Permit to Work Manual

Safety Management System

SMS 06.02.01

Auckland Airport

PTW CONTACTS AND EMERGENCY NUMBERS		
Permit Office	Email	Permit.Office@aucklandairport.co.nz
	Address	Tuapapa - The Base, Jimmy Ward Cres, Auckland Airport
HSW (PTW) Advisor	Mobile	027 220 0974 027-325 9931
AIAL Operations Centre	Phone	09 256 8813 0800 677 242 ext. 1 (general faults) or ext. 4 (suspicious behaviour) 98813 from internal airport phone (in terminals)
Traffic Management Authority	Mobile	027 579 6142
Head of HSW	Mobile	021 813 656
AIAL HSW Business Partner	Mobile	027 326 0554
		027 403 2552
		027 237 5998
Your AIAL Area Authority or PM (you fill in)	Mobile	
	Email	
EMERGENCY NUMBERS		
AIAL Emergency Services		09 256 8777 0800 677 242 ext. 9 (emergencies) 98777 from internal airport phone (in terminals)
Fire and Emergency NZ Ambulance and Police		111
Immediate notification to AIAL required for High and Critical Risk events. Same day notification to AIAL required for Medium Risk events.		

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RECORD OF REVIEWS & APPROVAL OF CONTENTS

Control and distribution details for this Manual are as follows:

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Permit to Work Office
Airport tenants as required

REVIEW PROCESS

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RECORD OF REVIEWS, DISTRIBUTION & APPROVAL OF CONTENTS *(cont)*

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May 2017	Viren Fernandes, Anna Cassels-Brown	2157711 (Minor change to authorising & responsible positions PICWS & Area Authority. Inclusion of safe work requirements)	1/05/17	ACB	2013927_5	10/05/17	
April – August 2021 Sept 2021 October 2021 3-4 Nov 2021	Darren Matthews, Peter Engelbrecht, Elnaz Van Vuuren, Jess Yip, Kristina Cooper Business-wide consultation Darren Matthews, Peter Engelbrecht, Kristina Cooper Anna Cassels-Brown	(Major restructure project): AIAL-1336572876-102442 (several versions during project), AIAL-1336572876-102436 (final draft), 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, (consultations), 56, 57, 58, 59 (KC final tweaks), 67 (ACB final review & edits).	05-11-21	ACB	AIAL-1336572876-102476 (Anna approval) 474, 473, 475 (2 other GM signatures on Foreword)	08-11-21	AIAL-1336572876-102490, 91 & 92
July 2022	Natalee Scripps-Hawkins, Troy Ross, Greg Bracey, Kristina Cooper	AIAL-1336572876-103247, 260, 255, 259, 258, 261, 262 (removal of Totika and changes to works around fuel and gas pipelines)	25-07-22	ACB	AIAL-1336572876-103268	25-07-22	tbc
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FORWARD

Tēnā koutou katoa.

Back in 2016 when Auckland Airport reinvented its Permit to Work system, the world of workplace health and safety was changing. The introduction of the Health and Safety at Work Act in 2015 was the least of it. The fact that New Zealand workers were continuing to suffer hundreds if not thousands of work-related illnesses, injuries, and fatalities every single year was a blight on our collective business conscience, and the new law merely a response to that distressing fact. The Airport was on the cusp of its most ambitious programme of capital construction works in decades, and had a goal of ensuring that no-one was harmed during this work programme (or any works at the Airport), and that all our staff and all workers on our precinct were able to return home safe and healthy every day.

Fortunate then that all the ideas, tools and systems already existed in some industries to make work that involves a higher degree of safety risk as safe as it can practically be, and that those industries were bucking the trend and delivering hundreds of thousands of hours of completed high-risk work without injury to a single person. Clearly the opportunity was there to take a leaf out of their book and reinvent our own safe work practices for those tasks most likely to be implicated in serious work safety incidents.

Several years on, the result is this: Auckland Airport's completely revised Permit to Work Manual and system, as well as all the commitment, resources, talented people and extensive suite of tools that bring them to life every day. Our Permit to Work Manual is a golden handbook for all who are involved in procuring, supervising or undertaking higher-risk work on our airport precinct. It has been crafted with care, many times reviewed and improved based on feedback from its users, and most importantly, has the health, safety and wellbeing of every person who comes into contact with Auckland Airport at the front, centre, and always in the spotlight.

Anna Cassels-Brown
GM Operations

André Lovatt
GM Infrastructure

Mary-Liz Tuck
GM Corporate Services

TERMS AND ABBREVIATIONS

AA Auckland Airport.

Aeronautical Zone

Has the meaning given to it in the Airport Workers Rules (refer map contained within the Airport Workers Rules definition of Aeronautical Zone) which broadly includes:

(a) The International Terminal Building, Domestic Terminal Building, the Regional Domestic Bus Lounge, the Operations Centre, the EOC and the Disaster Recovery Site;

(b) Any vehicle pick-up/drop-off, commercial vehicle parking area, delivery area, pedestrian forecourt or plaza, adjacent to the International Terminal Building, Domestic Terminal Building or Regional Domestic Bus Lounge;

(c) The Airfield Airside Area;

(d) Wiroa Island;

(e) Any area on the south side of Laurence Stevens Drive and/or any landside area within 25 metres of the airside/landside security fence or gates; and

(f) Public carparks south of Ray Emery Drive, Laurence Stevens Drive or Cyril Kay Road.

AIAL Auckland International Airport Limited.

Airfield Area Has the same meaning as 'Airfield Airside Area' in the Airport Workers Rules and means that part of the Airport used for the surface movement of aircraft, including (but not limited to) those areas used for take-off, landing and taxiing of aircraft, and the apron area used for the purpose of loading and unloading of passengers and cargo and refuelling, parking and carrying out of maintenance of aircraft, and any area (including areas on the ground floor/under croft of the terminals) used for the make-up, unloading or transportation of passenger baggage, being declared a "security area" by the Director of Civil Aviation pursuant to section 84(1) of the Civil Aviation Act 1990. This includes any associated areas used for supporting activities such as offices and workshops adjacent to apron areas and any roads, vehicle or equipment parking areas, other sealed areas or grassed areas airside.

Airfield Movement Area

Any part of the Airfield Area that is intended for the movement of aircraft on the ground, and includes the manoeuvring area, maintenance areas and aprons.

Airport Workers Rules

The rules published by Auckland Airport from time to time which set out the rules applying to all workers in the Aeronautical Zone.

ALARP As Low as Reasonably Practicable.

Approved Incumbent Licence (AIL)

A non-transferable licence granted by the PTW office for a maximum of three (3) months under section 3.3 to an incumbent worker to undertake certain inspections or minor short duration maintenance tasks without a PTW. At present, AILs can be granted for 'rooftop access' and for 'use of Mobile Elevated Work Platform (MEWP)' for inspections, testing or minor changing of consumables.

Area Authority

The Area Authority is an Auckland Airport staff member who may be the asset owner or their delegate, project manager or their delegate. (Note Air NZ Property or Facilities Managers can act as Area Authority for Air NZ leased areas). The Area Authority is responsible for ensuring that any work under their control or relating to assets they own which requires a PTW has a PTW and that all work is undertaken safely in accordance with the conditions of that PTW and all other associated requirements of Auckland Airport. Refer details of Area Authority's role and responsibility as set out in section 3.

Close Approach Consent

A consent required by Vector for work near Vector's overhead or underground network. Current proximity requirements set by Vector (refer Vector close approach consents) for when a Close Approach Consent is required are:

- Work within 4m of overhead lines;
- Excavating within 5m of a power pole or within 12m of a tower or pylon; and
- Excavating within 2m of strategic gas mains.

Concurrent activities

Activities that are taking place at the same time in the vicinity of/nearby the Permitted Works.

Conflicting activities

Activities that could create a hazard/risk for the Permitted works e.g. isolation of a fire system in an area where hot work is taking place, or working at height above plant that is undergoing routine maintenance at the same time as the Permitted Work.

Confined Space

An enclosed or partially enclosed space that is at atmospheric pressure during occupancy and is not intended or designed primarily as a place of work. In addition, the space:

- Is liable at any time to:
  - have an atmosphere which contains potentially harmful levels of contaminant;
  - not have a safe oxygen range; or
  - cause engulfment; and
- Could have restricted means for entry and exit.
- Excludes a Restricted Space.

Contractor Means a person or organisation engaged (otherwise than as an employee) to do any work for gain or reward. The 'gain or reward' does not need to be monetary; it can be payment in kind or an exchange of services. Nor does the contract have to be in writing.

Crane Includes all lifting devices within the scope of Worksafe NZ's Approved Code of Practice for Cranes, including:

- Dockside/container;
- Overhead travelling/gantry/monorail;
- Pillar/column;
- Truck (vehicle) loader type;
- Derrick/post/jib;
- Mobile (including crawler and rail);
- Tower (including self-erecting); or
- The following equipment when being used as a crane:
  - Forklift trucks;
  - Material handlers;
  - Telehandlers; or
  - Earthmoving and forestry equipment.

Critical Underground Asset

Underground services that are key to the efficient and safe continued operation of the aerodrome, terminals, roading network, retail precinct and commercial tenancies located at the Airport precinct, including:

- HV cables;
- Critical fibre cables;
- Gas pipeline

- Fuel pipeline or fuel distribution network
- Three Waters pipes greater than the following dimensions:
  - Potable Water network greater than 100mm diameter
  - Wastewater network greater than 150mm diameter
  - Stormwater pipework greater than 225mm in diameter
  - Recovered water network greater than 100mm in diameter
- Pumped wastewater rising mains of all sizes
- Any wastewater underground tank, pump chamber or pumped wastewater rising main
- Any stormwater interceptor.

Electrical Commissioning

The process of energising newly installed electrical plant.

Excavation or ground penetration

Any work that involves creating a person-made cut, cavity, trench, depression, penetration or hole in the ground surface of more than 300mm in depth, no matter the diameter or size of the excavation/penetration or the means used to create it. (Note if the excavation/penetration is within 6m of any fuel pipeline (including horizontal directional drilling), then a penetration or hole of any depth constitutes a ground penetration or excavation).

FENZ Fire and Emergency NZ

Fire system cause and effect matrix

A cause and effect matrix listing all elements of a building's active fire protection system and any elements of the passive fire protection system that undertake any action during an evacuation (eg, doors that release, H-Vac actions, air handler unit actions, PA announcements).

Fire system impairment

A situation in which the site/area fire detection/protection systems are not in operation or have a reduction in capacity as a result of any works are undertaken on the fire protection or detection systems or key inputs to those. Fire protection systems may include:

- Sprinkler and deluge systems;
- Fire hydrants, hose reels or Fire Extinguishers;
- Smoke, heat sensors, ASD Systems; and/or
- Manual Call Points.

Ground penetration or excavation

See definition above under Excavation or ground penetration

Group or Mains isolation

Is work on equipment, plant or systems where:

- Where HV supply or Mains power is being isolated (this includes isolation of supply to any Switchboards, Distribution Boards or any isolation that would affect consumers);
- The work will take longer than one shift to complete; or
- The work has the potential to interrupt or interfere with, the day-to-day operations of the airport.

Hazard Anything that is an actual or potential cause of harm (illness or injury) or damage, and includes the following broad categories: physical, psychological, environmental, chemical, ergonomic and biological.

Hot Work Any work or activity at an Auckland Airport facility or premises, which may be a source of ignition. Includes but is not limited to the use or operation of:

- Welding or flame cutting equipment or use of an open flame;
- Grinder, electric drill or other non-flameproof or spark-generating electrical equipment;
- Hot tapping equipment;
- Concrete cutting and chipping; and
- Hand tools that may create a spark.

Hot Work with a Naked Flame

Any heating or hot works that involves the use of a naked flame as the heating or work source. Includes but is not limited to welding or flame cutting equipment, gas blow torches, gas heaters or any other use of equipment that has a naked flame.

Hot Work Prohibition Zone

Areas identified under clause 6.4 of this PTW Manual where Hot Work is prohibited (other than in exceptional circumstances, with AIAL General Manager approval, where there is no practical alternative).

HSW Act Health and Safety at Work Act 2015.

Isolation Discontinuation or separation of plant and equipment from energised power supply.

Job Safety Analysis (JSA)

A step-by-step assessment of the tasks to be completed, the actual and potential hazards and risks associated with each task, and the controls that are required to be in place prior to commencement and for the duration of the task.

Lower Explosive Limit (LEL)

The concentration of a flammable contaminant in air, below which a flame does not occur on contact with an ignition source**.**

MEWP

Mobile elevated work platform.

Notifiable Event

Any notifiable injury, illness or incident as defined in section 23 and 24 of the HSW Act.

NOTAM Notices to Airmen – a method of communicating operationally significant **events** relating to an aerodrome to pilots. For example, a temporary runway closure, defects or hazards in the manoeuvring area, a new item penetrating the OLS. Add ross's comments

Obstacle Limitation Surfaces (OLS)

OLS of an aerodrome are defined surfaces in the airspace above and adjacent to the aerodrome necessary to enable aircraft to maintain a satisfactory level of safety while manoeuvring at low altitude in the vicinity of the aerodrome. OLS are required to be established under the Civil Aviation Act 1990 and Civil Aviation Rules Part 139. The OLS may be found in Designation 1102 of the Auckland Unitary Plan. The OLS is not permitted to be penetrated without approval from the Auckland Airport Airfield Operations Tower, who will need to issue a NOTAM to all pilots advising of the temporary OLS breach.

Particular Hazardous Work

Any restricted work as defined in the Health and Safety in Employment Regulations 1995. For Auckland Airport's purposes, Particular Hazardous Work includes:

- Work with a risk of falling 5 metres or more;
- Erecting or dismantling scaffolding with a risk of falling 5 metres or more;
- Use of a lifting appliance where the appliance has a lift a mass of 500 kilograms or more a vertical distance of 5 metres or more, excluding work using:
    - An excavator;
    - A fork-lift; or
    - A self-propelled mobile crane;

- Work in any pit, shaft, trench, or other excavation in which any person is required to work in a space more than 1.5 metres deep and having a depth greater than horizontal width at the top;
- Work in any drive, excavation, or heading in which any person is required to work with a ground cover overhead;
- Work involving the use of explosives, or storage of explosives for use; and
- Work that in which a person breathes compressed air, or respiratory medium other than air (excluding diving or work undertaken by AES crew under FENZ Reference Guide for working with Respiratory Protection Equipment (E3-2 RG)).

Permit Issuer

An Auckland Airport staff member based at the PTW Office who has been delegated authority by Auckland Airport to authorise (i.e. issue) all types of Permits to Work at Auckland Airport. Permit Issuers also undertake training, raising awareness and administering the PTW system as well as auditing compliance of work activities with the requirements of both this PTW system and the conditions of individual permits issued. Refer details of Permit Issuer's role and responsibility and training pre-requisites as set out in section 3. Note in the case of a ring-fenced site (excluding PTWs relating to GPCs or cranes), the Permit Issuer is the contractor's nominated person who must meet the training requirements for Permit Issuers.

Permit to Work (PTW or Permit)

An official document which authorises Medium or High Risk Work to be undertaken at Auckland Airport. It incorporates a signed statement that hazard and risk identification, and specified checks or tests have been carried out by an authorised person, and that barriers and controls have been put in place to eliminate or minimise the hazards and risks prior to the work commencing. The Permit to Work is not valid until it has been signed by an authorised Permit Issuer employed by Auckland Airport's PTW Office. Information on the Permit document includes:

- Details of the work tasks to take place;
- The start and estimated completion times for the work;
- The precise location of the work;
- Evacuation procedures and Emergency Assembly Point for work site;
- The potential hazards and risks involved in the work;
- The required controls for those hazards and risks;
- Details of final inspections required;
- Any concurrent or conflicting activities while the work is in progress; and

- The PICWS or key people involved in the work.

PTW office An Auckland Airport office located at 5 Jimmy Ward Crescent where PTWs are issued and PTW Issuers are based.

PICWS The Person In Charge of the Work Site. The PICWS is responsible for the overall safe execution of the work in accordance with the PTW and the safety of the work site and all workers on the work site, including the identification and control of any hazards. The PICWS must be identified on the PTW Application. Refer details of PICWS's role and responsibility as set out in section 3.

Pipeline Manager

The person appointed by the owner of a fuel distribution network or pipeline to manage the operation. This is a role required by the Health and Safety in Employment (Pipelines) Regulations 1999.

Restricted space/s

Any enclosed or partially enclosed hazardous space or area not designed for human occupancy that does not fit within the legislative definition of a confined space, yet has certain hazards such as moving parts, high voltage hazards, risk of falling or restricted means of entry and exit. (Refer Confined/Restricted Space Decision Tree in Appendix 1 AIAL SMS 06.01.31 Confined Space Requirements for further detail.)

Risk A measure of a hazard's significance in terms of the potential Severity of the consequences, and the Likelihood of occurrence.

Controlled Risk – The level of risk assuming all identified controls are in place and are effective, sometimes referred to as **'residual'** risk.

Current Risk – The actual level of risk having regard to the effectiveness of the controls currently in place.

Risk Assessment Matrix (RAM)

A tool used to quantify the overall level of risk associated with a hazard and used to help determine the relative priority of different hazard and risk controls. The level of risk is determined by quantifying:

- The Severity of the consequences; and
- The Likelihood of an event occurring.

A copy of the AIAL RAM is included in this Manual at Appendix D.

Safety Watch

A qualified and competent person assigned to remain on watch at the site of hazardous work or a hazardous environment. The work may include the duties of Fire Watch for hot work and/or Safety Observer or Spotter. Refer details of Safety Watch roles and responsibilities as set out in section 3.

SOP Standard Operating Procedure. Sometimes called a Method Statement, Work Methodology, Safe Method of Work etc. In all cases provides a step-by-step description of how a specific work task is to be performed. May not be deviated from except with the approval of an authorised senior person.

Sterile Area Has the same meaning as 'Sterile Area' in the Airport Workers Rules and means those areas of the terminals declared a "security area" by the Director of Civil Aviation pursuant to section 84(1) of the Civil Aviation Act 1990. Typically, Sterile Areas fall between the Avsec screening point/s where passengers, their carry-on bags, crew, workers and all retail goods or supplies have been security screened and the aircraft boarding gate, into which access is strictly controlled and the mixing of screened persons and unscreened persons or unscreened goods must be prevented. The CAA signs 'declaration plans' of Sterile Areas (updated from time to time) which are reproduced in the definition of Sterile Area in the Auckland Airport 'Airport Workers' Rules'.

Sub-Contractor

Means a person engaged by a Contractor (otherwise than as an employee) to do any work for gain or reward.

Take 5 A short pre-start work meeting by all workers to review the job and any associated risks or hazards and to ensure that all risks and hazards are identified and controls are in place to make the risk of the work ALARP. A Take 5 card may be used as a prompt for the meeting, and the outcome may be recorded on a Take 5 card and signed by all workers involved.

Toolbox Meeting

A job site meeting held with all workers involved in or affected by the work. This meeting must take place at the worksite after the PTW has been issued. The PICWS is responsible for ensuring all those involved in the work take part in the toolbox meeting. The JSA and associated risk controls are reviewed as part of this meeting.

Traffic Management Authority

The person the Airport as a Roading Controlling Authority authorises to approve Temporary Traffic Management Plans.

VOC's Volatile Organic Compounds. VOCs are substances (solvents, fumes etc.) that readily produce vapours that are hazardous to a person's health and/or flammable in low concentrations.

Worker An individual who carries out work in any capacity, whether an employee, contractor or sub-contractor, an employee of a contractor or subcontractor, a labour hire employee, an out-worker, an apprentice or trainee, a person gaining work experience or carrying out a work trial, or a volunteer.

Working at Height

Auckland Airport has adopted the WorkSafe NZ definition of working at height as 'working at a place, above or below ground level, where a person could be injured if they fell from that place – that is, falling from one level to another. Access and egress, except by a staircase in a permanent workplace to or within a place of work, can also be work at height'.

WorkSafe NZ Guidance

Documents issued by WorkSafe NZ including:

- Approved Codes of Practice (ACOP);
- Best Practice and/or Good Practice Guidelines;
- Fact Sheets; and
- Any other information published by WorkSafe NZ.

Worksite An area where work is taking place.

Work within Minimum Approach Distance (MAD)

As defined by NZECP 34:2001 New Zealand Electrical Code of Practice for Electrical Safe Distances, table 9 (Minimum safe approach distance limits for persons from exposed live parts (*where consent from the owner of the live parts has been obtained)* – Currently 0.5m for Low Voltage and 1.5m for 11kV.

References and Associated Documents

References

Code / Number	Title
Legislation	Health and Safety at Work Act 2015
	Health and Safety in Employment Regulations 1995
	Health and Safety in Employment (Pipelines) Regulations 1999
	Health and Safety in Employment (Pressure Equipment, Cranes and Passenger Ropeways) Regulations 1995
	Health and Safety at Work (Asbestos) Regulations 2016
	Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
	Health and Safety at Work (Hazardous Substances) Regulations 2017
	Hazardous Substances and New Organisms Act 1996 (HSNO)
WorkSafe NZ Documents	Approved Code of Practice - Asbestos – Management and Removal of Asbestos
	Approved Code of Practice - Boilers
	Approved Code of Practice - Cranes
	Approved Code of Practice – Management of Substances Hazardous to Health in the Place of Work
	Approved Code of Practice – Power-operated Elevated Work Platforms
	Approved Code of Practice – Load Lifting Rigging
	Best Practice Guidance for Demolition in New Zealand
	Best Practice Guidelines for Working at Height in New Zealand
	Best Practice Guidelines for Working on Roofs
	Best Practice Guideline for Scaffolding in New Zealand
	Good Practice Guidelines for Excavation Safety
	Guide for Safety with Underground Services
	Health and Safety in Welding
	See also NZ Crane Association Safety Manual
Standards:	
AS 2865:2001	Confined Space Standard
AS 2444:2001 (confirmed 2021)	Portable Fire Extinguishers and Fire Blankets
NZS 45013:2005	Hand Operated Fire Extinguishers
AS / NZS 60079.17:2017	Explosive Atmospheres – Part 17 : Electrical installations and inspections and maintenance
AS/NZS 3504:2006	Fire blankets
NZS 4781:1973	Code of practice for safety in welding and cutting
AS 4072.1: 2005	Service Penetrations and control joints
AS / NZS 1905:1997	Components for the protection of openings in fire resistant walls – fire resistant door sets
NZS 4520	Fire Resistant Door Set
AS 1905.2: 2005 (Pt 2)	Fire Resistant Door Shutters
NZS / BS 476: 1987	Fire or Smoke Curtain

Associated SMS Documents

Document Number	Description	Location
SMS 00.00.00	Safety and Health Management Manual	Available for inspection at PTW Office or Downloads | Auckland Airport
SMS 01.00.01	Safety Policy Statement	
SMS 02.00.01	Introduction to Emergency Planning and Response	
SMS 05.01.03	Event Reporting Form	Permit to Work System | Auckland Airport
SMS 06.01.01	Hazard and Risk Management Procedure	Request from PTW Office
SMS 06.01.02	Risk Assessment Matrix	Appendix D Permit to Work System | Auckland Airport
SMS 06.01.07	Hazard and Risk Identification Checklist	Permit to Work System | Auckland Airport
SMS 06.01.09	Hazard and Risk Registers	Request from Area Authority
SMS 06.02.01	PTW Manual	Permit to Work System | Auckland Airport
SMS 06.02.02	PTW Application Certificate	Permit to Work System | Auckland Airportt
SMS 06.02.03	PTW Short Notice Endorsement	Request from Area Authority
SMS 06.02.04	Approved Incumbent Licence Application	Request from PTW Office
SMS 06.02.05	PTW Rescue/ Recovery Plan	Permit to Work System | Auckland Airport
SMS 06.02.07	Confined space & hazardous atmospheres workspace record	
SMS 06.02.11	Equipment Isolation Procedure (Lock Out Tag Out)	
SMS 06.02.12	Equipment isolation checklist	
SMS 06.02.17	PTW Contact List	
SMS 06.02.20	JSA Writing Guidelines	Request from PTW Office
SMS 06.02.21	JSA Template	Permit to Work System | Auckland Airport
SMS 06.02.22	Take 5 Card Template	Request from PTW Office
SMS 06.02.31	Confined Space Requirements	Permit to Work System | Auckland Airport
SMS 06.02.32	Working at Height Requirements (including rooftop access)	
SMS 06.02.33	Hot Work Requirements	
SMS 06.02.34	Excavation Requirements	
SMS 06.02.35	Third Party Use of Firearms	
SMS 06.09.01	Asbestos Management Procedure	
SMS 09b.01.01	PCBU Procedure	Request from PTW Office
SMS 09b.02.01	Contractor Management Procedure	Request from PTW Office

Associated Airport Operations Documents

Description of document	Location
Airport Workers Rules	Available for inspection at PTW Office or Downloads | Auckland Airport
Airside Driving Permit and Vehicle Permit Rules	
Biosecurity Rules	
Apron and Airfield Waste Management Plan	
ITB Waste Management Plan	
ITB and DTB Fire Evacuation Schemes	Downloads | Auckland Airport
Airside Vehicle Safety Request Form	Airside Driving | Auckland Airport
Cranes – Airfield Advisory Notice 3	Downloads | Auckland Airport
Crane or Temporary Structure Application Form	Downloads | Auckland Airport
Doors and Staff carparks access Application Form	Downloads | Auckland Airport
Security Guidelines for Construction Projects	Appendix B or Downloads | Auckland Airport
Auckland Airport Bylaws 1989	Downloads | Auckland Airport

SECTION 1 – INTRODUCTION

1.1 OVERVIEW OF PTW SYSTEM

1.1.1 **A Permit to Work must be obtained before commencing:**

- **any medium or high-risk work on any Auckland Airport facility or premises;**
- **any work in the Airfield Area; or**
- **any work creating a medium or high-risk impact on guests, guest areas or guest interfaces.**

1.1.2 The Permit to Work ("PTW") system set out in this document creates a system for authorising, coordinating and overseeing all medium and high-risk work across Auckland Airport, through a Permit Coordination Office (Permit Office) for the purpose of ensuring that full precautions have been undertaken to safeguard anyone carrying out the work, or others who may be affected by the work from harm.

1.1.3 The PTW System achieves this by:

- Providing authorisation for all types of work activities that require a Permit to Work ("Permit").
- Linking a Permit to other documentation (Certificates etc) required for the Permitted work activity.
- Ensuring there is a designated person in charge of the worksite ("PICWS"), and that they are aware of their responsibilities within the scope of the Permitted work.
- Documenting all information relevant to the task, including the hazards and risks involved in such work, and the controls for those hazards and risks, for everyone who is involved in the work, and ensuring any concurrent and/ or conflicting work has been identified.
- Acting as a method of communication between the people responsible for managing assets and the workers who plan and carry out the work activities.
- Ensuring that the controls for those hazards and risks are in place prior to commencement of the work, and maintained for the duration of the work.
- Ensuring all aeronautically related controls are in place for work affecting the safe operation of the aerodrome or terminals (refer section 4 of this Manual for details).
- Ensuring there are adequate plans, controls and sign-offs to return the worksite to normal operations.

1.1.4 The Permit to Work can be considered a documented contract between the Area Authority, the Permit Issuer and the Person in Charge of the Worksite (PICWS). A Permit to Work is issued based on the agreed work scope and associated risk assessment and authorises a person to:

- Carry out specific work activities;
- At a specific location;
- Within a specified time frame;
- Using agreed hazard and risk controls;
- Using specified equipment; and
- Using standard work methods / processes.

