



Kelowna International Airport

CYLW Disabled Aircraft Removal Plan

Last edited January 3 2025

Expiry date January 2 2026

Must be replaced by that date and previous version destroyed

Office Hours 08:00 to 16:00 250-807-4350

After Hours 250-807-4350

Table of Contents:

1. INTRODUCTION.....	1
1.1 Purpose.....	1
1.2 Definition.....	1
1.2.1 Aircraft De- Bogging.....	1
1.2.2 Aircraft Recovery.....	1
1.2.3 Aircraft Salvage.....	1
1.3 Scope.....	1
1.4 Responsibilities.....	2
2. PRINCIPLES AND PROCESSES.....	3
2.1 Introduction.....	3
2.1.1 Site Survey.....	3
2.1.2 Planning.....	3
2.1.3 Preparation.....	3
2.1.4 Recovery.....	4
2.1.5 Reporting Process.....	4
3. AIRCRAFT REMOVAL.....	4
3.1 Aerodrome Coordinator.....	4
3.2 Airfield Operations.....	5
3.2.1 Aerodrome Coordinator.....	5
3.2.2 Operations (Fire).....	5
3.2.3 ARFF Services.....	6
3.2.4 Emergency Coordination Centre (ECC).....	6
3.2.5 Airfield Engineering.....	6
3.2.6 CYLW Security (Terminal Services)	7
4. AIRCRAFT DE-BOGGING.....	7
4.1 Introduction.....	7
4.2 Considerations.....	7
4.2 Procedures.....	7
5. APPENDIX 1A EQUIPMENT AND RESOURCES AVAILABLE.....	8
6. APPENDIX 1B AIRCRAFT SALVAGE CONTACT DETAILS.....	9
7. APPENDIX 2 DISABLED AIRCRAFT REMOVAL INDEMNITY.....	9
Letter of Terms.....	10
Confirmation Agreement.....	11
CYLW INCIDENT COMMAND LOG.....	12
Site Survey.....	13
Recovery.....	14
Contact List.....	16

Intentionally Left Blank

A. AMENDMENTS

This document will be subject to a routine review, over a period not exceeding 12 months. The latest version will be maintained on the Vortex Portal; interim reviews are carried out as deemed necessary.

Only operational related amendments will prompt the issue of a new Version.

B. Records of Amendments

Number	Date of Amendment	Section	Page / Change	Date Entered	Entered By
1 2023-08-01	August 1 2023	Version update		August 1 2023	Mark Stella
2 2024-10-01	January 5 2024	Version Update		January 5 2024	Mark Stella
3 2025-010-01	January 3 2025	Version Update		January 3 2025	Mark Stella
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					

1. INTRODUCTION

1.1 PURPOSE

A disabled aircraft can have a critical impact on the business and operations at Kelowna International Airport (CYLW). It is therefore imperative that plans are in place to remove any disabled aircraft as expeditiously as possible.

The purpose of this document is to detail the principles, which should be applied for the removal of disabled aircraft; as well as to provide instructions for YLW departments in the actions, which they would need to take in the event of this type of situation.

1.2 DEFINITION

The ICAO Airport Services Manual; Part 5, "Removal of Disabled Aircraft", defines the removal of disabled aircraft as being three distinct areas:

- Aircraft De-bogging
- Aircraft Recovery
- Aircraft Salvage

These three types of removal are further defined as follows:

1.2.1 AIRCRAFT DE-BOGGING:

The removal of an aircraft from a Runway or Taxiway, where the aircraft has become bogged down but has relatively little or no damage is considered a "De-bogg".

1.2.2 AIRCRAFT RECOVERY:

An aircraft will be considered as an "Aircraft Recovery" in any situation when is unable to move under its own power, or through the normal use of an appropriate tow tractor and tow bar.

Examples include:

- One or more landing gear off the hard surface of a Runway, Taxiway or Apron
- Aircraft bogged down in mud or snow
- One or more landing gear collapsed or damaged
- An aircraft that is economically repairable

1.2.3 AIRCRAFT SALVAGE:

An accident or incident in which the aircraft sustains substantial damage, and the insurer considers the hull a constructive loss will be considered "Aircraft Salvage".

1.3 SCOPE

This plan will predominantly detail procedures for Aircraft Recovery. However, Section Four details considerations for the De-bogging of an aircraft. Aircraft Salvage is not considered as part of this Plan.

Disabled aircraft can result from several situations, including Runway Excursion, engine failure, burst tire, aircraft accident or bad weather. This Plan will not consider the reason for the disabled aircraft but only on the procedures for its removal.

