in the text and/or a blue highlight is used, the text will need to be replaced to reflect the relevant matter e.g. AOC holder’s name; CEO’s name; role in organisation structure; name of the system used; or other specific information particular to your organisation.
* Numerical limits are identified by green highlights. You will need to replace the green highlighted limits with the limits relevant to your operation. The actual limits you select must be informed by your hazard identification and risk assessment procedures and must not fall outside the limits prescribed in the relevant Appendix.
* ‘Notes’ in orange provide some guidance to assist the author when developing the procedures. CASA anticipates a compliant manual will need to contain procedures and processes dealing with the matters in orange. As mentioned, operators will also need to consult CAAP 48-01 for more comprehensive guidance. After an operator has used the orange text to guide the development of appropriate procedures, the orange text should be removed from the finished supplement prior to submission to CASA.
* The tables and forms may need to be labelled to suit your organisation’s operations manual or exposition, with relevant references in the text amended as a result.
* The numbering used in the template may need to be amended to align with the numbering system of your operations manual or exposition.

Note that the Definitions are specific to CAO 48.1 (2019) and appear in this template either per the order or from the CAAP 48-01 in which the language has been simplified slightly. These Definitions may not be consistent with terms used elsewhere in your operations manual or exposition but are required to be used.

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Definitions

Where these definitions differ in wording from those in Civil Aviation Order 48.1 Instrument 2019 the wording from the CAAP were chosen for this template to simplify complex definitions. The wording in the Instrument takes precedence; however, the wording from the CAAP was chosen for this Manual to aid understanding.

|  |  |
| --- | --- |
| Term | Definition |
| Access | No restriction on, or impediment to, a flight crew member’s (FCM’s) immediate and actual use of a necessity. |
| Adequate sustenance | Food and drink (including clean drinking water) in quantities sufficient to reasonably sustain a person in the person’s circumstances. |
| Assigned | assigned by the AOC holder to his or her FCM |
| Bed | for suitable sleeping accommodation, includes at least 1 pillow, clean bed linen, and bed covering appropriate for the temperature of the accommodation |
| Consecutive | A continuous, unbroken, period of time for the duration of the hours or days mentioned. |
| Cumulative duty | The progressive sum of duty periods. |
| Cumulative flight time | The progressive total of flight time accrued by the FCM when acting as a crew member on board any aircraft but excluding flight time accrued during recreational private operations. |
| Day | The period between local midnight at home base and the subsequent local midnight at home base. |
| Duty | Any task that a person who is employed as an FCM is required to carry out associated with the business of an operator. |
| Duty period | A period of time that starts when an FCM is required by an operator to report for duty and ends when the FCM is free of all duties. A duty period includes any time spent by the FCM in positioning. |
| Fatigue | A physiological state of reduced alertness or capability to perform mental or physical tasks, which:* may impair the ability of the FCM to safely operate an aircraft
* is caused by one or more of the following:

- the FCM’s lack of sleep- the FCM’s extended wakefulness- the FCM’s circadian phase at any relevant time- the FCM’s workload of mental activities, or physical activities at any relevant time.**Note:** An individual's level of fatigue and state of alertness can also be influenced by their health, diet, fitness, and overall well-being. |
| Fit for purpose | For a crew rest facility, or suitable sleeping accommodation, means that it has ergonomic characteristics that make it suitable for an FCM to obtain sleep or rest (as the case requires). |
| Flight crew member (FCM) | A crew member who is a pilot or flight engineer assigned to carry out duties essential to the operation of an aircraft during flight time. |
| Flight duty period (FDP) | A period of time that:* starts when a person is required, by an operator, to report for a duty period in which they undertake one or more flights as part of an operating crew
* ends at the later of:

the person’s completion of all duties associated with the flight, or the last of the flights; or* 15 minutes after the end of the person’s flight, or the last of the flights.
 |
| Flight time | The time when an FCM is acting in the capacity as a crew member on board an aircraft that includes:* in the case of a heavier-than-air aircraft — the total time from the moment at which the aircraft first moves under its own power for the purpose of taking-off, until the moment at which it comes to rest after landing; and
* in the case of a lighter-than-air aircraft — the total time from the moment at which the aircraft first becomes airborne until it comes to rest on the ground, excluding any time during which the aircraft is moored.