1.1.5 Any variation from the documented PTW must be approved by the PTW Office.

1.1.6 It is important to appreciate that the PTW system and the Permit itself do not make the job safe; this can only be achieved by those involved in planning and those doing the job adhering to the requirements of the Permit and ensuring effective controls are in place for all hazards and risks at all times during the work.

1.2 SCOPE OF PTW SYSTEM

1.2.1 This Permit to Work System applies to all work undertaken within the Auckland Airport precinct which is of medium & high risk, as well as any work that would have a medium or high risk impact on guest experience or interfaces.

1.2.2 The risk of work must be assessed using Auckland Airport's Risk Assessment Matrix (reproduced in Appendix D).

1.2.3 The residual risk (i.e. after all controls have been identified which will be implemented for the duration of the works) should be applied when determining whether PTW is required. Note, Permit Issuers, Area Authorities and AIAL's Health and Safety team have the right to review and adjust this risk assessment.

1.2.4 A PTW is required for work undertaken by a Ground Lessee when the work, or its effects:

- Extends beyond the ground lease;
- May affect aerodrome operational areas; or
- Will be connecting to any common use Auckland Airport owned network (e.g. electricity, gas, roading, fibre etc). Refer clause 2.1.4 to 2.1.6 below.

1.2.5 Examples of the types of work commonly requiring a Permit to Work can be found in section 2.3 of this Manual.

1.2.6 Emergency response protocols are not addressed within the scope of this PTW Manual. These are managed through the company's emergency response management plans. Notwithstanding this, some medium & high risk activities require a Rescue/Recovery Plan to be submitted as part of the application for a Permit to Work.

1.3 COMPONENTS OF THE PTW SYSTEM

1.3.1 The PTW System comprises a number of documents, forms and procedures. All need to be read together. Most important is this PTW Manual, however it cannot be read in

isolation. It is supported by the PTW Application Form, the JSA, the Hazard and Risk Identification Checklist, the PTW Rescue/Recovery Plan and Confined Space and Hazardous Atmospheres Workspace Testing Record.

1.3.2 For some forms, the AIAL form **must** be used (e.g. the PTW Application Form and the Hazard and Risk Identification Checklist). For other forms, a PCBU's own equivalent form can be used, e.g. the JSA, the Rescue/Recovery Plan and Confined Space and Hazardous Atmospheres Workspace Testing Record.

1.3.3 The sections on particular hazardous work found in section 6 of this PTW Manual are also supplemented by separate Procedures for some of these high risk works, which contain additional detail (refer list on page 21 of this PTW Manual). Auckland Airport workers or contractors undertaking work on behalf of Auckland Airport must also refer to and follow these Procedures.

1.3.4 AIAL has developed an Equipment Isolation Procedure (Lock out Tag Out) SMS 06.02.11. Work being undertaken at or on AIAL owned and/or operated equipment or plant and assets must follow the Auckland Airport Equipment Isolation Procedure. Work undertaken at Auckland Airport on equipment, plant and assets not owned by AIAL must follow an appropriate isolation procedure which has been communicated and agreed between all workers involved in the work.

1.3.5 The core documents within Auckland Airport's PTW System are set out below, with an indication of whether Auckland Airport documents must be used, or whether PCBUs may use their own documents or templates.

Core PTW System Documents

Document Number	Description	Location	AIAL document must be used	AIAL document may be used
SMS 05.01.03	Event Reporting Form	Permit to Work System | Auckland Airport		✓
SMS 06.01.02	Risk Assessment Matrix	Appendix D	✓	
SMS 06.01.07	Hazard and Risk Identification Checklist	Permit to Work System | Auckland Airport	✓	
SMS 06.01.09	Hazard and Risk Registers	Request from Area Authority	✓	
SMS 06.02.01	PTW Manual	Permit to Work System | Auckland Airport	✓	
SMS 06.02.02	PTW Application Certificate	Permit to Work System | Auckland Airport	✓	
SMS 06.02.03	PTW Short Notice Endorsement	Request from PTW Office	✓	
SMS 06.02.05	PTW Rescue/ Recovery plan	Permit to Work System | Auckland Airport		✓
SMS 06.02.07	Confined space & hazardous atmospheres workspace record	Permit to Work System | Auckland Airport		✓
SMS 06.02.11	Equipment Isolation Procedure (when working on AIAL-owned assets)	Permit to Work System | Auckland Airport	✓	
SMS 06.02.11	Equipment Isolation Procedure (when working on assets not owned by AIAL)	Permit to Work System | Auckland Airport		✓
SMS 06.02.12	Equipment Isolation Checklist	Permit to Work System | Auckland Airport		✓
SMS 06.02.20	JSA Writing Guidelines	Request from PTW Office		✓
SMS 06.02.21	JSA Template	Permit to Work System | Auckland Airport		✓
SMS 06.02.22	Take 5 Card Template	Request from PTW Office		✓
SMS 06.02.31	Confined Space Requirements	Permit to Work System | Auckland Airport		✓
SMS 06.02.32	Working at Height Requirements (including rooftop access)	Permit to Work System | Auckland Airport		✓
SMS 06.02.33	Hot Work Requirements	Permit to Work System | Auckland Airport		✓
SMS 06.02.34	Excavation Requirements	Permit to Work System | Auckland Airport		✓
SMS 06.02.35	Third Party Use of Firearms	Permit to Work System | Auckland Airport	✓	
SMS 06.09.01	Asbestos Management Procedure	Permit to Work System | Auckland Airport	✓	

1.4 QUERIES AND CONTACTS

In some instances, the requirements and guidance in this document may require interpretation and good judgment by the Area Authority or PICWS. In the event of any doubt, refer all queries to the PTW Office, an AIAL H&S Business Partner or the AIAL Head of H&S. Contact details are set out on the reverse of the cover page to this Manual as well as in Appendix A to this PTW Manual.

1.5 EXEMPTIONS

1.5.1 From time to time there may be circumstances specific to a project or other situation which may justify an exemption needing to be made to the rules and processes contained in this Manual.

1.5.2 Applications for exemptions or alternatives solutions should be made in the first instance to the Head of Health, Safety & Wellbeing. In the absence of this person, applications for exemptions can alternatively be made to the General Managers of Corporate Services, Operations or Infrastructure.

1.5.3 Any application for an exemption must be in writing and include:

- Which part of the PTW Manual an exemption is being applied for;
- An explanation of why the exemption is required (i.e. why it is impracticable to comply with the rule);
- The alternative solution proposed by the applicant to achieve the same safety, security and compliance outcome and its Risk Assessment; and
- The length of time the exemption is being applied for.

1.5.4 A response to the application will be made in writing. Auckland Airport has the sole discretion as to whether or not to grant an exemption, and what conditions to apply. Such decisions are not subject to any review or appeal process.

1.5.5 Any exemptions granted will be recorded in a register, accessible at all times to the following Auckland Airport staff: PTW Office, Health, Safety & Wellbeing Business Partners, Duty Operations Managers, Operations Supervisors and Skygate Security staff.

SECTION 2 – THE PTW PROCESS

2.1 WHAT WORK NEEDS A PTW?

2.1.1 All Medium and High-Risk Work Requires a PTW

2.1.1.1 Any medium or high-risk work undertaken within land or buildings owned by Auckland Airport must have a PTW issued before work can commence. This applies to Auckland Airport itself as well as tenants, licensees, stakeholders and users of the airport (including but not limited to government agencies, airlines and ground handlers), as well as any employees, contractors and sub-contractors of these organisations.

2.1.1.2 The only exceptions to the above rule are:

- Work wholly within ground leases as per clause 2.1.5
- Approved ring-fenced construction projects as per clause 2.1.6
- Emergency work undertaken under clause 2.2.3

2.1.1.3 When assessing whether a PTW is required, use the residual (or controlled) risk rating for the work after identified controls have been put in place.

2.1.1.4 With the exception of approved Short Notice Applications under clause 2.2.2 or urgent emergency or out of hours work undertaken in accordance with clause 2.2.3) the PTW application including all associated certificates and documents must be submitted at least 3 working days before the planned date of the work.

2.1.2 Work Affecting the Health & Safety of Guests or the Public

2.1.2.1 A PTW is also required for work that is low risk, but has the potential to create a health & safety risk to other workers, guests and members of the public that is medium or greater. For example:

- Closing off or in other ways affecting significant floor space or access/egress ways used by other workers, guest or the public (e.g. part of work preparation, movement of materials, etc.);
- Significant noise emissions with the potential to exceed 85dB;
- The creation of dust in quantities that may have the potential to be recirculated through a building's controlled air supply; or
- The use of cleaning, painting, or similar substances in quantities that may produce fumes, odours or other emissions that have the potential to cause ill health or discomfort to personnel or guests.

2.1.2.2 Most work in the terminals requires a Terminal Works Endorsement (refer section 5.3). A TWE will be required for low-risk work in the terminals, even though a PTW is only required for medium and high risk work or for work which has the potential to create a health &

safety risk to other workers, guests and members of the public that is medium or greater. (In these cases **both** a TWE **and** a PTW will be required.)

2.1.3 Common Activities Requiring a Permit to Work

2.1.3.1 Examples of common activities that will require a Permit are set out in the table below. Note that permits are required for all Medium or High Risk work (as assessed under Auckland Airport's RAM). Therefore, less common types of Medium or High Risk work not included below will still require a Permit. Contact the PTW Office if you are unsure if the work you are planning requires a Permit.

Description	Permit required	Type of work	Allowable length of Permit
Confined space entry/work	Yes	For all Confined Space Work (Note restricted space entry not requiring a PTW still requires a JSA and appropriate controls)	Length of task if under one shift **AND** there are no personnel changes. If greater than one shift OR personnel changes, a new Permit is required
Working at heights	Yes, for some work	Refer definitions in preliminary section	Length of task and no greater than one shift (8 hours)
Roof access	Yes	Any Work on building roofs Any inspections on building roofs (unless the inspection leader holds a Roof Top Licence)	Length of task
Floor/wall/ceiling penetrations	Yes	For all work including a reduction of fire rating of the room	Length of task
Ground penetration/ Excavation	Yes, for most work	For all penetrations/ excavations deeper than 300mm For penetrations/ excavations of any depth when within 6m of fuel network pipeline	Length of task (Note required within ground leases when penetration is in the vicinity of any AIAL owned underground services.)
Hot Work	Yes, for some work	All hot work not completed in a designated workshop requires a Permit	Length of task and no greater than 7 days at the discretion of the Permit Issuer
Electrical isolation or commissioning	Yes, for some work	All commissioning of new electrical equipment Some electrical isolations	Length of task and no greater than one shift (8 hours) unless there are concurrent Permits issued for work on the same equipment to the same work parties (i.e., Working on HV equipment)
Electrical Work	Yes, for some work	Work on any High Voltage electrical equipment Any work within MAD from exposed live parts of the equipment	For work on High Voltage electrical equipment: Length of task For work within MAD: Length of the task and not greater than one shift (8 hours)

Description	Permit required	Type of work	Allowable length of Permit
Fire System Impairment	Yes	For all work	For work affecting detection system: Length of task for detection For work affecting the protection system: Not greater than 8 hours
Work on any building component In ITB or DTB Fire System Cause and Effect Matrix	Yes	For all work	For work affecting detection system: Length of task for detection For work affecting the protection system: Not greater than 8 hours For all other work: Length of task: Not greater than one month
Demolition	Yes	For all work	Length of the task
Structural Penetration	Yes	For all work	Length of the task
Traffic System Impairment	Yes	For all work	Length of task: Not greater than one month
Working with hazardous substances (other than Asbestos – see below)	Yes, for some work	When working with a. Flammable or explosive substances b. More than 20 litres of hazardous chemicals c. All substances toxic to humans or the environment	Length of task and no greater than one shift (8 hours) Note SDS must accompany PTW application
Asbestos	Yes	For all work, including but not limited to: • Removal • Containment • Penetrations • Sampling • Testing	Length of the task
Firearms	Yes, for some work	All work other than wildlife control airside by AIAL Wildlife Team under approved SOPs	Length of task and no greater than one shift (8 hours)
Cranes	Yes, for some sites	Cranes of any height south of Tom Pearce Drive or West of Pukaki Bridge Cranes greater than 15m in height north of Tom Pearce Drive	Length of task
Complex lifts	Yes	For any complex lift	Length of task
Airfield	Yes	Any work external to the terminal buildings within the Airfield Area (whether high, medium or low risk)	Length of task and no greater than one week

Description	Permit required	Type of work	Allowable length of Permit
Work impacting airport operation or guests	Yes	Works that have a medium or high risk impact on the safety or efficient operations of the airport e.g., traffic, forecourt, Guest or Public areas or interfacing / effecting these areas.	Length of Terminal Works Endorsement

2.1.4 Work in Leased Areas (Excluding Ground Leases)

2.1.4.1 All medium & high risk work completed by Tenant(s) and/or their Contractors in/or on AIAL facilities, premises or buildings must have an authorised Permit to Work. This includes any roof access to AIAL leased buildings.

2.1.4.2 Tenants and/or their Contractors require the consent of their AIAL Area Authority when applying for a Permit to Work.

2.1.4.3 Tenants may apply to have work authorised as a 'Ring Fenced Construction Project' under section 2.1.6 below, in which case a PTW is not required for work undertaken within the boundaries of the "ring fenced" area.

2.1.5 Work within Ground Leased Areas

2.1.5.1 Where the Tenant has a ground lease, and owns the buildings on the land, then a PTW is only required if the work:

- Is within the DTB regional lounge and associated Koru valet parking area;
- Involves a crane operation:
  - Of any height if south of Tom Pearce Drive or the western side of Pukaki Bridge;
  - Of greater than 15 metres if north of Tom Pearce Drive;
- Involves any ground penetration work within the vicinity of a Critical Underground Asset;
- Is at or breaches the OLS;
- Extends beyond the boundaries of the ground lease;
- Affects AIAL aerodrome operational areas (e.g. lighting that needs assessing for whether it impacts flight operations or work that may create a bird hazard management risk);
- Could impact on any AIAL operations or facilities, i.e. hot works or isolating of systems;
- Will be connecting to any common use Auckland Airport owned network (e.g. electricity, gas, roading, fibre, three waters etc); or

- May result in any nuisance or harmful element being released or experienced beyond the boundaries of the ground lease including, but not limited to, noise, water, dust, chemicals, fumes etc.

2.1.6 Construction Ring-Fenced Projects

2.1.6.1 Construction projects that are outside of the airfield area, passenger terminals and terminal forecourts and public drop off areas, and can be effectively segregated from public areas, can apply in writing to the Head of Health, Safety & Wellbeing to be authorised as a "Construction Ring Fenced Project".

2.1.6.2 If approved as a Construction Ring Fenced Project, then works within the project are not required to apply for an AIAL Permit, other than for works which:

- Involve a crane operation which is at or breaches the OLS;
- Involves any ground penetration work within the vicinity of a Critical Underground Asset;
- Breach the OLS;
- Extend beyond the boundaries of the Construction Ring Fenced Project;
- Affect AIAL aerodrome operational areas (eg, lighting that needs assessing for whether it impacts flight operations or work that may create a bird hazard management risk);
- Could adversely impact on any airfield or passenger operations or facilities, i.e. hot works which could cause an evacuation or isolating of systems which could impact operations;
- Will be connecting to any common use Auckland Airport owned network (eg, electricity, gas, roading, fibre, three waters etc); or
- May result in any material nuisance or harmful element being released or experienced beyond the boundaries of the Construction Ring Fenced project including, but not limited to, noise, water, dust, chemicals, fumes etc.

2.1.6.3 Before approving any works as a Construction Ring Fenced Projects, the Head of Health, Safety and Wellbeing must be satisfied that the Contractor:

- Has either a Safety Plan specific to their site at Auckland Airport and/or the Tenant, which also applies to all work conducted by subcontractors or any work being conducted on their behalf; or if a specific Safety Plan has not yet been developed, that the contract for the project contains a clause that the Safety Plan must be approved by Auckland Airport's Head of Health and Safety;
- Has their own PTW system, which can be used to authorise, manage and control medium and high-risk work undertaken within the boundaries of the "ring fenced" area;

- Has correctly determined the above ground level height (considering above mean sea level and contour heights) of the work area for the purposes of calculating the maximum permissible height of a crane or other structure without it breaching the OLS;
- Has a Wildlife Management Plan approved by the Auckland Airport Wildlife Hazard Manager if required under clause 5.9.3); and
- Has a suitable plan to clearly demarcate and control the site perimeter (where practicable).

2.1.6.4 Where a project has been approved as a Construction Ring Fenced Project, the Contractor has overall responsibility for the management of health, safety and wellbeing on the Ring-Fenced site, including the Contractor's PTW system. If there are any changes or planned changes from the basis on which the project was approved as a Construction Ring Fenced project, these must be communicated to, and accepted by, Auckland Airport's Head of HSW.

2.1.6.5 If a project needs to be tendered as a ring-fenced project, then the contract must contain a clause making its status as a ring-fenced project.

2.2 WHEN DO YOU NEED TO SUBMIT A PTW APPLICATION?

2.2.1 Three Working Days' Notice Required

2.2.1.1 Permit to Work applications, including all associated certificates and documents (or applications for), must be submitted at least 3 working days before the planned date of the work. The only exceptions are:

- Short Notice Applications outlined in clause 2.2.2;
- Emergency work during working hours when the PTW office must be notified; or
- Emergency out of hours work approved by Senior People outlined in clause 2.2.3.

2.2.1.2 Submit the Permit Application (SMS 06.02.02) either by scanning the Permit Application Form and all supporting documentation and emailing it to Permit.office@aucklandairport.co.nz or in person by delivering a hard copy to the Permit Office at Tuapapa – The Base, Jimmy Ward Crescent, Auckland Airport.

2.2.2 Short Notice Applications

2.2.2.1 In exceptional or unforeseen circumstances, short notice applications may be accepted at the discretion of the PTW Office 24 hours prior to the work commencing.

2.2.2.2 Short Notice Applications must be accompanied by the Short Notice PTW Endorsement Form (SMS 06.02.03) which includes a signed statement from the relevant AIAL General Manager, Head of the relevant Business Unit or Manager Engineering Services setting out the reason for the short notice application and supporting it.

2.2.3 Emergency Work

2.2.3.1 Auckland Airport is a 24 hour, seven days a week operation and emergency medium & high risk work may need to be completed, either within or outside normal Permit Office hours, and in some cases, within a faster time frame than a PTW can be obtained within.

2.2.3.2 Medium or high risk work undertaken in an emergency situation without a PTW must be limited to that required to make the problem or issue 'good', safe and secure. Non urgent work to subsequently fully resolve the issue must have a PTW.

2.2.3.3 Medium or high risk work undertaken in an urgent emergency situation without a PTW must still be undertaken safely with all appropriate controls in place to reduce the risk as low as practicable. Medium risk urgent emergency work can be undertaken using a Take 5 or similar process but high risk urgent emergency work requires a JSA to be completed as well as a completed Hazard and Risk Identification Checklist (SMS 06.01.07).

2.2.3.2 Workers undertaking emergency work must:

- Be suitably qualified and competent to perform the work;
- Understand and comply with all requirements to complete the work safely;
- Complete either a Take 5 card or similar (for medium risk) or a JSA (for high risk) to identify any potential hazards, risks and controls;
- Determine whether any additional resource or equipment is required to complete the task safely;
- For high risk urgent emergency work, advise by phone one or more of the Senior Persons listed below the nature of the work to be undertaken and a summary of the JSA that has been completed, and obtain approval from the Senior Person, and record that approval in either the documented JSA or the Work Order prior to commencing any work activity.

2.2.3.3 Senior People who may approve urgent emergency high risk work are the:

- Duty Operations Manager;
- Relevant Project Manager or Project Delivery Manager;
- Engineering Services Manager;
- Head of Property Asset Management;
- Head of Airport Operations;
- Any General Manager;
- Duty Engineering Services Manager (after hours only);
- On call Airport Operations Manager (after hours only); or
- Airfield Operations Team Leader on duty (after hours only).

2.2.3.4 Normal delegated authority rules regarding approval of work apply as set out in the AIAL RAM. If the residual risk with controls in place remains high or greater, then the work

requires GM approval (provided that between 10pm and 7am (or if no GM is available) then on call Airport Operations Manager or the Duty Engineering Services Manager can authorise emergency high risk work).

2.2.3.5 A copy of the JSA and Hazard and Risk Identification Checklist completed for high risk urgent emergency work must be lodged with the PTW office the next working day either by delivering it to the PTW Office at Tuapapa – The Base, Jimmy Ward Crescent, Auckland Airport or emailing it to Permit.office@aucklandairport.co.nz.

2.2.4 Planned routine maintenance

2.2.4.1 Planned routine maintenance that would require a Permit can be grouped together in geographically similar locations and similar types of work, with a single Permit applied for. One month planned routine maintenance Permits would suit commonly recurring tasks. It allows for slight variation in timing due to weather, availability of staff or parts, or tasks taking slightly longer than anticipated.

2.2.4.2 Planned Routine Maintenance Permits can only be used for medium risk tasks – i.e. they cannot be used for high or critical risk assessed tasks.

2.2.4.3 Planned routine maintenance Permits cannot be used for work where the Permit needs to be granted on site, e.g. confined space, hot works within the terminal or airside or cranes.

2.2.4.4 Examples of tasks that could come within a planned routine maintenance Permit would include planned servicing of airbridges on the airfield, planned servicing of fire egress doors in a terminal, planned escalator or travellator servicing, planned changes of filters.

2.3 OVERVIEW OF PERMIT APPLICATION PROCESS

2.3.1 The following briefly describes the Permit application process:

1. Determine if the type of work to be carried out requires a Permit (refer to section 2.1);
2. Gather all information relevant to the work, including but not limited to:
    - Starting time and date;
    - The expected duration;
    - A description of the task; and
    - The names of those carrying out the work.
3. Conduct a thorough hazard and risk assessment (e.g. JSA or equivalent) and determine:
    - Who is at risk?
    - What are the hazards?
    - What control measures are necessary to manage the hazards (using the hierarchy of controls)?
    - What the level of controlled (residual) risk is?
4. Obtain any necessary pre-work precautions/approvals such as:
    - Fire Isolation Certificate;
    - Ground Penetration Certificate;
    - Fire Stopping Requirement Notice;
    - Traffic Management Plan;
    - Terminal Works Endorsement;
    - Smoke Detector Isolation Approval
    - Sprinkler System Shutdown Approval
    - Airfield Works Approval (form 12A);
    - Wildlife Hazard Management Plan;
    - AOT Crane/Temporary Structure Approval;
    - CAA consent and NOTAM for any breach of the OLS or crane in excess of 60m;
    - Notification to and approval from the relevant Pipeline Manager if work is planned within 6m of any fuel pipeline (including horizontal directional drilling);
    - Close Approach Consent (sometimes also call Close Proximity Permit) from the utility owner if working within the specified proximity of underground or overhead services. (refer Vector close approach consents); and
    - Any required plans from 'BeforeUDig'.
5. Prepare a Permit application (SMS 06.02.02) and supporting documentation or information including, at minimum:

- JSA (or equivalent);
- If the work is high risk, a completed Hazard and Risk Identification Checklist (SMS 06.01.07)
- Any known or suspected risks present in the work area e.g. asbestos, aluminium composite panels, fire rated walls;
- A rescue/recovery plan if the work is for confined space entry, working at height, complex lifts or excavations (or otherwise required);
- A list of likely or known concurrent or conflicting activities and how any conflicts will be managed, including methods of communication with the workers involved in the current or conflicting activity/activities;
- A list of plant, tools and equipment to be used;
- The names of key people involved in or managing the work;
- A list of PPE to be used; and
- Any relevant pre-approvals or certificates required (noting that if these have not yet been received the PTW application can still be lodged for an in principle approval as per 2.3.2).

6. Submit your Permit application either by scanning the Permit application form and all supporting documentation and emailing it to Permit.Office@aucklandairport.co.nz or in person by delivering a hard copy to the Permit Office at Tuapapa – The Base, Jimmy Ward Crescent, Auckland Airport.
7. The Permit to Work application, including all associated certificates and documents, must be submitted at least 3 working days before the planned date of the work. In exceptional or unforeseen circumstances Short Notice Applications (SMS 06.02.03) supported by a General Manager or Head of Business Unit may be accepted at the discretion of the PTW Office 24 hours prior to the work commencing. Emergency work approved by Senior People may be undertaken without a PTW provided the process in clause 2.2.3 is followed.

2.3.2 In some cases a Permit may be 'Approved in Principle' but not issued. This can either be because:

- A further approval is required before it can be issued (e.g. Terminal Works Endorsement or an Airfield Works Approval); or
- The work is sufficiently high risk that the PTW office needs to verify that all controls identified in the PTW application are in fact in place before the Permit will be issued. In this case, the issuing of the Permit will occur on site after a site inspection. Hot works (within the aeronautical zone), confined space, excavations or penetrations in the vicinity of Critical Underground Assets, and cranes are examples of high risk work where a Permit will normally be issued on site.

2.4 OBLIGATION ON PICWS AFTER PERMIT ISSUED

2.4.1 Once a Permit is issued, it will either be sent by email by the PTW Office to the Area Authority or the PICWS must uplift it from the PTW Office.

2.4.2 Before any work activity commences the PICWS must brief each team member on the requirements of the Permit, ensuring all workers understand that:

1. They are required to work in accordance the requirements and conditions of the Permit at all times; and
2. They must intervene and/or stop the work if the requirements of the Permit are not being followed.

2.4.3 While the work is being done the PICWS must:

1. Keep a copy of the Permit and all supporting documentation on site at all times;
2. Observe the work being carried out and monitor compliance with the requirements of the Permit;
3. Regularly review hazards, risks and controls; and
4. Cooperate with any audit or safety walk undertaken by the PTW office, Area Authority or other Auckland Airport staff, of the work site and activities being undertaken.

2.4.4 If it is not practicable to display the Permit on site (e.g. the site is exposed to weather or used operationally outside work hours) an appropriate summary notice or sign should be displayed including a brief summary of the work, its duration and hours of work, the Project Manager's name and contact details and emergency contacts including the PTW Office and Auckland Airport Operations Centre.

2.4.5 If the PICWS is not able to be present to supervise the work for the full duration of the works, then they must transfer this responsibility to another person, and this must be formally recorded on the PTW Application Form in the space provided. The PICWS is responsible for fully briefing the incoming PICWS of any risks, hazards and controls that are in place and any special conditions of the PTW.

2.5 AMENDMENT TO PERMIT

2.5.1 If a PTW or a TMP has been approved, and on the day there are last minute minor changes in scope or method of work which are risk assessed as **Low** using the Auckland Airport RAM, then such changes can be made to the workplan by the PICWS. The PICWS should record the changes on the JSA and have all workers sign to indicate they understand the changes and any relevant controls put in place.

2.5.2 If any change to the PTW or TMP scope of works or workplan is required which is risk assessed as **Medium** or **High** using the Auckland Airport RAM, then approval from the PTW Office or PTW Issuer is required before the work can proceed. Contact the PTW office by phone and discuss the proposed changes, risks and controls. Such amendments can be reviewed by the PTW office upon receipt (subject to staff availability) without the need for three working days' notice. Note – medium or high risk changes to the approved PTW or TMP must have written (which may be provided electronically) authorisation from the PTW office before proceeding.

2.6 PERMIT STATUS

An issued Permit will be either Active, Suspended, Closed (or Closed Pending Documentation) or Expired. No work may be undertaken when a Permit is Suspended or Expired. A Permit will be Suspended automatically in certain circumstances, or can also be Suspended by Notice.

