

# PAPAKURA DISTRICT COUNCIL

## PROPOSED STORMWATER BYLAW

### EXPLANATORY NOTE

*This note and any following words in italics are not part of the Bylaw, but are intended to indicate the general effect of the provisions contained in the Stormwater bylaw.*

*Water is a precious taonga. As such, Council supports and strives to utilise measures that ensure it remains or is regenerated to a waiora (pristine) state. In the spirit of partnership the views of Kaitiaki will continue to be sought in matters relating to the sustenance and protection of our waterways.*

*The Bylaw seeks to manage stormwater within the District so as to protect people, property, and the environment by minimising the impact of flooding, erosion and environmental pollution, through:*

- Ensuring the safe and efficient creation, operation, maintenance, and renewal of stormwater systems;*
- Ensuring development proposals fully take account of stormwater hazard management (flooding and erosion) and environmental protection;*
- Minimising adverse effects on local ecological systems, particularly freshwater ecological systems and beach water quality; and*
- Ensuring that private stormwater systems are properly maintained.*

*Stormwater is currently disposed of by public and private reticulation systems. Detention structures and water quality improvement devices also form an integral part of stormwater systems, providing peak flow attenuation and water quality improvement. This part of the Bylaw applies to both public and private stormwater systems.*

*Watercourses passing through or serving private land are generally considered private. Private drains are the responsibility of the owner of the land they serve, and each section of a private watercourse (including a privately piped watercourse) is generally the responsibility of the owner of the land it passes beside or through.*

*This Bylaw is in addition to controls on stormwater imposed by the Auckland Regional Council and Papakura District Council under the Resource Management Act 1991, including those contained in the Operative and Proposed Papakura District Plans. The Papakura District Plan contains rules in Section 3, Part 2 for land subject to flooding. These rules which include minimum freeboard requirements must be complied with (or a resource consent must be obtained if they are not complied with) for any activity or development in a flood prone area subject to the District Plan. Section 3, Part 2 of the District Plan also contains rules in respect to activities through which stormwater may become contaminated.*

*Obtaining the Council's approval under this part of the Bylaw does not remove the need to obtain any consents required under the Resource Management Act 1991, the Building Act 2004, or any other Act, regulation or bylaw. Further, it is not intended that approval under this part of the Bylaw will replace or add to existing resource consents or permitted activity status.*

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## 1 INTERPRETATION

1.1 In this Part of the Bylaw unless the context otherwise requires:

### **annual exceedance probability (AEP)**

The probability of exceedance of a given rainfall or flood flow in any given year:

- a 20% AEP storm is equivalent to a storm of a magnitude which is only likely to occur every 5 years
- a 1% AEP storm is equivalent to a storm of a magnitude which is only likely to occur every 100 years

### **catchment (watershed)**

The area of land within which rainfall flows to a water body.

### **catchment management plan (CMP)**

A plan providing an overview of the main stormwater and water quality issues within a catchment to provide a framework for future stormwater management. It links the strategic policies and the implementation of stormwater management and forms the basis of the comprehensive discharge consent. For the purposes of this bylaw, the catchment management plan for a catchment means the catchment management plan adopted by the Council, following the grant of a comprehensive discharge permit for the catchment.

### **comprehensive discharge consent**

A consent granted to Council by Auckland Regional Council to discharge stormwater within a particular catchment in accordance with conditions attached to the consent and the CMP for that catchment.

### **design-capacity storm**

A storm of an AEP, as determined by the Council, on which the design-capacity of the primary system for any area is based.

### **detention structure**

A structure, for example a pond or tank, that captures some inflow for subsequent release at a slower rate.

### **development**

Any subdivision, change of use, or works to land or building which alter the stormwater runoff characteristics (either quantity or quality) of that land.

### **flood plain**

Either:

- (a) for a catchment which has a CMP, the area shown as a flood plain
- (b) for a catchment without a CMP, any area which is predicted to flood in a design-capacity storm

### **freeboard**

The additional height above the estimated flood level which forms the minimum height for the construction of building platforms, as provided for in the Operative Papakura District Plan

### **gully trap**

A small chamber which receives wastewater discharges from washbasins, sinks and baths.