**Note:** Recording flight time from 'push-back' or 'off blocks', rather than from the moment the aircraft first moves under its own power (as per the definition), is acceptable.Likewise, for rotorcraft, recording flight time from the moment the rotor blades start turning until they stop turning is also acceptable. |
| Flight training | For a flight crew licence, rating or endorsement, means the training mentioned in regulation 61.195 of the Civil Aviation Safety Regulations 1998 (CASR) for the licence, rating or endorsement. |
| Home base | The location, assigned by the operator to the FCM, from where the FCM normally starts and ends a duty period or a series of duty periods. |
| Late duty | an FDP that finishes after 2200 hours local time |
| Local night | A period of eight consecutive hours which includes the hours between 2200 and 0500 local time. |
| Local time | local time in the time zone of the location; orlocal time in a time zone (the alternative local time):(i) that adjoins the time zone of the location; and(ii) whose nearest boundary is reasonably proximate to the location,provided the alternative local time is:(iii) specified in the AOC holder’s operations manual; and(iv) used consistently as local time for the location. |
| Off-duty period (ODP) | A period of time during which a pilot is free of all duties and standby associated with their employment. |
| Positioning  | being transported, as a passenger, to a location, by any mode of transportation, as required by the AOC holder, but does not include being transported to or from suitable accommodation after or before an FDP |
| Recreational private operation | Flying conducted by an FCM in a personal capacity, and at and for the FCM’s leisure. A flight conducted by an FCM as a private operation is not a recreational private operation if it is conducted for, or on behalf of, an entity (regardless of whether or not the entity is an operator). |
| Reporting time | The time assigned to a pilot to commence an FDP. |
| Roster | A list made available to an FCM by an operator, setting out the times when the FCM is assigned to undertake duties or standby. |
| Sleep opportunity | A period of time during an off-duty period when a pilot is not meeting the reasonable requirements of bodily functioning, such as eating, drinking, toileting, washing, dressing; and has access to suitable sleeping accommodation without, under normal circumstances, being interrupted by any requirement of <XXXX>. |
| Suitable sleeping accommodation | Accommodation not within an aircraft that is fit for purpose for an FCM to obtain sleep, and that includes all of the following:* a comfortable room, compartment or facility
* a single occupancy, at the discretion of the FCM
* access to clean, tidy and hygienic amenities, including a toilet and hand washing basin
* a bed that is comfortable, flat and horizontal, allowing the occupant to sleep on their stomach, back, and either side
* minimum noise levels, including low occurrence of random noise
* the means to control light, temperature and ventilation
* access to adequate sustenance.
 |
| Unforeseen operational circumstances  | an unplanned exceptional event that becomes evident after the commencement of the FDP, such as un-forecasted weather, equipment malfunction, or air traffic delay |

# Flight Crew Member Fatigue Management

## Fatigue management policy

<XXXX> is committed to ensuring accumulated fatigue does not reach a level where it results in unsafe working practices and procedures. In terms of pilot fatigue management, we are committed to:

* ensuring that our pilots are aware of the way fatigue builds up, to identify it, manage it and recover from it.
* embracing a just safety culture that enables open and fair reporting which allows us to learn and improve our understanding of the impact of fatigue and the best ways to manage it.
* fatigue management rostering practices that avoid disruptive roster patterns and minimise the risks associated with fatigued pilots, with the goal of having no flights on which pilots are impaired by fatigue to the extent that safety is impacted.

<XXXX> will not require a pilot to operate an aircraft if the pilot is suffering from fatigue or considering the circumstances of the flight to be undertaken, is likely to suffer from fatigue, which may so impair the pilot’s performance that the safety of the operation may be affected.

This policy and the fatigue management procedures noted in this manual apply to, and are expected to be followed by (as applicable):

* all pilots employed or engaged by <XXXX> regardless of their employment status
* all staff, (including management), whose work may cause (or impact on) the fatigue of pilots, e.g., with their involvement in pilot rostering, extensions, reporting and continual improvement.