Note a Permit Application can also be 'Approved in Principle' but not issued due to further approvals being required or an on-site inspection needed. In this case there is not yet an issued Permit. (Refer 2.3.2 above)

2.6.1 Active Permit

2.6.1.1 A Permit is Active when it has been issued by a Permit Issuer and the Permitted work is authorised to take place. Note that submission of a PTW Application is not sufficient for a Permit to be Active – the PTW Application must be approved and signed by a PTW Issuer from the PTW Office before a Permit is Active.

2.6.1.2 If a new hazard or risk is identified during the work activity, the work must stop, the JSA must be reviewed, and if a suitable control(s) can be applied within the scope of the existing Permit, then the work may continue.

2.6.2 Suspended (invalid) Permit

2.6.2.1 No work activity may take place if a Permit is Suspended until the Permit is revalidated or reissued.

2.6.2.2 A Permit is automatically Suspended when:

- There has been a serious injury or incident, or a significant near miss during or associated with the Permitted work;
- There has been an emergency evacuation (including false alarms and trial evacuations);
- Where there has been a change in the scope or method of work that is more than minor; or
- A change in the work environment has introduced new hazards or risks which, after revising the JSA, cannot be effectively controlled within the conditions of the existing Permit. E.g. emergent conflicting work, severe weather conditions etc.

2.6.2.3 A Permit is Suspended by Notice where:

- An AIAL employee has reviewed the worksite and PTW documentation and deemed the work activity is non-compliant with the requirements of the Permit; or
- If the worksite is found not to be active during the time the Permit was granted for and the PTW Office has not been notified in advance.

2.6.2.4 Revalidation by the PTW Office of a Suspended Permit is required if the Permit is Suspended for any reason, except for suspension caused by an evacuation. One working days' notice is required to revalidate a Suspended Permit. To revalidate a Suspended Permit, the PICWS must:

- Review the JSA and the hazards, risks and controls; and
- Return the Permit and all supporting documentation to the Permit Issuer for written revalidation.

2.6.2.5 In the case of a Permit suspended as a result of an evacuation, this Permit can be revalidated by the PICWS after returning to the worksite (after the all-clear for re-entry has been provided by the EOC) by:

- Reviewing the JSA; and
- Confirming that the conditions of the worksite and the hazards, risks and controls are unchanged from prior to the evacuation.

In this case the work may recommence in accordance with the requirements of the existing Permit. If there is any doubt, the PICWS must contact the PTW Office for clarification or return the Permit and all supporting documentation to the Permit Issuer for revalidation.

2.6.3 Expired Permit

2.6.3.1 When the authorised end time and date stated in the Permit for the work to occur has elapsed, the Permit will automatically Expire.

2.6.3.2 Once a Permit is Expired, no further work can be undertaken under it. If the work has not been completed, a new Permit is required, with the application lodged with three working days' notice.

2.6.3.3 Note, an amendment to the authorised time a Permit is valid for can be applied before the Permit expires. Once the Permit has Expired, an amendment is not possible and a new permit is required.

2.6.4 Closed Permit

2.6.4.1 A Permit is Closed when the scope of the work is completed, all required close-out checks have been made and all signatories have signed it off as Closed.

2.6.4.2 On completion of the work, the worksite must be cleared by the PICWS and made ready to return to normal operations. Prior to closing the Permit, the worksite must be inspected by the Area Authority, who will ensure that it is safe to return to normal operational use.

2.6.4.3 Closing the Permit includes:

- Confirming that the work has been completed to the required standard;
- Confirming the worksite has been cleared of all equipment and materials related to the Permitted work, and is fit to return to normal and safe operation; and
- Confirming that any remedial work has been completed, including but not limited to:
    - Provision of a completed Fire Stopping Requirement Notice verifying that penetrations made to fire walls have been appropriately sealed by an approved provider and a register provided of any sealed penetrations;
    - Any isolations to fire detection or suppression systems have been reactivated; and/or
    - Any soil disturbance has been remedied in accordance with the wildlife management requirements set out in section 5.10;
- Provision of any building compliance related documentation to Auckland Airport's nominated holder of building compliance documentation, including but not limited to:
    - As built drawings (to the GIS team);
    - Any Producer Statements;
    - Any Code of Compliance Certificates or Safe Operator Certificates; and
    - Any Council Compliance documentation such as CCCs, CPUs, updated Building Compliance Schedules or Building Compliance Schedule Manuals.
- Signing the End of Job Inspection section of the Permit (PICWS);
- Returning the Permit documentation to the Permit Office (in person or via email);

- Undertaking any inspections which may be required and then signing the Close Out section of the Permit (Permit Issuer); and
- The Permit Issuer updating and filing the Permit and all supporting documentation in the Permit Office.

2.6.5 Closed Pending Documentation

2.6.5.1 If all work on a PTW has been satisfactorily completed, and the Permit could be closed other than for receipt of any building compliance related documentation, then the Permit may be moved to a status of 'Closed Pending Documentation'.

2.6.5.2 This includes situations where the following is being waited for:

- As built drawings (to the GIS team);
- Any Producer Statements;
- Any Code of Compliance Certificates or Safe Operator Certificates; and
- Any Council Compliance documentation such as CCCs, CPUs, updated Building Compliance Schedules or Building Compliance Schedule Manuals.

2.6.5.3 When the building compliance related information is received then the Permit will move to a fully Closed status.

SECTION 3 – ROLES, TRAINING AND ASSURANCE

3.1 ROLES AND RESPONSIBILITIES

Managers, supervisors and workers all have responsibilities under the Permit to Work system:

Position / Job Title	Responsibilities
Area Authority	The Area Authority is an Auckland Airport staff member who may be the asset owner or their delegate, project manager or their delegate. (Note that Air NZ Property or Facilities Managers can act as Area Authority for Air NZ leased areas). The Area Authority is responsible for: • Ensuring that the design and standard of the work complies with any applicable AIAL Design Standards; • Ensuring that any required Council consents have been obtained; • Engagement of the work party performing the task and/or for the area that the work is to be performed in; • Identifies the PICWS for supervision of the work; • Ensuring that a Permit is applied for in relation to any work which requires a PTW (and that no work which requires a PTW is undertaken without one); • Ensuring that the PTW is applied for three days prior to the planned work commencing; • Ensuring that the AIAL Management of Change Process has been followed for any safety-related change with approval obtained (refer SMS 08.00.01); • Ensuring that any internal pre-requisite consents have been obtained such as the Terminal Works Endorsement, GPC, Fire Isolation approvals, Airfield Works Consent, Terminal Works Endorsement, Wildlife Hazard Management Plan; • Reviews the Permit application and all supporting documentation prior to it being sent to the Permit Office; • Signs the PTW certificate as the AA; • Ensures that the PICWS understands all relevant Auckland Airport Rules and that the work complies with these; • Monitors the safety of the work and compliance with the conditions of the PTW; • Ensures all incidents associated with the work are reported and investigated in accordance with AIAL's RAM and Incident Reporting and Investigation Procedure.

Health, Safety & Wellbeing Business Partner	Provides professional advice, guidance and assistance to the Managers, Supervisors and Workers on matters relating to health and safety at work.
Head of Health, Safety & Wellbeing	Overall owner of the PTW system, including: • Establishment of the PTW system; • Ensuring necessary supporting documents, guidance materials, templates, SOPs, forms, etc. are available and current; • Identifying appropriate training for PTW system users; • Appointment of Permit Issuers; • Routinely monitoring the PTW system to ensure it is working effectively, including undertaking spot field audits from time to time; • Leading an annual Management Review of the system; • Arranging for periodic independent third party audits of the PTW system.
Permit Issuer	The Permit Issuer is responsible for: • Applying and improving the PTW system; • Authorising (i.e. issuing) all types of Permits to Work at Auckland Airport; • Delivering training programmes for PICWS and Area Authorities; • Maintaining a current register of PICWS, and other appropriate records; • Conducting regular audits of Permits and the PTW system as a whole; • Ensuring that Permit applications are completed correctly; and • Ensuring that suitable control measures are identified prior to signing any Permit; • When required, inspecting worksites prior to commencement of Permitted works to identify any unusual hazards or risks.

Person in charge of the Worksite (PICWS)	The PICWS:
	• Must have undertaken all required safety training, including:
	  ○ AIAL PTW Office induction training
	  ○ NZQA HARM (Hazard and risk management) course (or equivalent alternative formal qualification)
	  ○ If works are occurring within the Aeronautical Zone, AIAL's core on-line modules (currently Airport Workers Rules, Zero Harm, Security Watch, Biosecurity Awareness and General Fire Safety)
	  ○ If works are occurring in the Airfield Area, the on-line module on Ramp Fire Awareness;
	• Ensures all tools and equipment to used are serviceable and where required carry current certification;
	• Leads the development of JSAs (or equivalent) for all work activities requiring a Permit;
	• Leads the development of a recovery plan / rescue plan / emergency response plan;

	• Identifies and ensures implementation of control procedures to manage hazards and reduce risks, ensures that all appropriate precautions have been taken so that the work can be carried out safely;
	• Uplifts the Permit from the Permit Office, displays the PTW at the worksite and upon completion of the work returns the PTW to the PI for closure.
	• Facilitates a toolbox talk with all personnel involved in the work to ensure:
	  ○ scope of permitted work is understood
	  ○ the hazards and hazard controls are understood
	  ○ personnel understand their responsibility for maintaining hazard controls
	  ○ any relevant Auckland Airport rules regarding aerodrome safety, security, biosecurity and environment are understood
	  ○ workers are aware of what to do in the event of an incident or emergency
	• Ensures that all members of the work party sign on to the JSA after the toolbox talk;
	• Is responsible for the overall safe execution of the work scope;
	• Is responsible for reactivating or obtaining authority to reactivate any suspended PTW;
	• Raises any safety concerns with the AA and PI, including any concerns about concurrent or conflicting activities;
	• Is present at the worksite, or represented by an approved second-in-charge, while the Permitted work is being performed;
	• If the PICWS needs to leave the worksite they must appoint a replacement PICWS and record this on the Permit, and ensure that the incoming PICWS is fully briefed on all risks, hazards and controls on the work site and any special conditions on the Permit;
	• Ensures that after completion of the Permitted work the worksite is returned to an operational state;
	• Reports all incidents, near misses and safety observations to the AA.

Safety Watch **Safety Observer** **Safety Spotter**	**The Safety Watch/Observer/Spotter:** • Must have completed the relevant NZQA training for the type of safety role being undertaken; • Monitors that conditions and requirements listed on the Permit are complied with at all times; • Maintains a constant watch for hazards or risks related to the tasks being completed, before and during the work; • Anticipates and communicates to the PICWS (or their authorised second-in-charge) any conditions that would be hazardous or pose a risk to workers or others affected by the Permitted work; • When necessary, stops all work and keeps the worksite closed until hazards/risks are controlled; • Maintains a position that allows clear observation of the work;

	• Maintains communication with the workers at all times; • Must not be carrying out any other role or work; • Does not leave worksite while work is being carried out, unless properly relieved by an equivalent alternate Safety Watch; • Remains on watch at the site of the Permitted works until all people involved in the work have completed the work and/or left the site; **In the case of Hot Work:** • The Safety Watch must be trained in unit standard 3271 (Suppress fire with hand extinguishers and fixed hose reels) and 4647 (Explain principles of fire science) • Ensures the correct type and size of fire extinguisher(s) are at hand; • Determines the appropriate location of all firefighting equipment in the worksite; • Checks that all firefighting equipment is in proper working order and is competent to operate the equipment; • Secures the worksite where hot work has been performed before departing, ensuring there are no smouldering fires or hot spots; • Remains on watch at the site for 60 minutes (or a longer period if required) after the work has stopped. • If no fire suppression or detection is present in the works area then a fire safety watch must remain on site for 4 hours after the hot works are complete. • Note that the Safety Watch may also include the duties of Fire Watch for hot work and/ or Safety Observer or Spotter.
Workers	• All workers must be able to identify the inherent dangers of medium and high risk tasks such working in confined spaces, work at height, hot work and be able to identify any high risk or non-routine work taking place on their work site. • All workers must understand that medium & high-risk work is prohibited unless a Permit to Work has been issued for that work. • All workers must understand all relevant/applicable Auckland Airport Rules regarding aerodrome safety, security, biosecurity and environment. • All workers must know how to report any incident or emergency to AIAL Operations Centre or FENZ. • All workers must be aware of the relevant evacuation route and Emergency Assembly Area applicable to the work site.

3.2 TRAINING REQUIREMENTS

3.2.1 The table below sets out the minimum training requirements for medium and high risk work being undertaken at Auckland Airport:

	AIAL PTW Issuer	PICWS or any person delegated to be PICWS	Person undertaking the task
AIAL PTW Induction	✓	✓	n/a
• Hazard ID & RM (HARM) (eg US 00497 or US 30265) (or equivalent alternative or advanced other course).	✓	✓	✓
AIAL Core Aeronautical Zone Training	✓	If undertaking work in the aeronautical zone	Recommended if regularly undertaking work in the aeronautical zone
Permit Issuer • US 17590	✓	n/a	n/a
Working @ height (foundational working @ height) • US 17600 (safe work practices) • US 23229 (use safety harnesses) • US 25045 (height safety equipment)	If issuing a PTW relating to working at height	If supervising working at height	If undertaking work at height (Note not required for people inspecting site or work if they are escorted by trained person)
Using a MEWP • US 23966 (using an MEWP) • US 23960 (scissor lift) • US 23961 (truck EWP) • US 23962 (self-propelled boom lift) • US 23963 (truck mounted EWP)	US 23966 If issuing a PTW relating to use of an MEWP	US 23966 & 23960 required if supervising MEWP use	Relevant US must be held for the type of MEWP being operated/task being undertaken
Fall arrest systems installation or use • US 23229 (use safety harnesses) • US 25045 (height safety equipment) US 15757 (use, install and remove proprietary fall arrest systems)	Working @ height foundation training required	Working @ height US required	Relevant US must be held for the use or installation task being undertaken
Scaffolding erection and dismantling • US 9184 (pre-fabricated scaffolding up to 5 metres) • US 13016 (knowledge of scaffolding up to 5 metres) • US 13053 (erect and dismantle scaffolding up to 5 metres)	Nil	Relevant US must be held for the type of scaffolding erection/dismantling being undertaken	Relevant US must be held for the type of scaffolding erection/dismantling being undertaken
Confined space • US 17599 (confined space entry) • US 18426 (confined space hazards) • US 25510 (atmospheric testing)	If issuing a PTW relating to confined space	If supervising confined space	If undertaking work in a confined space or being safety watch
Fire	Nil	If supervising hot works	If undertaking hot work or being fire safety watch

	AIAL PTW Issuer	PICWS or any person delegated to be PICWS	Person undertaking the task
• US 3271 (suppression with handheld equipment) • US 4647 (principles of fire science)			
Cranes • US 16617 (or US 30072) (truck loader crane) • US 30072 (slinging loads safely) • US 3789 (sling varied load and operate crane) • US 3795 (mobile crane) • US 3794 tower crane) • US 27676 (lattice boom track crawler crane)	Nil	US 16617 or 30072 required if supervising crane usage	Relevant US must be held for the type of crane being operated/task being undertaken

3.2.2 People responsible for issuing and receiving Permits must have refresher training to ensure familiarity and compliance with any new Regulations, WorkSafe Guidance and maintain competency. Refresher training needs to be conducted:

- Every two years; or
- If there is a significant change made to the PTW system; or
- If required by the PTW Office due to issues with the quality of the Permit paperwork and JSAs being presented Applicant.

3.2.3 Any Unit Standards must be current and refreshed within required NZQA or industry body time-frames.

3.2.4 Alternative equivalent formal qualifications may be accepted by the PTW Office, if a link to the qualification authority and content covered by the alternative qualification is provided upon request.

3.2.5 Where an industry organisation or Board or Regulations require a particular level of training or registration to undertake certain tasks, then anyone undertaking those tasks must hold that relevant qualification or registration (eg, electrical work or plumbing and gasfitting work).

3.3 APPROVED INCUMBENT LICENCE (AIL)

3.3.1 In order to reduce the volume of Permits which would otherwise be required for regular tasks or inspections by trained individuals, suitable staff or contractors who are 'Incumbents' may apply to the PTW Office to be granted a quarterly Approved Incumbent Licence in the following areas:

- Roof-top Access (known as an Airport Incumbent Licence (Roof-top Access)).
- MEWP use (known as an Airport Incumbent Licence (MEWP).

3.3.2 To be classified as an 'Incumbent' and thus able to apply for an Approved Incumbent Licence, an individual must spend the majority of their working week on site at Auckland Airport facilities and have a high degree of familiarity with the Airport environment, processes, risks and hazards.

3.3.3 Any person that holds an Approved Incumbent Licence granted under this section does not need to obtain a PTW for any inspection (including pre or post work) or brief maintenance task that would be of low risk if it was not working at height (e.g. changing filters or light bulbs, measurements or visual inspections, testing, short duration repetitive tasks). Any work which is non-routine, of longer duration or high risk will still require a PTW. There may also be other factors which would trigger the need for a Permit (e.g. the task being undertaken such as drilling into an area with possible asbestos or penetrating a fire rated wall).

3.3.4 Applications for an Approved Incumbent Licence should be made on the form SMS 06.02.04 and sent to Permit.Office@aucklandairport.co.nz .

3.3.5 The decision as to whether or not to grant an Approved Incumbent Licence is solely at Auckland Airport's discretion. Limits can be specified on the licence, such as the area the Approved Incumbent Licence applies to, the height the MEWP can ascend to, weather conditions, etc. Decisions made by the PTW office in relation to granting or limiting an Approved Incumbent Licence can be referred for review to Auckland Airport's Head of Health and Safety, with the decision by the Head of Health and Safety being final.

3.3.6 The term of any Approved Incumbent Licence granted under section 3.3 will be 3 months, unless revoked or suspended by the PTW Office for unsafe behaviour. For the avoidance of doubt, a person with a suspended Approved Incumbent Licence can still apply for a PTW to undertake any required tasks.

3.3.8 In determining whether or not to grant an Approved Incumbent Licence, the following factors will be considered:

- The formal training held by the Applicant in relation to the type of Approved Incumbent Licence being applied for;
- The Applicant's familiarity with Auckland Airport assets;
- The Applicant's familiarity with risks and hazards existing in the Auckland Airport environment;
- The Applicant's understanding of the JSA, Take 5 and hazard identification processes and the elimination, mitigation and isolation of hazards;
- The robustness of the SOP which the Applicant would be using;
- The method which the Applicant will use to risk assess the site on the day (e.g. Take 5 card, JSA book, Q start or other method);

- The history of the Applicant's adherence to PTW controls and requirements; and
- Whether the Applicant has received any health and safety demerit points under the Airport Workers Rules.

3.3.9 When an Approved Incumbent Licence is being relied up to undertake any access, inspections, servicing or minor maintenance:

- The worker must have Approved Incumbent Licence with them either physically or electronically in a readily accessible format;
- The Approved Incumbent Licence must be produced for inspection if requested by any Auckland Airport Manager or supervisor, PTW office staff member or member of Auckland Airport Health and Safety Team;
- The worker must undertake a risk assessment prior to any task and record this in a suitable format (e.g. Take 5 card, JSA book, Q start or other method) which can be shown to any Auckland Airport Manager or Supervisor, PTW office staff member or member of Auckland Airport Health and Safety Team; and
- All relevant pre-start inspections and checks appropriate to the type of equipment and task must be undertaken.

3.4 ASSURANCE REQUIREMENTS

Auditing is an integral part of the PTW system to verify that the requirements of the system:

- Are being adhered to;
- Are effective; and
- If inconsistencies or improvements are identified, corrective actions are initiated.

3.4.1 Field Audits

3.4.1.1 Field audits can be undertaken by the Permit Issuing officers, the Area Authority or a relevant Auckland Airport Manager at any time. These types of audits examine each individual site for compliance with the PTW system.

3.4.1.2 As a guide 15% of new Permits issued every week shall be audited for compliance with the overall PTW system and any discrepancies brought to the notice of the PICWS or Area Authority. All Permits for crane lifts, confined space and hot works must have a field audit on site before the Permit is issued.

3.4.1.3 Field audits check for the following at the worksite:

- The PTW application certificate is displayed correctly at the worksite and is valid as per the dates displayed;

- The certificate is authorised and endorsed by the correct permit signatories;
- Hazard ID and controls are clearly identified through the JSA and associated checklists;
- All workers on site must be signed onto the JSA;
- The specified safety equipment is available and functional at the worksite and all other controls are being applied;
- Any equipment is current (ie, tested and tagged);
- The controls applied are appropriate for the hazards identified; and
- There are no other unidentified hazards.

3.4.1.4 Where required corrective actions must be recorded and assigned in Risk Manager (or such other health and safety risk management used by AIAL from time to time) to the appropriate AIAL person.

3.4.1.5 Where Permit conditions are not being followed, where work is undertaken without a Permit, or where it is identified that Health and Safety requirements of the Airport are not being followed, then demerit points can be issued under the Airport Workers Rules as follows:

- Low risk potential consequence 35 demerit points
- Medium risk potential consequence 50 demerit points
- High risk potential consequence 75 demerit points
- Critical risk potential consequence 100 demerit points

3.4.1.6 For more information on the Airport Workers Rules demerit points system, consequences, access suspension, reviews and appeals, refer sections 1.8 to 1.12 of the Auckland Airport 'Airport Workers Rules'. Note demerit points can also be issued for breaches of aviation security, Customs, biosecurity and health related rules and requirements.

3.4.2 Quarterly Management Assurance Reports

3.4.2.1 The PTW Office must prepare a three monthly Management Assurance Report to the Head of Health, Safety & Wellbeing, Head of Operations Risk and Assurance, GM Corporate Services, GM Infrastructure and GM Operations. This report should outline:

- A summary of Permits issued and the types of work;
- A summary of the Field Audits undertaken and any corrective actions identified, and any emerging trends or risks;
- Any high-risk matters identified during Field Audits or other inspections;
- Any work undertaken without an appropriate Permit;
- Any high-risk incidents or near misses associated with Permitted work;
- Education and awareness activities undertaken;

- Any insights from data drawn in relation to trends and emerging risks and self-identification of improvements; and
- The results of any Management Reviews or other audits of the PTW Office and System, and progress actioning any corrective actions.

3.4.3 Annual Management Review

3.4.3.1 An annual Management Review should be undertaken of the PTW management systems, by a group of three senior Managers, selected from a representation of Health and Safety, Operations, Property, Retail and Infrastructure teams. At least one of these Managers must be familiar with the PTW system.

3.4.3.2 This annual Management Review should both confirm that the PTW System is being delivered in accordance with this Manual and look for opportunities for improvement.

3.4.3.3 Matter to be covered should include (but are not limited to):

- Permit issuers, PICWS and Area Authorities are competent and have completed relevant training requirements;
- Relevant PTW documentation is current and easily available at the PTW Office;
- Management systems associated with the PTW system are functioning correctly and being applied consistently;
- Field Audits are being carried out as required, and producing appropriate results, and corrective actions are being identified, logged in Risk Manager and actioned;
- Three monthly Management Assurance Reports are being prepared by the PTW Office, with appropriate insights from data drawn in relation to trends and emerging risks and self-identification of improvements;
- Appropriate levels of education and awareness raising activities are being undertaken;
- Current legislative requirements are being met, and where changes in legislation or regulatory requirements have occurred (or will), that these have been reflected within the PTW System and requirements;
- So far as practicable, an assessment of whether non-permitted work is being carried out without a Permit;
- Non-compliant items from any previous audits have been actioned; and
- An assessment of the effectiveness of the PTW System and Permit Issuing Office at ensuring Medium and High-risk work at the Airport is safely managed and undertaken, and any suggestions for improvement.

3.4.3.4 The results of this Management Review should be presented to the Executive Leadership Team and reviewed with General Managers. Results should also be recorded in RM and any actions arising shall also be assigned through RM.

SECTION 4 – COMMON REQUIREMENTS & CONTROLS

4.1 GENERAL PERMIT REQUIREMENTS

4.1.1 A PTW will not be granted for any Medium or High-Risk Work until:

- All risks and hazards have been identified and controls identified that will manage those risks and hazards to a level that is as low as reasonably practicable;
- All other safer options to complete the work have been considered and ruled out;
- Any relevant pre-consents or approvals required have been obtained, including but not limited to:
    - Building Consent (or Resource Consent)
    - Terminal Works Endorsement
    - Airfield Works Approval (the 'bluey') (AOT 12)
    - Wildlife Hazard Manager approval of Wildlife Management Plan
    - Fire Isolation Certificate (ES 405 and/or 406)
    - Ground Penetration Certificate (ES 403)
    - Fire Stopping Requirement Notice
    - Watermain Shutdown
    - Major Plant Planned Outage (ES 409)
    - AOT Crane/Temporary Structure Approval
    - Notification to (and if an excavation, approval of) the relevant Pipeline Manager if work is within 6m of any fuel pipeline (including horizontal directional drilling);
    - Close Approach Consent (sometimes also call Close Proximity Permit) from the utility owner if working within the specified proximity of underground or overhead services. (Refer Vector close approach consents)
    - WorkSafe NZ, CAA or NZ Police have been notified if required.

4.1.2 After a PTW is granted, the Medium or High-Risk Work cannot proceed until:

- The work area is appropriately isolated from the public or other airport users;
- All controls identified in the JSA are present and in place so that the risks and hazards identified are managed to a level that is as low as reasonably practicable;
- The Permit is displayed at the work area;
- The PICWS to whom the Permit was issued is present on site (or a delegated PICWS is present with the delegation section on the PTW form having been completed by the outgoing PICWS and the incoming PICWS and available on site);
- The requirements of the Permit have been communicated to all workers involved in the work and any others who may be affected by the work, and they have confirmed these are understood;

- Appropriate PPE is being used;
- All persons undertaking the work are qualified, authorised and competent to do the work in question; and
- WorkSafe NZ, CAA or NZ Police have been notified if required.

4.2 STANDARD H&S REQUIREMENTS

4.2.1 All PCBUs are, as a matter of law and good practice, expected to have their own H&S policies and procedures, and meet all safety requirements under the Health and Safety at Work Act 2015. If you do not have your own procedures for a particular element, you must use Auckland Airport's.

4.2.2 This PTW Manual does not contain a definitive code of safe operating practices for equipment, machinery, processes, protective gear, etc. It is expected that the contractor will ensure all its staff and subcontractors are fully trained in all such matters. However, by way of reminder, the following general requirements (amongst others) are mandatory across all work sites at Auckland Airport at all times while any permitted work is occurring, being set up or while the site is being returned to normal operations:

Keep the public and visitors safe	• The public and staff must be segregated from the work site at all times. • All required temporary directional signage for guests must be arranged. • All temporary hoardings are to be constructed in a safe manner and approved by the Auckland Airport Area Authority. • No tools or equipment must be left unattended in public areas, landside or airside, and mechanical plant must be isolated at all times during down time. • Nail guns operated in worksites surrounded by areas accessible to the public can only be used behind full-height hoardings (they may only be used behind a solid barrier). • Any scissor hoist must be key-operated and have the keys removed whenever it is unattended. • J 20 Ramset guns are banned from the entire airport precinct.
PPE	• Wear all required PPE. • The PCBU is responsible for providing safety equipment to an approved New Zealand standard or its equivalent to its employees and for ensuring that the equipment is used or worn as required.
Housekeeping	• Keep all walkways clear at all times (particularly fire egress routes and exits). • Stack materials safely. • Keep rubbish cleared away promptly.
Training	• Where specialist plant and equipment are used, workers must be proficient in its correct use and procedures and be current in any required training or certificate of competency.
Safe work area	• Report all defects promptly. • Any openings in floors or surfaces able to be walked on must be protected so that persons cannot fall through.

