

## **AGENDA**

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### **Environment and Planning Committee**

**Tuesday, 13 June 2023**

**7:00pm**

**Dragon Room**

**Georges River Civic Centre,  
Hurstville**



### **OATH OF OFFICE OR AFFIRMATION OF OFFICE**

All Georges River Councillors are reminded of their Oath of Office or Affirmation of Office made at the time of their swearing into the role of Councillor.

All Councillors are to undertake the duties of the office of Councillor in the best interests of the people of the Georges River Council area and are to act faithfully and impartially carry out the functions, powers, authorities and discretions vested in them under the *Local Government Act 1993* or any other Act to the best of their ability and judgement.

### **DISCLOSURES OF INTEREST**

All Georges River Councillors are reminded of their obligation to declare any conflict of interest (perceived or otherwise) in a matter being considered by Council or at any meeting of Council.

**ENVIRONMENT AND PLANNING****ORDER OF BUSINESS****OPENING****ACKNOWLEDGEMENT OF COUNTRY****APOLOGIES / LEAVE OF ABSENCE****REQUEST TO JOIN VIA AUDIO VISUAL LINK****NOTICE OF WEBCASTING****DISCLOSURES OF INTEREST****PUBLIC FORUM****CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS**

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## **CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS**

**Item:** ENV017-23 Confirmation of the minutes of the previous meeting held on 8 May 2023

**Author:** Executive Services Officer

**Directorate:** Office of the General Manager

**Matter Type:** Previous Minutes

ENV017-23

### **RECOMMENDATION:**

That the Minutes of the Environment and Planning Committee Meeting held on 8 May 2023 be confirmed.

### **ATTACHMENTS**

Attachment 1 Unconfirmed Minutes - Environment and Planning Committee - 8 May 2023



## MINUTES

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### Environment and Planning Committee

Monday, 08 May 2023

7:00pm

Georges River Civic Centre,  
Hurstville



GEORGES RIVER COUNCIL

## **PRESENT**

### **COUNCIL MEMBERS**

The Mayor, Councillor Katris, Deputy Mayor, Councillor Landsberry (Chairperson), Councillor Ashvini Ambihaipahar, Councillor Elise Borg, Councillor Christina Jamieson and Councillor Benjamin Wang.

### **COUNCIL STAFF**

Director Environment and Planning - Meryl Bishop, Manager Strategic Planning - Catherine McMahon, Manager Environment Health and Regulatory Services – Mr Andrew Spooner, Coordinator Environment Waste and Sustainability – Elyse Ballesty, Strategic Planner – Michelle Fawcett, Coordinator Strategic Planning -Stephanie Lum, Executive Advisor and Projects – Sue Weatherley, General Counsel – James Fan, Manager Office of the General Manager – Vicki McKinley, Executive Assistant to the Director, Environment and Planning - Leanne Allen (Minutes), Executive Services Officer – Marina Cavar and Acting Head of Technology - Garuthman De Silva.

### **EXTERNAL CONSULTANT**

Group GSA Pty Ltd, Associate Director – Felicity Ratcliffe

## **OPENING**

Councillor Landsberry, opened the meeting at 7pm.

## **ACKNOWLEDGEMENT OF COUNTRY**

Councillor Landsberry acknowledged the Bidjigal people of the Eora Nation, who are the Traditional Custodians of all lands, waters and sky in the Georges River area. I pay my respect to Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples who live, work and meet on these lands.

## **APOLOGIES/LEAVE OF ABSENCE**

**MOTION:** Councillor Borg and Jamieson

That an apology be accepted and leave of absence be granted for Councillor Mahoney.

### **Record of Voting:**

For the Motion: Unanimous

## **REQUEST TO ATTEND MEETING VIA VISUAL AUDIO LINK**

There were no requests to attend via Audio Visual Link

## **NOTICE OF WEBCASTING**

The Chairperson, Councillor Landsberry, advised staff and the public that the meeting is being recorded for minute-taking purposes and is also webcast live on Council's website, in accordance with Section 4 of Council's Code of Meeting Practice. This recording will be made available on Council's website.

## DISCLOSURES OF INTEREST

There were no disclosures of interest made.

## PUBLIC FORUM

SPEAKER	ITEM
1. Adrian Polhill (In Person)	<b>ENV016-23</b> Significant Tree Register - Consultation
2. Richard Ford (In Person)	<b>ENV014-23</b> Sans Souci Park Plan of Management and Master Plan Adoption
3. David Barker (Written Submission)	<b>ENV015-23</b> Results of Public Exhibition of Merriman Reserve Master Plan Options

Note: The Mayor Councillor Katris and Councillors Elmir and Konjarski arrived at 7.12pm

Note: The Mayor Councillor Katris left the meeting at 7.17pm and did not participate in the voting of any items.

## CONFIRMATION OF MINUTES OF PREVIOUS MEETINGS

**ENV012-23 Confirmation of the minutes of the previous meeting held on 11 April 2023**  
(Report by Executive Services Officer)

**RECOMMENDATION:** Councillor Borg and Councillor Jamieson

That the Minutes of the Environment and Planning Committee Meeting held on 11 April 2023 be confirmed.

### Record of Voting:

For the Motion: Unanimous

## COMMITTEE REPORTS

**ENV013-23 Draft Swimming Pool Compliance Policy and Inspection Program**  
(Report by Manager Environment Health & Regulatory Services)

**RECOMMENDATION:** Councillor Borg and Councillor Ambihaipahar

- That Council note the recent improvements implemented to the Swimming Pool Compliance Program, as contained within this report.
- That Council endorse the draft Swimming Pool Compliance Policy and Inspection Program for public exhibition for a minimum period of not less than 28 days.
- That a further report be provided to Council on the outcomes of the public exhibition of the draft Swimming Pool Compliance Policy and Inspection Program.

### Record of Voting:

For the Motion: Unanimous

**ENV014-23 Sans Souci Park Plan of Management and Master Plan Adoption**  
(Report by Strategic Planner)

**RECOMMENDATION:** Councillor Borg and Councillor Jamieson

- (a) That Council adopt the exhibited Sans Souci Park Plan of Management with amendments in accordance with section 40 of the *NSW Local Government Act 1993* and section 3.23(6) of the *NSW Crown Land Management Act 2016*.
- (b) That Council authorise the General Manager to make minor editorial modifications in the finalisation of the Sans Souci Park Plan of Management and Master Plan.
- (c) That all individuals who provided a submission during the public exhibition of the Sans Souci Park Plan of Management and Master Plan be notified of Council's decision.
- (d) That the adopted Sans Souci Park Plan of Management and Master Plan be forwarded to the NSW Department of Planning and Environment – NSW Crown Lands for information.
- (e) That the Sans Souci Park Plan of Management and Master Plan be placed on Council's website following adoption by Council.
- (f) That the draft Sans Souci Plan of Management be updated so that it reflects the recent resolution of Council on 24 April 2023 (ASS008-23) to install parking signage restricting car parking at Sans Souci Park.

**Record of Voting:**

For the Motion: Unanimous

**ENV015-23 Results of Public Exhibition of Merriman Reserve Master Plan Options**  
(Report by Coordinator Strategic Planning)

**RECOMMENDATION:** Councillor Ambihaipahar and Councillor Wang

- (a) That Council note the submissions received during the consultation for the draft Merriman Reserve Master Plan options.
- (b) That Council endorse the preparation of a preferred Merriman Reserve Master Plan option based on the exhibited Option 1.
- (c) That all persons who made a submission during the consultation for the draft Merriman Reserve Master Plan options be advised of Council's decision.
- (d) That a further report be considered by Council seeking endorsement to place a preferred draft Merriman Reserve Master Plan and Plan of Management on public exhibition for 28 days.

**Record of Voting:**

For the Motion: Unanimous

**ENV016-23 Significant Tree Register - Consultation**

(Report by Manager Environment Health & Regulatory Services)

**RECOMMENDATION:** Councillor Borg and Councillor Jamieson

- (a) That Council endorse the definition, criteria and the method for assessment qualification for a Significant Tree.
- (b) That Council seek nominations of potential trees of significance from the public for a period of no less than 60 days to inform the development of the Significant Tree Register.
- (c) That the unspent funds allocated in the 22/23 budget for the Significant Tree Register are carried over into the 23/24 financial year to allow the completion of the project.
- (d) That a further Report be provided to Council in late 2023 presenting the results of the community consultation and the draft Significant Tree Register, subject to existing funding.

**Record of Voting:**

For the Motion: Unanimous

**CONCLUSION**

The Meeting was closed at 7.41pm.

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Chairperson

**COMMITTEE REPORTS**

**Item:** ENV018-23 Proposed Housekeeping Amendment to the Georges River Local Environmental Plan 2021

**Author:** Strategic Planner

**Directorate:** Environment and Planning

**Matter Type:** Committee Reports

ENV018-23

**RECOMMENDATION:**

- (a) That Council forward Planning Proposal No. 2023/0002 Housekeeping Amendment 2023 enclosed in Attachment 1 to the Department of Planning and Environment for a Gateway Determination under Section 3.34 of the *Environmental Planning and Assessment Act 1979*.
- (b) That Council authorise the Director Environment and Planning to make minor editorial amendments to the Planning Proposal as required throughout the Gateway process.
- (c) That Council endorse to publicly exhibit the Planning Proposal in accordance with the terms of the Gateway Determination issued by the Department of Planning and Environment in accordance with Georges River Council Engagement Strategy.

**EXECUTIVE SUMMARY**

1. This report seeks Council's endorsement to forward a draft Planning Proposal (PP), *Georges River Local Environmental Plan 2021 – Housekeeping Amendment 2023 (Attachment 1)*, to the Department of Planning and Environment (DPE) for a Gateway Determination.
2. The PP seeks to amend the *Georges River Local Environmental Plan 2021* (GRLEP 2021) to respond to a range of administrative and housekeeping issues to the instrument and accompanying mapping which have arisen since its commencement in October 2021.
3. The objective of the PP is to amend the GRLEP 2021 to improve its operation and accuracy by correcting identified anomalies and inconsistencies to existing provisions and maps, updating property descriptions and adding a new provision from the Standard Instrument LEP. The changes will improve the overall operation and accuracy of the Plan and applies to land covered by the GRLEP 2021 as shown in **Figure 1**.
4. The Planning Proposal was considered by the Georges River Local Planning Panel (LPP) at its meeting on 18 May 2023. The LPP supported the Planning Proposal, as amended by the LPP's recommendation, to be forwarded to the Department of Planning and Environment for a Gateway Determination.