This fatigue management policy and procedures section will be formally reviewed:

* once a year on the anniversary of commencement of operations to this supplement
* upon identification of a fatigue related issue associated with this section including extensions
* upon dissemination of relevant scientific advances improving fatigue management
* if operations change significantly enough to affect rostering, crewing, training or aircraft types
* if there are any amendments to applicable legislation.

The formal review will be conducted by the Chief Pilot (or delegated person) and stored as a record associated with flight and duty times. The review is to ensure continual improvement of the system and its ongoing applicability to current operations.

## Flight duty limitations and fatigue management

XXXX> complies with CAO 48.1 Instrument 2019 and conducts all operations under Appendix 1 (Basic Limits).

Note:

1. An organisation operating under more than one Appendix must clearly specify what operations are conducted under which Appendix.

### Responsibilities

#### <XXXX> Responsibilities

The Chief pilot (or delegated person) has responsibility for implementing and managing the fatigue management system on behalf of <XXXX>. Responsibilities include:

* maintaining a reporting system for fatigue occurrences
* ensuring roster limits are designed and promulgated in accordance with the provisions of this manual
* designating and recording a home base for each pilot and ensuring that each pilot is advised of this designation
* ensure the roster is kept as up to date as possible and includes the most accurate account of expected operations for at least the following 7 days
* ensuring records of the following are made and stored for a minimum of 5 years:
	+ the roster – the roster will be backed up daily.
	+ all actual flight duty periods, standby periods, duty periods, split-duty periods.
	+ off-duty periods and actual flight times of each pilot when acting in the capacity of a crew member.
	+ extensions and exceedances including details of the situation involved and why the extension was required.
* authorising extensions in unforeseen operational circumstances
* maintain a register of suitable accommodation locations (hotels/motels etc.) applicable to the scope of company operations
* ensuring pilots are contacted only in accordance with the communication protocol
* ensuring all pilots are aware of the fatigue management system, its limits and procedures and their responsibilities
* conduct an annual formal review and other reviews as required by the Fatigue Management Policies and Procedures.

**Note:**

1. If these responsibilities are delegated to another staff member the details should be documented in this section. This section should be specifically referenced in the general section on Chief pilot responsibilities (and any delegate person).

#### Pilot responsibilities

<XXXX> recognises that many factors are outside the control of the individual and circumstances will arise from time to time that will affect the individual’s ability to manage their sleep opportunities and level of fatigue. However, pilots have a legal responsibility to appropriately manage fatigue factors (and fitness for duty generally) that it is reasonable to consider are within their control and thereby prepare adequately for each flight duty period. Pilots also have a responsibility to notify the <XXXX> if they believe they are not, or are unlikely to be, fit for a flight.

<XXXX> expects the following from its pilots in respect of fatigue management. All pilots must:

* work towards a detailed understanding of all the underlying causes and effects of fatigue on alertness that is described in company training
* take advantage of sleep and rest opportunities provided to achieve required restorative sleep or rest in order to be sufficiently alert for subsequent flight duties
* monitor your fatigue state and advise the Chief pilot (or delegated person) as soon as possible once you believe that you might not be available or could have an unacceptable fatigue risk level
* accurately record actual flight and duty times
* notify the Chief pilot (or delegated person) as soon as it becomes apparent that flight and duty time limits might be exceeded (e.g. due to unforeseen operational circumstances)
* advise the organisation if flying (other than purely recreational flying) is to be conducted in duty free periods
* if you are working on a contract basis, provide details of previous FDPs, ODPs and cumulated flight and duty time so that rosters can be built that do not exceed any limits
* bring to the attention of the Chief pilot (or delegated person) as soon as possible any errors in rosters, or the possibility of exceeding cumulative limits
* give consideration to alertness and authorisation requirements
* notify the Chief Pilot (or delegated person), of your personal situation or any changes to your situation, if you believe that, because of its nature, duration, effects or for any other reason, it might impact on your ability to meet <XXXX>'s fatigue risk management policies or your obligations. This could include factors such as: a new baby, being a caregiver, secondary employment, travelling a long distance to report for duty. Once notified this will be noted as a continuing state of affairs for the pilot and does not require repetition reporting (unless circumstances change). CAAP 48-01 provides guidance and what to consider in line with the shared responsibility between an FCM and their operator.

