

6.1 OUTCOME OF ADVERTISING AND ADOPTION OF STORMWATER DRAINAGE CONNECTIONS POLICY

- Attachments:**
1. Stormwater Drainage Connections - Final Policy
 2. Survey Results of Stormwater Drainage Connections Amended Policy
 3. Current Stormwater Drainage Connections Policy
 4. Marked Up - Stormwater Drainage Connections Final Policy

RECOMMENDATION:

That Council **ADOPTS** the Stormwater Drainage Connection Policy at Attachment 1.

PURPOSE OF REPORT:

To present the outcome of community consultation and seek approval of the amended Stormwater Drainage Connection Policy at Attachment 1.

DELEGATION:

Section 2.7 of the *Local Government Act 1995* sets out the Role of Council as being to '*determine the local government's policies*'. There is no delegation to Administration to make, review or repeal policies.

BACKGROUND:

Council at its 18 June 2024 approved conducting community consultation on the amended Stormwater Drainage Connection Policy. The current Policy has been in place for 10 years and has been the basis of assessing the requirements of onsite retention of stormwater and the circumstances in which private connections can be made to the City's storm water drainage infrastructure.

In accordance with the City's [Community and Stakeholder Engagement Policy](#), community consultation was undertaken between 26 June 2024 - 29 July 2024 which is in excess of the 21 days required.

DETAILS:

Managing drainage discharge is essential to all urbanised local governments. The general principle is that property owners need to contain stormwater on their property. Stormwater retention onsite in neighbouring local governments states that a 1:20 average recurrence interval (ARI) event of one hour year storm event is required where controlled overflow can be demonstrated to the street. If overland flow cannot be demonstrated, the development will need to store and release a 1 in 100-year ARI event of one hour.

It is proposed to amend the Policy to respond to the capacity of current stormwater drainage infrastructure and the effects of climate change, in particular the increasing occurrence and intensity of storm events. This will require commercial and residential developments to factor in a greater retention system onsite.

Administration is investigating its current stormwater drainage infrastructure in respect to its condition, serviceability, and capacity to address future needs. This includes modelling of the system and collaboration with other stakeholders including Water Corporation, Main Roads WA, neighbouring local governments, and owners of land subject to flooding, drainage easement, or development.

The capacity of the City's drainage system is constrained with City resources directed to address 'hotspots'. The review and amendment to this Policy has taken this into consideration.

CONSULTATION/ADVERTISING:

The policy was advertised on the City of Vincent website, social media and through the following public notices:

- Perth Voice – 29 June 2024
- E-newsletter - 28 June 2024 and 12 July 2024
- News item on the City's website
- Notice exhibited on the notice board at the City's Administration and Library and Local History Centre.

Administration received six submissions in response to invitation for comment, three YES and three UNSURE, and related to general comments on drainage and questions relating to changing the storm event. These are summarised below:

Comments Received in Support:	Administration Comment:
<p>Issue:</p> <ul style="list-style-type: none"> • The rubbish leaves etc block the drains. • Street sweeper needs to attend more often to clean up leaves from street trees. The leaves do not breakdown and most residents do not sweep them up and dispose of in their green waste - clogging the storm water drains. 	<ul style="list-style-type: none"> • Our team is reviewing the maintenance schedule for regular cleaning and considering additional measures to prevent debris from obstructing the drains. • Additionally, the City of Vincent has prepared a Tender to purchase a jetting/educating truck which can be used all year round to ensure pits are cleaned regularly.
Comments Received Neither Support Nor Object:	Administration Comment:
<p>Issue:</p> <ul style="list-style-type: none"> • I am concerned that the reducing of the 1:10 year planning of the event to 1:100 will reduce the responsibility of the planners who will do developments at the top of my street. I have previously had stormwater inundation in my house. On heavy storms sometimes excess water goes onto my property from the pathway and roads. There is increasing coverage of blocks in my area with hard surfaces. As necessary large developments are planned on East Parade the risk is that my water inundation will recur with the new developments and as weather events are worsening, I am wondering at the meaning of the change to a lower number in the amended plan. • The proposal does not take into consideration, Federal, State, City of Vincent, infrastructure and land. For example: Beatty Park Aquatic Centre was extended in 2013. After the extension and added roof area the drainage was insufficient. During rain events pit lids were blown off and houses were being flooded from drainage water cascading from Beatty Park Reserve into the rear of their properties. Land on Beatty Park Reserve was excavated, and a separate large drainage pipe was run across Beatty Park Reserve and connected to the Claisebrook main drain near Charles Street. Commercial, Industrial and Residential storm events. What figures are used in calculations if a development is commercial on the ground floors and residential on all other floors, the policy does not explain this adequately. 	<ul style="list-style-type: none"> • The shift from a 1:10 year to a 1:100-year planning event is generally intended to provide a more conservative approach to stormwater management. This change aims to account for more extreme weather events and ensure that systems are designed to handle larger volumes of water. Even with this change, planners and developers are still required to adhere to strict guidelines and standards to manage stormwater effectively. The goal is to minimise any additional risk to properties, by incorporating appropriate drainage solutions and stormwater controls. • The stormwater management figures for a mixed-use development, with commercial use on the ground floor and residential use on the upper floors, would need to follow the commercial policy guidelines.