**harmful effect**

Adverse effects to people or property such as:

- (a) danger to life;
- (b) danger to public health;
- (c) flooding of any building floor or sub-floor or public roadway;
- (d) damage to property;
- (e) damage to the stormwater system;
- (f) erosion or subsidence of land;
- (i) loss of riparian vegetation; or
- (i) wastewater overflow to land or water.

**inflow**

Ingress of surface water into the sewer system through faulty gullies, damaged manhole covers and the like. Inflow increases sewage volume and flow rate, makes the sewer and treatment systems more costly and causes environmental pollution due to sewage overflows. The Council requires the inflow to be minimised through proper design, construction, operation and maintenance of private and public sewerage.

**natural watercourse**

A watercourse which has been created naturally and has not been significantly modified.

**on-site stormwater management device**

A device that retards the flow and/or detains contaminants in stormwater (for example a tank, raingarden, filter, trench, swale, filter strip or pond)

**overland flow path**

The route taken by excess stormwater when the capacity of the primary system is exceeded.

**primary system**

The system of drains and other means for disposing of stormwater excluding the overland flow path.

**private stormwater system**

Any stormwater system which is not a public stormwater system.

**public stormwater system**

Any stormwater drain or treatment facility:

- (i) which serves more than one freehold lot; or
- (ii) within a road or other public places; or
- (iii) over which the Council has exercised control for a period of more than 20 years; and includes any drain declared to be a public drain.

**stormwater drain**

Every conduit for the purpose of carrying stormwater, including watercourses, and drainage channels.

**stormwater drainage works**

Any work which may alter the flow of water in or into, or the shape, stability or surface of:

- (a) a stormwater drain; or
- (b) a 1% AEP flood plain; or
- (c) a 1% AEP overland flow path

and includes, for example:

- (i) any development, or
- (ii) construction or alteration of any stormwater system.

**stormwater system**

A set of facilities and devices, either natural or man-made, which are used to reduce the risk of flooding and erosion, and to improve water quality. This may includes any device for the purpose of retarding the flow and/or treating stormwater from a property and includes a private soakage system

**stormwater treatment facility**

Any device to improve stormwater quality, including wetland, wet pond, continuous deflective separation unit (CDS), sand filter, and catchpit insert.

**watercourse**

Every open stream, creek, culvert and channel through which stormwater commonly flows, whether continuously or not.

**swale**

vegetated shallow channels which convey runoff to a collection point or further drainage system, where the vegetation is intended to retard and promote trapping of pollutants.

*Reports and calculations*

- 1.2 All reports and calculations required under or in connection with this Part of the Bylaw:
  - Shall be prepared and calculated in terms of Maximum Probable Development of the relevant catchment, as determined by Council.
  - Shall use a methodology and information (including rainfall intensity and runoff coefficients) satisfactory to an authorised officer.
- 1.3 No approval granted under this Part of the Bylaw shall be taken as approval under the Building Act 2004, or the Resource Management Act 1991 or any other Acts, Regulations or Bylaws.

**2 Stormwater Drainage Works**

*Approval required*

- 2.1 No person shall carry out Stormwater Drainage Works without prior written approval from an authorised officer or without a building consent or resource consent if required.

*Application details*

- 2.2 Every application to carry out stormwater drainage works must:
  - (i) include drawings and specifications for the proposed works.
  - (ii) show, to the satisfaction of the authorised officer, the proposed works and their effect on the subject site and surrounding land.

*Requirements for Drainage Works*

- 2.3 All stormwater drainage works must:
  - (a) contain:
    - (i) a primary system designed, constructed and operated to have the minimum capacity for the design-capacity storm
    - (ii) a secondary system to provide for storm events above the design-capacity storm.
  - (b) be designed and constructed:
    - (i) in accordance with the following documents and approvals:
      - the catchment management plan and comprehensive discharge consent for the area including its recommendations or conditions for the area concerned; and
      - the Council’s standards set out in the Papakura District Council Development Code; and
      - any relevant building or resource consent; and

- any written conditions imposed by an authorised officer when approving the works
- (ii) to minimise sediment discharge to any stormwater drain
- (iii) to be consistent with foreseeable catchment-wide works (for example, extending a pipe upstream or downstream) so as to give a benefit to the catchment as a whole