#### FCM Alertness consideration

#### It is recommended that a method of measuring alertness be made available to be used to assist a pilot in assessing their alertness before an FDP or extension.

#### There are a number of Alertness Consideration Applications that may be found at the iOS App Store or the Google Play Store. For example: Fatigue SAFE or Fatigue Guru. These applications could be used as a starting point in the assessment of an individual's fatigue level. Keep in mind, if you choose to use an App of any sort be sure all of your members are using the same App for consistency. CASA has published additional information on alertness consideration applications on the fatigue management website

#### https://www.casa.gov.au/safety-management/fatigue-management/fatigue-management-resources/fatigue-management-publications-and-tools

#### These tools are for assistance to increase the awareness of the Pilot and operator to the individual’s current fatigue status. If the pilot feels they are too fatigued to commence or continue in an FDP or to undertake an extension, then they should report fatigued and discontinue the FDP. Similarly, while <XXXX> may use the tools to assist in discussing the pilot’s level of fatigue, a predictive fatigue tool, should not be used as a means to apply any pressure pilots to continue an FDP or undertake an extension.

#### Communication protocol

All communications between <XXXX> and a pilot while the pilot is off duty must be in accordance with the following communication protocol:

* <XXXX> will endeavour to contact pilots outside of their prior sleep opportunity
* if the pilot needs to be contacted during or close to their prior sleep opportunity the preferable method is by text. A voice message may also be left if the message is deemed too complex for text. If there is any doubt about mobile phone reception coverage at a location the message can be left with the hotel reception
* the pilot should ensure that their mobile phone is on ‘silent’ during all prior sleep opportunity periods to, as best as possible, ensure uninterrupted restorative sleep
* when an FCM is interrupted during sleep opportunity, this may affect the FCM’s fitness for duty before the commencement of, or during, the next FDP
* the pilot must check their text messages and reply to any text or voice message notifying the pilot of a delay, before leaving the location of the prior sleep opportunity
* a text sent and shown as delivered or the leaving of a voice message is deemed to be notification however the pilot shall still reply to the text before leaving the location of the prior sleep opportunity to confirm they understand the message
* the pilot will check with the hotel reception for messages prior to checking out at locations where mobile phone reception is in doubt
* the timing and content of text messages (and phone calls) regarding delays will be logged in the rostering system.

**Note:**

1. Text is only one method of contact; any effective method that did not interrupt sleep would be acceptable.

All required or urgent communications between a pilot and <XXXX> during an ODP or FDP will be in accordance with the following communication protocol:

* in the first instance, the pilot will contact the Chief Pilot (or delegated person) as soon as practicable on the duty phone number
* if no answer is received, the pilot will leave a detailed voice message including their name and aircraft registration (if appropriate) and send a text message notifying that a voice message has been left
* if the message relates to an extension request, the pilot must ensure they receive a response approving the extension prior to extending.

All required or urgent communications between the Chief Pilot (or delegated person) and a pilot during an FDP will be in accordance with the following communication protocol:

* in the first instance, the Chief Pilot (or delegated person) will contact the pilot on the mobile phone number supplied by the pilot
* if no answer is received, the Chief Pilot (or delegated person) will leave a detailed voice message and send a text message notifying that a voice message has been left
* if the message relates to an extension request, the Chief Pilot (or delegated person) will gather sufficient information about the nature of the extension and the level of fatigue of the pilot to ensure they can adequately assess whether safety will be impacted before approving the extension.

Note:

1. The communication protocols are focussed on ensuring sleep opportunities of FCMs are not disturbed so that operational alertness is not impacted. An operator should ensure procedures for communication from all areas of the business reflect this intent.

### Prior sleep opportunity

For FDPs commencing at home base, <XXXX> must ensure the pilot will have at least 8 consecutive hours sleep opportunity in the preceding 12 hours before the commencement of the FDP.