	• Ensure the work area is adequately lit – if not, arrange extra lighting.
Safe plant & equipment	• Undertake all relevant safety checks before plant and equipment is brought onto site. • Undertake any relevant pre-start checks. • All applicable machine guards must be in place, secure and in good condition. • All safety signage, instructions & directions must be followed & adhered to. • Keep a lookout for moving drives, belts and parts of machinery (and isolate id these are being worked on or need to be entered/crossed). • All ladders must meet Auckland Airport's Working at Height requirements (refer section 6.5).
Communication of risks and hazards	• All sites are to have a Site Risk/Hazard Board, which is to be updated regularly. • All risks and hazards should be controlled immediately by whoever discovers them, unless they do not have the ability to do so in which case it must be immediately reported to the Safety Supervisor. • Regular toolbox meetings and pre-starts should be held and signed onto by all workers. • JSAs must be completed for all work.
Fire awareness	• Recharging of electrical equipment must only occur in suitable locations away from combustibles. • Do not obstruct sprinkler heads. • Do not block emergency egress routes or doors or fire protection equipment. • Be aware of the location of fire protection equipment. • Be familiar with evacuation processes and location of Emergency Assembly Areas. • Ensure construction activities do not cause false alarms or unnecessary activation of sprinklers or smoke alarms. • Smoking is ONLY permitted in designated areas.
Electrical safety	• Check electrical leads and portable appliances/power tools for damage before use. • Ensure electrical leads and portable appliances/power tools are tagged and dated, and dates are current. • Keep all electrical leads and portable appliances clear of water. • Always use an isolating transformer or R.C.D (Residual Current Device) when using any electrical tool or appliance. • All power tools must have appropriate built in safety features.

Vehicles	• All vehicles on airport land must have a current registration and warrant (unless expressly exempted under Airside Driving and Vehicle Permit Rules). • Vehicles must only be parked in areas permitted by Auckland Airport. • Transport of workers in open-decked vehicles is prohibited on airport. • Bringing dogs onto the airport in vehicles is prohibited (airside and landside).

Emergency Response Plans	• Know where the fire extinguishers are located and how to use them • Know fire egress routes and evacuation processes • Ensure emergency response plans exist for all possible emergencies that may arise during the term of the contract.
Dangerous Goods and Hazardous Substances	• The contractor must have a list of all dangerous goods and hazardous substances that the contractor will bring to the site. The list must show the form (i.e., solid, liquid or gas), the hazard classification number and the quantity of each hazardous substance or dangerous good. • Material Safety Data Sheets (MSDS) must be supplied if requested. • Appropriate segregation and storage of dangerous goods or hazardous substances must be followed. • All gas bottles must be secured.

Reporting of Incidents and immediate first aid	• The contractor and subcontractors must provide first aid facilities suitable and sufficient for the number of persons employed on the contract.
	• Airport Emergency Services provide an on-site immediate medical response in the event of any injuries – ring AIAL Operations Centre 0800 677 242 ext. 9. The Operations Centre can also arrange St John's attendance.
	• The contractor and subcontractors must report all incidents, accidents, hazardous substance spills, discharges, near misses and equipment damage, etc, to their AIAL Area Authority in the timeframe required under AIAL's Risk Assessment Matrix (refer Appendix D) which is:
	  ○ Critical, High or notifiable to Worksafe or other Regulator – immediate verbal notification to AIAL Operations Centre, AIAL Area Authority and AIAL Head of HS&W or PTW Office
	  ○ Medium – same day notification to AIAL Area Authority and PTW Office
	  ○ Low – notification within 3 days to AIAL Area Authority

4.3 BUILDING CONSENTS

4.3.1 Construction and maintenance work needs to comply with all Building Consent and other processes required under the Building Act and by Auckland Council. Area Authorities must also ensure that Auckland Airport Building Compliance processes are complied with so that the Airport can effectively manage the compliance of our buildings.

4.3.2 Applicants for a PTW should be aware that any building work affecting a specified system is likely to require a Building Consent. A stream-lined consenting process is being developed with the Council for minor works requiring consents, which recognises that Auckland Airport's Passenger Terminal Buildings operate in a highly dynamic environment where changes to security requirements, usage and emergency repairs and maintenance are daily activities.

4.3.3 There is a limited class of routine repair and maintenance activities in relation to Passenger Terminal Buildings (i.e. the ITB and DTB) that has been agreed with Auckland Council as constituting exempt work under Schedule 1 of the Building Act, which do not require a special Exemption 2 application for each instance. The PTW Office maintains a current list of the classes of work in Passenger Terminal Buildings which have been agreed with Council as being exempt from requiring a Building Consent.

4.3.4 The flow diagram at the end of this section illustrates the overall compliance lifecycle from project initiation through to the annual building compliance anniversary. Works undertaken under a PTW need to fit within this lifecycle. In particular:

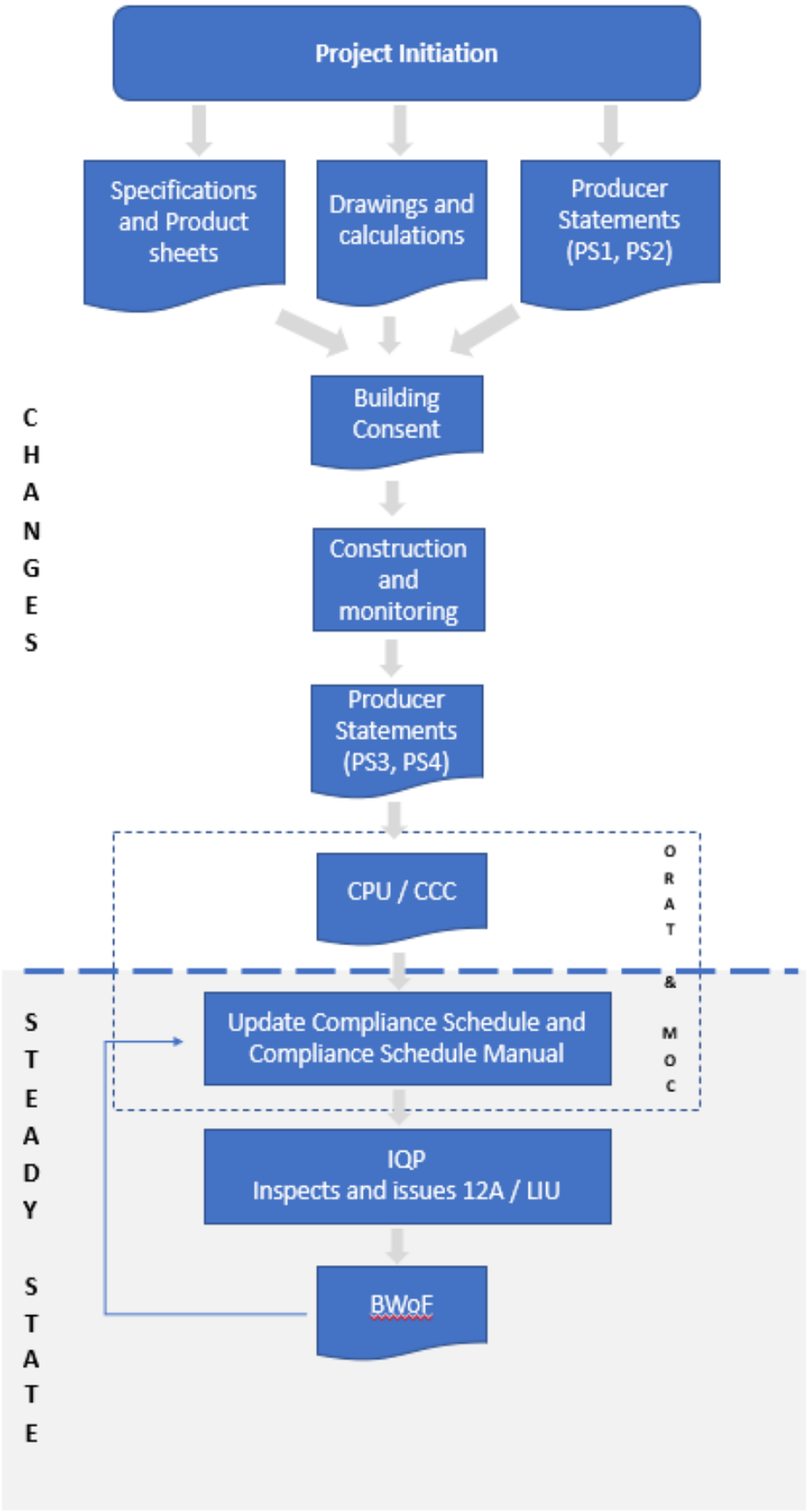
- The designs of any works must comply with Auckland Airport Design Standards.
- If required, PS1 and PS2s, must be obtained.
- If a Building Consent is required, this must be obtained, unless an Exemption Application is applied for and granted under Schedule 2. Exemption Applications must be signed by the Auckland Airport Asset Owner.
- In the case of Building Consents:
    - Authorisation to lodge a Building Consent must be provided by the relevant Auckland Airport asset owner as identified in section 4.3.5. A Project Manager (be they an Auckland Airport or a tenant's Project Manager) is not authorised to lodge a building consent on behalf of Auckland Airport without first receiving written authorisation from the relevant asset owner.
    - PS3s and 4s must be obtained.
    - CCCs and CPUs must be obtained.
- If alterations are made to specified systems, then updated Compliance Schedules must be provided by the Contractor to the relevant Auckland Airport Asset Owner to file with the Council. A Project Manager is not authorised to lodge a Compliance

Schedule on behalf of Auckland Airport without the consent of the Auckland Airport Asset Owner.

4.3.5 Council documentation (such as Compliance Schedule alterations, amendments to Compliance Schedule Manuals, CCCs, CPUs, COCs etc) must be provided to the relevant asset owner before the Permit will be fully closed. If all work is complete and the area signed off for return to normal operations but this documentation has not yet been received, the Permit will move to a Closed Pending Documentation status.

4.3.6 The relevant Auckland Airport Asset Owners who can authorise an Application for a Building Consent, or the submission of an updated Compliance Schedule are as follows:

- **Terminal Asset Manager** for Operations owned assets (ITB, DTB, AES Station, Operations Centre, SES Precinct, Livestock Compound, Transitional Waste Facility, Marae and associated utilities);
- **Airfield and Technical Assets Manager** for projects occurring on the runway, taxiways and apron and associated utilities;
- **Head of Airport Assets and Commercial** for landside roading and utilities;
- **Head of Property Asset Management** for existing buildings managed by the Property and Commercial Business Unit; and
- **Head of Project Delivery** for new buildings being constructed by the Property and Commercial Business Unit.


Project Initiation
Specifications and Product sheets
Drawings and calculations
Producer Statements (PS1, PS2)
Building Consent
Construction and monitoring
Producer Statements (PS3, PS4)
CPU / CCC
Update Compliance Schedule and Compliance Schedule Manual
IQP
Inspects and issues 12A / LIU
BWoF
CHANGES
STEADY STATE
ORAT & MOC

4.4 COMPLIANCE WITH RESOURCE CONSENTS

4.4.1 Auckland Airport's aeronautical and commercial activities are enabled through aa number of regulatory frameworks including:

- Auckland Unitary Plan – Auckland Airport Precinct rules;
- Designations 1100, 1101 and 1002 in the Auckland Unitary Plan; and
- Resource consents.

4.4.2 Auckland Airport holds a number of existing comprehensive resource consent approvals to authorise large-scale earthworks, stormwater discharge and diversion and stream works across various parts of the Airport Precinct. All works authorised by these consents, as well as any permitted works in these areas, must comply with the necessary resource consent conditions.

4.4.3 Individual projects may also hold additional specific environmental approvals under various environmental legislation, such as resource consents, archaeological authorities, outline plan of works or outline plan waivers. Accessory consent conditions and/or environmental approvals may also be required. There may also be cases where the project must comply with the permitted activity standards included in the Auckland Unitary Plan.

4.4.4 Every project is different, and the relevant environmental approvals applicable can vary. In some cases, a small-scale project may not require environmental approvals and best practice processes are recommended in their place. Larger, more complex projects will likely require and trigger environmental approvals and need to be compliant with them. The Planning and Sustainability Team can provide information on the requirements of a project through a Project Information Memorandum (PIM) or a Planning Review.

4.4.5 Copies of applicable environmental approvals are typically included in the project contract and are available from the Project Owner or the Planning and Sustainability Team. Depending on the scale and nature of the project, the applicable environmental approvals are summarised and included in the PIM or Planning Review prepared by the Planning and Sustainability Team for the project.

4.4.6 Commonly, the contractor is responsible for:

- Providing technical information/documents required for any application for environmental approvals;
- Being aware of the applicable environmental approvals/permitted activity standards and their requirements and complying with them; and
- Ensuring compliance with the Conditions and Requirements Register which is included in the PIM (e.g. pre-start meeting, sediment and erosion controls, archaeological requirements such as on-site supervisions by an approved archaeologist and/or

following accidental discovery protocols) and reporting compliance to the Project Owner as required.

4.4.7 In any case where the contractor is unsure of their requirements or responsibilities under Auckland Airport's environmental Approvals, the Project Owner or contractor get in touch with the Planning and Sustainability Team to discuss.

4.5 SUSTAINABILITY

4.5.1 Auckland Airport is committed to operating in a responsible and sustainable manner and seeks to work with contractors that share a similar mindset. To Auckland Airport sustainability means delivering environmental, social and wider economic value to all stakeholders as well as direct economic value associated with ongoing business activity.

4.5.2 All activity must be undertaken with sustainability in mind. Contractors and project owners alike should strive to deliver the most sustainable outcome as a balance of the best whole-of-life economic, environmental and social value for all stakeholders. At a minimum, all contractors must comply with Auckland Airport's Supplier Code of Conduct.

4.5.3 All projects must ensure that works are undertaken in an environmentally responsible manner with run-off from the site controlled and managed.

4.5.4 Any chemicals and dangerous goods must be stored and disposed of responsibly and in accordance with all regulatory requirements, including appropriate bunding.

4.5.5 All projects must have waste management protocols in place including adequate waste separation to achieve the highest possible diversion from landfill. All projects should target at least 70% diversion of waste from landfill.

4.5.6 Any spills must be appropriately contained and cleaned up. Spills covering an area greater than $2m^2$ or that entered waterways must be reported immediately to the Area Authority and to the Auckland Airport Operations Centre.

4.5.7 The quantities of concrete, asphalt, aggregate and steel must be recorded and reported quarterly to the project owner. Any known emissions factors for the specific materials used should also be included to ensure the best possible carbon footprint estimation.

4.5.8 For any queries on project sustainability requirements, please contact the Masterplanning and Sustainability team.

4.6 ISOLATIONS

4.6.1 Protection of workers from unexpected energy or hazards

4.6.1.1 When work has to be carried out on Equipment or Plant (during installation, servicing, maintenance, repair, cleaning, dismantling, etc.), the usual hazard controls cannot always be used. For example, the work may require guards, interlocks and other safety devices to be removed or by-passed, and workers may have to enter or place parts of their bodies in hazardous areas of the Equipment or Plant.

4.6.1.2 In these cases, isolation procedures (also known as Lock Out Tag Out) must be followed to protect workers from unexpected energisation, start-up, or release of hazards, while they are working on Equipment or Plant.

4.6.1.3 Consideration needs to be given to protection from unexpected or unintended:

- movement or operation of the Equipment or Plant itself;
- movement of water;
- movement of fuel;
- contact with energy:
    - used to operate the Equipment or Plant
    - used to carry out processes in the Equipment or Plant
    - produced or carried by the Equipment or Plant
    - stored within the Equipment or Plant
- contact with dangerous goods, hazardous substances or biohazardous materials.

4.6.1.4 Work being undertaken at or on AIAL owned and/or operated equipment or plant and assets must follow the Auckland Airport Equipment Isolation Procedure SMS 06.02.11.

4.6.1.5 Work undertaken at Auckland Airport on equipment, plant and assets not owned by AIAL must follow an appropriate isolation procedure which has been communicated and agreed between all workers involved in the work.

4.6.2 General principles of isolation

4.6.2.1 Isolated equipment must be rendered incapable of being energised without premeditated and deliberate action.

4.6.2.2 Where Isolation points have provision for locking, such locking arrangements must be used to prevent re-energising. If the Isolation point is not fitted with a built-in provision for locking, an alternative appropriate lock or other means of immobilising a point of Isolation must be used.

4.6.2.3 Isolation points must be tagged.

4.6.2.4 Where an Isolation point is used for multiple Permits to Work it must:

- Have a separate tag for each Permit to Work;
- Have a separate tag for each equipment isolation check sheet; or
- Be tagged in accordance with approved equipment isolation check sheets procedures including isolations register arrangements.

4.6.2.5 All complex/group isolation operations shall be identified on an equipment isolation check sheet available to all workers involved in the job.

4.6.2.6 The type of isolation process will vary depending on the scope and complexity of the work and type of equipment and hazards. Broadly speaking, the three kinds of isolation techniques available are:

- Directly Controlled Isolation;
- Personal Isolation; or
- Group Isolation.

4.6.3 Directly Controlled Isolation

4.6.3.1 Directly controlled isolation can be used where it may not be necessary or practicable to lock and tag energy sources. Isolation can be achieved by unplugging power leads, disconnecting pipelines and hoses, or removing vehicle ignition keys. Re-energisation of the Equipment or Plant can be effectively prevented, without the need for locking and tagging out, by coiling up power leads or hoses.

4.6.3.2 Directly controlled isolation is appropriate for work on Equipment or Plant where:

- Isolation, dissipation or restraint of energy sources is carried out by physical removal or separation of Equipment or Plant components;
- Each worker can keep the means of isolation, dissipation and restraint under continuous observation and control;
- There is no high voltage (greater than 1,000 Volts), high pressure or high energy sources involved; and
- There are no special conditions that have been imposed by the Permit Issuer on the PTW due the non-routine nature of the works.

4.6.3.3 Examples of such work might include the maintenance of power tools and the servicing of light vehicles.

4.6.4 Personal isolation

4.6.4.1 Personal Isolation can be used for work on Equipment or Plant where:

- At least one of the workers must be an Isolation Leader;
- Each worker involved does not have direct close control of the means of isolation, dissipation and restraint;
- Fewer than four energy sources are involved;

- Fewer than six workers are involved, and they can easily liaise with each other during the work;
- The work will be completed by the end of the current shift;
- There are no special conditions that have been imposed by the Permit Issuer on the PTW due the non-routine nature of the works; and
- There is no high voltage (greater than 1,000 Volts), high pressure or high energy sources involved.

4.6.4.2 The Equipment or Plant involved should be fitted with isolating switches on electrical power sources, and other suitable devices on other sources of energy and be locked and tagged.

4.6.4.3 Such work will include most routine maintenance and similar tasks carried out by individual workers or by small groups.

4.6.5 Group isolation

4.6.5.1 A Group Isolation is required for work on Equipment or Plant where:

- More than four energy sources are involved;
- More than six workers are involved;
- There is high voltage (greater than 1,000 Volts), high pressure or high energy sources involved; or
- The work will take longer than one shift to complete.

4.6.5.2 A Group Isolation will also be required where:

- There are special conditions that have been imposed by the Permit issuer on the PTW due the non-routine nature of the works; or
- Any time there is more than one worker if none of the workers are Isolation Leaders.

4.6.5.3 Examples of work requiring Group Isolations includes major maintenance work, major construction or modification work to power stations, or work on high voltage electrical installations, etc.

4.6.5.4 Where a Group Isolation is carried out, it is still necessary to give all workers involved the means (through the use of the group isolation board and personal isolation Locks) to ensure that the Equipment or Plant cannot be re-energised until they have stopped work on the Equipment or Plant.

4.7 TRAFFIC IMPAIRMENT

4.7.1 Code of Practice for Temporary Traffic Management (CoPTTM) followed

4.7.1.1 Any work that will affect the roadway or pedestrians or any activity that varies the normal operating conditions of any part of the road corridor (road, footpath or berm) for longer than 15 minutes requires a Traffic Management Plan and PTW.

4.7.1.2 Auckland Airport follows the Waka Kotahi Code of Practice for Temporary Traffic Management (CoPTTM) which provides best practice guidelines for road controlling authorities (RCA) to operate temporary traffic management to ensure so far as reasonably practicable the safe and efficient operation of the roading network under their authority.

4.7.1.3 The Traffic Management Authority role at Auckland Airport is fulfilled by the PTW and Traffic Management Authority.

4.7.1.4 PTW staff will from time to time carry out checks of worksite traffic management to ensure that what was stated in the approved plan is what is being undertaken on-site in a safe and compliant manner.

4.7.2 When Traffic Management Plans Required

4.7.2.1 A Traffic Management Plan (TMP) must be approved by AA Traffic Management Authority before a PTW will be granted for any work that will affect the roadway or pedestrians. There must be an approved TMP, with all identified measures in place, before any work varying the normal operation of the road commences.

4.7.2.2 Any amendments required to the approved TMP must be authorised by the AA Traffic Management Authority in writing before any changed method or scope of the works can take place.

4.7.2.3 Unless the works are an emergency, you will need to submit a TMP for any activity that varies the normal operating conditions of any part of the road corridor (road, footpath or berm). For example, if the work will prevent:

- Normal use of a vehicle driving or parking lane;
- Normal pedestrian access along a footpath; or
- Vehicle access to premises.

4.7.2.4 In an emergency situation, prior approval of a TMP is not required, however the AA Traffic Management Authority still needs to be notified of the activity and approve the works retrospectively. Emergency works are unplanned and must be done without delay to prevent loss of life, injury, damage to property, material interruption of Airport Services or breaches of key Airport regulatory requirements (as identified in section 4.1).

4.7.2.5 Examples of emergency works include:

- Burst or damaged watermains;
- Fallen power lines or electricity faults;

- Telecommunications failures;
- Gas or fuel leaks;
- Damaged Aerodrome security fence or access gates; etc

4.7.3 Traffic Management Plan Content

4.7.3.1 The TMP details the way activities in the road corridor will be carried out so as to minimise inconvenience and help ensure road users and workers remain as safe as possible.

4.7.3.2 Any TMP must comply with the Code of Practice for Temporary Traffic Management (CoPTTM). For more information about the code, visit the NZ Transport Agency (NZTA) website Code of practice | Waka Kotahi NZ Transport Agency (nzta.govt.nz).

4.7.3.3 The TMP must be a site-specific plan covering the design, implementation, maintenance and removal of temporary traffic management (TTM) measures while work or activity is carried out in the road corridor (road, footpath or berm). The TMP must detail:

- The specifics of the work being done, such as the specific location, date/times of works;
- Who is doing and who is managing the work and contact details;
- The work methodology;
- Temporary speed limit information (as needed); and
- How road users - including cyclists and pedestrians - will be directed around a work site, accident, or other temporary road disruption, to minimise inconvenience while providing safe conditions for both the road user and those carrying out the activity.

4.7.3.4 The TMP must be accompanied by a Traffic Management Diagram (TMD) which is a drawing that details the physical layout of temporary traffic management equipment around the worksite.

4.7.3.5 The TMP must be designed, set up and monitored by personnel qualified under NZTA requirements.

4.7.4 Crash Reports

4.7.4.1 All crashes at worksites must be recorded and immediately reported to Auckland Airport's Operations Centre (refer page 2 and Appendix A contact sheet), your Area Authority or Project Manager and, if there was a TMP, the Traffic Management Authority. Within 24 hours of any crash, there must be a written report provided to the Traffic Management Authority on the details of the crash.

4.7.4.2 A crash is defined as any incident involving a road user, resulting in damage to any installed TTM equipment, vehicles, plant, or injury to a person. Any crash resulting in serious harm must be reported to WorkSafe NZ as soon as the accident becomes known.

4.7.4.3 The crash report must include:

- A copy of the signed and approved TMP for the worksite;

- Details of the incident including a diagram showing the layout of the worksite at the time of the crash. The diagram must also show any relevant crash details such as vehicle travel paths, skid marks etc;
- Photographs of the crash site;
- An assessment of the cause or contributing factors of the incident; and
- Any preventative steps or changes made to reduce risk and prevent a recurrence of the incident.

SECTION 5 – AIRPORT ENVIRONMENT

5.1 OVERVIEW OF AIRPORT CHARACTERISTICS

5.1.1 Auckland Airport operates in a heavily regulated environment with many rules, regulations and requirements which PCBUs undertaking work and PICWS at the Airport need to be aware of and comply with. Specifically, the Airport is:

- Licensed as an aerodrome under Part 139 of the Civil Aviation Rules;
- A security designated aerodrome under s84 of the Civil Aviation Act;
- Licenced as a Place of First Arrival under s37 of the Biosecurity Act 1993;
- Nominated as a Point of First Entry to the World Health Organisation;
- A Quarantine Free Travel (QFT) Port under COVID-19 Public Health Response (Air Border) Order (No 2) 2020; and
- Licenced as a Customs Controlled Area under s59 of the Customs & Excise Act 2018.

5.1.2 As well as regulatory requirements around aviation security, biosecurity, Customs, Immigration and border health, there are also many extremely important health and safety requirements unique to the airport environment which must be adhered to (summarised in the remainder of section 5). These relate not only to the safety of workers directly undertaking work, but also the health and safety of workers and guests around the airport, and the safety of aeronautical operations and passengers and crew on aircraft operating to and from Auckland Airport.

5.1.3 Auckland Airport's Airport Workers Rules set out the obligations on workers undertaking work in the Aeronautical Zone (broadly speaking anywhere airside and any landside areas associated with terminals, forecourts and within 25 metres of the security fence), which must be complied with by anyone working within the Aeronautical Zone. The Airport Workers Rules may be inspected in hard copy at the PTW Office or Security Access Office or downloaded at Downloads | Auckland Airport. The Top 12 Airport Workers Rules are displayed overleaf.

5.1.4 Any person requiring permanent airside access must have completed Auckland Airport's on-line training covering Airport Workers Rules, Destination Zero Harm (safety), Security Watch (aviation security), Biosecurity Awareness and General Fire Awareness training.

5.1.5 Workers must not drive or present themselves for work on airport property while under the influence of alcohol and/or drugs.

5.1.6 Workers (including delivery drivers) must not bring animals to work at the Airport – even if they stay in a vehicle. Under Auckland Airport Bylaws 1986, only travelling animals, guide/assistance animals or Border Agency/Police dogs are permitted.

Top 12 Airport Workers' Rules

Only go airside for work purposes – valid AIC required

Obey airport and border agency instructions

Our airport is drug and alcohol free

Maintain 1.5m clearance either side of security fence

Close all security doors behind you – prevent tailgating

Maintain sterile terminal – be security screened & control any tools

Declare & clear international items* with Customs & MPI

Defend New Zealand's border – be alert for biosecurity risks

FOD (Foreign Object Debris) is everyone's responsibility – prevent and pick up

Driving airside requires airside driving permit

Obtain PTW (Permit to Work) for any medium or high risk work

Treat airport guests and each other with respect

*international items are all items flown into New Zealand which need to be cleared by NZ Customs and MPI before taking landside.

Security and safety is everyone's responsibility – be aware of risks and controls.
Report anything unsafe or suspicious to airport operations 0800 677 242
Refer Auckland Airport 'Airport Workers' Rules' for more information.

Auckland Airport

5.2 AVIATION SECURITY REQUIREMENTS

5.2.1 Auckland Airport is a Security Designated Aerodrome. The overarching aviation security requirements are set out in the Civil Aviation Act 1990 and rules specified by the Civil Aviation Authority.

5.2.2 The various security rules and requirements as they apply at Auckland Airport are set out in sections 3.5 - 3.10 and 4.1 - 4.3 of the Airport Workers Rules.