*Drawings submitted to Council*

2.4 Any person carrying out stormwater drainage works must submit to Council as-built drawings of the completed works within the timeframe specified in Council's written approval and in accordance with the following requirements:

- (a) For public stormwater systems, the as-built drawings must be:
  - (i) drawn in accordance with the Council's Subdivision and Development Code
  - (ii) prepared or certified by a [charted professional engineer] or other qualified person satisfactory to the authorised officer.
- (b) For private stormwater systems, the as-built drawings must be:
  - (i) drawn in scale indicating, but not limited to:
    - the correct positions of the stormwater drains in relation to the existing building and boundaries,
    - pipe diameter and material
    - the position of the street frontage, and
    - depth of the drains at connection points.
  - (ii) prepared or certified by a qualified draftsman satisfactory to the authorised officer.

Such Stormwater Drainage Works shall remain the responsibility of the owner of the land on which the works occur unless and until they are taken over and vested in Council.

*Approval for existing stormwater systems*

2.5 To avoid any doubt, an existing stormwater system does not require approval under this bylaw unless:

- (a) works are undertaken to alter or modify the system
- (b) the system is extended to other properties or buildings
- (c) the existing stormwater system causes harmful effects.

However, if an existing stormwater system needs to be upgraded because it causes harmful effects, the works required to be done to the system must be limited to those works necessary to avoid, remedy or mitigate the harmful effects.

*Drains to be kept clear*

2.6 All stormwater systems must

- (i) be operated and maintained in accordance with any written approval granted under this Part
- (ii) at all times, be kept free from obstructions that impede the free flow of water.

### 3 Development And Flood Areas

*Development in Flood Risk Areas*

3.1 No person may, without prior written approval of an authorised officer, do any of the following in a 1% AEP flood plain:

- (a) erect, extend or alter any building or structure
- (b) construct any barriers which obstruct the natural flow of water (for example, solid walls on property boundaries)

- (c) undertake any earthworks
- (d) plant any trees
- (e) otherwise do any activity which will, or is likely to:
  - (i) obstruct or increase any obstruction to the flood plain
  - (ii) reduce the protection from any harmful effect from flooding, or
  - (iii) increase the likelihood or extent of any harmful effect from flooding

A resource consent from the Auckland Regional Council maybe also be required.

*No obstruction of stormwater system*

- 3.2 No person may, without the prior written approval of an authorised officer:
- (a) stop, obstruct, alter, interfere with or divert any stormwater system
  - (b) erect anything which obstructs water in any stormwater system.

*Structures in flood areas*

- 3.3 When applying for approval from Council for the works in clauses 3.1 and 3.2, applicants must provide sufficient information to demonstrate to the satisfaction of the authorised officer that:
- (a) the interference to the water flow from the proposed building or structure is not significant, and
  - (b) the existing land and buildings (if any) and the proposed building, and any other land and property, are adequately protected from harmful effects.

This may include a flood risk assessment and any information necessary for a resource consent (if such a consent is required).

*Removal of obstructions*

- 3.4 An authorised officer may, by written notice, require that the owner or occupier of the land remove any obstructions mentioned in clause 3.1.

*Access culverts and bridges over watercourses*

- 3.5 In a 1% AEP flood plain the following applies:
- (a) Any access culvert over a natural watercourse must:
    - (i) be designed and constructed in such a way that surface water generated by a 10% AEP design-capacity storm can safely pass the culvert by overland flow without causing harmful effects to the subject property or the neighbouring properties,
    - (ii) include a transition structure at both the inlet and outlet to the proposed culvert, to the satisfaction of an authorised officer; and
    - (iii) allow fish passage by either having the culvert invert at least 100mm below the dry weather flow level or an alternative design to the satisfaction of an authorised officer.
  - (b) Any bridge over a natural watercourse must:
    - (i) be designed and constructed in such a way that:
      - the water generated by a 10% AEP design-capacity storm can safely pass under the bridge
      - the water generated by a larger than design-capacity storm (1% AEP) can safely pass over the bridge by overland flow without causing harmful effects to the subject property or the neighbouring properties and
    - (ii) include a transition structure at both ends of the bridge, to the satisfaction of an authorised officer.

*Vehicle crossings*

- 3.6 Where a vehicle crossing falls away from the road kerb line, appropriate crown or rollover must

be built to prevent stormwater overflowing the road channel and running down the driveway.

