Auckland Unitary Plan

Practice and Guidance Note

E36 Overland Flow Paths

This guidance note describes:

1 What are overland flow paths?

Overland flow paths are defined in Chapter J of the Auckland Unitary Plan (operative in part) (AUP(OP)) as:

> *A low point in terrain, excluding a permanent watercourse or intermittent river or stream, where surface runoff will flow, with an upstream contributing catchment exceeding 4000m^2.*
>
> *Excludes the following areas:*
>
> - *Constructed depressions and pits within Special Purpose – Quarry Zone*

Overland flow paths can include ephemeral streams, intermittent wetlands and overland portions of the stormwater network.

Overland flow paths convey stormwater. Overland flow paths can be natural or manmade and may follow natural drainage patterns or constructed routes, such as roads, accessways and formed depressions.

Where there is a piped stormwater network, overland flow paths carry water when network capacity is exceeded or where the flow does not enter the piped stormwater system, for example where the entry point is blocked.

Overland flow of stormwater is the most common source of flooding in the region. The maintenance and protection of overland flow paths is important to avoid and minimise the effects of flooding.

2 Where do I find overland flow path provisions in the AUP(OP)?

Activities that affect overland flow paths are generally managed under section 9(3) of the Resource Management Act 1991 (RMA) – district plan provisions. Generally, these are activities which alter, remove or have the potential to affect the operation of overland flow paths.

The primary chapter for managing the effects of activities on overland flow paths is:

- E36 Natural hazards and flooding

The following chapters also include provisions relating to overland flow paths:

- E3 Lakes, rivers, streams and wetlands
- E9 Stormwater quality – High contaminant generating car parks and high use roads
- E10 Stormwater management area - Flow 1 and Flow 2
- E12 Land disturbance – District
- E26 Infrastructure
- E38 Subdivision - Urban
- E39 Subdivision - Rural

There may also be Precinct specific requirements for overland flow paths.

In all cases, consideration must be had to the provisions of E36 Natural hazards and flooding plus provisions of any additional chapters as they may apply.

3 How do I identify if an overland flow path is on my property?

3.1 Using the Council GeoMaps layer

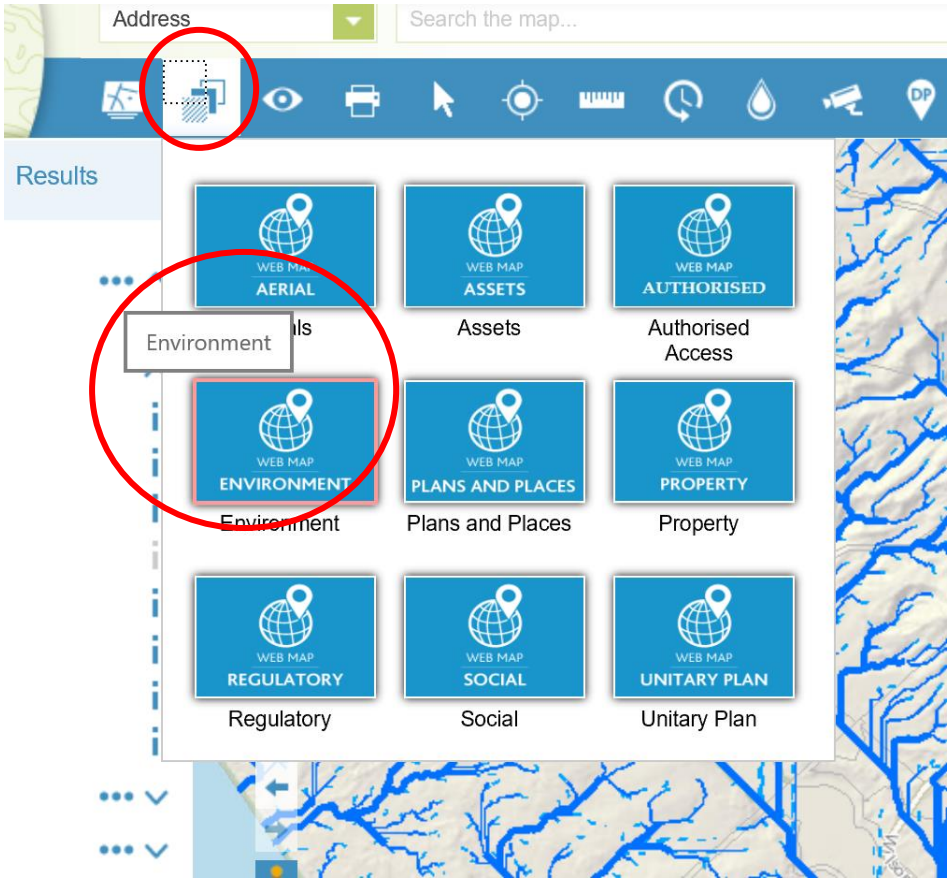
The council website has several guides on how to use the GeoMaps. For example:

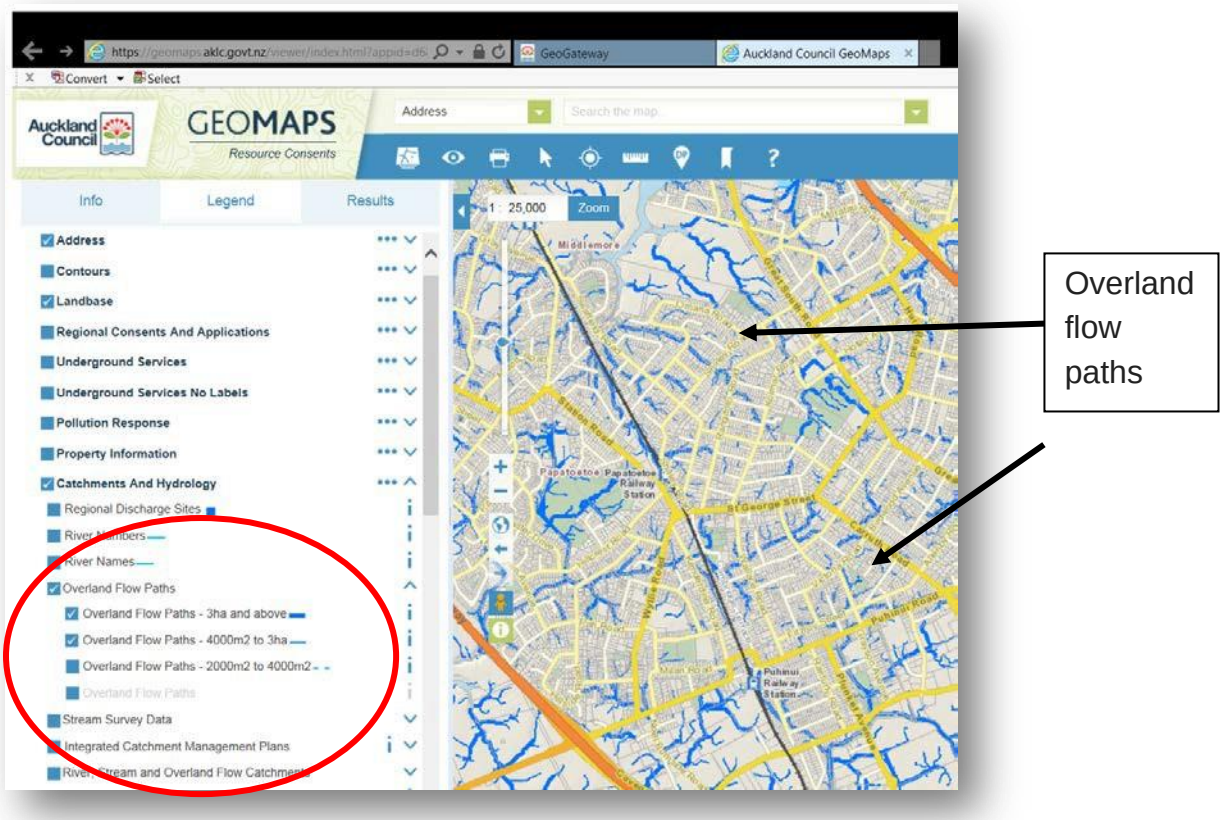
Search layers in GeoMaps

Reorder and display layers in GeoMaps.