5.2.3 PICWS and AA of areas in or adjacent to airside areas must be familiar with the rules and requirements as set out in the Civil Aviation Act, by the Civil Aviation Authority and as translated to Auckland Airport in the Airport Workers Rules.

5.2.4 The Area Authority must ensure that the PICWS is familiar with and understands these requirements. The PICWS must ensure that their workers are trained in and familiar with these rules.

5.2.5 Key aerodrome security requirements can be summarised as:

- All workers entering security areas must have and visibly wear either a current Avsec Airport Identity Card, or a temporary Identity Card (and be under escort for the later);
- Workers can only go airside for work purposes;
- Do not purchase duty free items other than necessary food (which must be consumed airside);
- All workers, tools and equipment entering sterile areas must pass through an Avsec Screening Point;
- Workers in the Security Enhanced Area can be subject to non-passenger screening at any time;
- All tools taken Airside must be named;
- Tools taken into the sterile area must be listed and checked off as work is complete (you may elect to use for ES 503A);
- Tools cannot be left unattended airside;
- All security doors and gates must be closed after passing through, and users of doors and gates must ensure that tailgating is not possible; and
- A 1.5m clearance must be maintained (both landside and airside) around the security fence at all times.

5.2.6 For assistance, a one-page summary of key requirements is set out in Appendix B for workers in the context of construction work. Note the detailed rules in the documents referenced in clause 5.2.1 and 5.2.2 take precedence over these summaries.

5.2.7 Any queries regarding security requirements should be directed to the Auckland Airport Security Operations Systems Manager or by email to security@aucklandairport.co.nz.

5.3 TERMINAL WORKS ENDORSEMENT

5.3.1 The Terminal Works Endorsement process exists to ensure Auckland Airport is well positioned to deliver its Guest Promise, by coordinating maintenance, ad hoc and project activities to safeguard the efficient and safe operation of the terminal buildings and to deliver an optimal guest experience. The Terminal Works Endorsement process documents the Airport requirements prior to work parties gaining access to the terminals to perform maintenance or project activities.

5.3.2 The Terminal Works Endorsement process is a formal process that all internal and external parties must adhere to. If this process is not strictly followed, work in the terminals cannot take place and may be stopped by the Operations team.

5.3.3 A Terminal Works Endorsement is a pre-requisite to obtaining a PTW for activities within the terminal buildings that will impact on Airport Operations and / or the Guest Experience in the terminals. This includes, but is not limited to:

- All activities where guests and / or stakeholders are present, including P2, P3 and P4 works;
- All activities affecting safety and security of the terminals; and
- Utility outages (Water, Lighting and Power outage) within the terminals.

5.3.4 Terminal Works Endorsement is not required for:

- P1 works – however, Airport Operations must be notified of the work;
- Work in plantrooms and electrical rooms provided no equipment is to be moved through any public areas and so long as the personnel make their presence known to monitoring team upon entry (phone call or radio);
- Work on Terminal roof-tops, provided no equipment is to be moved through any public areas and so long as the personnel make their presence known to monitoring team upon entry (phone call or radio); or
- Where a monthly maintenance schedule has been agreed and signed off by the Terminal Asset and Services Manager.

5.3.5 Applications are to be lodged by an AIAL employed or contracted Area Authority. External consultants or contractors are not permitted to lodge TWE application.

5.3.6 Applications must normally be lodged a minimum of 2 full working days prior to the start date of the works. The exception is for P2 works where the AA can verbally request urgent approval. (Note PTWs must normally be lodged 3 working days before work is expected to commence).

5.3.7 Note the TWE is required for low risk work in the terminals even though such work may not meet the threshold required for a PTW.

5.4 ACTIVE AND PASSIVE FIRE PROTECTION IN THE ITB AND DTB

5.4.1 Why fire stopping matters

5.4.1.1 Passive Fire Protection (i.e. fire rated floors, walls and doors) is a vital part of any building design and must be maintained so as to enable the building to perform to its life safety design standards. Passive fire protection forms separate fire compartments within a building – which restrict the spread of fire & smoke within the building in order to safeguard human life by allowing occupants to escape and reduce damage to property.

5.4.1.2 While fire stopping is important for all buildings, it is particularly so for the ITB and DTB which many thousands of travellers and workers use each day, and where a managed evacuation strategy with 20 different evacuation zones applies in the ITB, which depends upon maintenance of sound fire stopping.

5.4.1.3 Undertaking building and repair works will often necessitate making openings within fire separations, either for the passage of building services such as cables, pipes, ducting or for the installation of fire rated glazing, doors, inspection hatches or service risers. Penetrations made to fire rated walls, floors and ceilings must be fire stopped or otherwise receive additional passive fire protection measures to ensure fire separations maintain adequate structural stability and integrity for a specific design period.

5.4.1.4 For any penetrations of fire separations made during works conducted:

- The Auckland Airport Airport Communications Cabling Management Manual must be followed for communications cabling penetrations;
- The penetrations must be fire stopped using a suitably tested product, installed in accordance with manufacturers specifications, by an approved installer;
- Quality assurance must occur by Auckland Airport's appointed party; and
- A Register is maintained and provided to AIAL as part of the PTW closure process.

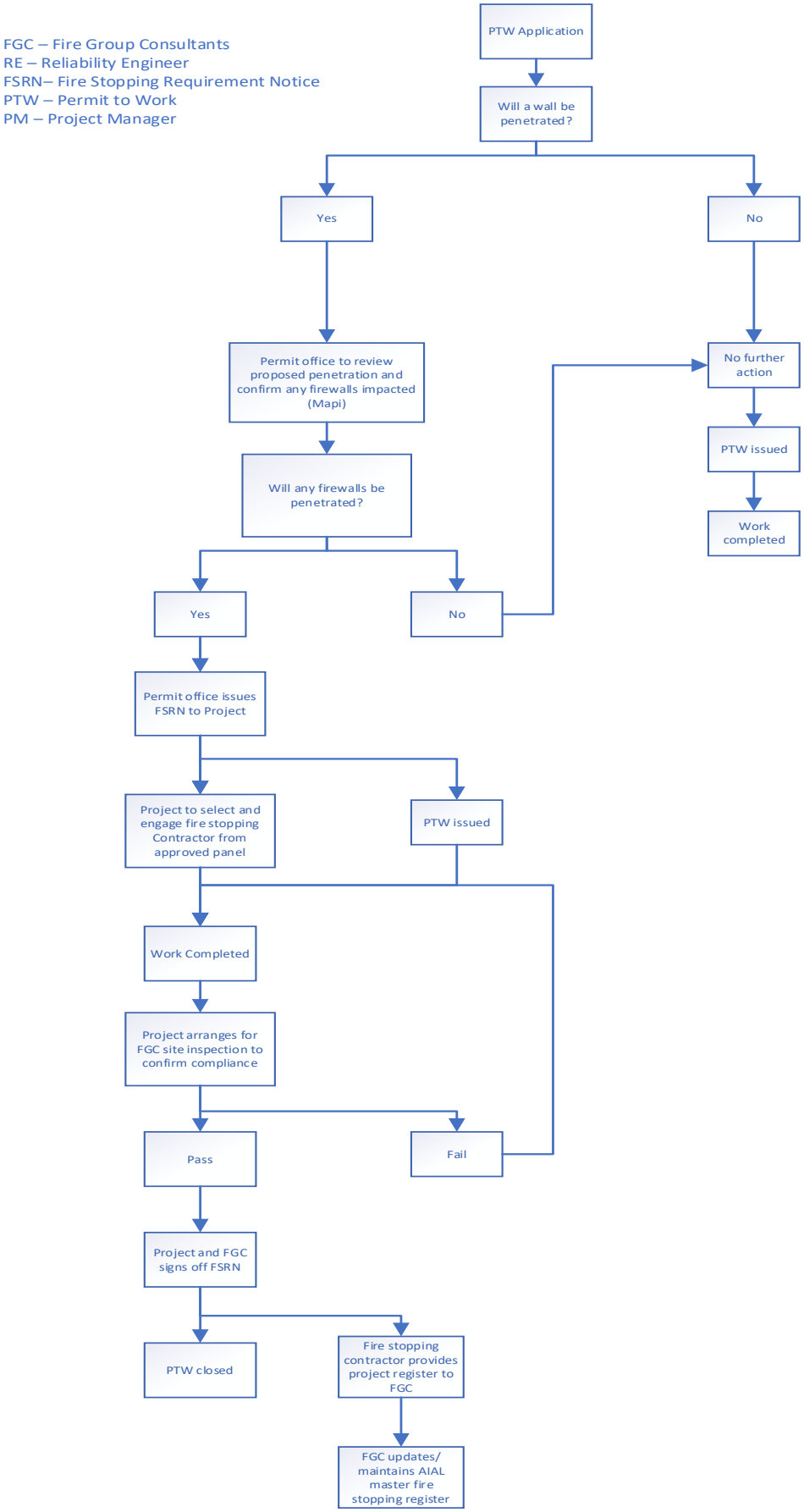
5.4.2 Fire Stopping Requirement Notice

5.4.2.1 Auckland Airport has appointed a panel of approved Fire Stopping specialists who must be used to fire stop any penetrations in fire rated walls in the ITB and DTB. Individual trades fire stopping penetrations they have made is not permitted.

5.4.2.2 When applying for a PTW for work in the ITB or DTB any wall penetrations involved in undertaking the work must be disclosed. The PTW Office will check AIAL's building records to determine if the wall is a fire rated wall, in which case a Fire Stopping Requirement Notice will be issued and the Project Manager must ensure that a Fire Stopping Contractor from the Approved Panel is engaged before a PTW will be issued.

5.4.2.3 A completed Fire Stopping Requirement Notice must be returned to the PTW Office before a Permit will be closed.

FGC – Fire Group Consultants
RE – Reliability Engineer
FSRN– Fire Stopping Requirement Notice
PTW – Permit to Work
PM – Project Manager



5.5 AIRFIELD REQUIREMENTS

5.5.1 PTW Receivers and PICWS in the airfield environment must be aware of the unique risks presented when undertaking work in an operational aerodrome and ensure that appropriate controls are identified in the JSA and in place before work commences. An Airfield Safety Officer may be required to supervise work in the Airfield Airside Area.

5.5.2 Works in the Airfield Airside Areas require prior approval of the Airfield Projects and Works Manager as a pre-requisite to obtaining a PTW. Submit a completed 'Airfield Works Approval Form 12A' to airfieldworks@aucklandairport.co.nz.

5.5.3 The detailed requirements of working on the airfield are set out in section 5 of the Airport Workers Rules (refer Downloads | Auckland Airport) which all PICWS undertaking work on the airfield must be familiar with.

5.5.4 Key requirements of working in the airfield environment can be summarised as:

- Any instructions of Airport/Border Agency Officials must be obeyed, including any request to leave the work area immediately.
- Works must ensure that FOD (Foreign Object Debris) is not created. All waste and loose objects must be kept secure so they do not blow away causing a FOD risk.
- No smoking airside.
- Workers must not use i-pods, e-cigarettes or other non-airport-related electronic devices while in an Airside Area outside of the terminals.
- Use of a mobile phone, radio (RT) or other electronic device is prohibited within 3 metres of any refuelling tanker, refuelling equipment or aircraft fuel tank vent.
- Workers must not walk across taxi lanes to aircraft stands or roads. Unless directly related to a work activity, workers must not walk alongside, across or in the middle of an airside perimeter road or manoeuvring area.
- Workers must understand the Circle of Safety around aircraft which places restrictions on certain activities (refer section 5.7 of Airport Workers Rules).
- Keep well clear of and give way to aircraft which are moving or about to move.
- When an aircraft's anti-collision beacon is on, workers must keep well away from the front and rear of propellers and jet engines. Aircraft engines can suck objects in from many metres away and jet blast is of sufficient force to turn a car over.
- All workers undertaking works in Airfield Airside Areas must cease working whenever Low Visibility Operations are initiated, and they may be requested by Auckland Airport to leave the Airfield Airside Area.
- No person or equipment is to work in the RESA or in restricted work areas adjacent to the runway while the relevant runway is in use except with an ATC clearance.

5.6 AIRSIDE DRIVING RULES

5.6.1 Airside Driving & Vehicle Permit Rules apply to all drivers and vehicles in the airfield airside area in order to provide a safe and secure environment for aerodrome operations as required under Civil Aviation Rule Part 139. These can be inspected at the PTW Office and downloaded from Airside Driving | Auckland Airport

5.6.2 The overriding requirements are that all airside vehicles must have certain equipment and characteristics, and that the drivers must:

a. Always enter, drive and carry out work duties in the Airside Airfield Area in a safe and appropriate manner.
b. Only bring a vehicle into the Airside Airfield Area if it is necessary for aerodrome or aircraft operations, or for approved airfield or terminal works.
c. Ensure that driving and parking of vehicles and equipment do not impede aircraft operations or movement on aprons.
d. Be aware of the aviation environment and its inherent dangers.

5.6.3 There are specific rules regarding the process for entering and exiting the Airside Airfield Area, including consenting to reasonable worker and vehicle checks, contained in section 1 of the Airside Driving & Vehicle Permit Rules which must be strictly complied with. For the avoidance of doubt, the normal rules regarding authority to access Airside Areas, the process to access Airside Areas and escorting visitors airside as set out in Section 3 of the Airport Workers' Rules apply at vehicle entrances to the Airfield.

5.6.4 Subject only to the 'under escort' process outlined below:

- all workers operating a vehicle in the Airside Area must hold a current Airside Driving Permit applicable for the area the vehicle is intended to be operated in; and
- all vehicles in the Airside Area must have and display a current Airside Vehicle Permit applicable for the area the vehicle is intended to be operated in.

5.6.5 Airside Driving & Vehicle Permits can be obtained via the Driving Permit Office (refer Airside Driving | Auckland Airport). Personnel who do not hold a current Airside Driving Permit are not authorised to drive within the airside area unless 'under escort'.

5.6.6 Vehicles or drivers who do not hold a current Airside Driving or Vehicle Permit applicable to the area the vehicle will be operated in, who have a valid purpose to be there, can be escorted by a representative of their primary stakeholder that has a valid Airside Driving Permit in a vehicle with a current Airfield Vehicle Permit. Workers operating a vehicle under vehicle escort must comply with Auckland Airport's Airside Driving & Vehicle Permit Rules and the Airport Workers' Rules at all times.

5.6.7 Vehicles must be escorted by an AIAL Airfield Officer if three or more vehicles need to be escorted or any vehicle requires a Class 2 NZTA licence (or above).

5.6.8 Escort Vehicles Application forms are available via Airside Driving | Auckland Airport

5.6.9 The Top Driving Rules are summarised in the poster below (also available on-line):

5.7 OBSTACLE LIMITATION SURFACE RULES

5.7.1 Auckland Airport has Obstacle Limitation Surfaces (OLS) specified in the airspace surrounding the airport. These OLS's protect the safe navigation of aircraft. The OLS may not be penetrated without Auckland Airport (and in some cases, CAA) consent. The OLS extends around the airport and surrounding areas in all directions. The most important of the protected surfaces are those under the take-off and approach paths.

5.7.2 Obstacles which construction activities should guard against breaching the OLS include:

- Permanent or temporary structures like buildings;
- Plant/equipment close to the airfield;
- Complex lifts close to the airfield; or
- Crane operations.

5.7.3 Conditions which may be imposed by Operations regarding obstacles may include:

- Specific lighting requirements;
- Only operating in specific weather conditions with good visibility;
- Only allowing the obstacle to raise between flights; and/or
- Only raising the obstacle during weekly planned runway maintenance closures.

5.7.4 Crane operations south of Tom Pearce Drive or west of Pukaki Bridge (and any cranes greater than 15m in height north of Tom Pearce Drive) require a PTW (including crane operations entirely within Ground Leases).

5.7.5 Crane operations within ring-fenced construction sites do not require a PTW unless the OLS will be breached, but do require AOT approval if greater than 15m in height.

5.7.6 The Area Authority must ensure Auckland Airport Aerodrome Operations Tower (AOT) is informed on AOT@aucklandairport.co.nz and an AOT Crane/Temporary Structure Application is completed and approval granted.

5.7.5 Any crane operating on the airport precinct without AOT approval when required will be required to be lowered on request until an acceptable risk management plan is established.

5.7.6 If you are unsure about the restrictions around crane operations please contact Apron Tower 256 8990 – AOT@aucklandairport.co.nz & AirfieldWorks@aucklandairport.co.nz

5.7.6 Note – the following obstacles require prior CAA approval (use CAA Form: 24077/01A - Notice of Proposal to Construct/Alter a Structure) which can take up to 90 days:

- Structures anywhere exceeding 60m above ground level;
- Structures in an area of low level aerial activity or a low flying zone where the height exceeds 18m above the general surrounding tree height;
- Structures which penetrate the transitional, horizontal or conical OLS; or

- Structures at either end of the runway which extend above the 1:83 slope from the start of the take-off surface.

5.8 BIOSECURITY REQUIREMENTS

5.8.1 Auckland Airport is approved as a Place of First Arrival ("POFA") for arriving international aircraft under the Biosecurity Act 1993. MPI specifies the standards and requirements which a POFA must adhere to. Works undertaken in the Aeronautical Zone also need to follow these MPI requirements.

5.8.2 All workers must follow Auckland Airport's Biosecurity Rules available at Auckland Airport's corporate website for airlines (Downloads | Auckland Airport) and in its on-line supplier portal for all service providers.

5.8.3 Key requirements from these rules affecting works in the aeronautical zone include:

- Only workers with legitimate cause for the purposes of their employment may enter Biosecurity Controlled Areas. In particular, workers who do not have any legitimate reason to be in the processing areas used by MPI to risk assess and process arriving passengers and airline crew and their baggage, cannot pass through these areas simply as a convenient exit route.
- Workers must follow the directions of MPI Officers, particularly when within a Biosecurity Controlled Area such as the Arrivals Hall. This includes requests by MPI Officers for workers to leave or not enter a Biosecurity Controlled Area.
- No uncleared baggage or other arriving items can be removed from any of the Biosecurity Controlled Areas without clearance from MPI.
- No food which was taken from landside (e.g., lunch) to the international Terminal Airside Area or the Airfield Airside Area can be taken back landside. It either needs to be consumed airside or disposed of in FOD/biosecurity bins before exiting airside. Food purchased in the international Terminal Airside Area must only be consumed airside and cannot be taken landside.
- Construction sites must be managed so that they do not become a potential breeding habitat for exotic pests. This particularly includes the need to manage sites so that water does not pool becoming a breeding habitat for exotic mosquitos. Tyres, rubbish, equipment, construction materials, bins, and skips must all be managed so that water does not accumulate.

5.8.4 If a worker notices a pest (e.g., cat, dog, Giant African Snail, insects coming from a ULD, water containing mosquito larvae, etc) then they should inform AOT (09 256 8990) or On-duty MPI Chief Quarantine Officer (09 909 8613) or MPI Duty Manager (09 909 8615).

5.9 BIRD HAZARD RISK MANAGEMENT

5.9.1 Birds are a Hazard to Aviation

5.9.1.1 Auckland Airport works hard to discourage birds from roosting on the airfield or on the Manukau mudflats adjacent to the airfield, crossing the runway or flying through aircraft flight paths, due to the risks that birds pose to aviation.

5.9.1.2 Construction activities can attract birds or can disturb existing bird habitats causing birds to relocate to airfield areas. In particular, birds can be attracted or affected by:

- Standing water on construction sites or grassed areas;
- Weeds and other secondary growth;
- Planted beds or landscaping changes;
- Exposed areas of earth or topsoil;
- Recently sown areas of grass;
- Aggregate stockpiles;
- Flat ground with little or no vegetation cover or landscaping;
- Food scraps or other waste and bins;
- Areas of cover/shelter;
- The establishment or removal of trees; and/or
- The creation of architectural features that include roosting, nesting, bathing or loofing opportunities.

5.9.2 Bird Control Measures Must be Considered in JSAs

5.9.2.1 For all contracts involving exterior work that involves or has the potential to involve any of the above bird attractants/affecting element, the Contractor must consider the above elements and reflect the relevant type of bird hazard management and controls (as suggested in 5.9.4 below) in their JSA.

5.9.2.2 The adequacy of the controls proposed will be reviewed by the PTW Issuer and advice sought from the Auckland Airport Wildlife Hazard Manager if required.

5.9.3 Wildlife Management Plan may be Required

5.9.3.1 Where the works will be likely to have a material effect on bird behaviour around the runway or flight paths (e.g. the site is a large one, involves significant excavation or stockpiles of material, or the removal of mature trees):

- The Contractor must prepare a Wildlife Management Plan and submit this to the Auckland Airport Wildlife Hazard Manager for approval at least 20 Working Days prior to the works commencing;
- The Auckland Airport Wildlife Hazard Manager may advise any additional bird control measures required to be undertaken or provided by the Contractor during the Contract Works;

- A PTW will not be granted until the Wildlife Management Plan for the proposed works has been reviewed and approved by the Auckland Airport Wildlife Hazard Manager; and
- Work likely to attract or effect birds shall not commence on the site until the PTW Office or the Auckland Airport Wildlife Hazard Manager has confirmed the presence of the required controls.

5.9.3.2 Where a Wildlife Management Plan is required, it must detail as a minimum:

- The planned location of any bird attractant or effecting element;
- The planned duration/staging the bird attractant or effecting element will be in place;
- The Contractor's plan for mitigating or otherwise controlling the bird hazard created by the attractant or effecting element; and
- Any active wildlife monitoring to occur if the location is of high risk.

5.9.3.3 Once approved, the Contractor must comply with the requirements of the plan.

5.9.3.4 If the work scope, schedule or other conditions materially change, the project's Wildlife Management Plan must be updated and re-submitted for review to Auckland Airport's Wildlife Hazard Manager.

5.9.3.5 For all contracts involving exterior work that involves or has the potential to involve any of the above bird attractants/affecting element, the PICWS must ensure that the Auckland Airport Wildlife Hazard Manager and/or Wildlife Team is able to access to the Site at any time for the application of any additional bird control measures required by Auckland Airport.

5.9.4 Bird Management Controls

5.9.4.1 Matters to be considered when determining bird management controls for exterior work that involves or has the potential to involve any of the above bird attractants/affecting element (whether within a JSA or a Wildlife Management Plan) include:

Weed control	• The works area must be maintained so that any weeds or other unwanted vegetation does not exceed 200 mm in height. • Windrows and small stockpiles of excavated material will not be permitted once they exhibit evidence of weed growth. Any such weed growth must be immediately cleared.
Grass control	• Access must be maintained for Auckland Airport's grounds team to mow existing grassed areas undisturbed by the Contract Works. • The PICWS must ensure grassed areas are free of obstacles and debris that could impede or damage mowing equipment.
Rodent control	• Rodent control must be actively implemented on the work site by the PICWS.

Rutting of ground	• Creation of rutting or other damage to the ground outside of the immediate intended work area must be avoided where-ever possible. • Any rutting or damage to the ground that occurs must be rectified.
Topsoil control	• Areas of recently exposed topsoil, and newly grassed areas must be furnished with bird deterrent devices or covered with AVEX deterrent until a grass sward of at least 80mm has become established. • All topsoil must be sown with Avanex grass seed unless otherwise approved by Auckland Airport's Wildlife Hazard Manager. • If grass is sown in airside, grass is to be drilled in to the top soil and an overlay of FLEXTERRA is to be applied (see section 5.10).
Water ponding	• The contract area must be maintained at all times so that water cannot pond, other than in approved drains and settling areas. • Areas of unauthorized ponding that become evident must immediately be drained or alternatively infilled with scoria or similar material (non-grassed areas only). This is important for both bird control and prevention of exotic mosquito breeding habitats. • Ponding on grassed areas must be rectified with appropriate drainage and then top-soil and grass reseeding (refer 5.10 for airside grass reseeding requirements). • Unless otherwise approved through the Wildlife Management Plan, temporary ponds for sediment control or the like must be covered in netting suitable to prevent birds from landing on the pond banks or water.
Contractor Facilities	• Contractor site facilities and the like shall be positioned at approved locations and must not contain covered elevated areas (e.g. exposed rafters/ledges and the like) suitable for perching. • Buildings or other permanent features on the airport grounds must not include eaves or gaps where birds (mainly swallows) can nest with ease. • Features close to high human activity require bird deterrents such as spikes and/or bird hot gel to deter birds (such as gulls) from roosting. • Feeding opportunities for wildlife such as outdoor fast food pop up wagons will not be accepted due to the high risk of attracting birds resulting in loafing.
Site Management	• All unnecessary or abandoned posts, fences and other structures within the Site that can be used as perches shall be removed. • Piles of construction debris and discarded equipment, un-mowed fence rows and other unmanaged areas are not permitted. • Good house-keeping must be maintained
Waste management	• Feeding of birds with food scraps, and other actions that could encourage birds, are totally prohibited. • All outdoor bins must be wildlife-proof bins and must be covered at all times. • Bins are to be emptied in a timely manner to ensure large, scavenger birds are not attracted to the area. • Skips used in the airfield must have covers.
Stockpiles	• The use of large stockpiles of excavated material can only occur if approved by the project's Engineer with appropriate controls put in place.

	• The location of aggregate stockpiles (including concrete) is subject to approval by the project's Engineer and shall generally be restricted to laydown areas remote from the airfield. • Irrespective of location, the PICWS shall regularly turn over or otherwise manage stockpiles such that rodent or bird nesting does not occur.
Planted Beds / Landscape changes	• Any planted bed must only include plants of little attraction to birds (e.g. no fruit bearing species or bright colours). • Landscape changes which are large or which are close to the airfield must be reviewed by the Wildlife Hazard Manager in advance to determine whether a wildlife management plan is required, any bird deterrents needed (e.g. streamers, scarecrows, gas cannons) and whether active wildlife monitoring is required if the location is of high risk.

5.10 AIRSIDE GRASS RESEEDING

5.10.1 In order to manage the risk of bird strike to aircraft movements, the following requirements must be strictly complied with when reseeding/re-establishing grass airside. Any deviation from the processes outlined below can only occur with approval in writing from the Airport Grounds and Wildlife Manager.

5.10.2 The Wildlife Team will inspect any areas post reseeding and are also available to provide advice and confirm the appropriateness of the proposed methodology.

Bird control before reseeding	• Stockpiles/ grass free areas may be attractive to roosting birds. Pig-tails/stakes with streamers to deter birds are required wherever the ground has been disturbed. • AIAL wildlife rangers can provide information on the distribution of the pig-tails.

Soil Preparation	• The surface must be left, level and free of rocks over 10mm, hard clay lumps, clumps of grass, stakes and survey markers. This is necessary:
	  ○ To avoid damage to the seed drill used during grass seeding
	  ○ To enable ease of future mowing
	  ○ To prevent FOD which is a high risk to aircraft.
	• At least 100mm of screened topsoil (after compaction) must be applied and level for effective grass establishment.
	• The area to be grassed must be weed and grass free before reseeding. This may require multiple herbicide applications over a number of weeks and if required, sprayed with a broadleaf and grass herbicide 1 week prior to seeding.
	• Once soil has settled (2-3 weeks), grass seeding must commence.

Grass seeding by taxiways and runways	• Avanex grass must be used in all airside areas (and any other areas where wildlife threats are high). Avanex is an endophytic bird deterrent grass that makes birds feel ill when ingested and also discourages insects. • Avanex can be purchased by PGG Wrightson Turf. • Avanex tall fescue is preferred. However, Avanex Ryegrass is to be used in the winter months (can be sown in temperatures as low as 5 degrees).

