



Kerb and Channel Guidelines

Asset Management and Systems

1. Guideline Definitions

AT - Auckland Transport

ATCOP - Auckland Transport Code of Practice

Channel is the lined edge of a street or road for carrying off surface water.

Kerb is a line of stone or concrete forming an edge between a footpath or berm and a carriageway, so that the footpath or berm is some 10-15 cm above the level of the carriageway.

Road Corridor has the same meaning as **road** in the Local Government Act 1974 (Section 315). In short, it covers the total area of land between road boundaries including:

- carriageway (formed road)
- footpath including kerb and channelling
- cycle ways, cycle paths
- walkways
- land that is legally designated as road but is not currently formed as carriageway or footpath

Rural generally refers to countryside or small village style built environments with relatively low population densities and a predominance of undeveloped green space.

SOI – Statement of Intent

Terminology is used in this document to describe whether an aspect or statement is a requirement under law/mandatory or good practice:

- **Must** – indicates something that is mandatory or required by law
- **Should** – indicates a recommendation
- **May** – indicates something that is optional and may be considered for use.

Urban generally refers to areas with a built environment and dense population, such as cities and towns.

2. Guideline Statement

The Mayor's vision outlines turning Auckland into the world's most liveable city by 2040. The Auckland Plan has identified that an efficient and integrated network of roads and public transport is vital to delivering this vision. As a Council Controlled Organisation (CCO), AT is responsible for delivering the region's transport services – from roads and footpaths to cycling, parking and public transport. Through the Statement of Intent (SOI) and to contribute to the achievement of priority areas and targets contained in the Auckland Plan, AT is required to prioritise and optimise investment across transport modes and related infrastructure.

AT has developed a set of guidelines to ensure that the transport services will be delivered on a consistent basis around the Auckland region. These guidelines identify the approach that AT will apply when managing the transport assets. The approach identified in the guidelines is cognizant with the Level of Service identified in the Integrated Transport Programme and Asset Management Plan.

The AT Kerb and Channel Guidelines provide guidance on the construction and maintenance of kerb and channel along the road corridor. The guidelines outline AT's objective to deliver a suitable and functioning drainage network (through renewal, maintenance and improvement programmes) that protects the road pavement by diverting stormwater runoff to the stormwater system.

3. Background

AT is responsible for the provision of kerb and channel in the road corridor for the Auckland region. The kerb and channel are typically associated with the construction of the road pavement with the purpose of directing stormwater runoff from the road surface to suitable drainage, to prevent damage to the road structure. There is over 7,000km of surface water channels in the Auckland region.

4. Purpose and Scope

The main purpose of the kerb and channel guidelines is to achieve a consistent and coherent approach to the provision and maintenance of the kerb and channel in the road corridor. These guidelines seek to identify when and where kerb and channels should be constructed. Recycling of kerbing materials is encouraged whenever possible, particularly in heritage areas or town centres.

The kerb and channel form part of the drainage network. AT aims to achieve a well-maintained and suitable drainage network to support the transport network by protecting the road edge and substructure from stormwater erosion and damage, and divert run-off into the main stormwater system. Kerb and channel also contributes to:

- Preventing flooding of property adjacent to the road corridor;
- An edge restraint for the pavement;
- Supporting the carriageway in the place of a shoulder and feathered edge of pavement;
- A visual definition of the edge of the carriageway; and
- Providing a barrier to prevent vehicles crossing onto the footpath or berm.

The kerb and channel guidelines are aligned with the guidelines on footpaths and stormwater. Technical specifications and engineering standards of the construction and maintenance of kerb and channels are provided in the kerb and channel section of the ATCOP.

5. Guidelines

Kerb and channel is important for the life of the adjacent pavement as it collects and channels runoff to a safe discharge point, ensuring that water cannot soak into the pavement, leading to damage. It also prevents flooding of property adjacent to the road corridor. It is an important feature in the road carriageway to ensure pavement functionality and to minimise lifecycle costs. The level of service in the current AT Road Network Asset Management Plan identifies the target performance (indicative/to be developed and agreed) at 95% of the drainage network in moderate or better condition, reflecting the contribution of kerb and channel to maintaining the road corridor.