The legend to the AUP(OP) maps can be found here.

Council maintains and regularly updates information on the location of overland flow paths in GeoMaps. The relevant map layers can be found under the Switch themes icon/ Environment/ Catchments and Hydrology/ Overland Flow Paths; see below.





The GeoMaps information is indicative only. The AUP(OP) definition of overland flow path includes a note to this effect:

> *Note*
>
> *The Council holds publicly available information showing the modelled Overland Flow Paths in its GIS viewer for specific properties. The Overland Flow Path map is indicative only. A party may provide the Council with a site specific technical report prepared by a suitably qualified and experienced person to establish the location, depth or flow characteristics of the Overland Flow Path.*
>
> *Council will continually update the Overland Flow Path map to reflect the best information available.*

GeoMaps does not show all overland flow paths. Some properties will have overland flow paths that are not shown in GeoMaps. Visual inspections may be required to confirm whether an overland flow path exists.

The overland flow path layer in GeoMaps shows water courses in their entirety. Accordingly, the GeoMaps 'overland flow path' layer shows entire watercourses from their commencement as overland flow paths to ephemeral, intermittent and permanent reaches of rivers and streams. These latter components fall outside the definition of overland flow path in the AUP(OP).

GeoMaps shows the indicative centreline for watercourses. GeoMaps cannot be used to determine the width or extent of watercourses. If required, this will necessitate a site inspection.

3.2 Other useful property information

Other publicly available information may be useful to identify the presence of an overland flow path.

3.2.1 Record of title

Legal encumbrances may be noted on the property title e.g. easements, encumbrances or consent notices to maintain and protect overland flow paths, particularly if the Record of Title (previously referred to as computer freehold register) has been issued since 2000.

However, there may have been landform changes since the title was issued or these instruments registered.

3.2.2 Property file

Review the property file. The property file may contain resource consents, LIMs and PIMs that identify and / or modify overland flow paths.

This might include:

- stormwater permits, which require or protect overland flow paths or secondary stormwater flow paths as a condition of resource consent
- subdivision consents (and associated land disturbance) which require provision of overland flow paths. If the s224(c) certificate has been issued, then it is likely that there will also be engineering approvals and / or consent notices
- relevant land use consents.

There may also be site specific technical reports confirming an overland flow path on the site.

4 What rules of the AUP(OP) apply?

Chapter E36 Natural Hazards and Flooding is the primary chapter to address activities within or over overland flow paths.

- Rules E36.4.1 A39 to A42 relate to general activities within or over overland flow paths
- Rules E36.4.1 A52 to A56 relate to infrastructure activities within or over overland flow paths.

Proposed activities within or over an overland flow path as well as another hazard area listed in Table E36.4.1, will need to be assessed against all relevant rules (i.e. the rules for activities in overland flow paths and the rules for activities in coastal erosion hazard areas). The following is a summary of the Chapter E36 rules.

Rule	Activity	Status	Discussion
E36.4.1(A39)	Fences and walls located within or over an overland flow path that do not obstruct the overland flow path.	Permitted	Must comply with standard E36.6.1.10(1) - must not cause ponding beyond the boundaries of the property. Where another chapter of the AUP(OP) requires a specific fence design, e.g., Historic Heritage overlay areas, standard E36.6.1.10(2) states that the non-E36 rule prevails. If a specific fence design is required to address an adverse effect outside a rule or standard e.g., noise, visual, or landscape, E36.6.1.10(2) does not apply, and the specific design must address all adverse effects including those on the overland flow path. If standard E36.6.1.10 cannot be complied with, the fence or wall would be a restricted discretionary activity under C1.9(2). In addition to the matters in C1.9(3), Council will restrict its discretion to the matters found in E36.8.1(11) and relevant assessment criteria.
E36.4.1(A40)	Flood mitigation works within an overland flow path required to reduce the risk to existing buildings from flood hazards.	Permitted	No specific standards apply to these works. However, the works must be required to reduce flood risk to existing buildings. Displacement of risk to other sites is not reduction in risk, and this enabling rule will not apply.