The equipment and resources available at the Airport, for the removal of disabled aircraft are available upon request. All circumstances and liabilities are considered.

1.4 RESPONSIBILITIES

The registered owner or aircraft operator will always retain complete responsibility for the removal of the disabled aircraft. All airline operators at YLW are expected to have an aircraft recovery plan.

However, it is the responsibility of the Aerodrome operator to co-ordinate the aircraft recovery operation and to ensure that the disabled aircraft is removed in a timely and efficient manner. They are also responsible for ensuring that an *Aerodrome Coordinator (IC)* of Disabled Aircraft Removal Operations is appointed (see Section 3).

The Airline/Aircraft operator, or their designated agent, hereafter referred to as the "Aircraft Operator", is responsible for the following:

- a) Ensuring that they are equipped with the necessary insurance, technical advice, supervision and the provision of all necessary equipment and materials.
- b) Salvaging and removing the disabled aircraft as quickly as possible. Regular users of the Airport must ensure that they have adequate facilities to conduct their own recovery operations or where they do not have these facilities, they must have contractual arrangements with another agency capable of undertaking the recovery on their behalf.
- c) Informing the Airport of their aircraft recovery contingency arrangements and keeping the Airport Authority informed of any changes.

If the aircraft operator or agent refuses to remove a disabled aircraft, or neglects to do so within a reasonable time and the aircraft is creating either an obstruction, an embarrassment or a nuisance to the Airport; or obstructs the Airport in carrying out its responsibilities as an Aerodrome Certificate holder, the Airport will take independent action to remove the aircraft. Alternatively, the Airport may be requested to assist with recovery arrangements. The Airport, or its agents, accepts no responsibility for any loss or damage of any kind resulting from this action and the aircraft operator will be held responsible for all costs and losses incurred, including consequential losses. A form of indemnity absolving the Airport from third party liability is to be signed by parties in such cases (Appendix 2). The aircraft operator will be required to defray any charges for work involved in making good damage to Airport property as a result of the aircraft incapacitation and its subsequent salvage.

The TSB is responsible for authorizing the release of the disabled aircraft. In minor incidents the TSB may make the decision not to attend the site and will ask for photographs etc. to be taken (see Section 3). However, their approval must still be sought in this scenario, prior to moving the aircraft.

2. PRINCIPLES AND PROCESSES

2.1 INTRODUCTION

There are five generally accepted major principles of the disabled aircraft removal process:

- Site Survey
- Planning
- Preparation
- Recovery
- Reporting Processes

2.1.1 SITE SURVEY:

Site Survey involves any preliminary tasks, which can be completed prior to removal but after permission has been granted to access or move the aircraft.

The site Survey may include, but is not limited to:

- An initial aircraft survey: visual inspection, checks for fluid leaks and identification of the need to defuel the aircraft
- An initial site survey; terrain, soil characteristics, topographical site map, including pavement specifications, access routes, temporary roadway construction
- Checks of the weather forecast
- Identification of any health and safety issues, including tire pressure
- Identification of PPE required for all engineers
- Identification of any hazmat or biohazards
- Identification of fire safety precautions required

2.1.2 PLANNING:

During the Planning phase, an assessment should be carried out of the weight and centre of gravity management method required, to ensure that the lift is at a central point to facilitate an equal vertical lift.

2.1.3 PREPARATION:

The Preparation stage of the process ensures that the aircraft is ready to be moved. This is achieved through several potential actions, including:

- Stabilizing and securing the aircraft
- Removing any loose or damaged components, which could hinder the removal process
- Tethering, shoring or ground anchoring the aircraft
- Preparing the ground to ensure that it can support the removal equipment and weight of the aircraft

A major part of the Preparation stage is reducing the weight of the aircraft where possible. This can be achieved through several methods, including defueling the aircraft &/or removing cargo / baggage from on board. However, when reducing the weight, it should be ensured that the centre of gravity does not shift, as some of the weight on board could be acting as a stabilizer. It may also be necessary to remove other parts of the aircraft to reduce the weight, such as the landing gear or engines. This should only be done on the authority of the aircraft engineer.

2.1.4 RECOVERY:

Once all the above has been put in place, the aircraft is ready to be removed. The main element of the Recovery stage is the levelling and lifting of the aircraft. The aircraft should firstly be levelled, and the centre of gravity maintained before any attempt to lift the aircraft is made. There are several methods to achieve these, which should be considered, including the use of:

- Jacks
- Cranes
- Pneumatic Lifting Devices

Once the aircraft has been lifted, it will need to be moved onto either a hard surface (permanent or temporary) or a trailer/vehicle. It can then either be towed or moved to a more suitable location.

