# Infrastructure

## Airport Approach Path

### Overlay description

The purpose of this overlay is to manage obstructions such as buildings and trees, so that they do not protrude into airport approach paths, supporting airports and airfields efficient operation.

Detailed height restriction diagrams for Kaipara Flats Airfield, North Shore Airfield, Parakai Airfield and Auckland Gliding Club are contained in this overlay section of the Unitary Plan while Auckland International Airport (AIA), Whenuapai Airbase and Ardmore Airport diagrams are contained in the designation section of the Unitary Plan.

### Objective

* + 1. Obstructions that compromise the safe and efficient operation of airports or airfields are prevented from protruding into airport approach paths.

### Policies

1. Allow the removal or topping of trees.
2. Control development within the Airport Approach Paths overlay threshold height limit approach and take­off height limit and within areas subject to obstacle limitation surfaces and runway end protection areas in the relevant Auckland International Airport, Whenuapai Airbase and Ardmore Airport designations.
3. Prevent the height of buildings and trees from adversely affecting the safety and efficiency of airports or the ability of airports to function at present levels.

## Aircraft Noise

### Overlay description

The purpose of the overlay is to manage the subdivision of land and location of activities sensitive to aircraft noise in areas of high cumulative noise around the region’s airports and airfields, so that the continued operation of the airports and airfields is not compromised and reverse sensitivity issues addressed.

The following airports/airfields are included in this overlay:

* Auckland International Airport
* Ardmore Airport
* Kaipara flats Airfield
* North Shore Airfield
* Whenuapai Airbase.

### Objectives

* + 1. Airports are protected from reverse sensitivity effects.
    2. The adverse effects of aircraft noise on residential and other activities sensitive to aircraft noise are managed.
    3. The internal noise environment of habitable rooms are protected from aircraft noise within the overlay.

### Policies

1. Avoid establishing residential and other activities sensitive to aircraft noise (ASAN):
   1. within the 65Ldn noise contours in the aircraft noise overlay
   2. Within the area between the 55Ldn and 65Ldn noise contours in the 57Ldn noise contour in the aircraft noise overlay, unless the effects can be adequately remedied or mitigated through restrictions on the numbers of people exposed to aircraft noise in the external environment and

the acoustic treatment (including mechanical ventilation) of buildings containing activities sensitive to aircraft noise.

1. Manage residential intensification and other activities sensitive to aircraft noise within identified growth centres, intensive corridors and other areas identified for accommodating urban growth in a way that avoids conflicts or incompatibilities (including reverse sensitivity effects) between those land uses and Auckland International Airport Limited and Ardmore Airport Limited as recognised significant infrastructure.

## City Centre Port Noise

### Overlay description

The overlay is applied to land near Auckland’s downtown port. Buildings accommodating activities sensitive to noise within the overlay must be insulated to achieve an internal noise level appropriate to the activity. This will ensure that activities sensitive to noise within the overlay achieve a good standard of amenity and the port is able to operate efficiently.

### Objective

* + 1. The port is protected from reverse sensitivity effects arising from activities sensitive to noise.

### Policy

1.

Require activities sensitive to noise within the overlay to protect themselves from noise arising from the operation of the port.

## Electricity Transmission Corridor

### Overlay description

The electricity transmission network is important to the social and economic well­being of Aucklanders and New Zealanders.

Under the National Policy Statement on Electricity Transmission 2008, the council is required to identify and provide a buffer corridor below and around high voltage transmission lines and transmission towers/poles. These lines and tower/poles are owned and operated by Transpower New Zealand Limited and form part of the national electricity grid.

The purpose of these buffer corridors is to manage subdivision and development within close proximity to the high voltage transmission lines and transmission towers/poles, in order to prevent risks to people and property; protect the electricity transmission network; preserve line access for inspection and maintenance and to protect amenity values.

High voltage transmission lines pose a risk of electrical hazard in situations where development occurs too close to the lines and may result in injury to persons or damage to property. This can be either as a result of direct contact with the lines or where an electric arc (or ‘flashover’) contacts structures, such as buildings. Conversely, development in close proximity to transmission lines can pose risks to the electricity transmission network itself. These risks include ‘reverse sensitivity’ effects, a loss of security of supply through outages or physical damage to support structures, constraints on access to the line and support structures for inspection and maintenance purposes and inability to undertake line upgrades.

The electricity transmission corridor covers the area 12m (both sides) from the transmission centre line.