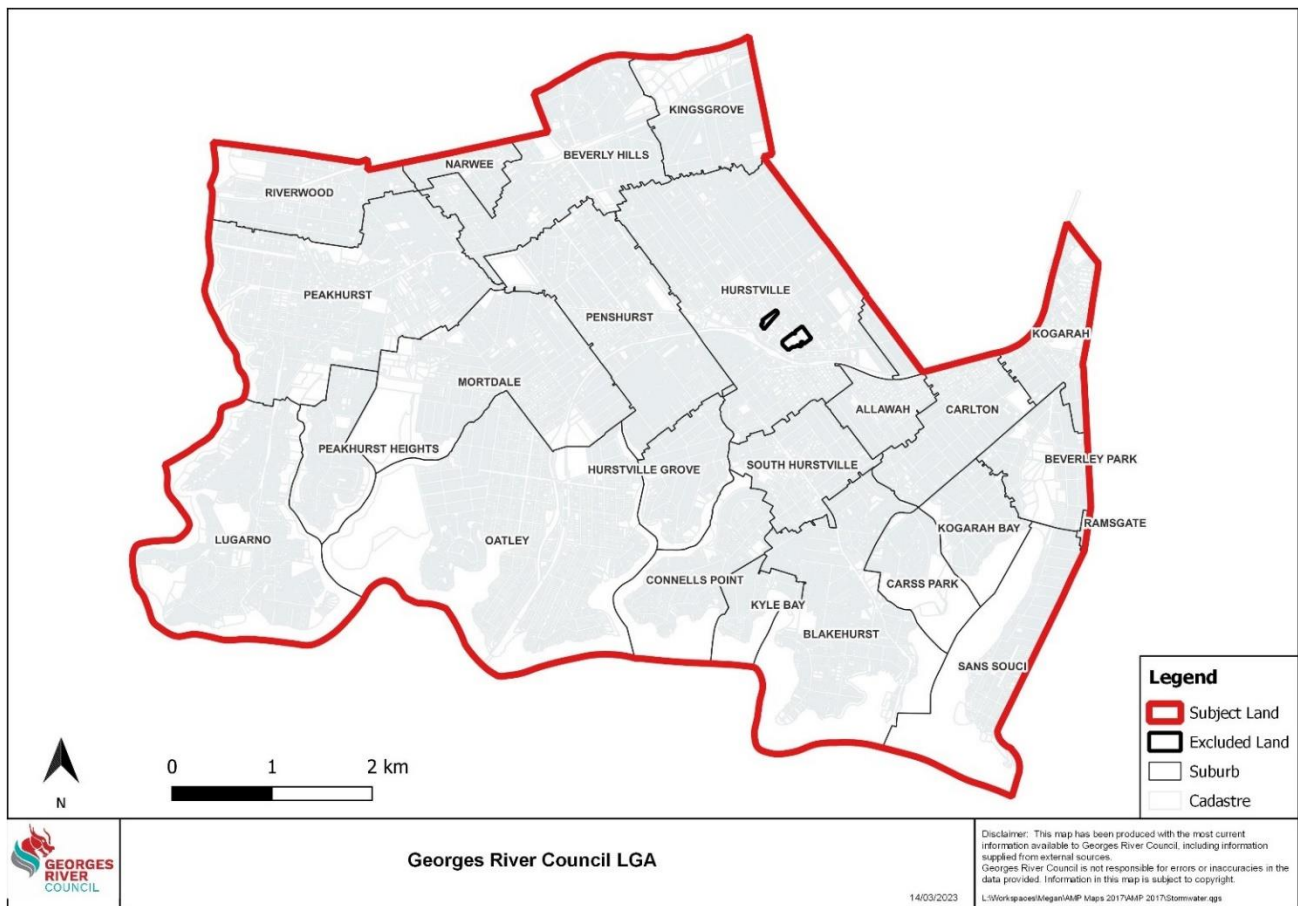


Figure 1 – Subject Land

## BACKGROUND

5. The GRLEP 2021 commenced on 8 October 2021 and replaced the planning controls of the former *Hurstville Local Environmental Plan (HLEP) 2012* and *Kogarah Local Environmental Plan (KLEP) 2012*.
6. A range of administrative and housekeeping issues to the instrument and accompanying mapping have arisen since its commencement in October 2021.

## PROPOSAL

7. A draft PP (*Georges River Local Environmental Plan 2021 – Housekeeping Amendment 2023*) has been prepared and is provided in **Attachment 1**.
8. The PP been prepared to amend the GRLEP 2021 to improve its operation and accuracy by correcting identified anomalies and inconsistencies to existing provisions and maps, updating property descriptions and adding a new provision from the Standard Instrument LEP.
9. The PP applies to land covered by the GRLEP 2021 as shown in **Figure 1**. The GRLEP 2021 does not apply to land identified as “Deferred matter” on the GRLEP Land Application Map which consists of the Westfield and Hurstville Civic Precinct sites.

## SCOPE OF PROPOSED AMENDMENTS

10. To achieve the objectives and intended outcomes, the PP proposes to amend the GRLEP 2021 with the following types of amendments:
  - a. Instrument only amendments;
  - b. Instrument only amendments – *Schedule 5 Environmental Heritage*;

- c. Map only amendments; and
- d. Instrument and map amendments.

### Instrument only amendments

11. Instrument only amendments (Items 1–5 of the attached Planning Proposal) are amendments to the GRLEP 2021 affecting the written instrument only, and do not affect any of the GRLEP map sheets. These include:

- a. Amending *Clause 4.4A Exceptions to floor space ratio—certain residential accommodation* to simplify the formula for calculating the maximum floor space ratio. The formulas are unnecessarily complex as the site area ÷ site area = 1. It is proposed to simplify the formula to avoid overcomplication and make them more user friendly. (Note: There is no change to the existing FSRs that apply to land within the LGA.)

**Proposed Amendment:** Amend Clause 4.4A(2) and 4.4A(4) to simplify the formula for calculating the maximum floor space ratio.

- (2) The maximum floor space ratio for a dwelling house on land identified as “Area 1” on the Floor Space Ratio Map must not exceed the maximum floor space ratio specified in the table to this subclause.

Site area	Maximum floor space ratio
not more than 650 square metres	<del><math>[\text{site area} \times 0.55] \div \text{site area}</math></del> :1 0.55:1

- (4) The maximum floor space ratio for a dual occupancy must not exceed the maximum floor space ratio specified in the table to this subclause.

Site area	Maximum floor space ratio
not more than 1,000 square metres	<del><math>[\text{site area} \times 0.6] \div \text{site area}</math></del> :1 0.6:1

- b. Inserting *Clause 5.22 Special flood considerations* from the Standard Instrument LEP. The clause is optional for Councils and if adopted for the GRLEP 2021, would allow Council to consider flood impacts for sensitive and hazardous development types (which are listed in the clause) for land between the flood planning area (FPA) and the probable maximum flood (PMF).
- c. Amending *Clause 6.3 Stormwater management* to delete the word ‘practicable’ and replace with ‘where required’ to align with Council’s *Stormwater Management Policy*. Since the commencement of the GRLEP 2021, some implementation issues have arisen with *Clause 6.3 Stormwater management*, where applicants are not providing on-site stormwater detention (OSD) or retention on sites that require it, due to the wording ‘if practicable’. The proposed amendment will strengthen the requirement for OSD to be provided on sites that require it under Council’s *Stormwater Management Policy*.
- d. Amending *Clause 6.11 Environmental sustainability* to delete the application of the clause to development that involves a change of use of an existing building.



e. Amending *Clause 6.12 Landscaped area* to address several operational issues by:

- Adding a new sub-clause outlining that the clause only applies to the erection of a new building or additions or external alterations where there is an increase in the footprint of the building to prevent unnecessary restrictions and reporting of minor applications.
- Inserting wording to enable trees to be removed, where warranted, as part of a DA, as the current wording does not allow this.
- Inserting wording to allow natural rock formations to be considered as part of the landscaped area where these are naturally occurring on sites.
- Adding semi-detached dwellings as a development type requiring a minimum landscaped area, which are not currently specified.
- Inserting a clause that clarifies that the provisions do not apply to strata or community title subdivisions.

The changes proposed to Clause 6.12 will also address the Department of Planning and Environment's letter dated 25 November 2023 which requested Council to address the issues with the clause within 12 months. The current wording of the clause makes no allowance for the scope of works proposed, or the extent of any existing, and legal non-compliance with respect to the percentage of landscaped area on the site. As such, due to the existing site landscaped area being non-compliant with the new development standard, several types of minor applications are currently only able to be determined by the Local Planning Panel including, for example applications relating to:

- Minor internal works wholly within an existing building
- A first-floor addition to an existing house
- Subdivision of an already approved dual occupancy
- Ancillary works, such as a new fence, new patio over an existing hard stand area etc.

The DPE granted a temporary assumed concurrence for a period of 12 months from 25 November 2022 which permitted Council for a 12 month period to be exempt from the requirement to refer development applications (or modifications) to the Georges River Local Planning Panel (LPP) where:

- a) there is pre-existing non-compliance with the landscaped area provisions specified in Clause 6.12(5) of the Georges River LEP 2021; and
- b) development applications do not result in further reductions in landscaped area(s) or consequent increases in the non-compliance.

Applicable development applications are able to be determined by Council staff under delegation from the Georges River LPP in accordance with any relevant governance mechanisms for the period of 25 November 2022 to 25 November 2023.

#### Instrument only amendments – Schedule 5 Environmental Heritage

12. Instrument only amendments – *Schedule 5 Environmental Heritage* (Items 6–24 of the attached Planning Proposal) include various administrative amendments to update property addresses and property descriptions to align with the mapped data, and one update to the item name to reflect the significant components of the site.

#### Map only amendments

13. Map only amendments (Items 25–29 of the attached Planning Proposal) includes amendments to the GRLEP 2021 Land Zoning (LZN) map to align the zoning with the current and intended use as a public reserve, as well as updating the Land Reservation Acquisition (LRA) map to remove the layer from a number of sites which have already been acquired by the acquisition authority.