2.1.5 REPORTING PROCESSES:

Full records of each stage of the above processes should have been kept for any investigatory purposes. These should include, where relevant, diagrams, photographs, maps, risk assessments, calculations etc. If any damage occurred during the removal process, full details of this should also be recorded.

Any necessary corrective actions to the aircraft will be undertaken by the airline company. Any remedial works required to the surfaces shall be undertaken by the Aerodrome authority.

A full investigation shall be carried out by the Aerodrome authority following an aircraft recovery, to review the procedures and actions taken and apply any lessons learned to the process.

The incident shall be reported to the TSB in line with current CARs requirements.

3. AIRCRAFT REMOVAL

3.1 AERODROME COORDINATOR (IC)

For the purposes of disabled aircraft removal operations, Airport Rescue/Fire Incident Command will undertake the role of Aerodrome Coordinator. They will be responsible for ensuring that the aircraft is removed in a timely and efficient manner by undertaking the following actions:

- a) Ensure that the principles and processes detailed in Section 2 of this document are adhered to at each stage of the recovery. The *Aerodrome Coordinator (IC)* does not have to fulfil all these actions themselves, but they must record on the Log, when the action was taken and by whom. A copy of the Log sheet is attached as Appendix 3.
- b) Ensure that the aircraft is not approached or removed until the TSB has given permission to do so; except for firefighting or life-saving procedures, or where the safety of other aircraft is compromised.

- c) Contact Airfield Technicians and ask them to carry out an assessment of the area, to ensure that no lighting or nav aids have been damaged and that there are no safety implications for the removal of the aircraft, exposed wiring etc.
- d) If the aircraft is required to be removed for safety reasons, prior to permission being granted by the TSB, or if the TSB say that they will not be attending the site, the following actions should be taken:
 - Take photographs of the aircraft and the area from four different angles. Where relevant, include photographs of the flight deck showing the position of all switches and controls
 - Mark the location and position of the aircraft and any other major components
 - Draw a diagram of the incident site
- e) Meet with the aircraft operator or their handling agent to discuss how to remove the aircraft as quickly and safely as possible. Make all relevant information available to the aircraft operator, including equipment which the airport can supply or source.

If the aircraft operators intended actions may result in a delay to successful recovery, then the procedures detailed in Section 1 should be followed. If the Airport is required to remove the aircraft, ask the operator to sign and complete the Liability form.

If required, contact the removal contractors for CYLW.

- f) Arrange for:
 - The best access route for the equipment and provide maps where required; arrange escort vehicles and any relevant security passes
 - Emergency lighting to be provided by YLW ARFF
 - Fire cover to be provided by YLW ARFF if necessary
 - An area where the aircraft should be moved to

3.2 AIRFIELD OPERATIONS

3.2.1 AERODROME COORDINATOR:

CYLW Fire & Rescue Incident Command will assume the role of Aerodrome Coordinator. They will:

- Raise any required job registrations or permits to work for the recovery
- Ensure that adequate risk assessments and safe systems of work are in place
- Provide additional escort vehicles if required
- Carry out a visual check of the surfaces in liaison with NAV CANADA, prior to the area reopening

3.2.2 OPERATIONS CONTROL:

Duties include:

- Ensuring that the Senior Manager, Airport Operations & Emergency Services and AMOC have been informed of the incident
- Liaison with NAV CANADA regarding any continued operations
- Contacting operators or handling agents as required by the AEP.

3.2.3 AIRCRAFT RESCUE AND FIREFIGHTING SERVICE:

Upon notification of an aircraft which needs assistance with removal, the following actions should be undertaken by ARFF, if required:

- Standby to aid
- Provide fire cover and fire safety advice during the removal process
- Provide advice regarding PPE and safety measures
- Assist Airfield Technicians
- Provide an additional escort vehicle
- Provide emergency lighting

On notification of an aircraft, which needs de-bogging, the following actions should be undertaken by the ARFF Incident Command:

- Assume the role of *Aerodrome Coordinator (IC)* by providing any relevant advice and guidance
- Ensure that the aircraft is not approached or moved, unless there is a life risk, until all required actions have been completed
- If the process is to be undertaken by ARFF, ensure that all staff involved in the process have the correct PPE
- Wash the wheels and undercarriage once the aircraft is back on hard standing to ensure that surfaces are not contaminated when the aircraft moves back to the apron or stand

3.2.4 EMERGENCY COORDINATION CENTRE (ECC)

Upon notification of an aircraft which needs assistance with removal, or which needs de-bogging, the following actions should be undertaken by ECC:

- Notify the TSB.
- Advise YLW Incident Command that permission from the TSB has been granted to approach &/or recover the aircraft
- If for safety reasons the aircraft has had to be removed prior to permission being granted, inform the TSB and tell them that the photos have been taken and will be made available to them
- Issue a NOTAM if required
- Following the conclusion of the removal process, ARFF will carry out a visual check of the surfaces in liaison with the ECC.