Unless a unique arrangement has been agreed to between the pilot and the Chief pilot (or delegated person) and recorded, the sleep opportunity provided before an FDP at home base will not include the 2 hours immediately before the commencement of the FDP. Any unique arrangement is to be recorded as part of the Flight and Duty Records.

For an FDP commencing away from home base, the pilot will have at least 8 consecutive hours sleep opportunity in the preceding 10 hours before the commencement of the FDP. For the purposes of calculating sleep opportunity, the sleep opportunity will not include 1 hour before the commencement of the FDP.

If for any reason a pilot does not achieve the required sleep opportunity period, they cannot commence the assigned FDP. They must inform the Chief pilot (or delegated person) as soon as it is known that the sleep opportunity period cannot be achieved.

Table 1: Sleep opportunity requirements

|  |  |
| --- | --- |
| **Where** | **Hours of sleep opportunity immediately preceding FDP**  |
| Away from base | 8 consecutive hours within the 10 hours preceding the FDP. |
| Home base | 8 consecutive hours within the 12 hours preceding the FDP. |

### Duty time, flight time and cumulative limits

An FDP is a period of time which starts when a pilot is required by <XXXX> to report for a duty period in which one or more flights as a pilot are undertaken, and ends not less than 15 minutes after the end of the pilot’s final flight.

**Note:**

1. The minimum time according to CAO 48.1 Instrument 2019 that the FDP can end after the final flight is 15 minutes after shutdown. However the operator should choose a period which cannot be less than 15 minutes, that reflects their operations and that typically enables the pilot to complete all safety critical actions such as post flight inspections and necessary paperwork associated with the flight.

Any work duty that precedes a flight such as a period of simulator flying, management duties, administrative tasks, maintenance tasks etc., will be included in the FDP unless it is separated from the flight by an ODP with a period of time sufficient for a prior sleep opportunity.

The following limits will apply:

Table 2: limits on flight and duty times

|  |  |
| --- | --- |
| Flight duty periods (FDP) | Limit |
| FDP Commencement and Completion limits | No FDP will be assigned to commence before 0700 local time or beginning of morning civil twilight, whichever is earlier.No FDP will be assigned to end after 0100 local time (1:00 am on following day).  |
| Maximum FDP | Commencing before 0600 hours – 8 hoursCommencing between 0600 and 1400 – 9 hoursCommencing at or after 1400 – 8 hours  |
| FDP Extension | Once the FDP has commenced, an FDP is permitted to be extended by up to 1 hour if:- an extension has been approved in accordance with Section 2 – Conditions and processes for extensions to limitations; and- the extended FDP will not end later than 0100 local time, subject to conditions as per Section 2. |
| FDP finishing after 2200 hours local time | A maximum of 3 FDP finishing after 2200 hours local time (a late FDP) can be assigned in any 168 consecutive hours.An FDP rostered to finish before or at 2200 that is subsequently extended (under the Extension provisions) past 2200 does not need to be taken into account as one of the 3 late FDPs. |
| Flight Training | Flight Training is to be conducted during the first 7 hours of the FDPs flight time.Flight Training may be conducted after the first 7 hours of the FDP for up to 30 minutes if:* unforeseen operational circumstances arise
* it is operationally necessary to complete the duty.
* the FCM considers themselves fit for the duty.
 |
| In any 28 consecutive days | 100 flying hours |
| In any 365 consecutive days  | 1000 flying hours |

### Off-duty periods

Off-duty periods must include enough time to allow for minimum sleep opportunities and meet cumulative limit requirements.

The minimum off-duty period is:

* 12 consecutive hours during any consecutive 24 hours.

Additional longer term ODP requirements are summarised in Table 3.

Table 3: Off-duty period limits

|  |  |
| --- | --- |
| Time period | Off-duty period limits |
| Any consecutive 168 hours(7 Days) before the projected end of the assigned FDP | Minimum of 36 consecutive hours off-duty that must include at least 2 local nights |
| In the 28 Days before an FDP commences | a minimum of at least 6 days off-duty  |

### Access to sustenance

Where an FDP is to exceed 5 hours, <XXXX> will provide the pilot the opportunity for a meal during that FDP. Not more than 5 hours will elapse between opportunities to access adequate sustenance. At home base a fridge has been provided specifically for food/beverage storage to facilitate access to adequate sustenance.