#### Instrument and map amendments

14. The instrument and map amendments (Items 30–36 of the attached Planning Proposal) are amendments that relate to both the GRLEP instrument and associated mapping and includes:
- Amending the Floor Space Ratio (FSR) map and *Clause 4.4B(4) Exceptions to floor space ratio–non-residential uses* to add a non-residential floor space ratio of at least 1.5:1 that will apply to the Hurstville E2 Commercial Centre zone.
  - Amending the Additional Permitted Uses (APU) map, *Clause 6.13 Development in certain business zones* and *Schedule 1 Additional permitted uses* to allow an additional permitted use for RFBs along the Roberts Lane frontage in Hurstville.
  - Amending the Additional Permitted Uses (APU) map and *Schedule 1 Use of certain land in Zone E1* to resolve a number of minor inconsistencies following the commencement of the *State Environmental Planning Policy Amendment (Land Use Zones) (No 3) 2022* which commenced on 26 April 2023.
  - Amending the Land Reservation Acquisition (LRA) map, Additional Permitted Uses (APU) map and *Schedule 1 Additional permitted uses* following subdivision and a realignment of lot boundaries at 5 and 5R Denman Street, Hurstville.
  - Amending the Heritage map and *Schedule 5 Environmental heritage* for Item I206 ‘Terraces and garden, “Beatrice” and “Lillyville”’, following a recent lot consolidation and demolition works resulting in a reduced curtilage.
  - Amending the Heritage map and *Schedule 5 Environmental heritage* for Item I217 ‘Cottage “Killarney” and setting’, following subdivision resulting in the heritage item being wholly on 66B Moons Ave, Lugarno, not on 66A Moons Avenue, Lugarno.
  - Inserting a State listed heritage item, ‘Thurlow House’, at 9 Stuart Crescent, Blakehurst (Lot D, DP 346635) into *Schedule 5 Environmental heritage*.
15. The proposed amendments are detailed within the draft PP provided in **Attachment 1**.

#### **ASSESSMENT OF THE PLANNING PROPOSAL**

16. The following **Tables 1 to 5** provide a detailed assessment and justification of the strategic and site-specific merit of the proposed housekeeping amendments to determine whether the PP should be supported. The Tables contain the 12 questions from the DPE’s *Local Environmental Plan Making Guideline* dated September 2022 which outlines the matters for consideration when describing, evaluating and justifying a proposal.

**Table 1: Section A – Need for the planning proposal**

Question	Considerations
1. Is the planning proposal a result of an endorsed LSPS, strategic study or report?	The proposed amendments cover a range of instrument and mapping related matters which have been identified as administrative or housekeeping issues that need to be addressed to ensure that the GRLEP operates as originally intended and/or to improve its operation.

Question	Considerations
	While the PP is not a direct result of an endorsed LSPS, strategic study or report, it is consistent with a number of priorities within the <i>Georges River Local Strategic Planning Statement 2040</i> ('LSPS 2040') as discussed in Question 4 below.
2. Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?	Yes, the PP is the best and only means of addressing the administrative and housekeeping related matters that have been identified within the GRLEP 2021.

ENV018-23

**Table 2: Section B – Relationship to the strategic planning framework**

Question	Considerations
3. Will the planning proposal give effect to the objectives and actions of the applicable regional or district plan or strategy (including any exhibited draft plans or strategies)?	<p>Yes. The PP gives effect to the following objectives within the <i>Greater Sydney Region Plan – A Metropolis of Three Cities</i>:</p> <ul style="list-style-type: none"> <li>• <i>Objective 2. Infrastructure aligns with forecast growth.</i> The PP gives effect to this objective by updating the Land Reservation Acquisition (LRA) maps to remove the layer from sites which have already been acquired for public infrastructure (i.e. classified roads and local open space).</li> <li>• <i>Objective 10. Greater housing supply.</i> The PP gives effect to this objective by allowing an additional permitted use of residential flat buildings for a portion of land along Roberts Lane, Hurstville, consistent with the site specific DCP controls already adopted for the site.</li> <li>• <i>Objective 13. Environmental heritage is identified, conserved and enhanced.</i> The PP gives effect to this objective by amending <i>Schedule 5 Environmental Heritage</i> and the Heritage maps within the GRLEP 2021 so that all property descriptions, item names and maps are accurate for all local and State heritage items within the Georges River LGA.</li> <li>• <i>Objective 22. Investment and business activity in centres.</i> The PP gives effect to this objective as it proposes to introduce a minimum non-residential floor space ratio (FSR) control in the E2 Commercial Centre zoned component of the Hurstville strategic centre to ensure no net loss in non-residential floor space and that baseline job targets can be met despite recent Build to Rent (BTR) housing provisions being added to the <i>State Environmental Planning Policy (Housing) 2021</i>.</li> <li>• <i>Objective 27. Biodiversity is protected, urban bushland and remnant vegetation is enhanced.</i> The PP gives effect to this objective by amending the current <i>Clause 6.12 Landscaped areas in certain residential and environment protection zones</i> to ensure that the original intent of the clause is achieved; and to ensure that semi-detached housing provides a minimum landscaped area. It also gives effect to this objective by ensuring that public reserves are zoned appropriately and that land that has been acquired for local open space purposes is removed from the LRA maps.</li> <li>• <i>Objective 37. Exposure to natural and urban hazards is reduced.</i> The PP gives effect to this objective by inserting a new clause from the Standard Instrument LEP, <i>Clause 5.22 Special flood considerations</i>. The clause applies to sensitive and hazardous development on land between the flood planning area and the probable maximum flood to build resilience in future development and reduce the extent of property damage and potential loss</li> </ul>

Question	Considerations
	<p>of life from severe to extreme flooding.</p> <p>The PP also gives effect to the planning priorities of the <i>South District Plan</i>:</p> <ul style="list-style-type: none"> <li>• <i>Planning Priority S1. Planning for a city supported by infrastructure.</i> The PP gives effect to this planning priority by updating the Land Reservation Acquisition (LRA) maps to remove the layer from sites which have already been acquired for public infrastructure (i.e. classified roads and local open space).</li> <li>• <i>Planning Priority S5. Providing housing supply, choice and affordability, with access to jobs, services and public transport.</i> The PP gives effect to this planning priority by allowing an additional permitted use of residential flat buildings for a portion of land along Roberts Lane, Hurstville, consistent with the site specific DCP controls already adopted for the site.</li> <li>• <i>Planning Priority S6. Creating and renewing great places and local centres, and respecting the District's heritage.</i> The PP gives effect to this planning priority by amending <i>Schedule 5 Environmental Heritage</i> and the Heritage maps within GRLEP 2021 so that all property descriptions, item names and maps are accurate for all local and State heritage items within the Georges River LGA.</li> <li>• <i>Planning Priority S9. Growing investment, business opportunities and jobs in strategic centres.</i> The PP gives effect to this planning priority as it proposes to introduce a minimum non-residential floor space ratio (FSR) control in the E2 Commercial Centre zoned component of the Hurstville strategic centre to ensure no net loss in non-residential floor space and that baseline job targets can be met despite recent Build to Rent (BTR) housing provisions being added to the <i>State Environmental Planning Policy (Housing) 2021</i>.</li> <li>• <i>Planning Priority S18. Adapting to the impacts of urban and natural hazards and climate change.</i> The PP gives effect to this planning priority by inserting a new clause from the Standard Instrument LEP, <i>Clause 5.22 Special flood considerations</i>. The clause applies to sensitive and hazardous development on land between the flood planning area and the probable maximum flood to build resilience in future development and reduce the extent of property damage and potential loss of life from severe to extreme flooding.</li> </ul>
<p>4. Is the planning proposal consistent with a council LSPS that has been endorsed by the Planning Secretary or GSC, or another endorsed local strategy or strategic plan?</p>	<p>Yes. The PP is consistent with the endorsed Georges River Local Strategic Planning Statement 2040 ('LSPS 2040'), specifically the following planning priorities:</p> <ul style="list-style-type: none"> <li>• <i>P4. Collaboration supports innovation and delivers infrastructure, services and facilities.</i> The PP is consistent with this priority as it proposes to update the Land Reservation Acquisition (LRA) maps to remove the layer from sites which have already been acquired for public infrastructure (i.e. classified roads and local open space).</li> <li>• <i>P10. Homes are supported by safe, accessible, green, clean, creative and diverse facilities, services and spaces.</i> The PP is consistent with this priority by amending the current <i>Clause 6.12 Landscaped areas in certain residential and environment protection zones</i> to ensure that the original intent of the clause is achieved; and to ensure that semi-detached housing provides a minimum landscaped area. The PP is also consistent with this priority as it ensures that public reserves are zoned appropriately and that</li> </ul>

Question	Considerations				
	<p>land that has been acquired for local open space purposes is removed from the LRA maps.</p> <ul style="list-style-type: none"> <li>• <i>P11. Aboriginal and other heritage is protected and promoted.</i> The PP is consistent with this priority as it seeks to amend <i>Schedule 5 Environmental Heritage</i> and the Heritage maps within the GRLEP 2021 so that all property descriptions, item names and maps are accurate for all local and State heritage items within the Georges River LGA.</li> <li>• <i>P15. All local centres are supported to evolve for long-term viability.</i> The PP is consistent with this priority as it seeks to introduce a minimum non-residential floor space ratio (FSR) control in the E2 Commercial Centre zoned component of the Hurstville strategic centre to ensure no net loss in non-residential floor space and that baseline job targets can be met despite recent Build to Rent (BTR) housing provisions being added to the <i>State Environmental Planning Policy (Housing) 2021</i>.</li> <li>• <i>P17. Tree canopy, bushland, landscaped settings and biodiversity are protected, enhanced and promoted.</i> The PP is consistent with this priority as it proposes to amend the current <i>Clause 6.12 Landscaped areas in certain residential and environment protection zones</i> to rectify operational issues and to ensure that semi-detached housing provides a landscaped area.</li> <li>• <i>P19. Everyone has access to quality, clean, useable, passive and active open and green spaces and recreation places.</i> The PP is consistent with this priority as it seeks to amend the current <i>Clause 6.12 Landscaped areas in certain residential and environment protection zones</i> to ensure that the original intent of the clause is achieved; and to ensure that semi-detached housing provides a minimum landscaped area. The PP is also consistent with this priority as it ensures that public reserves are zoned appropriately and that land that has been acquired for local open space purposes is removed from the LRA maps.</li> <li>• <i>P20. Development is managed to appropriately respond to hazards and risks.</i> The PP is consistent with this priority as it seeks to insert a new clause from the Standard Instrument LEP, <i>Clause 5.22 Special flood considerations</i>. The clause applies to sensitive and hazardous development on land between the flood planning area and the probable maximum flood to build resilience in future development and reduce the extent of property damage and potential loss of life from severe to extreme flooding.</li> </ul>				
5. Is the planning proposal consistent with any other applicable State and regional studies or strategies?	There are no other applicable State and regional studies or strategies.				
6. Is the planning proposal consistent with applicable SEPPs?	<p>The PP is consistent with the following SEPPs:</p> <table border="1"> <thead> <tr> <th>SEPP</th><th>Comment on consistency</th></tr> </thead> <tbody> <tr> <td><i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i></td><td> <p>This SEPP consolidates, transfers and repeals provisions of the following 11 SEPPs (or deemed SEPPs):</p> <ul style="list-style-type: none"> <li>• <i>SEPP (Vegetation in Non-Rural Areas) 2017 (Vegetation SEPP)</i></li> <li>• <i>SEPP (Koala Habitat Protection) 2020 (Koala SEPP 2020)</i></li> <li>• <i>SEPP (Koala Habitat Protection) 2021</i></li> </ul> </td></tr> </tbody> </table>	SEPP	Comment on consistency	<i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i>	<p>This SEPP consolidates, transfers and repeals provisions of the following 11 SEPPs (or deemed SEPPs):</p> <ul style="list-style-type: none"> <li>• <i>SEPP (Vegetation in Non-Rural Areas) 2017 (Vegetation SEPP)</i></li> <li>• <i>SEPP (Koala Habitat Protection) 2020 (Koala SEPP 2020)</i></li> <li>• <i>SEPP (Koala Habitat Protection) 2021</i></li> </ul>
SEPP	Comment on consistency				
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Question	Considerations
	<p>(Koala SEPP 2021)</p> <ul style="list-style-type: none"> <li>• Murray Regional Environmental Plan No 2—Riverine Land (Murray REP)</li> <li>• SEPP No 19—Bushland in Urban Areas (SEPP 19)</li> <li>• SEPP No 50—Canal Estate Development (SEPP 50)</li> <li>• SEPP (Sydney Drinking Water Catchment) 2011 (Sydney Drinking Water SEPP)</li> <li>• Sydney Regional Environmental Plan No 20 – Hawkesbury – Nepean River (No 2 – 1997)</li> <li>• (Hawkesbury–Nepean River SREP)</li> <li>• Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Sydney Harbour Catchment SREP)</li> <li>• Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment (Georges River REP)</li> <li>• Willandra Lakes Regional Environmental Plan No 1 – World Heritage Property (Willandra Lakes REP)</li> </ul> <p>The PP is not inconsistent with the SEPP.</p>
	<p>State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004</p> <p>The PP is not inconsistent with the SEPP.</p>
	<p>State Environmental Planning Policy (Exempt and Complying Development Codes) 2008</p> <p>The PP is not inconsistent with the SEPP.</p>
	<p>State Environmental Planning Policy (Housing) 2021</p> <p>The PP is not inconsistent with the SEPP.</p>
	<p>State Environmental Planning Policy (Industry and Employment) 2021</p> <p>This SEPP consolidates, transfers and repeals the provisions of the following 2 SEPPs:</p> <ul style="list-style-type: none"> <li>• SEPP (Western Sydney Employment Area) 2009 (Western Sydney Employment SEPP)</li> <li>• SEPP 64 – Advertising and Signage (SEPP 64)</li> </ul> <p>The PP is not inconsistent with the SEPP.</p>
	<p>State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development</p> <p>The PP is not inconsistent with the SEPP.</p>
	<p>State Environmental Planning Policy (Planning Systems) 2021</p> <p>This SEPP consolidates and repeals the provisions of the following 3 SEPPs:</p> <ul style="list-style-type: none"> <li>• SEPP (State and Regional Development) 2011 (State and Regional Development SEPP)</li> <li>• SEPP (Aboriginal Land) 2019 (Aboriginal Land SEPP)</li> <li>• SEPP (Concurrences and Consents)</li> </ul>