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Avanex Grass must be direct drilled. The seed drill type is critical to the success of the direct drilling. It is imperative that the seed drill places the seed in the blade slit below the surface otherwise the seed on the surface becomes an attraction for birds. Grooving type seeders and single disc or chisel type drills are not suitable.
Seeding depth must be drilled between 5 -10mm.
We recommend drilling with a ‘disc slitting direct drill seeder with a coulter spacing of 75mm’ at the rate below:

<table>
<tr><td></td><td>Rate Per Pass</td><td>No. of passes</td><td>Rate per Ha. (kg)</td></tr>
<tr><td>75mm spacing</td><td>70 kg/ha</td><td>3</td><td>210</td></tr>
</table>

Direct drilling must be carried out in three passes with each pass at a shallow angle to the previous pass. This gives good coverage with limited tearing of the surface. If using a drill with 150mm coulter spacing, four passes should be made if possible.
Following drilling, one layer of Flexterra (without seed) must be sprayed over the seeded area to:

further reduce the risk of birds being attracted to the disturbed earth ;
stabilise the ground and
retain water in the reseeded area and promote healthy grass establishment.

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<tr><td>Grass seeding of other airside areas</td><td>

If the area is of small scale a double layer of Flexterra can be used instead of drilling. This will entail one spray of ‘hydroseeding’ Flexterra with Avanex seed. The second spray will be just Flexterra without the seed to cover the seed. This will reduce the attractiveness of birds to the airfield.
Advice must be obtained from the Grounds and Wildlife Manager before commencing to ensure the most appropriate method for the size of the job is being used.

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<tr><td>Jet Blast protection</td><td>

Bare ground within jet blast areas is not acceptable. If heavy rainfall is predicted, the ground must be rectified within 2 weeks.
Hydro-seeding (Flexterra) must take place in bare areas within 2 meters of taxiways. This holds soil and seed in place due to potential Jet Blast.
Flexterra is also beneficial for keep birds from eating the grass seed and attractiveness to open ground.
Large areas of Flexterra will need to be used in areas adjacent to the runway, please consult Auckland Airport Grounds Manager for case specific analysis.

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<tr><td>Irrigation</td><td>

If projects fall outside of spring and autumn months, artificial irrigation will need to be used for grass establishment.

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<tr><td>Drainage</td><td>

Sufficient drainage must be constructed to discourage airfield ponding (potential bird roosting/feeding habitat).
Drains, Manholes, Mag signs, stands etc. must be level with the soil.

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SECTION 6 – SPECIFIC TYPES OF WORK

6.1 INTRODUCTION

6.1.1 This section of the PTW Manual sets out requirements and controls for specific types of medium and high-risk work, namely:

- Electrical Work (section 6.2)
- Confined Space (section 6.3)
- Hot Works (section 6.4)
- Working at Height (section 6.5)
- Ground Penetrations and Excavations (section 6.6)
- Complex Lifts (section 6.7)
- Use of Firearms (section 6.8)

6.1.2 The specific requirements and controls for these types of work outlined here in section 6 are in addition to the common requirements which must be adhered to for all medium and high-risk work as set out in section 4 regarding matters such as:

- Obtaining a Permit supported by JSA and hazard and risk assessment and controls;
- Ensuring that work is undertaken using the safest work methodology;
- Obtaining any relevant pre-consents or approvals required;
- Obtaining any regulatory consents such Building Consent, Exemption or Resource Consent;
- Following Isolation Procedures (Lock Out Tag Out);
- Undertaking work in a sustainable and environmentally sound manner; and
- Ensuring Traffic Management Plans are obtained if necessary.

6.1.3 The controls in section 6 for these specific types of medium and high-risk work must also be read in conjunction with the specific requirements for any work undertaken in the Airport Environment as outlined in section 5 of this Manual, regarding matters such as:

- Aviation Security requirements;
- Terminal Works Endorsement;
- Fire stopping of penetrations to fire rated walls within terminal buildings;
- Airfield requirements;
- Airfield Driving Rules;
- Obstacle Limitation Surfaces;
- Biosecurity Requirements;
- Bird Hazard Risk Management; and
- Airside grass reseeding.

6.2 ELECTRICAL WORK

6.2.1 Electrical Work Requirements

6.2.1 Due to high risk nature of working on electrical equipment on workers and AIAL's Operations, the following electrical activities are deemed to require a Permit (in addition to the general rule that any medium or high risk work, or work requiring a Terminal Works Endorsement will need a Permit):

- All commissioning of new electrical equipment requiring a Code of Compliance;
- Work on any high voltage equipment; and
- Any work within the MAD (Maximum Allowable Distance) from exposed live parts of the equipment.

6.2.2 Live work is not permitted on AIAL electrical network.

6.2.3 Work within MAD clearances shall not proceed unless the isolation of the equipment cannot take place for valid reasons identified by Area Authority and accepted by the Permit Issuer. If working within MAD clearances of exposed live parts of equipment is considered the only suitable method to carry out the work, a statement outlining the reasons and the specific controls which will be put in place needs to be presented to the Permit Issuer.

6.2.4 Obtaining a Permit for electrical work requires providing the Permit Issuer with the relevant supporting documentation:

- Permit to Work application;
- Rescue/Recovery plan;
- JSA to carry out the work;
- Method Statements (for complex work);
- Switching schedule or similar for Isolations and commissioning;
- Proof of competency for work on HV network (see AIAL HV Competency Requirement document); and
- Any other pre-approvals such as those identified in clause 2.4.

6.2.5 Electrical work requiring a Permit must not proceed unless the common requirements for all medium and high risk work as set out in clause 6.1 have been met, as well as the specific additional requirements set out below:

- All persons involved in the electrical aspects of the work have current electrical Registration;
- A Rescue/Recovery Plan has been prepared; and
- For HV work, rescue equipment must be immediately available.

6.2.2 Electrical Work Controls

6.2.2.1 The following minimum controls outlined in the table below must be in place before any Electrical Work requiring a Permit can be undertaken:

Training	• All workers must as minimum have current Electrical Registration or be supervised. • All workers must be Cardiopulmonary Resuscitation (CPR) trained. • All HV switching must only take place by Authorised Persons only. AIAL does not permit HV switching to persons not authorised by AIAL. (Refer to AIAL HV Operating Manual for definition of Authorised Person).
Work Environment	• Smoking is prohibited in Electrical rooms and Power Centres. • There must be adequate and suitable lighting in the work area. • Barriers and signs should be erected to prevent the passage of other persons in the work area.
Rooftop Plant Room or HV Power Centre Access	• AIAL Monitoring must be advised of any entrance to and exit from ITB or DTB rooftop plant rooms or any HV Power Centres. • Note a PTW is required for access to any rooftop plantroom which requires access across the roof.
PPE	• All workers need to adhere to minimum PPE requirements based on the task they are carrying out.
Emergency Rescue Procedure	• There must be an appropriate emergency/rescue procedure to facilitate an evacuation or rescue. • All workers identified on the PTW must be aware of and trained to the emergency rescue procedures and equipment as specified. • For HV work, rescue equipment must be immediately available.
Isolation principles	• Auckland Airport's Equipment Isolation Procedure must be followed for all work on Auckland Airport owned and/or operated Equipment or plant and assets. • For non-Auckland Airport owned and/or operated Equipment or plant and assets, an appropriate, clearly documented, Isolation procedure must be followed, which has been agreed by all workers involved. • Any isolation must be reliable, effective and unable to be bypassed by other persons in the vicinity. • Appropriate PPE must be used to carry out the isolation. • There must be a clearly documented procedure for both the isolation process and the safe removal of isolation(s) and return to normal service. • All persons involved are qualified, authorised and competent to do the isolation work (refer to AIAL's HV Competency Requirement document).

Electrical Isolation Principles	• The methods of isolation and discharge of stored energy must be agreed and executed by a suitably qualified and competent person(s).
	• If work is spanning over one shift, all exposed parts of the live network shall be covered and appropriate barriers must be placed to ensure safety of other persons in the area.
	• An Isolation point shall have a break of a distance appropriate to the voltage and insulating medium that is visible (if possible).
	• For high voltage Equipment or Plant – if the Isolation point does not have a visible break, it shall:
	  ○ be withdrawn to the isolated position;
	  ○ be proven to be de-energised and approved earthing devices applied to confirm isolation; and
	  ○ have control circuits isolated, locked (as appropriate) and tagged. Where Isolation is performed by an MCB/CB which cannot be locked, further

	Isolation shall be required i.e. withdrawal of all applicable fuses/links to provide a double break. • VT and CVT secondaries shall be isolated by the withdrawal of all applicable fuse/ links or by opening an Isolation switch or MCB. The fuses/links shall be secured or the Isolation switch/MCB shall be locked. Applicable VT selection switches shall be tagged. In addition to the above, for work on a CVT, secondaries shall be further isolated by the withdrawal of fuses/links or opening MCB's or slide disconnect links to provide a double break. • Where isolation of low voltage circuits requires the withdrawal of fuses/links, all subsequent exposed live terminals shall be made safe. • Where transformers remain connected within an isolated section of a high voltage conductor, then a risk assessment shall be carried out to determine the need for other safety measures to guard against alternative sources of supply e.g. backup generators or alternate supplies on the LV sides of transformers. • NOTE: Where a switch truck/carriage has been removed from its cubicle, other safety measures shall be taken to prevent access to Live Conductors, e.g. spout shutters locked, busbar covers installed, switchgear door locked and Tagged.
System Isolation	• There must be a clearly documented procedure for both the isolation process and the safe removal of isolation(s) and return to normal service. • For work on systems requiring an isolation: o A system of locks and tags must be installed at isolation points; and o A test must be conducted to ensure the isolation is fully effective; • Work must be continuously supervised with an appropriate system in place to monitor progress throughout the work.
Work Standard	• All work shall be executed in accordance with New Zealand Wiring Rules AS/NZ 3000.
HV Work	• AIAL follows New Zealand's Electricity Industry Safety Manual (SM-EI) to control all HV work. Therefore for HV work: o A "Test" or "Access Permit" issued by AIAL Authorised Person is required above and beyond the Permit to Work; and o The "Test" and "Access Permit" are issued after the Isolation has taken place and hence after the Permit to Work has been issued.
Electrical Commissioning	• All persons involved are qualified, authorised and competent to complete the commissioning (refer to AIAL's HV Competency Requirement document). • All relevant tests and inspections have taken place and Certificate of Compliance (COC) and Record of Inspection (ROI) are presented to the Livening Personnel. • After the commissioning has taken place suitable signs shall be provided indicating "equipment live" for at least 1 month.
Completion of works	• The site must be returned to operational use and be safe for any other users of the area. • Certificate of Compliance (COC) and Record of Inspection (ROI) must be provided to the Area Authority (or other person nominated by AIAL).

6.3 CONFINED SPACE

6.3.1 Confined Space Requirements

6.3.1.1 Due to the high-risk nature of entering a Confined Space, all entries to a Confined Space require a Permit, this includes providing the Permit issuer with the relevant supporting documentation:

- Permit to work application;
- Rescue/Recovery plan;
- JSA for entry into the Confined Space;
- Confined space & hazardous atmospheres workspace testing record;
- Site locations marked up on AIAL site map;
- Evidence of Worksafe notification (if applicable); and
- Any other pre-approvals such as those identified in clause 2.4.

6.3.1.2 Depending on the work being undertaken in the Confined Space, there may be other Permits required; this will be established through the SOP or JSA documentation. The Permit to enter a Confined Space does not confer the right to undertake other medium or high risk work such as hot works, ground penetration, demolition etc.

6.3.1.3 Permits to undertake Confined Space Work will only be issued on site after all controls have been verified as present and effective. Permit applications for Confined Space Work will therefore be 'Approved in Principle' subject to an on-site inspection.

6.3.1.4 On the day of works, the Permit Issuer will visit the site once it is set up and verify the presence of all controls identified in the Permit Application and supporting documents, and if present and effective, will issue the Permit on site.

6.3.1.5 Entry into and/ or work in a Confined Space must not proceed unless the common requirements for all medium and high risk work as set out in clause 6.1 have been met, as well as the specific additional requirements set out below for Confined Space:

- The PICWS holds the following minimum New Zealand Unit Standards ("US") relevant to the work that is to be performed (or equivalent qualification):
    - US 17599 – Plan a confined space entry
    - US 18426 – Demonstrate knowledge of hazards associated with confined spaces
    - US 25510 – Operate an atmospheric testing device to determine a suitable atmosphere exists to work safely
- All sources of energy, flammable and/or toxic gases and vapours affecting the confined space have been eliminated or reduced to ALARP;
- Testing of the atmosphere is conducted, recorded, verified and repeated as often as required by the Permit Issuer;

- A fully trained and competent Safety Watch is stationed at the entrance to the confined space, and a standby Safety Watch has been appointed;
- Unauthorised entry is prevented;
- WorkSafe NZ have been notified if required; and
- A Rescue/ Recovery Plan and rescue equipment is immediately available should it be required.

6.3.1.6 Any person undertaking Confined Space Work (or entering Confined Spaces) for or on behalf of Auckland Airport must also refer to AIAL SMS 06.02.31 Confined Space Requirements.

6.3.2 Confined Space Controls

6.3.2.1 All known Confined Spaces must have a "Danger – Confined Space' signage at each entry point; and in a location where it is visible when the Confined Space is open.

6.3.2.2 The controls which must be in place for Confined Space entries are outlined in the table below:

Worker Fitness	• Workers must be both mentally and physically fit. • It is the worker's responsibility to advise their supervisor or manager if they are not fit to work in a Confined Space.
Training	• Workers involved in Confined Space work must be trained to NZQA standards 17599, 18426 and 25510 or an equivalent alternative formal qualification. • They must also be trained to carry out the task assigned to them as required.

Communication Plan	• There must be a communication plan in place which enables:
	  ○ Communication between workers inside and the standby person outside the Confined Space;
	  ○ Help to be summoned in an emergency; and
	  ○ Rescue procedures to be implemented in case of an emergency.

Atmospheric Monitoring	• Atmospheric testing must have taken place to ensure that the atmosphere has a safe oxygen level of 20.9% and is free from both toxic and flammable vapours.
	• If decontamination of the Confined Space is required, this must be done before entering the Confined Space and certified by a trained person.
	• There must be ongoing monitoring of the atmosphere while the work is being undertaken.
	• Records must be maintained of the atmospheric testing.
	• If there is a possibility that contaminants can enter the Confined Space then they will need to be isolated from the Confined Space. Isolation methods include:
	  ○ Complete disconnection of pipes or ducts
	  ○ Insertion of blanks

Notify Worksafe NZ	• The PCBU employing or engaging any workers undertaking any work in which any person breathes air that is or has been compressed, or a respiratory medium other than air, is required to notify Worksafe NZ prior to

re Breathing Apparatus use	the work commencing that particular hazardous work is intended to be undertaken. • Note underwater diving or work undertaken by AES crew members under FENZ Reference Guide for working with Respiratory Protection Equipment (E3-2 RG) does not require Worksafe notification.
Access	• Access to the Confined Space must be large enough to allow workers wearing the necessary equipment to climb in and out easily, and provide ready access in case of emergency.
Lighting	• There must be adequate and suitable lighting in the Confined Space.
Safety Observer	• At least one safety observer must be assigned to the task. • The safety observer must not have any other duties and must have a direct line of sight to the confined space entry. • The Safety Watch must be trained in the use of the rescue equipment.
PPE	• Use of required PPE and/or RPE needs to be assessed once other controls have been agreed on.
Equipment Isolation	• If mechanical or electrical equipment within the space could be operated while the workers are in the Confined Space, it needs to be isolated by the equipment owner through the lock out process and an isolation checklist should be signed off. • Any method of isolation that is used must be tested to ensure it is reliable, effective and cannot be bypassed by other persons in the vicinity.
Electrical Equipment	• All electrical equipment used in a Confined Space must be intrinsically safe, appropriate to the work performed, maintained in proper working order. • All electrical equipment must be protected by residual current devices (RCD). • Workers are responsible for ensuring that the equipment is used and maintained in accordance with the manufacturer's instructions, checked visually for any defects and/or excessive wear, and confirm any expiry dates. • Any equipment that is damaged, worn or outside of calibration date shall be immediately withdrawn from service and usage prevented (e.g. locked out or disposed of).
Hot Works / combustible materials	• A separate Permit for Hot Works is also required if flammable/combustible materials are required for use in a Confined Space. • Any flammable/combustible materials must be kept to a minimum and cannot accumulate, and must be safely stored in accordance with manufacturer instructions and relevant Dangerous Goods and Hazardous Substances Regulations. • Smoking is prohibited in Confined Space.
Emergency Rescue Procedure	• There must be an appropriate emergency/rescue procedure to facilitate an evacuation or rescue. • All emergency rescue equipment must be set up ready to use if an evacuation or rescue is required. • All workers identified on the PTW must be aware of and trained to the emergency rescue procedures and equipment as specified.

6.3.2.4 On completion of works and the Confined Space entry, the site must be returned to operational use and be safe for any other users of the area, with entry to the Confined Space closed off safely.

6.3.3 Restricted Space

6.3.3.1 Entry to, or work within, restricted space areas do not require a PTW for this reason alone. However a JSA must still be completed and controls put in place to ensure that the risk of the work has been controlled to an ALARP level.

6.3.3.2 If entry to the particular Restricted Space Area is assessed as being of medium or high risk, or the work being undertaken itself is of medium or high risk, then a PTW is required.

6.4 HOT WORK

6.4.1 Hot Works Requirements

6.4.1.1 As Hot Work has the potential to affect life safety of guests and workers at the Airport, together with airport operations as a whole, a Permit is required for all Hot Work not completed in a designated Hot Works Area (usually a workshop) or temporary Hot Works Area. Hot Works includes any work or activity which may be a source of ignition. Refer definition of Hot Works for examples.

6.4.1.2 Permits to undertake Hot Works will only be issued on site after all controls have been verified as present and effective. Permit applications for Hot Works will therefore be 'Approved in Principle' subject to an on-site inspection.

6.4.1.3 Note clause 16 of the Auckland Airport Bylaws 1989 prohibits Hot Work with a Naked Flame from occurring within 50 metres of an aircraft.

6.4.1.3 To be issued with an 'Approved in Principle' Hot Works Permit, the Permit Issuer must be supplied with the relevant supporting documentation:

- Permit to Work application;
- Rescue/recovery plan;
- JSA or SOP for the hot work;
- Site location; and
- Any other pre-approvals such as those identified under clause 2.4.

6.4.1.4 On the day of works, the Permit Issuer will visit the site once it is set up and verify the presence of all controls identified in the Permit Application and supporting documents, and if present and effective, will issue the Permit on site. The length in which a Permit can be issued is up to the Permit Issuer's discretion (maximum 7 days).

6.4.1.5 Hot work must not proceed unless the common requirements for all medium and high risk work as set out in clause 6.1 have been met, as well as the specific additional requirements set out below for Hot Works:

- There is a Safety Watch trained and competent in the use of firefighting equipment (NZQA US 3271 (suppression with handheld equipment) and US 4647 (principles of fire science) or equivalent) who is present on site and able to undertake the Safety Watch task with direct and uninterrupted line of sight to the hot work;
- All sources of flammable vapours, gases and other flammable materials have been eliminated or removed, and where this is not possible in the case of flammable vapours and gases, reduced to below the Lower Explosive Limit;
- If the hot work is being performed in a confined space, there is also a Confined Space Permit and the atmosphere is continuously tested and monitored to ensure that it is free of flammable gases, and any risk of toxic contaminants is controlled; and

- The Safety Watch must be available to remain on site for 1 hour after the Hot Works have been completed to ensure no risk of fire. Note if the fire protection or detection system is materially impaired (or there is not one), then an extended fire watch of 4 hours is required for the ITB, DTB or any building containing a service essential to the aerodrome operating.

6.4.1.6 Any person undertaking Hot Works for or on behalf of Auckland Airport must also refer to AIAL SMS 06.02.33 Hot Work Requirements.

6.4.2 Designated Hot Work Areas

6.4.2.1 It is preferred that all Hot Work is carried out in designated Hot Work Areas – either a permanent designated Hot Area or a Temporary Designated Hot Area. When planning Hot Work, consideration needs to be given to whether the work can be done in a Designated Hot Work Area and then moved to site once the Hot Work is completed.

6.4.2.2 Hot Work can be completed using an approved Standard Operating Procedure (SOP) without a Permit in Designated Hot Areas.

6.4.2.3 For the avoidance of doubt, the general requirements for all Medium and High Risk work as set out in section 4 still apply for Hot Works undertaken in Designated Hot Areas as do the general requirements for Hot Works as set out in section 6.4.1 (other than the requirement for a PTW).

6.4.2.4 Designated Hot Areas (and Temporary Designated Hot Areas) must be approved by the Relevant General Manager, Asset Manager of the area, Head of Health and Safety and either the Chief AES Officer (or a Fire Engineer) after inspection to ensure that the area is one where fire, emergency and environmental issues can be relatively easily controlled, and that the requirements for Designated Hot Work Areas or Temporary Designated Hot Areas are present.

6.4.2.5 The PTW Office will maintain a list of Designated Hot Work Areas and Temporary Designated Hot Areas at the Airport.

6.4.2.6 Designated Hot Work Areas must:

- Where practicable, be constructed from non-combustible materials (walls, floors, benches and roof);
- Not have any openings in the area through which sparks could escape (or have such openings covered with non-combustible materials or a fire resistant blanket);
- Have no combustibles stored in the area;
- Have no open cable trays in the vicinity;
- Have readily available appropriate fire extinguishers and fire hose or hose reel;
- Contain a readily available means of calling emergency services;
- Be clearly sign posted; and

- Have an established end of shift inspection system in operation.

6.4.2.7 Temporary designated Hot Work Areas may be authorised by the persons identified in clause 6.4.2.4 when necessary for large project/construction works. The temporary designated Hot Work Areas must meet the requirements specified for a designated Hot Work Area, as well as the following additional requirements:

- Defined boundaries in which the Hot Work will take place;
- An assessment conducted by persons competent in fire hazards and endorsed by the Head of Health and Safety;
- The approval must be documented and displayed at the area;
- A monitoring programme must be established by the Project Manager to ensure compliance with the Hot Work conditions; and
- An annual review by the Project Manager, Asset Owner, Head of Health and Safety and either Chief AES Officer or a Fire Engineer.

6.4.3 Hot Work in Hot Work Prohibition Zones

6.4.3.1 Hot Work is prohibited to occur in the following areas (known as Hot Work Prohibition Zones):

- Areas where the fire system has been materially impaired;
- Oxygen enriched environments;
- Inside flammable goods stores or the restriction zone around them;
- Inside areas used for the storage and handling of oxidisers;
- Within 6m of hazardous/dangerous goods storage areas;
- Within 6m of gas fill stations;
- Within 6m of aluminium composite panels that form part of the building;
- Within 50 metres of an aircraft while refuelling; or
- Within 15 metres of an aircraft or refuelling equipment on the Airfield Movement Area (when refuelling is not occurring).

6.4.3.2 Hot Works with a Naked Flame are subject to additional restrictions Clause 16 of the Auckland Airport Bylaws 1989, which prohibits Hot Works with a Naked Flame from within 50 metres of:

- An aircraft; or
- A store or container of liquid fuel or explosives.

6.4.3.3 A Hot Work Permit will only be granted to undertake Hot Works in a Hot Work Prohibition Zone in exceptional circumstances where:

- There is no alternative to performing Hot Work in a ‘Hot Work Prohibition Zone’;
- A plan has been developed that reduces the risk to as low as reasonably practicable and contains additional controls and mitigations;

- The plan has been developed in consultation with the Area Authority, the Asset Owner, the AES Crew Chief and the Head of Health and Safety; and
- The plan has been approved in writing by the relevant General Manager responsible for the area in which the work is being undertaken.

6.4.3.4 Under no circumstances will Hot Works be permitted:

- Within 50 metres of an aircraft while refuelling; or
- Within 15 metres of an aircraft or refuelling equipment on the Airfield Movement Area (when refuelling is not occurring).

6.4.3.5 Under no circumstances will Hot Works with a Naked Flame be permitted within 50 metres of an aircraft or a store or container of liquid fuel or explosives.

6.4.3.6 The various restrictions on Hot Works around an aircraft can be summarised as follows:

	Hot Works with no naked flame	Hot Works with a Naked Flame
Within 15 metres of an aircraft	✗	✗
Within 15 metres of refuelling equipment or a store or container of liquid fuel	✗	✗
Between 15 metres and 50 metres of an aircraft that is not refuelling	✓	✗
Between 15 metres and 50 metres of an aircraft that is refuelling	✗	✗
Between 15 metres and 50 metres of refuelling equipment or a store or container of liquid fuel (when refuelling is not occurring)	✓	✗
Between 15 metres and 50 metres of refuelling equipment or a store of container of liquid fuel (when refuelling is occurring)	✗	✗
More than 50 metres distance from an aircraft (whether or not it is refuelling)	✓	✓
More than 50 metres distance from refuelling equipment or a store of container of liquid fuel	✓	✓
Within 50 metres of explosives	✗	✗
More than 50 metres distance from explosives	✓	✓

6.4.4 Hot Work Controls in Non-Designated Areas

It is preferred that all Hot Work is carried out in designated Hot Work Areas – either a permanent designated Hot Work Area or a temporary Designated Hot Area. If this is not possible, the following minimum controls outlined in the table below must be in place before any Hot Works can be undertaken:

JSA and Permit required	• A JSA and Permit must be completed. • A Permit will not be authorised when relevant authorities issue a "Total Fire Ban"; or the Protection and Detection elements of the Fire System within the evacuation zone have been materially impaired. • The Permit must be supported with a rescue/recovery plan.
Fire Systems Impairment	• If a fire system impairment is required, a fire systems isolations certificate must be completed and authorised by the appropriate AIAL Infrastructure Engineer. • The Hot Works Permit will not be closed as complete until the impairment to the Fire System has been reinstated and the Fire Isolation Certificate signed off verifying reinstatement as complete.
Adverse Weather	• If adverse weather or environmental conditions create a significant fire risk (e.g. high temperatures, low humidity or gusty wind) Hot Work should be rescheduled or additional fire controls implemented.
Fire Extinguishers	• Portable hand-held fire extinguishers of the appropriate type, size and certification are required for carrying out Hot Work and must be readily available at the work area. • Fire extinguishers must be in addition to those provided for the normal protection of the building.
Combustible Materials	• Combustible materials (paper, dusts, rags and flammable spills) must be cleaned up and moved, where possible to at least a 10m radius for ground level work, and 15m radius for elevated work. • If combustible materials cannot be cleared from an area, the area must be covered with a fire resistant blanket to prevent spread of sparks.
Conveyers or Ducting Isolation	• If there is potential for sparks and/or hot materials to enter conveyors and/or ducting system they must be isolated and cleared of all combustible materials.
Ventilation	• There must be adequate ventilation in place to remove all fumes or gases that are generated as a result of the Hot Work.
Confined Space	• Any Hot Work carried out in a Confined Space must have a Confined Space Permit as well and meet the minimum requirements of the AIAL Confined Space requirements.

Safety/Fire Watch	• A Safety Watch must be assigned to monitor the Hot Work.
	• The Safety Watch must not have any other duties and must have a direct line of site with the work being carried out.
	• The Safety Watch must be trained to the following (or other formal equivalent):
	  ○ US 3271 (Suppress fire with hand extinguishers fixed hose reels) &
	  ○ US 4647 (Explain principles of fire science).
	• The Safety Watch must be maintained, after the Hot Work has stopped, for a minimum of 60mins
	• If work is being undertaken in the ITB or DTB (or immediately adjacent areas) in areas where the protection and detection systems are materially impaired or there are no active protection and detection systems present at the area of Hot Works, an extended Safety Watch of 240 minutes is required.