Comments Received in Support:	Administration Comment:
<ul style="list-style-type: none"> • Using the flood ARI instead of the rainfall ARI. • Increasing the ARIs without adequate justification. • Applying different levels for residential and commercial land. • Precedent – the City should apply the same requirements on its own land holdings. 	<ul style="list-style-type: none"> • ARI (measured in years) is a term used to describe flood size. By extension, this relates to a rainfall storm event that occurs or is exceeded on average once every 100 years that causes flooding. • The justification to increase the storage and infiltration requirements for commercial and residential properties has a number of benefits overall. Infiltration of stormwater into the ground refurbishes groundwater levels throughout the city. Nutrient capture on commercial and residential properties is useful to assist with maintaining river and lake water quality. • Capture and infiltration on commercial and residential properties reduces pressure and flooding events on the city's drainage and road network infrastructure. • Strategy for drainage in Vincent will be reflected in the Asset Management Plan for our drainage infrastructure (currently being developed), and the Environment Strategy (currently being reviewed). This will include an objective of managing stormwater originating from Vincent managed land and facilities.

Administration has made additional modifications to the proposed policy to enhance the definition of the Average Recurrence Interval (ARI), specifically to better address the risk of flooding due to rainfall during storm events. These changes are identified and marked-up in red in Attachment 4.

ARI (measured in years) is a term used to describe flood size. It is the long-term average number of years between floods of a certain magnitude. For example, a 100-year ARI flood is a flood that occurs or is exceeded on average once every 100 years. By extension, this relates to a rainfall storm event that occurs or is exceeded on average once every 100 years that causes flooding.

LEGAL/POLICY:

Section 2.7(2)(b) of the *Local Government Act 1995* provides Council with the power to determine policies.

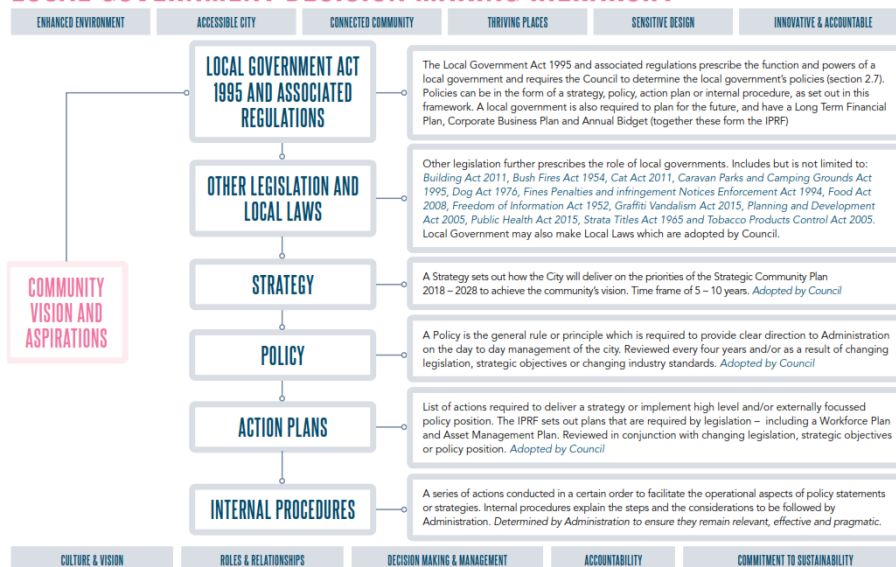
The City's [Policy Development and Review Policy](#) sets out the process for the development and review of the City's policy documents.

In accordance with section 2.3 of the Policy Development and Review Policy:

The purpose of a policy is to provide a general rule or principle to guide Administration and the community on the City's decision making and advocacy;

The purpose of the proposed policy is to control the disposal of stormwater from commercial Industrial, and residential properties, and the amendment acknowledges the capacity of the current stormwater drainage infrastructure and the effects of climate change, in particular the increasing occurrence and intensity of storm events.