Question	Considerations	
		<p><i>2018 (Concurrence SEPP)</i></p> <p>The PP is not inconsistent with the SEPP.</p>
	<p><i>State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021</i></p>	<p>The PP is not inconsistent with the SEPP. The site is not the subject of a Precinct identified by the SEPP.</p>
	<p><i>State Environmental Planning Policy (Primary Production) 2021</i></p>	<p>This SEPP consolidates, transfers and repeals the provisions of the following SEPPs:</p> <ul style="list-style-type: none"> <li>• <i>SEPP (Primary Production and Rural Development) 2019 (Primary Production and Rural Development SEPP)</i></li> <li>• <i>Sydney Regional Environmental Plan No 8 (Central Coast Plateau Areas) (Central Coast Plateau SREP)</i></li> </ul> <p>The PP is not inconsistent with the SEPP.</p>
	<p><i>State Environmental Planning Policy (Resilience and Hazards) 2021</i></p>	<p>This SEPP consolidates and repeals the provisions of the following 3 SEPPs:</p> <ul style="list-style-type: none"> <li>• <i>SEPP (Coastal Management) 2018 (Coastal Management SEPP)</i></li> <li>• <i>SEPP 33 – Hazardous and Offensive Development (SEPP 33)</i></li> <li>• <i>SEPP 55 – Remediation of Land (SEPP 55)</i></li> </ul> <p>The PP is not inconsistent with the SEPP.</p>
	<p><i>State Environmental Planning Policy (Resources and Energy) 2021</i></p>	<p>This SEPP consolidates and repeals the provisions of the following 2 SEPPs:</p> <ul style="list-style-type: none"> <li>• <i>SEPP (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)</i></li> <li>• <i>Sydney Regional Environmental Plan No. 9 – Extractive Industries (No 2 – 1995) (Extractive Industries SREP)</i></li> </ul> <p>The PP is not inconsistent with the SEPP.</p>
	<p><i>State Environmental Planning Policy (Sustainable Buildings)</i></p>	<p>The PP is not inconsistent with the SEPP.</p>
	<p><i>State Environmental Planning Policy (Transport and Infrastructure) 2021</i></p>	<p>This SEPP consolidates and repeals the provisions of the following 4 SEPPs:</p> <ul style="list-style-type: none"> <li>• <i>SEPP (Infrastructure) 2007 (Infrastructure SEPP)</i></li> <li>• <i>SEPP (Educational Establishments and Childcare Facilities) 2017 (Education and Childcare SEPP)</i></li> <li>• <i>SEPP (Major Infrastructure Corridors) 2020 (Corridor SEPP)</i></li> <li>• <i>SEPP (Three Ports) 2013 (Three Ports SEPP)</i></li> </ul> <p>The PP is not inconsistent with the SEPP.</p>

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7. Is the planning proposal consistent with applicable Ministerial Directions (section 9.1 Directions)?	<p>The PP is consistent with the applicable Ministerial Directions as follows:</p> <table border="1"> <thead> <tr> <th>Ministerial Direction</th><th>Comment</th></tr> </thead> <tbody> <tr> <td colspan="2"><b>1 Planning Systems</b></td></tr> <tr> <td><b>1.1 Implementation of Regional Plans</b></td><td>Consistent – The PP is consistent with: <ul style="list-style-type: none"> <li><i>A Metropolis of Three Cities – Greater Sydney Region Plan</i> – see previous discussion on Question 3.</li> <li><i>South District Plan</i> – see previous discussion on Question 3.</li> </ul> </td></tr> <tr> <td><b>1.2 Development of Aboriginal Land Council land</b></td><td>Consistent – The PP does not affect land shown on the Land Application Map of <i>State Environmental Planning Policy (Planning Systems) 2021</i>.</td></tr> <tr> <td><b>1.3 Approval and Referral Requirements</b></td><td>Consistent – The PP does not seek to make any additional provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority.</td></tr> <tr> <td><b>1.4 Site Specific Provisions</b></td><td>Consistent – The PP does seek to add an Additional Permitted Use for certain land however the use does not impose any development standards or requirements in addition to those already contained in the principal environmental planning instrument being amended.</td></tr> <tr> <td colspan="2"><b>1 Planning Systems – Place-based</b></td></tr> <tr> <td><b>1.5 Parramatta Road Corridor Urban Transformation Strategy</b></td><td>NA</td></tr> <tr> <td><b>1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan</b></td><td>NA</td></tr> <tr> <td><b>1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</b></td><td>NA</td></tr> <tr> <td><b>1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</b></td><td>NA</td></tr> <tr> <td><b>1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor</b></td><td>NA</td></tr> <tr> <td><b>1.10 Implementation of the Western Sydney Aerotropolis Plan</b></td><td>NA</td></tr> <tr> <td><b>1.11 Implementation of Bayside West Precincts 2036 Plan</b></td><td>NA</td></tr> <tr> <td><b>1.12 Implementation of Planning Principles for the Cooks Cove Precinct</b></td><td>NA</td></tr> <tr> <td><b>1.13 Implementation of St Leonards and Crows Nest 2036 Plan</b></td><td>NA</td></tr> </tbody> </table>	Ministerial Direction	Comment	<b>1 Planning Systems</b>		<b>1.1 Implementation of Regional Plans</b>	Consistent – The PP is consistent with: <ul style="list-style-type: none"> <li><i>A Metropolis of Three Cities – Greater Sydney Region Plan</i> – see previous discussion on Question 3.</li> <li><i>South District Plan</i> – see previous discussion on Question 3.</li> </ul>	<b>1.2 Development of Aboriginal Land Council land</b>	Consistent – The PP does not affect land shown on the Land Application Map of <i>State Environmental Planning Policy (Planning Systems) 2021</i> .	<b>1.3 Approval and Referral Requirements</b>	Consistent – The PP does not seek to make any additional provisions that require the concurrence, consultation or referral of development applications to a Minister or public authority.	<b>1.4 Site Specific Provisions</b>	Consistent – The PP does seek to add an Additional Permitted Use for certain land however the use does not impose any development standards or requirements in addition to those already contained in the principal environmental planning instrument being amended.	<b>1 Planning Systems – Place-based</b>		<b>1.5 Parramatta Road Corridor Urban Transformation Strategy</b>	NA	<b>1.6 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan</b>	NA	<b>1.7 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</b>	NA	<b>1.8 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan</b>	NA	<b>1.9 Implementation of Glenfield to Macarthur Urban Renewal Corridor</b>	NA	<b>1.10 Implementation of the Western Sydney Aerotropolis Plan</b>	NA	<b>1.11 Implementation of Bayside West Precincts 2036 Plan</b>	NA	<b>1.12 Implementation of Planning Principles for the Cooks Cove Precinct</b>	NA	<b>1.13 Implementation of St Leonards and Crows Nest 2036 Plan</b>	NA
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Question	Considerations
	1.14 Implementation of Greater Macarthur 2040 NA
	1.15 Implementation of the Pymont Peninsula Place Strategy NA
	1.16 North West Rail Link Corridor Strategy NA
	1.17 Implementation of the Bays West Place Strategy NA
	1.18 Implementation of the Macquarie Park Innovation Precinct NA
	1.19 Implementation of the Westmead Place Strategy NA
	1.20 Implementation of the Camellia-Rosehill Place Strategy NA
	1.21 Implementation of the South West Growth Area Structure Plan NA
	1.22 Implementation of the Cherrybrook Station Place Strategy N/A
	2 Design and Place
	3 Biodiversity and Conservation
	3.1 Conservation Zones Consistent – The PP does not affect land within a conservation zone or land otherwise identified for environment conservation/protection purposes in a LEP.
	3.2 Heritage Conservation Consistent – The PP seeks to make minor administrative amendments to <i>Schedule 5 Environmental Heritage</i> and associated Heritage maps within the GRLEP 2021 to ensure property descriptions, item names and maps are accurate for all local and State heritage items within the Georges River LGA.
	3.3 Sydney Drinking Water Catchments NA – the PP affects the Georges River LGA which the Direction does not apply to.
	3.4 Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs NA
	3.5 Recreation Vehicle Areas Consistent – The PP does not enable land to be developed for the purpose of a recreation vehicle area (within the meaning of the <i>Recreation Vehicles Act 1983</i> ).
	3.6 Strategic Conservation Planning NA
	3.7 Public Bushland Consistent – The PP does not propose any changes to existing controls protecting bushland in urban areas.
	3.8 Willandra Lakes Region NA
	3.9 Sydney Harbour Foreshores and Waterways Area NA – The PP does not affect land within the Foreshores and Waterways Area as defined in the <i>State Environmental Planning Policy (Biodiversity and Conservation) 2021</i> .