### Recording flight and duty times

Flight and duty records are stored in the <system>.

Each pilot is responsible for recording accurate flight and duty times and other relevant information in the system as soon as practicable after each duty and not more than 24 hours after the duty has been completed.

If the pilot cannot record the relevant information within 24 hours, they should contact the Chief pilot (or delegated person) with the details to maintain the accuracy of the rostering system.

**Notes:**

1. The operator should make reference to how a manual system is operated if an electronic recording system is not in use. Particular reference on how limits will be monitored and kept within published parameters needs to be outlined in the procedures.

2. The operator should insert the most appropriate maximum time to record flight and duty times.

If a pilot becomes aware of any errors in rostering (or the possibility of exceeding cumulative limits) these must be brought to the attention of the Chief Pilot (or delegated person) as soon as possible.

The rostering and recording system will be backed up at least weekly and records (including electronic files) kept for 5 years.

**Notes:**

1. The operator should insert the most appropriate time for backup that suits their operations.

2. incident and accident reporting should also be contained in the operations manual and may refer explicitly to this section and visa-versa.

### Reporting

#### Extensions reporting

All extensions or exceedances to FDPs or flight time limits require an extension report to be filled out (Form ER) and provided to the Chief pilot (or delegated person). The reports must contain sufficient detail to establish what happened and what the circumstances were that led to the extension or exceedance.

The reports will be reviewed by the Chief pilot (or delegated person). As extensions and exceedances are exceptional by nature and may result in elevated fatigue risk, the reports will used by the Chief pilot (or delegated person) to assist with the continuous improvement of our management of fatigue risk.

All extension reports will be stored for 5 years and made available to CASA upon request.

### Home base

The Chief Pilot (or delegated person) will advise each pilot of their designated home base.

Any change to home base will be notified to the pilot at least 28 days in advance and will be assigned with a degree of permanence.

Any change to a pilot’s designated home base will trigger the requirement for 3 consecutive off-duty days commencing from the day the change becomes effective.

**Note:**

1. The notification period and requirement for off-duty days are examples of an approach that would meet the intent of CAO 48.1 subsection 14.10 (b). Operators should identify time frames which are functional for themselves and the FCMs to ensure any change in home base in managed in a manner that does not introduce additional fatigue risk for the FCM

### Accommodation

The Chief Pilot (or delegated person) is responsible for ensuring that pilots provided a sleep opportunity away from home base have access to suitable sleeping accommodation which is fit for purpose.

A pilot’s home or residence is deemed to be suitable sleeping accommodation and fit for purpose (it is the pilot’s responsibility to ensure their home meets the required standard).

The Chief Pilot (or delegated person) will retain a list of accommodation facilities assessed as providing suitable sleeping accommodation which is fit for purpose. This list will form part of the flight and duty records.

The Chief Pilot (or delegated person) may remotely assess three star (equivalent or higher) commercial motels or hotels as meeting the suitable sleeping accommodation standard unless specific information indicates the need for an on-site evaluation.

If a pilot finds any aspect of away accommodation does not meet the required standard, the pilot must notify the Chief Pilot (or delegated person) who will ensure the required standards are met at that facility, or who will relocate FCMs to a facility which meets the required standards.

An FCM can improve the quality of their restorative sleep by ensuring they will not be disturbed unnecessarily. If at a hotel this can be facilitated by advising reception staff not to disturb (i.e. no phone messages unless very urgent), by putting the ‘do not disturb’ sign on the door and by ensuring mobile phones are on silent.

### Flight and duty records

Flight and Duty Records include all details relevant to the rostering and fatigue management and specifically include:

* rosters planned and achieved
* actual flight and duty times
* extension/exceedance reports
* FCM home base assignments
* accommodation lists
* any other unique arrangements.

All Flight and Duty Records will be backed up at least weekly and records shall be kept for 5 years. Backups and archived records will be stored off site <at xxxx>.