LOCAL GOVERNMENT DECISION MAKING HIERARCHY



Regulation 18 of the Local Government (Uniform Local Provisions) Regulations 1996 provides -

Protection of watercourses, drains, tunnels and bridges — Sch. 9.1 cl. 9 (1)

A person must not, without lawful authority, alter, obstruct, or interfere with, any watercourse, drain, tunnel, or bridge that is local government property.

RISK MANAGEMENT IMPLICATIONS

Low: Adopting the proposed policy is low risk for Council as the previous Stormwater Drainage Connection Policy was last amended in 1997. The proposed amendment aims to ensure stormwater generated from commercial, industrial and residential properties is managed in a sustainable manner, particularly recognising the finite capacity of the City's stormwater drainage infrastructure.

The proposed updates to the policy will address requests from developers who want to connect into City-owned stormwater infrastructure.

STRATEGIC IMPLICATIONS:

This is in keeping with the City's *Strategic Community Plan 2022-2032*:

Enhanced Environment

We have minimised our impact on the environment.

Thriving Places

Efficiently managed and maintained City assets in the public realm.

Innovative and Accountable

Our decision-making process is consistent and transparent, and decisions are aligned to our strategic direction.

SUSTAINABILITY IMPLICATIONS:

This is in keeping with the following key sustainability outcomes of the *City's Sustainable Environment Strategy 2019-2024*.

Water Use Reduction/Water Quality Improvement

FINANCIAL/BUDGET IMPLICATIONS:

Nil

COMMENTS:

The new policy is designed to provide clearer guidelines for developers and community members on the City's expectations for construction management plans (CMPs) relating to development. It features a revised proforma that details the required content for each CMP section and identifies the responsible parties for each element. This will help streamline the review and approval process, enhancing both efficiency and consistency.

Additionally, Administration is working on an online calculator for the City's website to help residents evaluate stormwater management requirements at the outset. Further calculators will be developed for developers, offering additional guidance.



STORMWATER DRAINAGE CONNECTIONS

Legislation / local law requirements	Metropolitan Arterial Drainage Act 1982 Metropolitan Water Supply, Sewerage and Drainage Act 1909 Waterways Conservation Act 1976
Relevant delegations	2.2.3 Performing particular things on land which is not Local Government Property.
Related policies, procedures and supporting documentation	Local Government Decision Making Hierarchy - D20/148390 Policy Registers - D20/126085 and Review Plan - D21/3270 State Planning Framework Planning Guidelines - Local Government Guidelines for Subdivisional Development

INTRODUCTION

The sustainable management of stormwater discharge is essential to all urbanised environments. Local Governments are responsible for controlling disposal of stormwater from commercial, industrial, and residential properties.

PURPOSE

The purpose of this policy is to ensure that stormwater generated from commercial, industrial, and residential property within the City of Vincent is managed in a sustainable manner with particular regard to preserving the capacity of the City's stormwater drainage infrastructure.

OBJECTIVE

To specify the management requirements for the disposal of stormwater on commercial, industrial, and residential property within the City of Vincent.

SCOPE

Commercial, industrial, and residential property in the City of Vincent and the City's stormwater drainage infrastructure.

DEFINITIONS

Average recurrence interval (ARI)

ARI (measured in years) is a term used to describe flood size. It is the long-term average number of years between floods of a certain magnitude. For example, a 100-year ARI flood is a flood that occurs or is exceeded on average once every 100 years. By extension, this relates to a rainfall storm event that occurs or is exceeded on average once every 100 years that causes flooding.

Retention System

Process or a design that involves keeping a portion of something (stormwater) for a certain purpose (avoid flooding).

Stormwater

Surface water in abnormal quantity resulting from heavy falls of rain.



STORMWATER DRAINAGE CONNECTIONS

POLICY

1. All stormwater generated from commercial, industrial, and residential property is to be retained on-site.
2. An on-site retention system is to meet the following capacity requirement –
 - a. Commercial and Industrial Property
An on-site retention system capable of accommodating a minimum 1:100-year average recurrence interval (ARI) storm event of one hour is required.
 - b. Residential Property
An on-site retention system capable of accommodating a minimum 1:20-year average recurrence interval (ARI) storm event of one hour is required.
3. Technical design for on-site retention systems shall adhere to the drainage management requirements specified in the State Planning Framework Planning Guidelines - *Local Government Guidelines for Subdivisional Development*.
4. Connection to the City's stormwater drainage infrastructure may be approved only in exceptional circumstances where stormwater runoff cannot be suitably retained on-site.
5. Approval to connect to the City's stormwater drainage infrastructure will be subject to the maximum on-site retention being provided according to prevailing site conditions.
6. The cost for connection to, and any necessary upgrade of the City's existing stormwater drainage infrastructure shall be borne by the applicant.
7. Connections to the City's stormwater drainage infrastructure shall consist of a controlled overflow into the system and upgrades will be sustainability focused and factor in future climate change considerations.
8. Connections to the City's stormwater drainage infrastructure shall be constructed and maintained in accordance with the specifications and conditions of approval determined by the City.
9. Stormwater discharged into the City's stormwater drainage infrastructure is to be pollutant free. Where there is a risk of pollution of the stormwater generated from the property, the stormwater should be adequately treated and retained on site or other approved disposal methods applied.