Question	Considerations	
	<b>3.10 Water Catchment Protection</b>	N/A – The PP does not propose any changes to controls that would impact on water catchments.
	<b>4 Resilience and Hazards</b>	
	<b>4.1 Flooding</b>	Consistent – The PP proposes to adopt <i>Clause 5.22 Special flood considerations</i> which will enable Council to consider flood impacts for sensitive and hazardous development types for land between the flood planning area (FPA) and the probable maximum flood (PMF). The PP is consistent with the objectives of the Direction.
	<b>4.2 Coastal Management</b>	Consistent – The PP affects land within the Coastal Zone however it does not propose an intensification of uses permitted. The PP does not propose any changes relating to coastal management.
	<b>4.3 Planning for Bushfire Protection</b>	Consistent – The PP does not result in controls that place development in hazardous areas. It does not change any existing provisions relating to bushfire prone land.
	<b>4.4 Remediation of Contaminated Land</b>	Consistent – The PP does not affect any known contaminated land.
	<b>4.5 Acid Sulfate Soils</b>	Consistent – The PP does not seek to introduce or change provisions relating to Acid Sulfate Soils.
	<b>4.6 Mine Subsidence and Unstable Land</b>	Consistent – The PP does not permit development on land that: (a) is within a mine subsidence district, or (b) has been identified as unstable in a study, strategy or other assessment undertaken: (i) by or on behalf of the relevant planning authority, or (ii) on behalf of a public authority and provided to the relevant planning authority.
	<b>5 Transport and Infrastructure</b>	
	<b>5.1 Integrating Land Use and Transport</b>	Consistent – The PP proposes minor alterations to provisions relating to urban land, however is consistent with <i>Improving Transport Choice – Guidelines for planning and development</i> (DUAP 2001), and <i>The Right Place for Business and Services – Planning Policy</i> (DUAP 2001).
	<b>5.2 Reserving Land for Public Purposes</b>	Consistent – The PP proposes to remove the LRA layer from a number of parcels which have already been acquired by the relevant authority (either Council or Transport for NSW). The mapping is no longer required. It is recommended that Transport for NSW be consulted as part of the Gateway Determination.
	<b>5.3 Development Near Regulated Airports and Defence Airfields</b>	NA – The PP does not create, alter or remove a zone or a provision relating to land near a regulated airport which includes a defence airfield.
	<b>5.4 Shooting Ranges</b>	NA – The PP does not seek to affect, create, alter or remove a zone or a provision relating to land adjacent to and/ or adjoining an existing shooting range.
	<b>6 Housing</b>	
	<b>6.1 Residential Zones</b>	Consistent – The PP is minor and consistent with

Question	Considerations
	the objectives of the Direction to encourage a variety of housing types to provide for existing and future housing needs, make efficient use of existing infrastructure and minimise the impact of residential development on the environment and resource lands. It achieves this by allowing an additional permitted use of residential flat buildings for a portion of land along Roberts Lane, Hurstville, consistent with the site specific DCP controls already adopted for the site.
<b>6.2 Caravan Parks and Manufactured Home Estates</b>	Consistent – The PP does not propose to permit development for the purposes of a caravan park or manufactured home estate.
<b>7. Industry and Employment</b>	
<b>7.1 Business and Industrial Zones</b>	Consistent – The PP affects land within an existing or proposed business or industrial zone and is consistent with the objectives of the Direction. It achieves the objectives of the Direction to protect employment land in employment zones and support the viability of identified centres. The PP gives effect to this objective as it proposes to introduce a minimum non-residential floor space ratio (FSR) control in the E2 Commercial Centre zoned component of the Hurstville strategic centre to ensure no net loss in non-residential floor space and that baseline job targets can be met despite recent Build to Rent (BTR) housing provisions being added to the <i>State Environmental Planning Policy (Housing) 2021</i> .
<b>7.2 Reduction in non-hosted short-term rental accommodation period</b>	NA – The PP does not cover the Byron Shire Council area or identify or reduce the number of days that non-hosted short-term rental accommodation may be carried out within the LGA.
<b>7.3 Commercial and Retail Development along the Pacific Highway, North Coast</b>	NA
<b>8 Resources and Energy</b>	
<b>8.1 Mining, Petroleum Production and Extractive Industries</b>	NA – The PP does not have the effect of: (a) prohibiting the mining of coal or other minerals, production of petroleum, or winning or obtaining of extractive materials, or (b) restricting the potential development of resources of coal, other minerals, petroleum or extractive materials which are of State or regional significance by permitting a land use that is likely to be incompatible with such development.
<b>9 Primary Production</b>	
<b>9.1 Rural Zones</b>	NA – The PP does not affect any land within an existing or proposed rural zone.
<b>9.2 Rural Lands</b>	NA
<b>9.3 Oyster Aquaculture</b>	NA – The PP does not propose a change in land use which could impact on a Priority Oyster Aquaculture Area.
<b>9.4 Farmland of State and Regional Significance on the</b>	NA

Question	Considerations
	NSW Far North Coast

**Table 3: Section C – Environmental, social and economic impact**

Question	Considerations
8. Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected because of the proposal?	No, the PP only proposes to make amendments to the LEP that are of a minor administrative or housekeeping nature so it is not expected that any critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected because of the proposal.
9. Are there any other likely environmental effects of the planning proposal and how are they proposed to be managed?	No other environmental impacts are anticipated other than positive environmental effects as a result of the proposed changes to <i>Clause 6.12 Landscaped areas in certain residential and environment protection zones</i> .
10. Has the planning proposal adequately addressed any social and economic effects?	Yes, the PP is likely to have positive social and economic effects due to the LEP operating in a more efficient and accurate manner which will better align the objectives of the instrument with appropriate development.

**Table 4: Section D – Infrastructure (Local, State and Commonwealth)**

Question	Considerations
11. Is there adequate public infrastructure for the planning proposal?	The PP does not create additional requirements for public infrastructure.

**Table 5: Section E – State and Commonwealth Interests**

Question	Considerations
12. What are the views of state and federal public authorities and government agencies consulted in order to inform the Gateway Determination?	Council has not yet consulted with relevant State and/or Commonwealth public authorities but will do so in accordance with the conditions of the Gateway Determination.

**GEORGES RIVER LOCAL PLANNING PANEL MEETING HELD 18 MAY 2023**

17. The Planning Proposal was considered by the Georges River Local Planning Panel (LPP) at its meeting on 18 May 2023. The LPP recommended:

1. That the Panel made the following recommended amendments highlighted in red, to improve the overall operation and accuracy of the Plan to the Council in respect of Planning Proposal No. 2023/0002 Housekeeping Amendment 2023:
  - a. In Clause 6.3 replace the words “if practicable” to “where required” so that Clause 6.3(2)(b) states: *includes, **where required**, on-site stormwater detention or retention to minimise stormwater runoff volumes and reduce the development’s reliance on mains water, groundwater or river water, and....*
  - b. Amend Clause 6.12 to read as follows:
    - (1) The objectives of this clause are as follows—
      - (a) to ensure adequate opportunities exist for the retention or provision of vegetation that contributes to biodiversity and enhances the tree canopy of the Georges River local government area,
      - (b) to minimise urban run-off by maximising permeable areas on the sites of development,
      - (c) to ensure that the visual impact of development is minimised by sufficient and appropriately located landscaping that complements the scale of buildings,
      - (d) to ensure that the use of surfaces that absorb and retain heat are minimised.
    - (2) This clause applies to development on land referred to in subclause (3) involving—
      - (a) the erection of a new building, or
      - (b) **additions or external alterations where there is an increase in the footprint of the building.**
    - (3)~~(2)~~ This clause applies to land in the following zones—
      - (a) Zone R2 Low Density Residential,
      - (b) Zone R3 Medium Density Residential,
      - (c) Zone R4 High Density Residential,
      - (d) Zone E2 Environmental Conservation.
    - (4) ~~(3)~~ Despite subclause (~~2~~ **2 and 3**), this clause does not apply to development referred to in [State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development](#), clause 4.
    - (5) ~~(4)~~ Development consent must not be granted to development on land to which the clause applies unless the consent authority is satisfied that the development—
      - (a) allows for the establishment of appropriate plantings—
        - (i) that are of a scale and density commensurate with the height, bulk and scale of the buildings to which the development relates, and
        - (ii) that will maintain and enhance the streetscape and the desired future character of the locality, and
      - (b) maintains privacy between dwellings, and

- (c) **it is not likely to** adversely impact the health, condition and structure of existing trees, tree canopies and tree root systems **that are required to be retained** on the land, and
  - (d) **it is not likely to adversely impact the health, condition and structure of existing trees, tree canopies and tree root systems on adjoining land, and**
  - (e) enables the establishment of indigenous vegetation and habitat for native fauna, and
  - (f) integrates with the existing vegetation to protect existing trees and natural landscape features such as rock outcrops, remnant bushland, habitats and natural watercourses.
- (6) ~~(5)~~ Development consent must not be granted to development on land to which this clause applies unless a percentage of the site area consists of landscaped areas and natural rock outcrops that is at least—
  - (a) for a dwelling house located on land outside the Foreshore Scenic Protection Area—20% of the site area, or
  - (b) for a dwelling house located on land within the Foreshore Scenic Protection Area—25% of the site area, or
  - (c) for a dual occupancy or semi-detached dwelling located on land outside the Foreshore Scenic Protection Area—25% of the site area, or
  - (d) for a dual occupancy or semi-detached dwelling located on land within the Foreshore Scenic Protection Area—30% of the site area, or
  - (e) for development in Zone R3 Medium Density Residential—20% of the site area, or
  - (f) for development in Zone R4 High Density Residential—10% of the site area, or
  - (g) for development in Zone E2 Environmental Conservation—70% of the site area.
- (7) ~~(6)~~ If a lot is a battle-axe lot or other lot with an access handle, the area of the access handle and any right of carriageway is not to be included in calculating the site area for the purposes of subclause (6 ~~5~~).
- (8) Subclause (6) does not apply to a subdivision of land under the [Community Land Development Act 1989](#) or the [Strata Schemes \(Freehold Development\) Act 1973](#).
- (9) ~~(7)~~ In this clause—  
**Foreshore Scenic Protection Area** means land shown on the [Foreshore Scenic Protection Area Map](#)
- c. Amend Clause **4.4B – Exceptions to floor space ratio—non-residential uses to read as follows:**
  - (1) The objective of this clause is to encourage an appropriate mix of residential and non-residential uses in order to ensure a suitable level of non-residential floor space is provided to promote employment and reflect the hierarchy of Zone E1 Local Centre, **Zone E2 Commercial Centre** and Zone MU1 Mixed Use.