3.2.5 AIRFIELD TECHNICIANS:

When requested by the YLW Incident Command, Technicians are to:

- Undertake an assessment of the area to ensure that no lighting or nav aids have been damaged during the incident
- Provide advice, where relevant, regarding any safety implications of damaged lighting or nav aids for the recovery operation
- Provide advice during the recovery operation so that any further damage to nav aids or lighting is minimized

3.2.6 KELOWNA INTERNATIONAL AIRPORT SECURITY (Terminal Services)

Upon notification of an aircraft which needs assistance with removal, or which needs de-bogging, the following actions should be undertaken Security:

- If requested to do so, assist with the security of incident site
- Where requested, escort the recovery vehicles to the incident site in liaison with YLW Aerodrome Coordinator

4. AIRCRAFT DE-BOGGING

4.1 INTRODUCTION

These procedures deal predominantly with aircraft recovery, it is recognized that aircraft can get bogged down in grass, mud or snow but not sustain major damage. An aircraft is defined as being bogged down when it is unable to move under its own power or through normal towing procedures. However, the aircraft will not have sustained any damage to its landing gears. If the aircraft has sustained any kind of damage or its landing gear is not serviceable, then the aircraft recovery procedures detailed earlier in this document should be activated.

4.2 CONSIDERATIONS

General considerations for the de-bogging process include:

- Weight and Centre of Gravity
- Condition of the aircraft
- Inspection of aircraft
- Inspection of the site; ground inspection, temporary roadways
- Chocking the wheels where required
- Movement of fuel or aircraft defueling to reduce the weight
- Steering and driving of the aircraft once de-bogged

Methods for moving the aircraft may include:

- Shackles and cables
- Bridging ropes or cables
- Heavy tow tractor
- Reducing tire pressure to give a higher surface area

4.3 PROCEDURES

NAV CANADA will inform YLW if an aircraft has become bogged down.

Prior to any persons approaching or moving the aircraft, the YLW Incident Command must arrange for photographs to be taken of the aircraft and surrounding area, in case the TSB wish to view them. They must also, where possible, mark the location of any part of the aircraft. YLW Incident Command must liaise with NAV CANADA & the ECC prior to allowing any persons to approach the aircraft to ensure that permission has been granted by the TSB.

YLW Incident Command will liaise with, and give any relevant information to, the Senior Manager, Airport Operations & Emergency Services who will give the instruction to begin moving the aircraft. The aircraft must not be approached or moved without the express permission of the Aerodrome Coordinator. If there is a possibility of further safety implications, or that more assistance will be required, then the incident should be upgraded to a full aircraft recovery and the relevant procedures followed.

Once the move has commenced, it may be necessary to stop to reposition equipment or to reassess the requirements of the situation. This decision should only be made by the YLW *Aerodrome Coordinator (IC)*

Once the aircraft has been moved onto the nearest hard surface, it may be necessary to wash down the aircraft prior to moving it further to prevent contamination of the Runway or Taxiway by mud or other substances. The YLW *Aerodrome Coordinator (IC)* will ensure that this is carried out.

5.0 APPENDIX 1A EQUIPMENT AND RESOURCES AVAILABLE

Equipment and Resources available at CYLW will be determined and arranged by the *Aerodrome Coordinator (IC)* and Senior Manager, Operations & Emergency Services.

6.0 APPENDIX 1B AIRCRAFT SALVAGE CONTACT DETAILS

To be determined by the Aircraft Carrier, Owner or Operator and under the direction of the Senior Manager, Operations & Emergency Services or designate.

Dear Sirs, Madame's

We write in respect of the above aircraft (the "Aircraft"), of which you are the owner.

We, Kelowna International Airport (CYLW), have been requested by your authorized representative to assist in recovery and/or removal of the Aircraft, which has suffered damage as detailed above.