OFFICE USE ONLY	
Responsible Officer	Manager Engineering
Initial Council Adoption	Date: 22 September 1997
Previous Title	Policy 2.2.10 Stormwater Drainage Connections
Reviewed / Amended	Date: <approval Date>, Ref#: CM24/3491
Next Review Date	Date: 2028

Survey Tool:		Have your say		16 June 2024	
Tool Status	Archived	Date of contribution	Contributor Details	Survey Response	
			Login (Screen name)	Are you supportive of the proposed amendments to the Stormwater Drainage Connection Policy?	Would you like to be kept updated on this Policy?
Visitors	11				
Contributors	6	Jun 27 24 07:09:11 pm	Anonymous	Unsure	No
Registered	0	Jun 28 24 08:39:19 am	Anonymous	Yes	Yes
Unverified	0	Jun 28 24 12:32:57 pm	Anonymous	Unsure	Yes
Anonymous	6	Jun 29 24 02:05:58 pm	Anonymous	Yes	Yes
Admin	0	Jul 02 24 12:24:09 pm	Anonymous	Yes	No

SUBMISSIONS	6	Jul 03 24 04:49:27 pm	Anonymous	Unsure	<p>The proposal does not take into cosideration, Federal, State, City of Vincent, infrastructure and land.</p> <p>For example: Beatty Park Aquatic Centre was extended in 2013. After the extension and added roof area the drainage was insufficient. During rain events pit lids were blown off and houses were being flooded from drainage water cascading from Beatty Park Reserve into the rear of their properties. Land on Beatty Park Reserve was excavated and a separate large drainge pipe was run across Beatty Park Reserve and conected to the Claisbrook main drain near Charles Street.</p> <p>Commercial, Industrial and Residential storm events. What figures are used in calculations if a developmrent is commercial on the ground floors and residential on all other floors, the policy does not explain this adequately.</p>	Yes
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Survey Responses Graph

Are you supportive of the proposed amendments to the Stormwater Drainage Connection Policy?	
Yes	3
Unsure	3

Would you like to be kept updated on this Policy?	
Yes	4
No	2

ADDITIONAL COMMENT RECEIVEDSTORMWATER DRAINAGE CONNECTIONS

I have three issues with the revised policy:

- Using the flood ARI instead of the rainfall ARI
- Increasing the ARIs without adequate justification
- Applying different levels for residential and commercial land.

ARI used

The policy defines the Average Recurrence Interval (ARI) in terms of flooding rather than rainfall.

While on first view this might seem relevant (we're worried about floods), the reality is that this is simplistic and not the correct measure. The correct measure is a rainfall event (called a storm event in the current policy).

While low points may experience periodic flooding, flooding ARI events are most relevant along river and stream boundaries – they are not relevant on the tops of hills. The Swan River has ARI data that reflects the river height, and therefore the likelihood of flooding on adjacent low-lying areas. While this may have some relevance on the small area of Vincent immediately adjacent to the river just north of Banks Reserve, it is of little relevance to areas such as North Perth or Mt Hawthorn. It does not make sense to make decisions based on potential flooding along the river when that flooding may just reflect the high rainfall in the 125,000 square kilometre Swan-Avon catchment rather than what has fallen in the Perth metropolitan area.

The most appropriate measure is a rainfall-based ARI, which is different to a 'flood ARI'. In any case, I expect that a flood ARI would be measured in metres above sea level – how would that be applied to a block in North Perth.

The 'definition' section should be modified to say that the ARI is based on rainfall. It should also explicitly identify the source of this data so that anybody can see how much stormwater they need to retain on site.

Increased ARI values.

There has been no adequate justification for increasing the requirements for residential and commercial properties, or for having greater requirements for commercial properties – just saying that there will be an increase in storm events is not sufficient.

The beauty of specifying something like a 1:20 ARI is that the actual value will change over time to reflect any long-term change in rainfall patterns. So, the amount to be retained in 2030 may be greater than was required in 1980, but the expectation would be that stormwater would not be retained on site only once every 20 years on average.