- (2) This clause applies to development that is the erection of a new building or alterations or additions to an existing building.
  - (3) Development consent must not be granted for development on land in Zone E1 Local Centre, **Zone E2 Commercial Centre** or Zone MU1 Mixed Use unless the non-residential floor space ratio is at least 0.3:1.
  - (4) Development consent must not be granted for development on the following land identified on the **Floor Space Ratio Map** unless the non-residential floor space ratio is—
    - a. for land identified as “Area 3”—at least 0.5:1,
    - b. for land identified as “Area 4”—at least 1:1,
    - c. for land identified as “Area 7” – at least 1.5:1.
  - (5) Development consent must not be granted for development on land identified as “Area 5” on the **Floor Space Ratio Map** unless the non-residential floor space ratio is at least 0.7:1.
  - (6) Despite clause 4.4, development consent may be granted for a building situated on land identified as “Area 6” on the **Floor Space Ratio Map** if the consent authority is satisfied that—
    - a. the gross floor area of the building will exceed the maximum gross floor area that would otherwise be permitted under clause 4.4 by an amount of no more than 7,023 square metres (the **bonus floor allowance**), and
    - b. part of the building, with a floor area of not less than the bonus floor allowance, will be used for the purpose of hotel or motel accommodation.
  - (7) In this clause—  
**non-residential floor space ratio** means the ratio of the gross floor area of that part of a building used or proposed to be used for a purpose other than residential accommodation in a building on the site to the site area.
- (d) Amend the title of Clause **13 Development in Zones E1 and MU1 to include E2 and to amend the Clause as follows:**
- (1) The objectives of this clause are as follows—
    - a. to promote uses that attract pedestrian traffic along ground floor street frontages,
    - b. to maintain existing, and encourage additional, non-residential uses along ground floor street frontages,
    - c. to strengthen the viability of existing established centres,
    - d. to maintain opportunities for business and retail development that is suited to high exposure locations.
  - (2) This clause applies to land in the following zones—
    - a. Zone E1 Local Centre,
    - b. Zone MU1 Mixed Use,
    - c. **Zone E2 Commercial Centre**

~~d. (c), (d) (Repealed)~~

- (3) Development consent must not be granted for development on land to which this clause applies unless the consent authority is satisfied the development will not cause a part of the ground floor of a building that is facing a street to be used for the purposes of residential accommodation or tourist and visitor accommodation.
- (4) Subclause (3) does not apply to a part of a building that is used for the following purposes—
  - a. entrances and lobbies, including as part of a mixed use development,
  - b. access for fire services,
  - c. essential services.
- (5) Development consent must not be granted for the erection of a building with a gross floor area on the ground floor of more than 500m<sup>2</sup> on land identified as “Area A” on the [Land Zoning Map](#) unless the consent authority is satisfied at least 500m<sup>2</sup> of the gross floor area on the ground floor will be used for—
  - a. a purpose other than residential accommodation or tourist and visitor accommodation, and
  - b. a purpose specified in subclause (4).
- (6) Development consent must not be granted for the erection of a building on land identified as “Area 7” on the Floor Space Ratio Map unless the consent authority is satisfied that the ground floor area is used for purposes other than residential accommodation.

- 2. That the Georges River Local Planning Panel recommends to Council that the Planning Proposal No. 2023/0002 Housekeeping Amendment 2023, as amended above, to amend the *Georges River Local Environmental Plan (GRLEP) 2021* be forwarded to the Department of Planning and Environment for a Gateway Determination under Section 3.34 of the *Environmental Planning and Assessment Act 1979*.

18. The above changes have since been made to the Planning Proposal provided in **Attachment 1**.

19. A copy of the report that was referred to the LPP is available on Council's website.

#### **SUMMARY OF ASSESSMENT/CONCLUSION**

- 20. In summary, the PP seeks to amend the GRLEP 2021 via a number of instrument and mapping amendments to respond to a range of administrative and housekeeping issues to the instrument and accompanying mapping which have arisen since its commencement in October 2021. The changes will improve the overall operation and accuracy of the Plan.
- 21. Items 1–5 on pages 5-11 of the attached Planning Proposal document are amendments to the GRLEP 2021 affecting the written instrument only, and do not affect any of the GRLEP map sheets.
- 22. Items 6–24 on pages 12-19 of the attached Planning Proposal document are administrative amendments to *Schedule 5 Environmental Heritage* of the GRLEP 2021. These amendments include updates to item names, addresses and property descriptions.



23. Items 25–29 on pages 20-26 of the attached Planning Proposal document are housekeeping amendments to the GRLEP 2021 maps, including the Land Zoning (LZN) and Land Reservation Acquisition (LRA) maps.
24. Items 30–36 on pages 27-42 of the attached Planning Proposal document are amendments that relate to both the GRLEP instrument and associated mapping.
25. The PP meets both the strategic and site-specific merit tests that are outlined in the *Local Environmental Plan Making Guideline* dated September 2022.
26. In terms of Strategic Merit, the PP:
  - a. Gives effect to the following objectives within the *Greater Sydney Region Plan – A Metropolis of Three Cities* as discussed in Table 2 of this report:
    - *Objective 2. Infrastructure aligns with forecast growth.*
    - *Objective 10. Greater housing supply.*
    - *Objective 13. Environmental heritage is identified, conserved and enhanced.*
    - *Objective 22. Investment and business activity in centres.*
    - *Objective 27. Biodiversity is protected, urban bushland and remnant vegetation is enhanced.*
    - *Objective 37. Exposure to natural and urban hazards is reduced.*
  - b. Gives effect to the following planning priorities of the *South District Plan*:
    - *Planning Priority S1. Planning for a city supported by infrastructure.*
    - *Planning Priority S5. Providing housing supply, choice and affordability, with access to jobs, services and public transport.*
    - *Planning Priority S6. Creating and renewing great places and local centres, and respecting the District's heritage.*
    - *Planning Priority S9. Growing investment, business opportunities and jobs in strategic centres.*
    - *Planning Priority S18. Adapting to the impacts of urban and natural hazards and climate change.*
  - c. Is consistent with the following planning priorities of the endorsed Georges River Local Strategic Planning Statement 2040 ('LSPS 2040'):
    - *P4. Collaboration supports innovation and delivers infrastructure, services and facilities.*
    - *P10. Homes are supported by safe, accessible, green, clean, creative and diverse facilities, services and spaces.*
    - *P11. Aboriginal and other heritage is protected and promoted.*
    - *P15. All local centres are supported to evolve for long-term viability.*
    - *P17. Tree canopy, bushland, landscaped settings and biodiversity are protected, enhanced and promoted.*
    - *P19. Everyone has access to quality, clean, useable, passive and active open and green spaces and recreation places.*
    - *P20. Development is managed to appropriately respond to hazards and risks.*
27. In terms of Site-Specific merit, the PP:

- a. Does not adversely affect critical habitat or threatened species, populations or ecological communities, or their habitats.
- b. Does not create additional requirements for public infrastructure.
- c. Is likely to have positive social and economic effects due to the LEP operating in a more efficient and accurate manner which will better align the objectives of the instrument with appropriate development.

### Community Consultation

- 28. Should the PP be supported, it will be forwarded to the delegate of the Minister for Planning and Public Spaces requesting a Gateway Determination.
- 29. If a Gateway Determination is issued, it is intended to exhibit the PP for a period of 28 days as specified in the Gateway Determination.
- 30. It is intended to make the PP available for viewing at:
  - a. Council's Your Say website;
  - b. Georges River Civic Centre, MacMahon Street, Hurstville, between 8.30am and 5.00pm, Monday to Friday;
  - c. Clive James (Kogarah) Library and Service Centre, during library hours; and
  - d. Hurstville Library, during library hours.
- 31. Consultation will also be undertaken with any relevant public authorities / organisations as conditioned by the Gateway Determination. It is also proposed to consult with Transport for NSW.
- 32. The project timeframe will depend on the Gateway Determination date and the required public exhibition period. The indicative project timeline is below.

#### Indicative project timeline

Stage	Timeframe/date
Consideration by the Georges River LPP	18 May 2023
Report to Council seeking endorsement to forward the PP for a Gateway Determination	26 June 2023
Gateway Determination	August 2023
Pre-exhibition tasks, e.g. complete technically compliant mapping	August/September 2023
Commencement and completion of public exhibition period	September/October 2023
Consideration of submissions	November/December 2023
Post-exhibition review and additional studies	November 2023
Report to Council on the results of the community consultation and finalisation of the PP	February 2024
Submission to the Department for finalisation	March 2024
Gazettal of LEP amendment	April/May 2024

33. It is noted that the project timeline will be assessed by the DPE and may be amended by the Gateway Determination.

## NEXT STEPS

34. If the Planning Proposal is endorsed by the E&P Committee, the minutes will subsequently be considered at a future Council meeting. If the PP is endorsed by Council, it will be forwarded to the Minister for Planning and Public Spaces for a Gateway Determination under Section 3.34 of the EP&A Act.

## FINANCIAL IMPLICATIONS

35. No budget impact for this report. The PP is being resourced within the existing Strategic Planning budget.

## RISK IMPLICATIONS

36. If the changes are not adopted, the identified minor inconsistencies and operational issues proposed for amendment will remain throughout the LEP and no operational benefits will be obtained for the LEP.