*Landscaping and paving*

- 3.7 Any person undertaking landscaping and paving must ensure that the landscaping or paving:
- (a) does not reduce the minimum freeboard for the property; and
  - (b) is designed and constructed so that any surface water:
    - (i) is directed away from buildings, and
    - (ii) does not cause any harmful effects to the neighbouring properties.

**4 Development And Stormwater Discharges**

*Erosion, water quality*

- 4.1 No person may, without written approval from an authorised officer, as a result of a development, discharge any stormwater into a stormwater drain or any drain leading to a stormwater drain if it will, or is likely to:
- (a) cause siltation
  - (b) cause erosion
  - (c) adversely affect water quality.

*Stormwater management devices*

- 4.2 No person may, without written approval from an authorised officer, install a stormwater management device.

*Approval for stormwater management devices*

- 4.3 When applying for approval from Council for a stormwater management device, the owner must provide proposed design and construction details, including:
- capacity
  - discharge rate
  - orifice size
  - location of devices
  - for private soakage system, a geotechnical report for the property.

*Soakage to have 20% AEP capacity*

- 4.4 Any private soakage system must be designed and constructed to endure a 20% AEP storm without causing any harmful effects.

*Maintenance and operation*

- 4.5 Any approved stormwater management device must be constructed and maintained in accordance with the approval of the authorised officer. The capacity, discharge rate, orifice size or location of the stormwater management device must not be altered without written approval of an authorised officer.

*Compliance as requested*

- 4.6 Any person in control of a stormwater management device must, when requested by an authorised officer, provide sufficient information to demonstrate compliance with clause 4.5.

- 4.7 The Council may require the owner to carry out such works as are required to comply with clause 4.6. The owner must complete the required work to the satisfaction of the Council.

**5 Maintenance of Stormwater Systems and Quality**

*Litter, rubbish, washdown water*

- 5.1 No person may:
- (a) deposit any material, rubbish or litter in or near a stormwater drain in a position where it may be washed into or may impede or is likely to impede the free flow of water in the stormwater drain;
  - (b) remove or damage any components of the public stormwater systems, including plants and aquatic life in wetlands or wet ponds;
  - (c) use bark or mulch on their gardens in a such a way that it will, or is likely to:
    - (i) be wasted from its original site by overflow, and
    - (ii) block or otherwise impede the flow of any stormwater system.
  - (d) park vehicles over a swale;
  - (e) spray into a swale any weed killers which may damage the vegetation (including herbicide, hot water, etc).
  - (f) discharge into a stormwater drain or a stormwater treatment facility (unless authorised by a resource consent from the Auckland Regional Council) any chemicals or contaminants (including paint, oil and grease, pesticides, fertilizer, detergent, grass clippings, rubbish, litter, swimming pool water) which will or are likely to:
    - (i) adversely affect stormwater quality or
    - (ii) cause adverse effects to the receiving environment including riparian and aquatic ecosystems
  - (g) deposit, or place in any position where it likely to be washed into, a stormwater drain or stormwater treatment facility any material (including building, material, grass clippings, rubbish, litter, paint, and fat) which will or is likely to:
    - (i) impede a stormwater drain,
    - (ii) reduce the capacity of a stormwater drain, or
    - (iii) adversely affect the operation of the stormwater treatment facility;
  - (h) wash a commercial vehicle used to carry any of the following in a way that the contaminated water will directly or indirectly enter a stormwater drain without first ensuring the contaminated water is treated in a manner consistent with Technical Publication 10 of the Auckland Regional Council:
    - (i) bulk cement
    - (ii) building material
    - (iii) litter or refuse
    - (iv) sludge
    - (v) oil, or
    - (vi) any other material which may deteriorate stormwater quality and/or cause adverse effects on the receiving environment.

*Natural watercourses*

- 5.2 Every person in control of a natural watercourse must maintain it to ensure that nothing impedes or is likely to impede the free flow of water. This includes ensuring none of the following obstructions within 3 metres of the nearest margin of the natural watercourse:
- (a) overhanging growth,
  - (b) collected debris,
  - (c) trees and shrubs (unless they form part of a maintained riparian margin), and
  - (d) rubbish and litter.