E36.4.1(A41)	Diverting the entry or exit point, piping or reducing the capacity of any part of an overland flow path.	Restricted discretionary	Matters of discretion E36.48.1(12), assessment criteria E36.8.2(12). Modifying the alignment of an overland flow path within a site, but not modifying the entry and exit points or reducing the capacity, will not require a resource consent under this rule. Earthworks that alter the route of an overland flow path within a site must comply with E12.6.2(12). Any pipe that replaces any section of the overland flow path is a restricted discretionary activity. For any pipes that are in addition to an overland flow path, this rule does not apply. For example, where an inlet is installed to take an overland flow path to the piped network in small rainfall events, but the overland flow path route and capacity remain unaltered overall, then this rule does not apply because the overland flow path is technically not 'piped' (i.e. it is still there, the pipe merely increases capacity or improves drainage). However, even if an inlet and pipe are sized and installed to accommodate the overland flow, but the overland flow path route will no longer exist, is reduced in capacity, or will exit the site at a different location, then such piping is a restricted discretionary activity. This is because the pipe entrance may become blocked, or the pipe itself may concentrate the flow at the point of discharge.

E36.4.1 (A42)	Any building or other structure, including retaining walls (but excluding permitted fences and walls) located within or over an overland flow path.	Restricted discretionary	Matters of discretion E36.8.1(13). No specific assessment criteria apply. Resource consent is required for any building or structure within an overland flow path, including any building or structure designed to accommodate the passage of 1% AEP flows.
E36.4.1 (A52 - A56)	Infrastructure in overland flow paths - Refer to the AUP(OP) rules	Various	These rules address infrastructure located within or over an overland flow path. No specific standards in E36 apply to permitted activity rules E36.4.1(A53) and (A54). Matters of discretion for E36.4.1 (A55) are found in E36.8.1(18), assessment criteria in E36.8.2(17). E36.4.1(A56) does not list any matters to which council has limited its discretion, nor assessment criteria.
E36.9	Special Information requirement – hazard risk assessment		A hazard risk assessment must be provided with any application for subdivision, use or development requiring resource consent on land subject to an overland flow path, or other hazards. See Rule C1.2(1)(e).

5 Matters to consider when preparing an application

Applicants need to fully assess the natural hazard risks on their site and take the steps necessary to provide safe buildings and sites for owners and occupiers that can meet the outcomes sought by the AUP(OP). Where the requirement for a resource consent is triggered under any rule relating to overland flow paths, the assessment of actual and potential effects should be based on consideration of the likelihood of being exposed to a flood event and the consequences of this, to both the activity being proposed, as well as to activities and sites upstream, downstream and adjacent. An Annual Exceedance Probability (AEP) of 1% should be used as the largest event.

If an overland flow path is identified on a property and activities are proposed that may require resource consent, then the implications of that overland flow path to the proposal need to be considered. You need to confirm:

- the continued existence of the overland flow path, and
- its actual location and extent on the site.

This is to demonstrate whether there is any structure (e.g. children's play structures, garden sheds etc) that can be positioned to change the overland flow path or increase the flow to adjoining neighbours. A civil engineer can assist you with confirming this detail. You should also seek planning advice.

Information requirements typically needed in an assessment would include:

- The size of the contributing catchment, upstream
- The predicted 1% AEP plus climate change and maximum probable development flow rate
- GD01 Stormwater Management Devices Guide graphical flow calculations
- Surveyed ground levels, existing and proposed (note: unimplemented consents can be relevant).

Specifically, E36.9 identifies the special information requirements when subdivision, use or development requiring resource consent is proposed to be undertaken on land which may be subject to overland flow paths.