	• Depending on the nature of the Hot Work there may be a requirement for multiple Safety Watches, this will be established in the JSA and Permit process.
PPE	• All persons carrying out Hot Work shall wear PPE that is fit for purpose for the work being completed.
Protection of other people	• Appropriate screening must be put in place to safeguard other workers from exposure to arc flash. • The worksite must be isolated from the public sufficient to ensure that there is no possibility of exposure to any sparks or combustibles.
Gas Cylinders	• Gas cylinders that are to be used while welding must be restrained and secured against movement at all times during storage, transport and use. • Gas cylinders must not be positioned across access ways or traffic areas or transported within closed vehicles. • All bottles, hoses and connections relating to welding equipment is to be checked to ensure they are connected properly and ready for safe use prior to undertaking Hot Work. • Flash back arrestors, suitable for the types of equipment used are to be fitted to both oxygen and fuel gas lines at the regulator outlet and between the blowpipe and hose.
Gas Testing for flammable vapours	• Gas testing is required in areas where flammable gases, liquids (vapours) are, or have been previously stored, prior to and during the Hot Works.
Airfield Airside specific requirements	• Note that the distance Hot Works are permitted from an aircraft or refuelling equipment differs depending upon whether or not refuelling is occurring and also whether the Hot Works involves use of a Naked Flame. Refer section 6.4.3 above for more details. • Airfield Works permissions must be obtained for any airfield works (Use 'Airfield Works Approval Form 12A'). Refer section 5.5. • A minimum 15 metre fire precaution area is to be observed around aircraft and/or fuelling equipment for any type of Hot Work. • If an aircraft is refuelling Hot Work is not in any circumstances permitted within 50 metres of the refuelling aircraft. • For Hot Works within 50 metres of an aircraft in summer temperatures, consider wind direction, whether aircraft vents are open and whether gas monitoring is required. • When Hot Works with a **Naked Flame** are going to be undertaken airside the higher precaution area of 50 metre distance must be observed around aircraft, refuelling equipment or a store or container of liquid fuel (whether or not refuelling is occurring). • The relevant airfield rules must be followed. • Consider the impact on aircraft operations and the potential for distraction to pilots needing to line up aircraft on approach or manoeuvring on the apron area and use screens to shield the light or sparks if possible.

6.5 WORKING AT HEIGHT

6.5.1 Working at Height Requirements

6.5.1.1 Working at Height in most circumstances is considered a high-risk activity, which can result in serious injuries such as death to not only the person working if they fall, but also to others below if items are dropped.

6.5.1.2 A Permit to Work is required for all Working at Height assessed as medium or high risk (unless the access at height is being undertaken using an Approved Incumbent Licence granted under clause 3.3 and the work falls within the terms of that Licence).

6.5.1.3 WorkSafe NZ defines working at height as 'working at a place, above or below ground level, where a person could be injured if they fell from that place – that is, falling from one level to another. Access and egress, except by a staircase in a permanent workplace to or within a place of work, can also be work at height'.

6.5.1.4 Where practicable working at height should be minimised through means such as adapting tools and equipment to give workers the ability to work from the ground, or assembling/constructing the item on the ground and then lifting it to height. Best practice WorkSafe Guidelines for Working at Height should be followed.

6.5.1.5 To be issued a Permit, the Permit Issuer must be supplied with the relevant supporting documentation:

- Permit to Work application;
- Rescue/recovery plan;
- JSA or SOP for Working at Height; and
- Site location.

6.5.1.6 Working at height where a PTW is required must not proceed unless the common requirements for all medium and high risk work as set out in clause 6.1 have been met, as well as the specific additional requirements set out below for Working at Height:

- A valid Permit to Work has been issued by a Permit Issuer, and the PICWS holds the New Zealand Unit Standards ("US") which are relevant to the work that is to be performed (or equivalent qualification):
    - US 17600 Explain safe work practices for working at heights
    - US 15757 Use, Install, and Disestablish Proprietary Fall Arrest System when working at height
    - US 23229 Use safety harness system when working at height
    - US 25045 Employ Height Safety Equipment in the Workplace
- Note: persons without the above training can be escorted onto the rooftop by the PICWS or a holder of an Approved Incumbent Licence (Roof-top) (who is appropriately trained) for the purposes of inspecting the worksite, either before, during or after the

relevant work or proposed work, If fall arrest restraint or equipment is identified as a control to enable the working at height to occur safely:

- It must meet NZ Standards;
- It must be provided to and used by any worker performing the work at height or present at the work area at height;
- It must be designed to limit free fall to less than 2 metres; and
- A visual inspection of the fall arrest equipment and system must be completed prior to the work commencing and each time it is used, and any equipment that is damaged, defective or (in the case of fall arrest equipment) has previously been activated, is taken out of service and replaced.

- A Rescue/ Recovery Plan and rescue equipment is immediately available should it be required.
- For specialised tasks when working at height (such as the use of MEWPs, harnesses, proprietary fall arrest systems, and scaffolding additional specialist training is required, as set out in the controls section below.

6.5.1.8 Any person working at height for or on behalf of Auckland Airport must also refer to AIAL SMS 06.02.32 Working at Height and Roof Access Requirements.

6.5.2 Working at Height Controls

6.5.2.1 The controls outlined in the table below which are applicable to the context of the particular task or worksite, must be in place before any Working at Height can be undertaken:

Worksafe Notification	• The PCBU employing or engaging any workers Working at Height above 5 metres (measurement taken from the ground to the highest platform a person could fall from) is required to notify Worksafe NZ prior to the work at height commencing. • The only exemption to the above is where the PCBU has a current WorkSafe Exemption, and a copy of this has been provided to AIAL with the PTW Application.
Isolation of work area	• Barriers and signs must be erected to prevent the passage of other persons in the area.
Restraint of tools	• Any tools or equipment liable to fall should be suitably constrained or restrained. • Consideration should be given to the installation of a crash deck if there would be a high risk to people underneath the worksite if items fell.
Equipment checks	• Any equipment being used must be checked daily to ensure it is safe and functioning properly. • Any equipment that is required to have a test certificate or tag showing when it is last tested must be checked to ensure it is within the appropriate testing frequency.

	• Any equipment that does not satisfactorily meet inspection requirements, or has been damaged must be taken out of service and may not be used until repairs have been done.

Scaffolding	• Scaffolding needs to be designed and erected to suit the type of work to be carried out, the site conditions and the anticipated workload.
	• A Permit is required for any scaffolding.
	• A worker erecting scaffolding over 5m (from the ground to the highest component) must hold the appropriate class of certificate or competence (COC) for that type of scaffolding.
	• Training required for workers erecting scaffolding less than 5m are the following NZQA standards (or other equivalent formal qualifications):
	  ○ US 9184 – Erect and dismantle non-notifiable pre-fabricated frame scaffolding up to five metres in height
	  ○ US 13016 – Demonstrate knowledge of the erection and dismantling of scaffolding up to five metres in height
	  ○ US 13053 – Erect and dismantle scaffolding up to five metres in height
	• Before working from the scaffold erected certified scaffolder, the certified scaffolder must issue the client with a handover certificate.
	• All scaffolds, regardless of height, must have a tag (Scaff Tag) clearly displaying important safety information at access points (minor scaffold may be excluded from this if appropriate to the situation).
	• Workers erecting the scaffold, who are not within the confines of the scaffold must have appropriate fall protection (i.e. harness systems).
	• Pre-start checks must be completed daily to identify any risks.
	• Scaffolding inspections must occur within the minimum frequencies set out in clause 6.5.2.2 below.
	• Under no circumstances is a worker permitted to alter a scaffold erected by a certified scaffolder.

Edge Protection	• Proprietary and guardrail systems are required to be installed by a competent worker.
	• The system needs to be appropriate and adequate for the Working at Height risk.
	• All edge protection must have handrails, mid-rails and toe-boards.
	• Workers installing and using edge protection must hold the relevant training. Training must be to the relevant NZQA unit standard courses or other approved equivalent formal courses as follows:
	  ○ US 23229 (use safety harnesses)
	  ○ US 25045 (height safety equipment)
	  ○ US 15757 (use, install and remove proprietary fall arrest systems)

Mobile Elevated Work Platform (MEWP)	• Pick the right MEWP for the job.
	• The worker operating the MEWP must be competent to operate the machine and hold the relevant training. Training must be to the relevant NZQA unit standard courses or other approved equivalent formal courses as follows:
	  ○ US 23966 (using an MEWP)
	  ○ US 23960 (scissor lift)
	  ○ US 23961 (truck EWP)
	  ○ US 23962 (self-propelled boom lift)
	  ○ US 23963 (truck mounted EWP).
	• Prior to each use of a MEWP, a pre-operation inspection must be undertaken and recorded in the MEWP's logbook.
	• Never use an MEWP that doesn't have a current and legible annual certification or a six-monthly test certificate.
	• Harnesses must be used in self-propelled boom lifts, trailer mounted boom-lifts.
	• MEWPs must not be used within 4m of live power lines and if work is required within 6.4m of live power lines a competent Safety Watch must be present.
	• Exclusion zones and/or the use of Safety Watches must be used when working in close confines of other workers or the public.
	• Scissor hoists must be key-operated and have the keys removed whenever unattended.
	• An Approved Incumbent Licence (MEWP) enabling use of a MEWP in certain controlled circumstances (excluding on the airfield) can be issued by the PTW Office under Clause 3.3 in which case a PTW is not required by virtue only of the Working at Height.

Forklift Platforms	• Forklift platforms can only be used where it is not practicable to use scaffolding or MEWP's. • The forklift must have a load rating five times the weight of the cage plus its SWL. • Where there are multiple forklifts on site that may be non-compatible, a system shall be implemented to prevent the cages being used on non-compatible forklifts. • Never use a forklift platform that does not have a current and legible annual certification or a six-monthly test certificate.
Crane Platforms	• There must be clear communication between the operator and workers carrying out the task, through line of site or telecommunication at all times. • Workers in crane lift platforms must wear a suitable harness with lanyard attached to the hook. • Never use a crane platform that has not been manufactured in accordance with NZS 3404 or BS2573. • Never use a crane platform that does not have a current and legible annual certification for the Crane itself and a six-monthly certificate for the cage.

Harness Systems	• There must always be another worker present when a worker is working in a harness. • There must be a documented recovery/rescue plan to support the Permit application. • All workers working in a harness must be trained and competent in the use of harnesses with NZQA US 23229 – Use a safety harness for personal fall prevention when working at height (or equivalent alternative formal qualification). • All workers involved in planning, installing, operating fall arrest systems and supervising staff must have NZQA US 15757 – Use, install and disestablish proprietary fall arrest systems when working at height (or equivalent alternative formal qualification). • The harness must be inspected before use for any visually obvious wear and tear or defects, and be within its certification date (1 year). • Workers must be attached to a certified anchor point, that has been certified and tagged by a competent person. • Fall arrest should only be considered when total restraint is impracticable.
Step Platforms	• The use of step platforms must be considered before a ladder is used. • Step Platforms must be of trade or industrial standard and be rated at not less than 120kg. (Note – take into account any tools being carried when assessing if rating is appropriate) • Step Platforms must be checked before use and after any incident to ensure they are in good working order
Ladders	• Ladders must only be used for access and low-risk, short duration tasks. • Ladders must be of trade or industrial standard and be rated at not less than 120kg. (Note – take into account any tools being carried when assessing if rating is appropriate) • Ladders must be checked before use and after any incident to ensure they are in good working order. • Workers on ladders must at all times maintain 3 points of contact. • Straight ladders must be secured at the top and be footed by another worker for the duration of the work.
Rooftop Access	• Where practical, on all AIAL buildings' roof access points such as doors, hatches with height access ladders etc will be keyed / locked and keys held by Permit to Work Office. • Access to AIAL building roofs for inspections, undertaking repairs and/or maintenance via doors, hatches with height access ladders, stand-alone ladder brackets or other means will need obtain and hold a valid PTW. • The granting of the PTW will enable issuing of any appropriate keys or codes to enable the roof access. • Visitors (or untrained working at height workers) under escort to the rooftop for familiarisation visits, training or inspections do not require working at height training, provided the person escorting them has the appropriate training, holds the required Permit or Approved Incumbent Licence (Rooftop) and remains with them supervising them at all times while on the roof top.

6.5.2.2 Scaffold Inspections must occur at the frequency set out in the table below. A written record of inspections undertaken must be recorded and available on site or kept with the Permit to Work documentation if the site is an external one exposed to weather.

Scaffold Type	Inspection Frequency	Inspection Done By
All scaffolds, regardless of height, that are in use for a week or more	• Weekly while in use; • Monthly while set up but not in use; • After each structural alteration, repair, addition or change of anchorage; • After any storm or event that could adversely affect the safety of the scaffold;	Certified scaffolder or competent person depending on the type of the scaffolding.
Notifiable scaffolds	As above	Certified scaffolder.
Suspended scaffolds	As above and before first use	Certified scaffolder.
	Daily as part of the pre-start check	The Competent User

6.6 GROUND PENETRATIONS/EXCAVATIONS

6.6.1 Ground Penetration/Excavation Requirements

6.6.1.1 A PTW is required for the following ground penetrations or excavations:

- Any Ground Penetration/Excavation (outside Ground Leases) deeper than 300mm;
- Any Ground Penetration/Excavation of any depth within 6m (including horizontal directional drilling) of any fuel or gas pipeline (whether within or outside a Ground Lease); or
- Any Ground Penetration/Excavation deeper than 300mm within a Ground Lease if it is within the vicinity of a Critical Underground Asset, namely there is the possibility that the Ground Penetration/Excavation is within:
    - 2m of an HV cable;
    - 2m of critical fibre cable;
    - 2m of Key Three Waters Assets; or
    - 5m of a transformer or Power Centre.

6.6.1.2 A PTW for any Ground Penetration/Excavation deeper than 300mm within the vicinity of a Critical Underground Asset, or any depth within 6m of any fuel or gas pipeline (including horizontal directional drilling), will only be issued on the work site. The PTW application with all supporting documents must be submitted as per the normal process in clause 2.3. The Permit will be 'Approved in Principle' but not issued until the PTW Issuer is able to be on site and verify all controls (including safety stand-over) are in place and also that the relevant Pipeline Manager approval has been given, or Close Approach Consent (for Vector assets) has been issued.

6.6.1.3 All work occurring within 6m of any fuel pipeline must be notified to and approved by the relevant Pipeline Manager:

- The fuel pipeline (Wiri to Airport - "WAP") that enters the Auckland Airport Precinct at Puhinui Road and travels to the JUHI facility at Cyril Kay Road is owned by the Wiri Oil Services Ltd (WOSL) Joint Venture. The relevant party to contact is B4UDIG – 0800 248 344.
- The Fuel Hydrant System (FHS) that runs from the JUHI Bulk Storage to the international apron is owned by Auckland Airport and operated by JUHI. The Auckland Airport Pipeline Manager can be contacted at Pipeline.Manager@aucklandairport.co.nz.

- The majority of the gas network fed within the Auckland Airport Precinct is owned by Vector Gas, with the exception of three sections owned by Auckland Airport being the Puhinui Bridge Gas line and the two downstream sections from the main meter sets located at International Terminal Building (refer gas network ownership map below). The relevant party to contact for the Vector owned sections is B4UDIG - 0800 248 344. For works around the Auckland Airport owned sections contact Pipeline.Manager@aucklandairport.co.nz.

Fuel Pipeline and Fuel Hydrant System

Gas Network Ownership Map

6.6.1.4 Ground Penetrations/Excavations must not proceed unless the common requirements for all medium and high-risk work as set out in clause 6.1 have been met, as well as the specific additional requirements set out below for Ground Penetrations/Excavations:

- A valid Permit to Work has been issued by a Permit Issuer, which includes a copy of the Ground Penetration Certificate issued by AIAL's authorised Infrastructure representative (and any other required approvals or consents);
- All Critical Underground Assets and any other underground hazards have been identified, located and if necessary isolated;
- The potential impact on bird activity and any risk to aeronautical operations has been considered, the Wildlife Hazards Manager consulted if required and appropriate controls put in place (refer section 5.9 and 5.10);
- Ground and environmental conditions are continuously monitored for change; and
- There is a reliable means of communication between the operator of any excavation/ ground penetration equipment and other workers on the ground in the vicinity of the equipment.

6.6.1.5 To be issued a Permit for any Ground Penetrations/Excavations, the Permit Issuer must be supplied with the relevant supporting documentation:

- Permit to Work application;
- Rescue/recovery plan;
- Ground Penetration Certificate (GPC);
- JSA or SOP for the Excavation Work;
- Site location; and
- Any other pre-work precautions/approvals required as listed in section 2.3.
- **Additional** requirements relating to **fuel or gas pipelines**: if any work (including but not limited to ground penetration or excavation work) is being undertaken within 6m of any fuel pipeline (including horizontal directional drilling), the relevant Pipeline Manager must be notified and the applicant must obtain the Pipeline Manager's written approval for the planned work.
- **Additional** requirements relating to **Vector-owned assets**: if work is being undertaken in the vicinity of Vector's electricity, gas and communications assets, a Close Approach Consent may be required from Vector.
- Approved 'BeforeUDig' plans may also be required before a GPC is issued.

6.6.1.6 Where persons are required to enter an excavation in order to perform work:

- A further hazard and current risk assessment of the worksite must be completed by a suitably qualified and competent person immediately prior to entry;

- Potential or actual ground movement must be controlled, and the risk of collapse or engulfment eliminated by systematically shoring, sloping, bracing, benching, etc. as appropriate to the circumstances of the work and the nature of the ground material;
- There must be a reliable means of communication between the operator of any excavation/ground penetration equipment and workers who have entered the excavation; and
- A Rescue/ Recovery Plan and rescue equipment must be immediately available should it be required.

6.6.1.7 Any person undertaking Excavation Work for or on behalf of Auckland Airport must also refer to AIAL SMS 06.01.34 Excavation Requirements.

6.6.2 Ground Penetration/Excavation Controls

6.6.2.1 The following controls (relevant to the characteristics of the Ground Penetration/ Excavation in question) outlined in the table below must be in place before any Ground Penetrations can be undertaken:

Worksafe Notification	• Notification to WorkSafe NZ of particular hazardous work is required for excavations:
	  ○ 1.5m or greater, that has a depth greater than the horizontal width at the top; or
	  ○ In which any face has a vertical height of more than 5 metres and an average slope steeper than a ratio of 1 horizontal to 2 vertical.

Isolation of area	• Any excavation that may create a risk of falling at height must be fenced off with appropriate signage to prevent unauthorised access from the public, these fences must:
	  ○ Have a secure supportive top and bottom rail;
	  ○ Have the top rail located at a minimum of 1m above ground level;
	  ○ Have the bottom rail located a maximum of 100mm above ground level; and
	  ○ Be continuous around the excavation.
	• Note if aircraft operational requirements prevent a 1m fence height, then a lower top rail of between 60cm and 1m may be approved provided acceptable mitigation measures are included in the JSA.
	• Within the area, there must be controls in place to prevent workers from falling into an excavation.

Equipment checks	• Any equipment (including machinery and plant) being used must be checked to ensure it is safe, undamaged and functioning properly prior to its first use on site. • Any equipment that is required to have a test certificate or tag showing when it is last tested must be checked to ensure it is within the appropriate testing frequency.

	• Any equipment that does not satisfactorily meet inspection requirements, or has been damaged must be taken out of service and may not be used until repairs have been done.
Safety Stand-over	• A Safety Stand-over must be assigned to the penetration/excavation if Critical Underground Hazards (HV or fibre cables and water, gas and/or fuel pipelines) are identified.
Safe access and egress	• There must be a safe means of access to and egress from the excavation, including ladder, stairway, benching or ramp access and egress. • There must be controls in place to prevent workers from falling into an excavation.
Soil investigations	• Prior to works commencing, consideration needs to be given (and, if necessary, an assessment undertaken) as to whether the soil requiring excavation might be contaminated. • If there is a possibility that the soil could be contaminated, the Auckland Airport Planning and Sustainability team must be consulted.
Underground Hazard Identification	• All Critical Underground Assets and any other underground hazards (pipelines, electric cables and services etc.) must be identified, located and if necessary isolated. • If the Underground assets have not been able to be located in the expected area, work must stop and the Asset Engineer, Pipeline Manager (if the underground hazard is a fuel pipeline) and Area Authority contacted for further direction. This may result in the PTW being temporarily suspended until a new plan is developed and agreed, and then reflected in either an amendment to the existing PTW or a new PTW.

Work around Underground Hazards	• If underground services are known or suspected to be in the area, then hand-digging (pot holing) water or air vacuum must be used at the beginning of the work to expose the underground services.
	• For work around Auckland Airport owned Critical Underground Assets:
	  ○ Once the underground services are exposed, mechanical digging can occur up to (but not within) 500mm of the identified underground hazards (with a Safety Stand-over present - sometimes referred to as a Service Stand-over). See next section relating to works within 6 metres of any fuel pipeline - additional controls will be required.
	  ○ Within 500 mm of the underground service, mechanical digging is no longer permitted and work can only continue by hand digging or continuation of hydro or air vacuuming.
	• For Vector owned underground services, the terms of your Close Approach Consent and the Vector *Guide to Working Safely around Vector's Electricity, Gas and Communications Networks* must be complied with, which at the date of this PTW Manual provides that *'you must not use any mechanical excavator within one metre of strategic cables or pipes – you must hand dig. Exceptions to this are only permitted if the excavation technique is expressly provided for in the Close Approach Consent.'*

Work around fuel pipelines	• Any excavation or penetration occurring within 6 metres of any fuel pipeline must be notified to the relevant Pipeline Manager: ○ The fuel pipeline (Wiri to Airport - "WAP") that enters the Auckland Airport Precinct at Puhinui Road and travels to the JUHI facility at

	Cyril Kay Road is owned by the Wiri Oil Services Ltd (WOSL) Joint Venture. The relevant party to contact is B4UDIG – 0800 248 344. ○ The Fuel Hydrant System (FHS) that runs from the JUHI Bulk Storage to the international apron is owned by Auckland Airport and operated by JUHI. The Auckland Airport Pipeline Manager can be contacted at Pipeline.Manager@aucklandairport.co.nz • The relevant Pipeline Manager must be informed of **any** work activities within 6 metres of the fuel pipeline, even if excavation or ground penetration is not occurring. Depending on the nature of the planned work this may trigger a requirement to notify the Regulator under the Health & Safety in Employment (Pipelines) Regulations 1999 and/ or an internal AIAL Management of Change process. Email Pipeline.Manager@aucklandairport.co.nz OR Robert.Almond@se1.bp.com • For Auckland Airport owned fuel or gas pipelines, SOP-U-008 Excavating Near Fuel & Gas Pipelines" and "SOP-U-007 Fuel and Gas Stand over" must be followed. • Complex excavations (as defined by SOP-U-008) must be approved by way of KDM. • Note: Horizontal directional drilling must be taken into account when calculating whether any excavation or penetration is within 6 metres of any fuel pipeline.
Work around AIAL-owned gas pipelines	• Any excavation or penetration occurring within 6 metres of any AIAL owned gas pipeline (the Puhinui Bridge Gas line and the two downstream sections from the main meter sets located at International Terminal Building (refer gas network ownership map in section 6.1). must be notified to Pipeline.Manager@aucklandairport.co.nz • Pipeline.Manager@aucklandairport.co.nz must also be informed of **any** work activities within 6 metres of the gas pipeline, even if excavation or ground penetration is not occurring. • For Auckland Airport owned fuel or gas pipelines, SOP-U-008 Excavating Near Fuel & Gas Pipelines" and "SOP-U-007 Fuel and Gas Stand over" must be followed. • Complex excavations (as defined by SOP-U-008) must be approved by way of KDM. • Note: Horizontal directional drilling must be taken into account when calculating whether any excavation or penetration is within 6 metres of any fuel pipeline.
Requirements for work around critical fibre optic cables	• There is a very high social cost to be met from damaging fibre optic cables, including loss of emergency services, Eftpos, banking, internet and other critical services. • During any excavations deeper than 500mm within 2 metres of critical fibre optic cables either direct buried or within ducting, there must be a Fibre Standover role to manage the risk of unintended strike. • The person performing the Fibre Standover role must be: ○ Authorised by Auckland Airport to perform Fibre stand-over ○ Have proof of competency to use a cable locator ○ Be familiar with Emergency Procedures at Auckland Airport

	○ Be familiar with Auckland Airport's critical fibre optic network • Industry-recognised techniques must be used to locate the cable throughout the excavation. If using a digger (note not permitted within 500mm of the fibre optic cables) potholes must be used first to locate the cable. • Cables must always be treated as live. If possible, the cable should be isolated for the period of excavation (consult with Cable Management Planner/network owner to see if this can occur). • Any exposed cables must be covered over and protected at the end of each day • If a cable is damaged/struck: ○ Always regard the cable as live – avoid looking into the end of the bare fibre as invisible laser transmission may be present that could damage your eyes ○ Keep well clear of the damaged cable as fibre optic glass shards could be present, tiny splinters from the fibres can penetrate the soft skin on the face, hands etc and can be very difficult to remove. ○ Never point the end of a damaged fibre at yourself or anyone else • For further information, refer ES SOP F-001 – Fibre Stand-over.
Prevention of Collapse	• A competent person must make an assessment as to the best way to control the risk of collapse either through benching and/or battering, shoring or trench shields. Consideration needs to be given to the: ○ Soil type; ○ Soil moisture content; ○ Planned height of the excavated face; and ○ Any surcharge loads acting on the excavated face. • If shoring for an excavation is designed to carry extra loads (soil, vehicles and spoil) than there must be 1m between the excavation and loads, and this must be specified in the JSA or method of work statement so it can be communicated and controlled. • If shoring for an excavation is only designed to carry soil loads, then extra loads (vehicles, spoil etc.) must be a minimum of 1m outside the zone of influence (and the zone of influence must be clearly defined by the shoring designer). • A competent person must regularly inspect the soil condition and the state of control for signs of ground collapse. • Mobile plant must not operate or travel near the edge of an excavation unless shoring can support such loads.
Water accumulation	• Adequate controls need to be put in place if there is the potential that water can collect in an excavation. • If works are within 400m of where international aircraft being handled or international freight or waste being processed, prevent any water accumulating or collecting thereby creating mosquito breeding habitats; or undertake controls to prevent breeding if water accumulation is unavoidable.
Bird Control	• Birds are attracted to excavation and dirt and present a significant risk to aviation which must be managed.

	• Refer section 5.9 of the PTW Manual for detailed requirements of bird deterrence and management measures which should be considered in all JSAs where excavation is occurring either airside or under aircraft paths. • If the site is a large one, involves significant excavation, or is in a location directly adjacent to the airfield or under the flight paths, then a Wildlife Management Plan approved by AIAL's Wildlife Hazard Manager will be required (refer section 5.9.3 of the PTW Manual).
Mobile Plant	• All mobile plant used must be fit for purpose and in good working order. • Mobile plant must not operate or travel near the edge of an excavation unless actions to prevent collapse (which may include shoring) has been undertaken to ensure the surrounding ground can support such loads. • Where practicable, an exclusion zone must be set up around mobile plant, if not practicable there must be a spotter in the immediate area of the mobile plant. The spotter must be in constant contact with the mobile plant operator. • All mobile plant must meet WorkSafe NZ's ACOP for Operator Protective Structures on Self-Propelled Mobile Mechanical Plant. • Mobile plant must not work within 4m of overhead services, unless they have received a Close Approach Consent from the service owner. • Excavator operators must ensure that the quick hitch is in good working order and the safety pin is securely in place or the automatic system has engaged correctly.
Reinstatement generally	• On completion of works, the site must be returned to operational use or to its previous state and be safe for any other users of the area.