Kelowna International Airport is prepared to assist with such rescue and/or removal of the Aircraft on the condition and understanding that you, as the owner of the Aircraft:

1. Own the Aircraft.
2. You indemnify Kelowna International Airport against all loss, damage, claims, costs demand acts or omissions, howsoever arising, while CYLW removes and/or rescues the Aircraft, or any property contained in the Aircraft, or to its current location.
3. You indemnify Kelowna International Airport, its servants or agents against any loss or damage to the property of Kelowna International Airport and against any claims for death or personal injury, which may be made against Kelowna International Airport or any servants or agents of Kelowna International Airport or the owner / operator or your servants or agents arising out of or in connection with anything done, permitted or omitted in or upon the Aircraft during or as a result of rescue and/or removal of the Aircraft.
4. You undertake to pay Kelowna International Airport the costs relating to the rescue or removal of the Aircraft.

Please confirm your agreement to Kelowna International Airport assisting you with the rescue and/or removal of the Aircraft, on the above terms, by signing and returning to us a copy of this letter.

Yours faithfully

Mark Stella
Senior Manager,
Operations & Emergency Services
Kelowna International Airport CYLW

WE CONFIRM OUR AGREEMENT TO THE TERMS SET OUT

Company: _____

Signature: _____

Print Name: _____

Position/Role: _____

Comments: _____

APPENDIX 3

KELOWNA INTERNATIONAL AIRPORT INCIDENT COMMAND LOG
All Times are Local

INCIDENT DATA			
INCIDENT DATE:		TIME:	
INCIDENT COMMANDER:			
ROLE HANDED TO:		TIME:	
AIRCRAFT LOCATION:		REMOVAL:	
CURRENT WEATHER:		SCOPE:	

AIRCRAFT AND REMOVAL DETAILS			
AIRCRAFT REGISTRATION:		AIRCRAFT TYPE:	
OPERATOR / HANDLING AGENT:			
CONTACT NAME:		CONTACT TELEPHONE NO:	
IS THE AIRPORT REQUIRED TO REMOVE THE AIRCRAFT?	YES		NO
IF YES, HAS THE LIABILITY FORM BEEN SIGNED?	YES		NO
CONTRACTOR APPOINTED TO REMOVE THE AIRCRAFT:			

LIAISON WITH NAV CANADA TSB			
TIME NOTIFIED:		NOTIFIED BY-	
ACTION		YES	NO
PHOTOGRAPHS TAKEN?			
LOCATION AND POSITION OF AIRCRAFT OR COMPONENTS MARKED?			
DIAGRAM OF INCIDENT SITE COMPLETED?			
PERMISSION GRANTED TO APPROACH THE AIRCRAFT?			
PERMISSION GRANTED TO REMOVE THE AIRCRAFT?			
ADDITIONAL INFORMATION GIVEN / REQUESTED BY TSB			

SITE SURVEY

ACTION	TIME (L)	BY WHOM
VISUAL INSPECTION AND SURVEY OF AIRCRAFT		
INITIAL SITE SURVEY		
ACCESS ROUTES IDENTIFIED		
CHECK OF WEATHER FORECAST		
IDENTIFICATION OF HEALTH & SAFETY ISSUES		
IDENTIFICATION OF PPE REQUIRED		
IDENTIFICATION OF ANY HAZMAT / BIO-HAZARD		
IDENTIFICATION OF FIRE SAFETY PRECAUTIONS		

PLANNING

ACTION	TIME (L)	BY WHOM
PLANNING UNDERTAKEN		
WEIGHT AND CENTRE OF GRAVITY ASSESSED		

PREPARATION

ACTION	TIME (L)	BY WHOM
AIRCRAFT STABILIZED		
LOOSE OR DAMAGED COMPONENTS REMOVED		
AIRCRAFT TETHERED / SHORED / GROUND ANCHORED		
GROUND PREPARED		
WEIGHT REDUCED, INCLUDING REASSESSMENT OF CENTRE OF GRAVITY		

RECOVERY		
ACTION	TIME (L)	BY WHOM
LIFTING AND LEVELLING OF THE AIRCRAFT		
AIRCRAFT MOVED TO HARD SURFACE OR SUITABLE VEHICLE		
AIRCRAFT MOVED TO AGREED AREA		

A COPY OF THE COMPLETED FORM MUST BE SENT TO THE SENIOR MANAGER, OPERATIONS & EMERGENCY SERVICES, KELOWNA INTERNATIONAL AIRPORT

Contact List

For AME requests

KF Aero Contacts

1st contact to try

Craig Woolford

MANAGER, HANGAR OPERATIONS

E c.woolford@kfaero.ca

P (250) 807-5417

M (250) 470-3666

www.KFAero.ca



2nd contact to try

KF Aero Operations Duty Manager

(11am-11pm) 250-491-5537

3rd contact to try

KF Aero 24hr line

1-800-505-3255