The level of information required to be provided should be proportionate to the hazard risk and the nature of the hazard. It should also be appropriate to the scale, nature and location of the development and reflective of the scale of the activity proposed. A hazard risk assessment report must accompany any resource consent

application where the land may be subject to overland flow paths. E36.9 (2) describes what should be addressed in the report in detail.

6 Other matters relating to overland flow paths

- An overland flow path protected by a consent notice may need to be varied under section 221 of the RMA to modify the entry or exit point, or for a reduction of its capacity.
- An overland flow path protected by an easement on the Record of Title may require a separate legal process to modify the entry or exit point, or reduction in capacity covered by the easement.
- Auckland Transport must be consulted where a public road or pedestrian access way is proposed to be used as an overland flow path.

7 Other guidance (non-RMA)

7.1 Code of Practice for Land Development and Subdivision

Auckland Council's Code of Practice for Land Development and Subdivision 1 November 2015: Chapter 4 – Stormwater (Stormwater COP) requires detailed design of any modification to a secondary flow path where the catchment exceeds 4000m^2, or for smaller catchments at the Council's discretion.

The Stormwater COP provides the following information that may assist with an engineering assessment:

- Section 4.3.4.2 of the Stormwater COP requires that overland flows in excess of 100 l/s for the 1% AEP event shall be protected by legal easement in favour of the Council or by other encumbrances prohibiting earthworks, fences, and other structures, as appropriate.
- Section 4.3.5.6 of the Stormwater COP specifies the matters to be taken into account when considering a secondary flow path.
- Section 4.3.5.7 of the Stormwater COP specifies freeboard where buildings are proposed to be located in or over overland flow paths.

7.2 The Building Act

The New Zealand Building Code is applicable to overland flow paths. For effects on buildings, the Building Code will take precedence over the Stormwater COP,

however, for instances outside the scope of the Building Code or for the protection of land or effects on others, the Stormwater COP can be applied.

The Building Code applies to all building works, including Building Consent exempted building works in overland flow paths (or secondary flow paths as referred to in the Building Code), irrespective of the size of the contributing catchment, and whether or not the overland flow path is controlled by the AUP(OP).

7.3 Common Law

Common law limitations and restrictions may also apply. Under common law, a property owner is legally required to accept stormwater runoff that would naturally flow onto their property, provided that the flow is not concentrated at the boundary.

7.4 Auckland Council Stormwater Bylaw

In addition to the AUP(OP), persons undertaking works within or over an overland flow path must comply with the Auckland Council Stormwater Bylaw 2015. Bylaw 11 sets out matters in relation to overland flow paths. No person may divert stormwater or obstruct an overland flow path unless they hold an approval under the Bylaw, the activity is a permitted activity under the AUP(OP) or is authorised by a resource consent. Bylaw 11 reads:

11 Obstructions and diversions of stormwater

(1) Unless the council approves otherwise or it is permitted in the Auckland Unitary Plan or expressly authorised by an operative resource consent, no person may stop, obstruct, alter, interfere with, or divert any watercourse, flood plain, overland flow path, drain, or wetland on public land, in a manner likely to:

- (a) adversely affect the performance of the watercourse, flood plain, overland flow path, drain or wetland;
- (b) adversely alter the velocity of stormwater; or
- (c) adversely divert the flow of stormwater.

(2) Unless the council approves otherwise or it is permitted in the Auckland Unitary Plan or expressly authorised by an operative resource consent, the owner, occupier, or manager of any premises on private land must ensure that any watercourse, flood plain, overland flow path, drain or wetland on the premises is kept free from obstruction that is likely to:

- (a) adversely affect the performance of the watercourse, flood plain, overland flow path, drain or wetland;
- (b) adversely alter the velocity of stormwater; or
- (c) adversely divert the flow of stormwater.

8 Who at Council is involved in assessing applications concerning overland flow paths?

Council planners are responsible for the processing all resource consent applications. Where works impinge on flood plain, flood prone area, flood sensitive area, or overland flow paths, a Development Engineer will be asked to review the application and assessment of effects on these matters. The planner may also seek input from council's Healthy Waters department.