*Removal of vegetation*

- 5.3 However, no person may remove, without prior written approval from the Council, any vegetation from this area if it will or is likely to cause or worsen erosion or sedimentation of the watercourses.

*Maintenance required by private owner*

- 5.4 Every owner must maintain the pipes, gutters, down pipes, catchpits or any other components of their approved stormwater system on their premises:
- (a) in good operating condition sufficient to cope with a design-capacity storm, and
  - (b) in accordance with any requirements set by Council.

*Prevent discharges of stormwater to wastewater system*

- 5.5 Every owner must maintain any private stormwater system on their premises so as to ensure that stormwater does not inflow to, or otherwise access, the wastewater system.

*Sediment control*

- 5.6 Every owner must take all necessary measures to control sediments and prevent them from entering stormwater drains when undertaking any works. If any person fails to prevent sediments from entering stormwater drains, they must remove the sediments from the stormwater drains immediately and undertake necessary remedial works to minimise the adverse impacts on the stormwater drains caused by the failure.

**6 Access to Private Stormwater/Wastewater Systems**

*Owner to repair private systems*

- 6.1 Every owner must:
- (a) repair any defect in any private stormwater or wastewater system on their premises that may have a harmful effect as soon as possible, but in any event no later than 60 days after delivery of a written notice from Council to the premises requiring such repair;
  - (b) allow the Council or its authorised agents access during working hours to inspect and maintain the public and private stormwater systems, and
  - (c) ensure manhole covers and other structures are kept visible and accessible.

*Inspections of private systems*

- 6.2 The Council or its agent will provide 24 hours notice to the owner of the requirement to undertake any inspection or maintenance of the systems described in clause 6.1(b), unless the inspection or repairs are required as an emergency.

*Costs recovered if owner does not undertake repairs*

- 6.3 If the owner fails to undertake any repairs required in terms of a notice given in terms of clause 6.1(a) within the period specified in that notice, the Council or its agents may undertake the work, recover the cost from the owner, and exercise any other powers conferred upon a Council under the Local Government Act 2002 and other relevant legislation.

**7 Urban Stormwater**

*Critical pipes*

- 7.1 Stormwater pipes with a diameter greater than 900mm are identified as 'critical'. In addition, stormwater pipes near Public Services (schools, stations, and hospitals for example) and Utility Services (telecom, power, and gas for example) are also deemed to be 'critical'. No person may erect, extend or alter any building or structure within 2m of such pipes without written approval from an authorised officer.

*Maintenance of private assets*

- 7.2 Every owner must maintain any dry detention areas, detention tanks, soak holes and recharge pits or any other components of their approved stormwater system on their premises:
- (a) in good operating condition sufficient to cope with a design-capacity storm, and
  - (b) in accordance with any requirements set by Council.

**8 Rural Stormwater**

### *Farm ponds*

- 8.1 To ensure the quality of water in farm ponds is not a health and safety risk to farm residents and visitors, every owner must prevent the uncontrolled access of stock to farm ponds.

### *Maintenance of private assets*

- 8.2 Every owner must maintain any private pipes and channels, treatment devices, filtration trenches and swales, and dry detention areas or any other components of their approved stormwater system on their premises:
- (a) in good operating condition sufficient to cope with a design-capacity storm, and
  - (b) in accordance with any requirements set by Council.

## **9 Fees**

- 9.1 The Council may fix or vary any fees and charges for any approval or other action taken under this Part of the Bylaw in accordance with section 150 of the Local Government Act 2002.

## **10 Breaches and Remedies**

### *Defect Notices*

- 10.1 In the event of a breach of statutory or legal obligations, the Council may serve a defect notice on the customer advising its nature and the steps to be taken within a specified period, to remedy it. If, after the specified period, the customer has not remedied the breach, Council may charge a re-inspection fee.

If however the breach is such that public health, or safety considerations, or risk of consequential damage to Council assets is such that delay would create unacceptable results, Council may take immediate action to rectify the defect, and recover all reasonable costs as set out in 10.2

### *Remedial Work*

- 10.2 At any time after the specified period of 10.1 has elapsed, Council may carry out any remedial work required in order to make good the breach, and to recover from the person committing the breach all reasonable costs incurred in connection with the remedial work.