When considering the construction of new kerb and channel or the renewal of existing kerbing, the provisions contained in the Waitakere Ranges Heritage Area Act (2008) must be complied with.

5.1 Selection of Kerb & Channel

Urban Roads

In urban areas, AT supports the construction of new kerb and channel along both sides of the road, where two of the following three conditions have been met:

- the drainage of stormwater from the road is impacting/eroding the road surface and the road requires additional maintenance,
- stormwater runoff from the road surface is at risk of flooding the road or an adjacent property,
- to protect the road pavement or adjacent road formation such as at the base of road cuttings, or
- there are sufficient pedestrian volumes and/or pedestrian safety is an issue along one or both sides of the road corridor.

AT recognises that the goal of achieving kerb and channel along both sides of an urban road will take time and that works will be prioritised and programmed through the Asset Management and Road Corridor Maintenance Teams as funding permits.

In urban areas, kerb and channel should be constructed parallel to the centreline of the road unless the road width changes during which there will be a transitional angle that is not parallel in accordance with the ATCOP.

All new urban roads must have the kerb and channel or approved low impact design stormwater collection constructed by the developer in accordance with the ATCOP.

Kerb extensions and bays may also be formed to provide:

- pedestrian crossing points;
- local area traffic management;
- parking bays;
- amenity planting areas;
- bus kerb extensions & inset bays;
- surface water flows;
- Kassel kerbs for bus stops; or
- raingardens or other stormwater control devices.

Kerb extensions must be designed to ensure that they do not cause hazards for road users and particularly for cyclists. Particular attention must be paid to road marking, signage and lighting, in accordance with the kerb and channel section of the ATCOP.

Kerb extensions must also be designed to take account of the existing road drainage system and ensure that the maintenance requirements of the road.

Renewals and maintenance of existing kerb and channel must be in accordance with the AT Road Network Asset Management Plan and the ATCOP.

Rural Roads

In rural areas, kerb and channel may be constructed on a case by case basis where:

- it is required by the provisions of the Waitakere Ranges Heritage Area Act (2008),
- there is an area of frequent pedestrian movement, such as a bus stop, and the drainage of stormwater impacts adversely on the boarding and alighting area,
- there are pedestrian safety issues and separation of the footpath/walkway from the carriageway is required,
- traffic safety purposes require it,
- slope stabilisation purposes require it,
- to protect the road pavement or adjacent road formation such as at the base of road cuttings,
- the drainage of stormwater from the road is impacting/eroding the road surface and the road requires additional maintenance.

Renewals and maintenance of existing kerb and channel must be in accordance with the AT Asset Management Plan and the ATCOP.

Special Areas

All renewal works should be considered on a like-for-like replacement approach, particularly for heritage areas or areas constructed with stone or basalt kerbing. Stone kerbing may be replaced with concrete with the approval of the Road Corridor Maintenance Manager, particularly where the stone kerbing materials are required for recycling to a heritage area or town centre.

New kerb and channel must be constructed from an appropriate performance based concrete (in accordance with the ATCOP section on kerb and channel) unless it is in a heritage area, CBD, town centre or other special character area that requires stone, coloured or alternative kerbing material.

New kerb and channel located within the Waitakere Ranges Heritage Area Act (2008) must be coloured to darken the concrete colour in accordance with the requirements of the Act, relevant Local Area Plans and the ATCOP.

6. Monitoring and Review

These guidelines shall be reviewed in 12 months and thereafter as part of the three year review cycle aligned to the Long Term Plan.




7. Related Guidelines

These guidelines rely on the AT Stormwater and Footpath in the Road Corridor Guidelines.

The performance standards and detailed specifications for the provision of kerb and channel in the road corridor are given in the AT Road Network AMP and the kerb and channel section of the ATCOP.

8. Document Status

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