Simply saying that the ARIs should increase to reflect more intense rainfall events misunderstands the use of ARIs.

ADDITIONAL COMMENT RECEIVED

STORMWATER DRAINAGE CONNECTIONS

Different requirements for residential and commercial

While I understand why the current policy differentiates between residential and commercial, I think, on reflection, that the justification is not correct. It was based on the requirements imposed on the Water Corporation's licence, and on the assumption that commercial properties have greater hardstand than residential properties, thus had a greater potential for runoff, and on the fact that the Water Corporation had to provide drainage to broad-scale areas without being able to control the level of retention on individual lots.

I can't see why there should be any different requirement imposed based on land use. The requirement should be uniform, such as 'you must retain a 1:20 ARI of one hour duration'. The fact that different developments may have different amounts of impervious cover should not differentiate the requirement – it simply differentiates how much retention should be built in.

I would expect that, at building licence time, the City would look at the total surface area of a lot and multiply that by the nominated ARI level, to give the total rainfall that would fall on a lot in a one hour period. It would then look at mitigating factors such as deep soil zones. These would provide reductions in the amount that would be required to be retained on site. I would also expect that the reductions would reflect the fact that soil gets water-logged and has reduced absorption capacity (e.g. x cubic metres of water may fall on the deep soil area but only a fraction of that will be absorbed).

Such an approach seems logical and is not dependent on land use, simply on the nature of development. So a residential development, that covers most of a lot, may have a similar retention requirement to a commercial lot next door, and not some significantly reduced requirement as the current/draft policy requires.

Also, only applying the requirements on residential, commercial and industrial uses misses out on other uses – what about schools, public utilities etc.

I think that clause 2 of the policy should simply require 'on site retention capable of accommodating a minimum 1:20-year ARI of one hour duration' and drop the residential/commercial/industrial differentiation.

Possible precedent

The City should be developing a policy that covers City owned/managed land (e.g. sporting facilities). The City of Stirling seem to have developed such a policy to help guide them and to provide some certainty to the community.

When adopting the revised policy, it must be recognised that the level you set now for private development should be the same level you eventually accept for City managed development. If you want private entities to provide 1:100 ARI retention, you must accept that the City will ensure 1:100 ARI retention.

POLICY NO: 2.2.10**STORMWATER DRAINAGE CONNECTIONS****OBJECTIVES**

the controlled disposal of stormwater from commercial, and residential properties.

POLICY STATEMENT

Disposal of stormwater generated on the following categories of property shall be as indicated:

Note: to be read in conjunction with Planning Policy No. 3.5.9.

1. Commercial or Developments

For properties where the nature of the soil is such that soakage is limited or not possible (as verified by a Geotechnical Report), an on-site stormwater water retention system capable of accommodating a minimum 1:10 year storm event is required from which a controlled overflow to the City's drainage system may be permitted..

The cost of connecting to the City's drainage system shall be borne by the applicant.

If, however, the City does not have drainage infrastructure adjacent the property; or where the existing system is not capable of handling the additional flow, the stormwater must either be fully compensated on site or an application made by the owner of the property to either extend or upgrade the stormwater system. Where there is concern about possible pollution of the stormwater generated on such a property, the stormwater should be adequately treated and retained on site or other approved disposal methods applied.

2. Residential

All stormwater is to be retained on-site. If, however, circumstances exist where stormwater cannot be suitably retained on-site, a connection to the City's drainage system may be approved, subject to adequate compensation equivalent to a minimum 1:5 year storm event, being provided on the site.

The cost of connecting on-site drainage to the City's drainage system shall be the responsibility of the owner of the property being connected and this includes the cost of any necessary extensions to the City's drainage system.

Date Adopted:	22 September 1997
Date Amended:	26 August 2003, 26 February 2013
Date Reviewed:	26 August 2003, 13 May 2008, 26 February 2013
Date of Next Review:	26 February 2018



STORMWATER DRAINAGE CONNECTIONS

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SCOPE

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DEFINITIONS

Average recurrence interval (ARI)

The long-term average number of years between the occurrence of a flood as big as, or larger than, the selected event. For example, floods with a discharge as great as, or greater than, the 20-year ARI flood event will occur on average once every 20 years. ARI is another way of expressing the likelihood of occurrence of a flood event.

ARI (measured in years) is a term used to describe flood size. It is the long-term average number of years between floods of a certain magnitude. For example, a 100-year ARI flood is a flood that occurs or is exceeded on average once every 100 years. By extension, this relates to a rainfall storm event that occurs or is exceeded on average once every 100 years that causes flooding.

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STORMWATER DRAINAGE CONNECTIONS

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