The corridor places restrictions on activities sensitive to the effects of transmission lines, such as residential and care centres. However, in recognition of the level of built development and the need to provide landowners some flexibility, the Unitary Plan takes a more permissive approach to certain building works, such as alterations and extensions and normal farming operations. This is subject to certain standards being met, including the maintenance of access to transmission line support structures and the requirement to meet the New Zealand Electrical Code of Practice (NZECP34:2001). This code sets minimum safe distances from transmission lines to protect people, property, vehicles and mobile plant from harm or damage from electrical hazards. Subdivision generally requires resource consent in order to ensure the layout of future buildings do not unduly constrain the operation and maintenance of the transmission lines.

### Objective

* + 1. The efficient development, operation and upgrading of the electricity transmission network (national grid) is not unnecessarily constrained by subdivision, land use and development.

### Policy

1.

Require subdivision, land use and development within the electricity transmission corridor to be undertaken so that it:

* + - 1. meets the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34: 2001)
      2. does not compromise security of supply and/or the integrity of transmission assets
      3. does not compromise existing access to conductors and support structures for maintenance and upgrading works
      4. does not foreclose operation and maintenance options or the carrying out of planned upgrade works
      5. manages activities sensitive to transmission lines to avoid exposure to risk and minimise

exposure to nuisance, such as noise, line drip and flashovers

* + - 1. takes transmission assets into account at the design stage of subdivision by locating compatible activities under or in close proximity to lines.

## High Land Transport Noise

### Overlay description

These provisions apply to land adjoining heavily trafficked roads or rail lines. Strategic land transport infrastructure, such as rail lines, state highways and other heavily trafficked roads generate high levels of transport noise which can affect community health and well­being, particularly in urban areas. These provisions require new or altered activities sensitive to noise within the overlay to undertake mitigation so that occupants are not exposed to transport noise levels above World Health Organisation guidelines.

These provisions also avoid the reverse sensitivity effects that can occur when activities sensitive to noise are located in proximity to strategic land transport infrastructure.

### Objectives

* + 1. Strategic land transport infrastructure is protected from reverse sensitivity effects associated with surrounding new or altered activities sensitive to noise.
    2. New and altered activities sensitive to noise, such as places where sleep or teaching normally occurs, are protected from:
       1. high levels of land transport noise
       2. unreasonable or excessive levels of noise arising from the operation and maintenance of strategic land transport infrastructure.

### Policies

1. Require new noise­sensitive land uses, and alterations to existing noise­sensitive land uses to be designed and constructed so that occupants are not exposed to levels of transport noise above World Health Organisation guidelines, particularly in bedrooms and other noise­sensitive rooms.
2. Encourage transport agencies to maintain, manage and operate their existing transport infrastructure to minimise and where practicable, reduce the adverse effects of land transport noise on noise­sensitive activities.
3. Allow noise­sensitive activities near strategic land transport infrastructure only where they do not compromise or limit the existing or future operation of strategic land transport infrastructure.

## Quarry Buffer Area

### Overlay description

The quarry buffer area is located around regionally significant mineral extraction sites. The intent of the buffer is to avoid the reverse sensitivity effects, such as noise complaints, that can result from subdivision, use and development occurring in proximity to quarrying activities.

### Objective

* + 1. The reverse sensitivity effects that can result from subdivision, use and development occurring in proximity to regionally significant mineral extraction sites are avoided.

### Policy

1.

Require subdivision, use and development occurring in proximity to regionally significant mineral extraction sites to not:

* + - 1. compromise or limit the existing or future operation of regionally significant mineral extraction sites
      2. compromise or limit the use of transport routes to or from the site
      3. require the extraction operation to put in place additional mitigation measures.

## Quarry Transport Route

### Overlay description

These provisions apply to activities sensitive to noise located 40m from identified quarry transport routes. Quarry transport routes are key transport routes that service regionally significant mineral extraction sites. Effects of quarry traffic include dust and noise and these effects can be accentuated in rural areas where the background noise levels are generally low. These provisions require new or altered activities sensitive to noise within the overlay to undertake mitigation so that occupants are not exposed to high levels of transport noise.

These provisions also avoid the reverse sensitivity effects that can occur when activities sensitive to noise are located in proximity to quarry transport routes.

### Objectives

* + 1. Quarry transport routes are protected from reverse sensitivity effects associated with surrounding new or altered, activities sensitive to noise.
    2. New and altered activities sensitive to noise, such as places where sleeping or teaching normally occurs, are protected from heavy vehicle noise.

### Policies

1. Require new noise­sensitive land uses, and alterations to existing noise­sensitive land uses to be designed and constructed so that occupants are not exposed to levels of transport noise, particularly in bedrooms and other noise­sensitive rooms.
2. Encourage quarry operators to manage traffic to and from the quarry zone in order to minimise the adverse effects of heavy vehicle on noise­sensitive activities.
3. Allow noise­sensitive activities near strategic land transport infrastructure only where they do not compromise or limit the existing or future operation of the quarry transport route and quarry activities.