## COMMUNITY ENGAGEMENT

37. Subject to issue of a Gateway Determination, the Planning Proposal will be exhibited in accordance with the provisions of the EP&A Act 1979 and EP&A Act Regulation 2000 and any requirements of the Gateway Determination.
38. Exhibition material, including explanatory information will be available for viewing during the exhibition period on Council's website. A hard copy of the material can be provided to individuals upon request.
39. Notification of the public exhibition will be through:
- Newspaper advertisement in The Leader;
  - Exhibition notice on Council's website;
  - Notices in Council offices and libraries;
  - Letters to State and Commonwealth Government agencies identified in the Gateway Determination (if required); and
  - Letters to affected landowners (in accordance with Council's Notification Procedures)

## FILE REFERENCE

PP2023/0002; 22/1228

## ATTACHMENTS

Attachment 1  Planning Proposal Document - Pre Gateway Version - June 2023 - *published in separate document*

**Item:** ENV019-23 Adoption of Moore Reserve Plan of Management and Master Plan

**Author:** Senior Strategic Planner

**Directorate:** Environment and Planning

**Matter Type:** Committee Reports

ENV019-23

**RECOMMENDATION:**

- (a) That Council adopt the exhibited Moore Reserve Plan of Management and Master Plan with amendments in accordance with section 40 of the *NSW Local Government Act 1993* and section 3.23(6) of the *NSW Crown Land Management Act 2016*.
- (b) That Council authorise the General Manager to make minor editorial modifications in the finalisation of the Moore Reserve Plan of Management and Master Plan.
- (c) That all individuals who provided a submission during the public exhibition of the Moore Reserve Plan of Management and Master Plan be notified of Council's decision.
- (d) That the adopted Moore Reserve Plan of Management and Master Plan be forwarded to the NSW Department of Planning and Environment – Crown Lands for information.
- (e) That the Moore Reserve Plan of Management and Master Plan be placed on Council's website following adoption by Council.

**EXECUTIVE SUMMARY**

1. At its meeting on Monday 26 July 2021, Council endorsed the draft Moore Reserve Plan of Management and Master Plan for public exhibition and for the draft Plan to be forwarded to the then Department of Planning, Industry and Environment – Crown Lands (landowner of a large portion of the Reserve) (Department – Crown Lands), for consent.
2. Landowners consent was provided by the Department – Crown Lands on 18 May 2022; and the draft Plan of Management and Master Plan were publicly exhibited from Wednesday 15 June to Friday 22 July with submissions accepted until Friday 5 August 2022. Three (3) on-site drop-in kiosks were also organised for community members to provide their feedback.
3. A total of eighty (80) written submissions were received raising issues relating to the overall Draft Plan of Management and Master Plan; proposed dog management; shared paths, car park, drainage, lighting, artificial wetland, general maintenance, toilets; actions in the Plan of Management; data and other miscellaneous comments. **Attachment 1** provides a detailed summary of all 80 submissions and assigns key themes to each.
4. Detailed analysis of all submissions and comments from the three on-site drop-in kiosks, was undertaken by Council staff and the consultant. **Attachment 2 - Summary and Analysis of Submissions** includes the details of issues raised, a corresponding response, and any recommended amendments to the draft Plans. The submissions were reported to the Environment and Planning Committee and Council in March 2023.
5. Pursuant to Section 40A of the *Local Government Act 1993*, Council held a public hearing into the proposed recategorisation of parts of Moore Reserve in July 2022 that resulted in

the recommendation of altering the categorisation of community land in the Reserve's south-east area, which was recorded in the Public Hearing Report, dated August 2022.

6. At its meeting on 27 March 2023, Council resolved to hold an additional public hearing pursuant to section 40A (3) (a) and (b) of the *Local Government Act 1993* to give effect to the alteration of categorisation of the community land in the Reserve's far south-east (being part Lot B DP374610) from "Natural Area" to "Park" to part "Natural Area" and part "Park" as a result of the recommendation of the Public Hearing Report, August 2022, under section 36(4) of the *Local Government Act 1993*.
7. In accordance with Council's resolution of March 2023, Council held a further public hearing on 11 May 2023 which was attended by a single participant. The participant's concerns related to their contention that the Park boundary in the area of the existing carpark and private properties along the southern end of West Crescent (in the area of Lot B DP374610 – outlined blue in **Figure 3**) is depicted incorrectly in the Plan of Management – including on the Categorisation Plan. The participant also provided a written submission which resonated these concerns. It is noted that both Council's on-line mapping system and the NSW Government's Spatial Information Exchange (SIX Maps, an on-line mapping tool for NSW) demonstrate that the cadastral data/plan for the Reserve boundary is correct. The subsequent Public Hearing Report dated 24 May 2023, did not recommend any amendment or alteration to the Plan of Management's categorisation (**Attachment 3**).
8. The draft Plan of Management and Master Plan have been updated following consideration of the issues raised in the submissions and the outcomes of the two Public Hearings.
9. Minister's consent was received on 27 April 2023 from the Department - Crown Lands prior to Council's adoption of the Plan.
10. This report recommends that the Moore Reserve Plan of Management (**Attachment 4**) and Master Plan (**Attachment 5**) be adopted and finalised in accordance with the requirements of section 40 of the *Local Government Act 1993* and section 3.23(6) of the *Crown Lands Management Act 2016*.

## BACKGROUND

11. Moore Reserve is a key open space located between Oatley and Hurstville Grove, on the Oatley Bay foreshore, in the Blakehurst Ward; providing a range of casual leisure and recreation opportunities to the local community and other visitors (Refer to **Figure 1**). It is covered by an existing Plan of Management and Master Plan which was prepared in 2009 by the then Kogarah City Council.

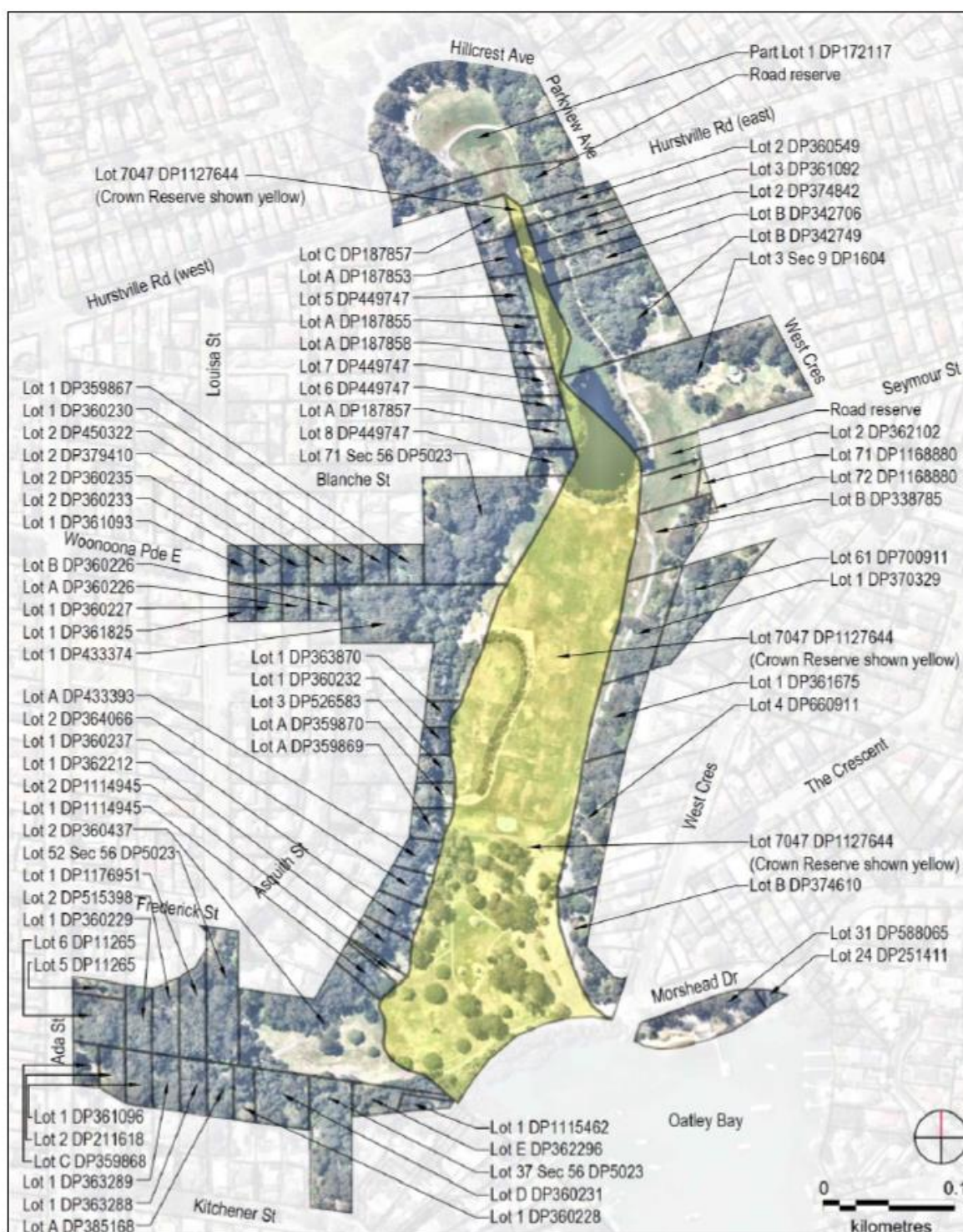




**Figure 1: Moore Reserve (Source: Nearmap)**

12. Moore Reserve covers a total area of approximately 14.2 hectares and is made up of 70 individual parcels of land. 67 of these land parcels are community land that is owned and managed by Georges River Council (Council). However, a large central part of the Reserve comprises a Crown Reserve (No. R89308 Lot 7047 DP 1127644) for which Council is appointed Crown Land Manager (CLM) under the *Crown Land Management Act 2016* (see **Figure 2** and **Table 1**).





**Figure 2: Moore Reserve Tenure Plan (Source: Moore Reserve PoM and Master Plan, 2023)**

13. The Reserve includes two parcels - Lot 61 DP 700911 and Lot 3 DP 526583; owned by the Department of Planning and Environment with Council responsible for managing both.

Number of parcels	Ownership
67	Community Land (owned and managed by Council)
1	Crown Land (Council appointed Crown Land Manager)
2	Department of Planning and Environment (managed by Council)

**Table 1: Ownership and management of Moore Reserve land parcels**

14. The majority of the Reserve is listed as an item of local significance (I155) under Part 1 Heritage items in the Georges River LEP 2021 (GRLEP 2021) (Clause 5.10). The Reserve is zoned RE1 Public Recreation under the GRLEP 2021, and parts of Moore Reserve are affected by the following clauses - Clause 6.1 - Acid sulfate soils, Clause 6.5 - Riparian land and waterways, Clause 6.4 - Foreshore area and coastal hazards and risk and Clause 6.6 - Foreshore scenic protection area.
15. Council engaged Gondwana consultants in September 2019 to update the Plan of Management and Master Plan for Moore Reserve under the provisions of both the Local Government Act 1993 (LG Act) and the Crown Lands Management Act 2016 (CLM Act). The draft Plan provides the statutory requirements, clear guidelines and an overview of the major elements and broad management directions, as well as key on-ground actions and the Reserve's intended layout or configuration for its on-going use and improvement.
16. Extensive initial community awareness and consultation were undertaken from 6 February to 13 March 2020 to contribute to the draft Plan's preparation. Three Councillor Briefings were held over 2020-21 during the preparation of the draft Plan of Management and Master Plan.
17. At its meeting on Monday 26 July 2021, Council endorsed the draft Moore Reserve Plan of Management and Master Plan for public exhibition and for the draft Plan to be forwarded to the then Department – Crown Lands (landowner of a large portion of the Reserve), for consent.