**Note:**

1. This should be expanded to include company specific details on who, what, where, when and how records are kept. Items/processes such as backing up to the cloud, stored at facility x by admin etc., would be in here.

### Private Operations

Recreational private operation means flying conducted by an FCM in a personal capacity, and at and for the FCM’s leisure.

A flight conducted by an FCM as a private operation is not a ‘recreational’ private operation if it is conducted for, or on behalf of, any entity.

As <XXXX> is required to consider the impact of private operations on the alertness of an FCM during <XXXX> operations, FCMs must report ALL private operations, whether recreational or not, to the Chief Pilot (or delegated person).

**Note:**

1. If an operator permits its FCMs to conduct private flying proximate to an FDP, the operator must ensure the procedures capture the following:

* + if a private flight is conducted by an FCM before any commercial flight, the private flight time must be taken to be part of the FCM’s FDP
	+ if a private flight is conducted by an FCM between commercial flights, the private flight time must be taken to be part of the FCM’s FDP
	+ if a private flight is conducted by an FCM after any commercial flight/s, the private flight time must be taken to be part of the FCM’s duty and not as part of the ODP.

Alternately, if an operator does not permit its FCMs to conduct private flying proximate to an FDP, the operator must ensure the procedures clearly state this.

# Conditions and processes for extensions to limitations

### Extensions

An FDP or flight time extension will only be authorised in unforeseen operational circumstances where other possible solutions to operational issues are unavailable.

Only the Chief pilot (or delegated person) can authorise an extension to an FDP or flight time limit. To do so the Chief pilot (or delegated person) will consider:

* increased operational risks including:
	+ impacts from increased sectors and/or workloads
	+ impact on the pilot’s duty expectations
	+ environmental factors including weather and temperature
	+ aircraft serviceability including MEL items (such as autopilot unserviceability).
	+ potential for task focus and/or self-interest influencing a pilot’s decision to request an extension
	+ availability of assigning alternate pilots
	+ possibility of flight cancellation or modification
	+ any patterns of extension
	+ future rostering or planning implications of the extension
	+ opportunities for duty rest.

An FDP can only be extended if:

* the pilot considers themself fit for the extended FDP. They should undertake an alertness consideration review and agree to the extension via the communication protocol.

**Note:**

1. Where possible the pilots should discuss their fatigue level with a third party, who knows about the signs and symptoms of fatigue, before reaching a decision on their fitness for the extension.

* the pilot has had sufficient time to consider their fatigue levels and agree to the extension
* the decision to extend is made and agreed prior to the last flight of the FDP
* the FDP is extended by no more than 1 hour
* cumulative flight or duty limits are not exceeded.

All decisions to extend must have been made prior to becoming airborne on the last flight of the FDP. No pilot will become airborne without an extension, knowing they cannot complete the flight, as planned, within the maximum FDP limit.

If after take-off on the final flight of the FDP, unforeseen operational circumstances arise, for safety reasons the pilot in command may elect to exceed 0100 local time in order to continue to the planned destination or alternate.

If unforeseen operational circumstances arise after take-off on the final flight of an FDP; and those circumstances would cause an pilot to exceed any flight and duty time limit then, the pilot can continue to the planned destination or alternate at their discretion as dictated by the safety of passengers and pilot. In these circumstances, if limits are exceeded, it is called an exceedance and must be reported in the same manner as an extension.

Extensions and exceedances require an Extension Report (Form ER) to be completed in accordance with the reporting provisions.

The report will also form part of the flight and duty records.

All extension reports will be stored for 5 years and made available to CASA upon request.

Extensions will be reviewed by the Chief pilot (or delegated person) as part of <XXXX>'s continuous improvement system.

**Note:**

1. Reference should be made here to the operators SMS if they have one.

## Rostering in accordance with flight and duty time policy

The Chief pilot (or delegated person) is responsible for preparing and publishing the roster. The roster will be planned on a 28-day basis and published 7 days before the beginning of the roster period. The roster will be amended and republished as quickly as possible if any changes are made. Any pilot affected by the changes will be notified.

1. Extension Report (Form ER)



Figure 2: Extension report (Form ER)