Reinstatement of airside areas	• If the area is airside then there are strict requirements around soil preparation, reseeding and bird control which must be adhered to in order to prevent attracting birds or creating FOD, both of which are high risk to the safety of aircraft movements.
	• These requirements are set out in section 5.9 PTW Manual in detail, key components of which are:
	  ○ The surface must be level with rocks greater than 10mm and all stakes/survey markers removed;
	  ○ Avanex (bird deterrent) grass must be used;
	  ○ The Avanex grass seed must be direct drilled to prevent being a bird attractant; and
	  ○ Flexterra must be sprayed over the seeded area to further reduce bird attractant as well as stabilising the ground and retaining water.

6.7 CRANE LIFTS

6.7.1 Crane Lift Requirements

6.7.1 Subject to 6.7.2 and 6.7.3, a PTW is required for the following crane operations (even if in ground lease areas):

- Any height if south of Tom Pearce Drive or the western side of Pukaki Bridge; or
- Greater than 15 metres height if north of Tom Pearce Drive;

6.7.2 A PTW for crane lifts will only be issued on site. The PTW application with all supporting documents must be submitted as per the normal process in clause 2.3. The Permit will be 'Approved in Principle' but not issued until the PTW Issuer is able to be on site and verify all controls are in place.

6.7.3 A PTW is not required for Crane lifts using a Truck Loader (hiab) that involve just moving materials from the delivery truck directly to the ground by an operator where this is

- Outside the Airfield Area; and
- Not in the forecourt or public drop off area of the Terminals or public car-parks.

6.7.4 A PTW is not required for Crane operations in Construction Ring-Fenced Projects unless the height of the crane is at or above the OLS. Auckland Airport AOT Crane/Temporary Structure Approval is however still required for Crane lifts in Construction Ring-Fenced Projects of:

- Any height if south of Tom Pearce Drive or the western side of Pukaki Bridge; or
- Greater than 15 metres height if north of Tom Pearce Drive. (refer section 2.1.6)

6.7.5 Any lift using a Crane where a PTW is required must not proceed unless the common requirements for all medium and high risk work as set out in clause 6.1 have been met, as well as the specific additional requirements set out below for Cranes:

- A valid Permit to Work has been issued by a Permit Issuer;
- All standards and plans specified in the NZ Crane Association Guide must be met; including provision of a lift assessment and/or lift plan on the NZ Crane Association standard forms (or equivalent) signed by a suitably qualified and competent person has been completed;
- Auckland Airport AOT Crane/Temporary Structure Approval has been received for any crane operation within clause 6.7.1;
- All relevant requirements contained in the Health and Safety in Employment (Pressure equipment, cranes and passenger ropeways) Regulations 1999 and Worksafe NZ's Approved Code of Practices for Cranes and for Load Lift Rigging are met;
- Rigging of the load must be carried out by a qualified and certified competent person;
- There must be a reliable means of communication between the operator of any lifting equipment and other workers on the ground in the vicinity of the lift (e.g. Rigger, dogman); and
- A Rescue/ Recovery Plan and rescue equipment must be immediately available should it be required.

6.7.6 If a crane lift will breach the OLS then a NOTAM must have been issued before the lift, and CAA approval obtained (refer section 5.7 for OLS Rules). The CAA Approval and NOTAM must be provided to the PTW issuer before the Permit will be issued.

6.7.7 The persons undertaking the relevant tasks within the crane operation must hold the appropriate NZQA unit standards (or equivalent alternative formal qualification) relevant to the work or role they are undertaking, and be able to provide proof of this training, including:

US 16617	Use a Truck Loader Crane to lift and place loads (or US 30072 refresher standard)
US 30072	Demonstrate and apply knowledge of slinging loads safely
US 3789	Sling a varied load and operate a Crane
US 3795	Configure and position a mobile crane and lift and place irregular loads
US 3794	Lift and place regular and irregular loads using a tower crane
US 27676	Configure a lattice boom track crawler crane to lift and place regular and irregular loads

6.7.2 Crane Lift Controls

6.7.2.1 The following minimum controls outlined in the table below must be in place before any Crane Lift can be undertaken.

Worksafe Notification	• Notification to WorkSafe NZ of particular hazardous work is required for any lift where the appliance has to lift a mass of 500 kilograms or more a vertical distance of 5 metres or more, other than work using an excavator, a fork-lift, or a self-propelled mobile crane.
Isolation of area	• An exclusion zone must have been established which is effective and will remain in place for the duration of the lifting operation. • This must be fenced off or demarcated with appropriate signage to prevent the unauthorised access from the public.

Equipment	• Equipment must comply with WorkSafe NZ's ACOP for:
	  ○ Cranes; and
	  ○ Load Lifting Rigging
	• The crane operator must undertake equipment checks as the crane is brought onto site before it is used and before each use as specified in the NZ Crane Association standard forms.
	• The appropriate lift and rigging plans must be completed as specified in the NZ Crane Association lifting plan relevant to the characteristic of crane lift.

Checks of hazards in surrounding area	• The Crane Lifting equipment needs to be designed and set up to suit the type of work to be carried out, the site conditions and the anticipated workload. • Crane lifts must not occur near the edge of an excavation unless shoring can support such loads. • Crane lifts should not be undertaken within 4m of live power lines. • If work is required within 6.4m of live power lines a competent Safety Watch must be present.
Equipment checks before	• Any equipment (including machinery and plant) being used must be checked prior to its first use on site to ensure it is safe, undamaged, appropriately maintained and functioning properly, with this inspection recorded.

work commences	• Any equipment that is required to have a test certificate or tag showing when it is last tested, must be within the appropriate testing frequency, and must be checked to confirm this is the case. In particular lifting tackle and equipment must have been certified for use within 12 months of the date of the lift. • Any equipment that does not satisfactorily meet inspection requirements, or has been damaged must be taken out of service and may not be used until repairs have been done.
Equipment check before each lift	• The load must not exceed dynamic and/or static capacities of the lifting equipment. • All lifting devices and tackle must have been visually examined by a competent person(s) before each lift and confirmed free of damage or defects.
Training	• All workers controlling the lift and operating the crane must be trained and competent in undertaking the relevant type of lift as well as competent and trained to operate the relevant machinery. • AIAL requires relevant NZQA Unit Standards (or equivalent formal qualification) to have been completed relevant to the type of lift and crane being used, as set out in clause 6.7.3.
Communication	• There must be clear communication between the operator and workers carrying out the task, through line of site or telecommunication at all times.
Control of lift	• A rigger (previously referred to as a dogman) must be appointed and present to control the lift. • The rigger must ensure that the rigger used to lift the load is in good working order and the safety pin is securely in place or the automatic system has engaged correctly before each lift.

Complex Lifts, Irregular Loads or multiple cranes	• Also called, irregular loads, complex lifts are crane lifts that have one or more of the following characteristics:
	  ○ Unequal weight distribution;
	  ○ Eccentric loading;
	  ○ Irregular shape and/or proportions;
	  ○ No set lifting points; and/or
	  ○ Dual crane lifts.
	• These types of complex lifts require highly trained operators and involve considerable skill and risk.
	• Only operators with the specific training as set out in section 6.7.5 can undertake complex lifts.

6.8 USE OF FIREARMS

6.8.1 Firearm Use Requirements

6.8.1.1 Any work that involves use of firearms (other than for airfield operations by Auckland Airport employees in the Wildlife Team using approved SOPs) must not proceed unless the common requirements for all medium and high risk work as set out in clause 6.1 have been met, as well as the specific additional requirements set out below for use of Firearms.

- Written authority to discharge a firearm has been obtained from the Auckland Airport Chief Executive, GM Operations, GM Corporate Services or GM Property;
- A valid Permit to Work has been issued by a Permit Issuer;
- The user of the firearm has produced (and the Permit Issuer has sighted) a current NZ Firearms Licence;
- Aviation Security and the NZ Civil Aviation Authority have been notified and granted approval for the use of the firearm (applies whether the work is to be performed either landside or airside);
- NZ Police and the Airport Operations Centre have been notified of the intention to bring a firearm into an Auckland Airport facility or onto Auckland Airport premises; and
- All persons involved are suitably qualified and competent to do the work.

6.8.1.2 A Safety Plan for the proposed use of the firearms must be prepared and provided to the PTW Office for review with the PTW Application, which, at a minimum must include:

- An outline of the nature / activity of the shooting activity;
- What type of firearm will be used (shotgun and gauge, rifle and calibre, air rifle and power/ velocity etc);
- The safety procedures / intended methods for ensuring that shooters do not accidentally shoot other people in the vicinity;
- The isolation or exclusion zones;
- What warning signage will be deployed;
- PPE requirements;
- How the firearms and ammunition will be securely stored and controlled; and
- The response and plan if an emergency occurs, including the shooter or other individual being shot or the shooter not returning.

6.8.1.3 Any person using Firearms at Auckland Airport (other than for airfield operations by Auckland Airport employees in the Wildlife Team using approved SOPs) must also refer to AIAL's Policy on Authorised Use of Firearms by Tenants, Licensees and Leaseholders and AIAL SMS 06.01.35 Use of Firearms: Safety Plans.

6.8.2 Firearm Controls

6.8.2.1 The following minimum controls outlined in the table below must be in place before any use of Firearms can occur on the Auckland Airport precinct (other than for airfield operations by Auckland Airport employees in the Wildlife Team using approved SOPs):

Isolation of area	• An exclusion zone must have been established which is effective and will remain in place for the duration of the firearm operation.
	• This must be fenced off or demarcated with appropriate signage to prevent unauthorised or inadvertent access from the public or workers.
	• Ideally others should be totally excluded.
	• If total exclusion is not practicable, then a system should be set up which ensures that a safe separation distance between shooters and others is maintained.
	• The risk level and isolation requirements change with the type of firearm used; for example:
	  ○ A 7-guage shotgun requires a minimum of 100 metres separation distance between shooters and other people at all times shooting is being carried out.
	  ○ A .22 calibre rifle will require much greater separation if not total exclusion.
	  ○ Air-powered rifles may (or may not) require a different separation.
	• The safety procedures must be set out in writing and be brought to the attention of all people who are likely to be in the area at the time.

Use warning signs	• Place temporary signs which warn that shooting is being carried out at entry points to the area that is subject to the use of firearms. • These signs must also advise people to keep out of the area, and the specific times that shooting is planned to be carried out. • The signs must be placed prior to the shooting being carried out and removed when shooting is finished. • It may also be desirable, where shooters are operating in the same area as the public are likely to be present, to place coloured cones and warning tape across any entry point to the shooting area.
Monitor the site and activity	• The area of live shooting must be continuously monitored for any change in conditions. • If the public are unable to be effectively excluded from the area by fences or other lockable barriers, then a safety watch must be in place.
Provide advance notice	• Timetable the shooting. • Timetable precisely the times when shooting will be carried out. • Advise all staff and applicable others (eg. occupiers of neighbouring land/ buildings) of these times. • Put this information in writing and advertise it on staff/ club notice boards, etc. • Shooting must then only be carried out during those times.
PPE	• Some firearms (eg. shotguns) generate high peak levels of noise and it is a significant hazard.

	• Auckland Airport advises all shooters to wear/ provide hearing protection of at least Grade 3 earmuffs, for the shooter/s themselves and all other people who will be within 10 metres of the shooter. • The wearing of protective eyewear, footwear and high visibility clothing are also strongly recommended.
Secure storage	• Ensure that firearms are safely and securely stored (unloaded) and out of sight in vehicles when not in the hands of shooters, in accordance with the requirements of the Arms Act 1983. • Ensure that bulk supplies of ammunition are safely and securely stored. • It is essential that children do not have access to firearms and ammunition storage areas.
Emergency Response Plan	• Develop an Emergency Response Plan (which can be a section in the Safety Plan) describing the emergency procedures to apply in the event of any person being harmed while a firearm is in use. • This must include a plan which covers when to search for a shooter who does not report back at the end of their shooting activity.

APPENDICES

APPENDIX A – EMERGENCY NUMBERS

PTW CONTACTS AND EMERGENCY NUMBERS		
Permit Office	Email	Permit.Office@aucklandairport.co.nz
	Address	Tuapapa - The Base, Jimmy Ward Crescent, Auckland Airport
HSW (PTW) Advisor	Mobile	027 579 6142 027 357 4195
AIAL Operations Centre	Phone	09 256 8813 0800 677 242 ext 1 (general ops) or ext 4 (suspicious behaviour) 98813 from internal airport phone (in terminals)
Traffic Management Authority	Mobile	027 579 6142
Head of HSW	Mobile	021 813 656
AIAL HSW Business Partner	Mobile	027 220 0974
		027 403 2552
		027 237 5998
Your AIAL Area Authority or PM (you fill in)	Mobile	
	Email	
EMERGENCY NUMBERS		
AIAL Emergency Services		09 256 8777 0800 677 242 ext 9 (emergency) 98777 from internal airport phone (in terminals)
Fire and Emergency NZ Ambulance Police		111

APPENDIX B – COPY OF SUMMARY OF SECURITY RULES

QUICK SECURITY CHECK-LIST FOR CONSTRUCTION PROJECTS

Avsec Identity Cards

- Security cards must be worn visible on the top half of the body at all times
- Only go airside for work purposes (ie not to meet friends or family)
- Report any lost identity cards to both Avsec and 0800 OPS AIA immediately
- If an identity card is found return this to Avsec immediately

Avsec Temporary Passes

- Temporary ID pass holders must remain in same work area within eye sight of the person responsible for supervising them at all times (eg, within the same room or work area)
- Only five people on temporary passes can be escorted by each permanent card holder
- The person supervising the temporary ID pass holder does not have to be the person who signed to obtain the temporary ID, but see below -
    - However, it is the responsibility of the person who obtained the temporary ID to ensure that the supervision role is clearly passed to another person holding a permanent ID

Accessing Airside

- You MUST always swipe your purple AIAL access card (including at Check-point Charlie) – This is now a separate card to an AIC and is obtained from the AIAL Access office separately.
- You MUST always close security doors and gates behind you and check they are securely closed
- You MUST make sure others around you also swipe their cards
- You MUST make sure no-one tails gates behind you
- Do not take anyone airside with you unless that person has an Avsec Identity card or a temporary ID has been obtained and you are officially escorting that person
- Do not write passcodes onto doors or other areas visible to the public
- Failure to abide by these rules WILL result in a breach notice and temporary revocation of airside access

Tool Management

- All tools must be labelled with the company's name
- When going into sterile areas in terminals, you must have a list of all tools that could be used as a weapon
- When airside do not leave tools unattended – these are prohibited items for passengers
- When airside carry tools securely in closed containers – no open trolleys, no open tool-boxes, no loose tool-belts that passengers could take tools from
- Undertake tool checks after working on airfield or in sterile areas of terminal so no tools are left behind

Be security conscious

- Ring 0800 OPS AIA to report any unattended items, any suspicious behaviour or vehicles, any unauthorised attempts to access airside and any insecure doors

Security Fence

- Nothing is to be stored or put (even temporarily) within 1.5m of the fenceline – airside or landside
- No vehicle or equipment is to be parked (even temporarily) within 1.5m of the fenceline – airside or landside
- Note – the 1.5m is measured from the out-rigger on the landside side of the fence
- Anything that could be moved and used to climb the fence (such as ladders, scaffolding, wheely bins, picnic tables) must be padlocked or otherwise secured so it cannot be moved next to the fence
- The fence must be a clear 2.44m high – if anything has to be within 1.5 of the fence, the height of the fence must be increased so that it is 2.44m above the obstruction (contact AIAL Skygate to inspect)
- If any holes, loose posts, loose fencing or wire is noticed report to 0800 OPS AIA or Skygate

Biosecurity

- Do not take any food back from airside – put into yellow biosecurity bins
- Do not allow standing water to accumulate (or else foreign hitch-hiking mosquitos may breed)
- Cover holes in road barriers and keep lids closed on bins to prevent water accumulating
- Report any suspicious insects or animals to 0800 OPS AIA or the MPI Duty Officer on 909 8615.

No Animals airside

- No animals are permitted to be brought onto the Airport precinct (whether airside or landside) even if kept in vehicles. Trained guide dogs and government border agency dogs are the only exception.

Auckland Airport

AUCKLAND AIRPORT'S AIRPORT WORKERS' RULES MUST BE COMPLIED WITH AT ALL TIMES

Authorised by Head of Operations Risk and Assurance and Safety and Security Manager Operations 28/6/21

SECURITY AND AIRFIELD RULES GUIDE FOR CONTRACTORS ON TEMPORARY IDS

Avsec Identity Cards

- Your temporary ID must be worn visible on top half of the body at all times
- Carry your drivers' licence or form of Government ID with you at all times
- Report any lost identity cards to both Avsec and 0800 OPS AIA immediately
- If an identity card is found return this to Avsec immediately

Supervision of Temporary Pass Holders

- Do not wander off from the person supervising you
- Temporary ID pass holders must remain in same work area within eye sight of the person responsible for supervising them at all times (eg, within the same room or work area)
- The person supervising the temporary ID pass holder does not have to be the person who signed to obtain the temporary ID, but see below -
- However, it is the responsibility of the person who obtained the temporary ID to ensure that the supervision role is clearly passed to another person holding a permanent ID
- If you become separated from the person supervising you, please ring Auckland Airport Operations on 0800 677 242, ext 4.

Accessing Airside

- You may only go airside when escorted by a person with a permanent CAA ID card
- Always close security doors and gates behind you and check they are securely closed
- Make sure no-one tails gates behind you

Tool Management

- All tools must be labelled with the company's name
- When going into sterile areas in terminals, you must have a list of all tools that could be used as a weapon
- When airside do not leave tools unattended – these are prohibited items for passengers
- When airside carry tools securely in closed containers – no open trolleys, no open tool-boxes, no loose tool-belts that passengers could take tools from
- Undertake tool checks after working on the airfield or in sterile areas of the terminal so no tools are left behind

Permit to Work

- Work cannot be undertaken without a Permit to Work from Auckland Airport or the approval of the area controlling authority in the case of a ring fenced construction site.

Be security conscious

- Ring 0800 OPS AIA to report any unattended items, any suspicious behaviour or vehicles, any unauthorised attempts to access airside and any insecure doors

Duty Free | Items acquired airside

- You may not purchase (or take back landside any duty free or other items purchased | acquired by others) while you are working airside or while you are airside using your temporary ID.

Security Fence

- Nothing is to be stored or put (even temporarily) within 1.5m of the fenceline – airside or landside
- No vehicle or equipment is to be parked (even temporarily) within 1.5m of the fenceline – airside or landside
- Note – the 1.5m is measured from the out-rigger on the landside side of the fence

Biosecurity

- Do not take any food back from airside – put into yellow biosecurity bins
- Report any suspicious insects or animals to 0800 OPS AIA or the MPI Duty Officer on 909 8615.

No Animals airside

- No animals are permitted to be brought onto the airside precinct (whether airside or landside) even if kept in vehicles. Trained guide dogs and government border agency dogs are the only exception.

Auckland Airport

AUCKLAND AIRPORT'S AIRPORT WORKERS' RULES MUST BE COMPLIED WITH AT ALL TIMES

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APPENDIX C – COPY OF SAMPLE TOOLS CHECKLIST

A sample form is below, with a suggested procedure overleaf. Organisations may develop their own Sterile Area Tools Checklist(s), and may hold these in hard copy or electronic, so long as the Checklist meets the requirements of para 4.3 of the Airport Workers' Rules.

Auckland Airport

Sterile Area Tool Checklist

Any workers taking tools of trade and equipment into sterile areas that could be used to inflict serious harm or injury to a person or unlawfully interfere with aviation (eg sharps or as a weapon) must record such tools as they are taken into and removed from sterile areas.

Date:

		Quantity	Pre-work	Post-work
Item 1				
Item 2				
Item 3				
Item 4				
Item 5				
Item 6				
Item 7				
Item 8				
Item 9				
Item 10				
Item 11				
Item 12				
Item 13				
Item 14				
Item 15				
Item 16				
Item 17				
Item 18				
Item 19				
Item 20				
Item 21				
Item 22				
Item 23				
Item 24				
Item 25				

I certify this list is a record of all tools and equipment that I am carrying into a sterile area which could pose a risk to aviation safety and security; that I will ensure no unauthorised person can access these while I am working airside and that when I finish work airside, I will ensure that all tools and equipment are returned landside. If any are missing, I will report this immediately to Auckland Airport Operations.

Worker: *(name)*:

(signature)

Suggested Sterile Area Tool Check Procedure

Scope:

This procedure applies to all workers undertaking work within sterile airside areas. Refer definition of Sterile Areas in Airport Workers' Rules, which, broadly speaking means any area in the international or domestic terminal that is airside (ie beyond an AVSEC Screening Point), including, but not limited to, the departures dwell area, gate lounges, aerobridges, airside retail stores, airline lounges and public bathrooms.

Purpose:

The purpose of this procedure is to maintain the integrity of sterile airside areas by ensuring any tools of trade that could be used to inflict serious harm or injury to a person or unlawfully interfere with aviation are known, accounted for and returned landside on completion of work. It is also to ensure any missing tools are identified and reported without delay.

Procedure:

- As far as practical, endeavour to take only the tools required to complete the job.
- Carry tools securely in a closed toolbox, tool bag or other container and ensure they cannot be accessed by passengers or unauthorised persons at any time.
- Complete a *Sterile Area Tool Checklist* and carry it with you, ready for presentation to an AVSEC Officer or Auckland Airport Official on request. This can be completed electronically so long as it can be shown upon request.

  This step acts as a record of tools and equipment that you are taking into the sterile area.
- Once the job is finished and prior to leaving the sterile work area, check your tools and complete the 'Post-Work' column of the *Sterile Area Tool Checklist* to confirm all tools are present and being returned landside. Again, this can be electronic so long as it can be shown upon request.

  This step acts as a check to ensure no items are inadvertently left behind.
- If a tool is identified as missing, immediately return to its last known location to retrieve it. If it cannot be located, notify Airport Operations on 0800 677 242 ext. 4 immediately.

Failure to follow this procedure and carry a *Sterile Area Tool Checklist* with your tools may result in the issue of a Security Breach Notice.

APPENDIX D – COPY OF AIAL RISK ASSESSMENT MATRIX

POTENTIAL CONSEQUENCES: (Severity of Impact)					LIKELIHOOD, PROBABILITY and FREQUENCY:				
Consequence Label	People: (Injury and Illness)	Environment & Biosecurity:	Business Impact: - Airfield Disruption - Asset Damage - Security - Financial Impact - Passenger/ Terminal Disruption - Damage to Reputation - Compliance Impact (CAA, WorkSafe)		A. Rare:	B. Unlikely:	C. Possible:	D. Likely:	E. Almost Certain:
				Likelihood:	Could occur in exceptional circumstances if at all.	Unlikely under most circumstances	May occur but not expected to occur.	Could occur in most circumstances	Will occur regularly
				Indicative Frequency:	Could occur once, if at all, during the facility life	Could occur several times during facility life, with extended periods between events	Could occur routinely over an extended period	Weekly exposure	Continuous exposure
				Probability:	< 1%	1 – 10%	10 – 50%	51 – 90%	> 90%
1. Insignificant	- First Aid or - No injury or illness.	Confined to immediate area within site; No effect or contained	- No aircraft movements affected, no impact on airfield - No damage to airport assets - No passenger disruption issues - No security incursion - Financial consequence up to $10 000 - No media concerns - Potential non-compliance with industry code or of known requirements.		L (1)	L (2)	L (3)	L (7)	M (8)
2. Minor	- Minor health effect/injury - MTI/RWI/LTI	Impact contained to site with simple clean-up or management process	- Minor impact on aircraft movements, minor impact to airfield - Minor damage to airport assets - Minimal terminal congestion, some impact on passenger processing - Minor security incursion - Financial consequence between $10 000 and $100 000 - Low level media interest - Potential breach of regulation or current non-compliance with industry code. Direction issued and recorded.		L (4)	L (5)	M (9)	M (10)	H (14)
3. Moderate	- Significant health effect or injury - Irreversible damage	Impact contained to site requiring specialist clean-up or resources or management	- Some aircraft movements restricted or limited for up to 3 hours, some impact to airfield - Some damage airport assets, out of order at present, no on-going concerns - Parts of terminal congested with moderate impact on passenger processing - Moderate security incursion - Financial consequence between $100 000 and $1 million - Some on-going media interest - Potential breach of regulation & may be reportable incident to legislator. Notice issued.		L (6)	M (11)	M (12)	H (15)	C (20)
4. Major	- Multiple significant health effects or injuries - Permanent total disability - Single fatality	Extends beyond facility boundary, ecosystem disturbance requiring clean-up using internal & external resources	- Limited or no aircraft movements for up to 24 hours, high impact to airfield - High level of damage to airport assets, taken out of action for a period of time - Passenger processing time affected, high level of passenger disruption - Major security incursion - Financial consequence between $1 million and $10 million - National concern - Reportable breach of regulation and licence. Possible prosecution.		M (13)	H (16)	H (17)	C (21)	C (22)
5. Catastrophic	- Multiple fatalities	Environmental impact of regional or national significance; Long term damage	- No aircraft movements for extended period over 24 hours, significant impact to airfield - Significant damage to airport assets for an extended period of time - Passenger processing halted for extended period, significant pax disruption - Significant security incursion - Financial consequence over $10 million - International and national concern - Breach of regulation and licence condition - reportable incident to regulator; prosecution very likely		H (18)	C (19)	C (23)	C (24)	C (25)

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Level of Risk:	Hazard and Risk Management:	Incident and Investigation:	Audit:
Overall risk rating **LOW (1 - 7)**	- Proceed with controls only when these have been confirmed as being fit for purpose and appropriate for the task. - If unsure discuss with supervisor/ line manager or area authority	- Verbal notification to supervisor/line manager/area authority. - Details to be entered into Risk Manager including any suggestions for improvement and/or corrective actions within 3 working days. - A simple investigation may be required depending on the issue and circumstances.	Corrective actions to be completed as soon as practicable
Overall risk rating **MEDIUM (8 - 13)**	- Proceed with controls only with the approval of the line mangers or area authority and when the controls have been incorporated in the JSA	- Verbal notification to Department Manager, HS&W Team and Airport Safety & Security Manager (for Aeronautical) as soon as possible, and followed up by an email confirmation. - Details to be entered into Risk Manager within 1 working day. - **Simple Investigation**, such as five whys or Mini-ICAM which is sufficient to establish the root cause, within 5 working days.	Corrective actions to be completed with 7 days
Overall risk rating **HIGH (14 - 18)**	- Only proceed with controls once written approval has been received from the relevant GM	- Verbal notification to Relevant GM, Head of HS&W and Airport Safety & Security Manager (for Aeronautical) as soon as possible, and followed up by an email confirmation. - Details to be entered into Risk Manager within 1 working day. - **Root Cause Analysis** (RCA) such as five whys or Mini-ICAM within 10 days, however the Relevant GM and/or Head of HS&W may request a full ICAM Investigation within 15 working days.	Corrective actions to be completed within 48 hours
Overall risk rating **CRITICAL (19 - 25)**	- Under no circumstances should you or any other workers proceed with the task until additional controls are put into place and the effectiveness of the controls have been verified by a subject matter expert. Written approval must be received from the relevant GM.	- Immediate verbal notification to Relevant GM, Head of HS&W and GM Corporate Services. - Details to be entered into Risk Manager within 1 working day. - **ICAM Investigation** within 15 working days.	Activity is to be stopped and corrective actions to be implemented before activity can recommence