#### Consent from the Department of Planning and Environment (Crown Lands) (Landowners)

18. Council requested landowner consent from the Department - Crown Lands on 10 August 2021 and written consent for public exhibition of the draft Plan of Management and Master Plan was provided on 18 May 2022. The Department also required an amendment to the draft Plan's land categorisation, and other minor editorial changes, prior to the document's public exhibition and for the final draft Plan to be submitted for the Minister's consent prior to adoption by Council.
19. The draft Plan proposed recategorising the Reserve's south-eastern carpark (off Morshead Drive) as General Community Use (from the "initial categorisation" as Park). However, the Department's May 2022 advice included the direction that the carpark more appropriately be categorised as Park – on the basis that this feature "supports access and use of the rest of the Reserve". The Department accepted the draft Plan's proposed recategorisation of other areas of the Crown Reserve from Park to Natural Area (bushland), Natural Area (wetland), Natural Area (watercourse) and Natural Area (Foreshore).
20. The Department - Crown Lands' amendments to the draft Plan of Management were made and the draft Moore Reserve Plan of Management and Master Plan were publicly exhibited from Wednesday 15 June to Friday 22 July with submissions accepted until Friday 5 August 2022. Late submissions were received until 25 October 2023.

#### **Public Exhibition**

21. The draft Moore Reserve Plan of Management and Master Plan were publicly exhibited from Wednesday 15 June to Friday 22 July with submissions accepted until Friday 5 August 2022.
22. The public exhibition methods included:
  - a dedicated public exhibition page on Council's "Your Say" webpage, with the draft documents available for download and a link to an on-line feedback/comments form;
  - copies of the draft documents on display for inspection and review at the Civic Centre and two Council libraries;



- promotion on Council's Facebook page, with a link to the "Your Say" webpage;
- a hard copy "Moore Reserve Draft Plan of Management Feedback Form" prepared and made available; and
- three drop-in information/discussion "kiosks" held on-site in the Reserve (Saturday 25 June 2022, 10am to 2pm; Tuesday 28 June 2022, 9am to 1pm; and Wednesday 29 June 2022, 1pm to 5pm).

### Submissions received

23. A total of 80 written submissions were received in response to the public exhibition of the draft Plan of Management and Master Plan. These represented the views of 87 people and 1 organisation. A detailed summary of all 80 submissions received, as well as the key themes raised in each, is provided in **Attachment 1**. Please refer to **Table 2** for a listing of submissions under various categories:

Submissions	Number received
Support	38
Objection	15
Objection/Suggestion	26
Objection/Support	1
Support/Question	1
<b>Total</b>	<b>80</b>

**Table 2 – Submissions received to the Public Exhibition of the draft PoM and Master Plan**

24. Between 180 and 190 participants attended the three on-site drop-in sessions, (84 people on Saturday 25 June 2022, 39 people on Tuesday 28 June, and over 60 people on Wednesday 29 June).
25. All 80 written submissions were analysed in detail, with 418 individual comments on various elements of the draft documents identified. Grouping similar or identical responses generated a final list of 178 topics or issues – ranging from matters that received only a single comment, to issues attracting over 20 similar comments. The submissions were reported to Council via the Environment and Planning Committee held on 13 March 2023.
26. From the analysis of the submissions received, the community's feedback on the draft Plan of Management and Master Plan has been summarised according to the following broad groups (themes) of comments. These groupings are used in the detailed analysis of all comments received in the "Summary and Analysis of Submissions" table – as provided in **Attachment 2**.
27. The submissions were segregated into the following groups (themes):
- Overall/General Response to the Draft Plan of Management and Master Plan
  - Feedback on Proposed Dog Management Directions/Actions
  - Divergent Feedback and Opinions (including issues related to shared paths, car park, drainage, lighting, artificial wetland, general maintenance, toilets)
  - Actions/Directions Supported
  - Actions/Directions Opposed
  - Actions/Directions Warranting Amendment
  - Information, Data, Factual and Miscellaneous Comments

### **Categorisation of Community Land and Council Managed Crown Reserves and Public Hearings**

28. Section 40A of the LG Act requires (with some limited exclusions in relation to lands categorised as a Natural Area) that where a draft plan of management would have the effect of altering the current categorisation of (that is recategorising) an area of community land, then a “public hearing” is to be held in respect of the draft plan and its proposed categorisation. This also applies to the recategorisation of an area of Crown Reserve under the control of a “Council manager.”
29. A Public Hearing was held in July 2022 with regard to the Moore Reserve Plan of Management and Master Plan. The Public Hearing Report (dated 29 August 2022) recommended that a small strip of land in the Reserve’s far south-east that was proposed to be recategorised from Natural Area (bushland) to Park, instead be in part retained as Natural Area (bushland) and in part recategorised as Park. See **Figure 3**.
30. With regard to the Public Hearing Report recommending recategorisation of land in the Reserve’s far south-east as explained above, Section 40A of the LG Act specifies in subsection (3) A council must hold a further public hearing in respect of the proposed plan of management if:
- (a) the council decides to amend the proposed plan after a public hearing has been held in accordance with this section, and*
  - (b) the amendment of the plan would have the effect of altering the categorisation of community land under section 36(4) from the categorisation of that land in the proposed plan that was considered at the previous Public Hearing.*



**Figure 3 – Map of the recategorised community land (outlined red)**

31. At its meeting on 27 March 2023, Council endorsed this additional Public Hearing as per Section 40A of the LG Act. An advertisement was published three weeks in advance in the local newspaper with regard to the Public Hearing. The Public Hearing was also advertised/promoted via Council’s “Your Say” webpage along with a “Proposed

Recategorisation of Parts of Moore Reserve - Background Information” booklet for informing intending participants and other interested people.

32. Council held this additional (second) in-person public hearing on 11 May 2023. Five community members had initially registered, however, only one attended this Public Hearing.
33. The Public Hearing was chaired by Alan Ginns of Gondwana Consulting, as an independent facilitator (as required and defined by section 47G of the LG Act). A Power Point presentation guided the conduct of the Hearing, which is included in the Public Hearing Report, May 2023 and provided in **Attachment 3**.
34. The Public Hearing participant was provided the opportunity to express their views. In summary, the participant's concerns stemmed from their contention that the Park boundary in the area of the existing carpark and private properties along the southern end of West Crescent (in the area of Lot B DP374610 – outlined blue in Figure 3) is depicted incorrectly in the Plan of Management – including on the Categorisation Plan. The participant also provided a written submission which resonated these concerns. It is noted that both Council's on-line mapping system and the NSW Government's Spatial Information Exchange (SIX Maps, an on-line mapping tool for NSW) demonstrate that the cadastral data/plan for the Reserve boundary is correct. Refer to **Table 3**.
35. The participant's concerns in relation to the categorisation matters – as expressed at the Public Hearing and in their written submission – can be segregated into four issues. These issues, their consideration and a corresponding recommendation have been covered in detail in the Public Hearing Report, May 2023 (available in **Attachment 3**) and summarised in **Table 3** below:

Issue	Consideration/Response	Recommendation
1. The Reserve boundary in the Reserve's far south-east (in the area of Lot B DP374610) as shown in the Amended Plan of Management (PoM) and in the included Categorisation Plan is incorrect, and shows areas of private property as being part of Moore Reserve. This means that the area categorised as Park, as shown on the Categorisation Plan and described in the accompanying discussion in section 4.6 Land Categorisation of the PoM, is actually much closer to the “real” private property boundary than is now presented. Any eastward expansion of the existing carpark will have a greater adverse impact on the adjacent private properties and may even be situated on private land.	<p>No evidence has been found that would indicate that the Reserve boundary in the area's far south-east has been incorrectly mapped or described in the PoM.</p> <p>Both Council's on-line mapping system and the NSW Government's Spatial Information Exchange (SIX Maps, an on-line mapping tool for NSW) show the cadastral data/plan for the Reserve boundary (as at Lot B DP374610), as well as for the two adjacent private properties at 71 and 73 West Crescent, as being consistent with how this Reserve / private property boundary is depicted in the Plan.</p> <p>Consequently, the Categorisation Plan in the Amended PoM is also correct (in terms of the location of the categories as shown relative to the Reserve / private property boundary). Refer to <b>Figures 3 and 4</b>.</p>	The Reserve's far south-eastern boundary as shown in the Amended PoM, and in the included Categorisation Plan (Figure 14), is correct and there is no amendment or alteration required to the PoM's categorisation in this area.
2. Describing the boundary between the area categorised as Park and the area categorised as Natural Area	The word description (in section 4.6 <i>Land Categorisation</i> in the Amended PoM) of the boundary between the Park and Natural Area (Bushland)	There is no amendment or alteration required to the PoM's categorisation in this area or to section

Issue	Consideration/Response	Recommendation
<p>(Bushland) (in the Reserve's far south-east) by referencing the carpark and its associated features is not "balanced," downplays the values and importance of the adjacent vegetated area and has "no respect for the environment."</p>	<p>categories in the Reserve's far south-east requires referencing easily identifiable and describable features that can be located on-the-ground.</p> <p>The carpark's eastern margin and the features along this edge are easier and more readily identified features to use in describing, in some detail, the boundary between the Park and Natural Area (Bushland) categories in this area.</p> <p>Such a practical approach to describing this category boundary does not devalue the area categorised as Natural Area (Bushland). Of the 1,107 square metre area in the Reserve's far southeast, which was the subject of the recommendation of the First Public Hearing Report, and where the categorisation was subsequently amended, it is noted that over 80% of this area was retained as Natural Area (Bushland) and less than 20% was recategorised as Park.</p>	<p>4.6 Land Categorisation.</p>
<p>3. The revised section 4.6 <i>Land Categorisation</i> in the Amended PoM makes no reference to the considerations in the recommendation to Council contained in the First Public Hearing Report (August 2022) – in relation to the categories, and their definition/identification, in the Reserve's far south-east.</p>	<p>It is noted that similar words as presented in the recommendation for Issue No 1 (regarding categories, and the carpark, in the Reserve's far south-east) in the First Public Hearing Report (pages 31 and 34) are found in the discussion of the First Public Hearing outcomes in section 4.6 <i>Land Categorisation</i> of the Amended PoM (page 102). The recommendations of the First Public Hearing Report were considered and endorsed by Council's Environment and Planning Committee and Council in March 2023.</p>	<p>There is no amendment or alteration required to section 4.6 <i>Land Categorisation</i> or to the PoM's categorisation in this area.</p>
<p>4. The Categorisation Plan (Figure 14 in the Amended PoM) shows insufficient detail to accurately depict the boundaries and extent of the Reserve's categories. A far more detailed and precise plan is warranted, to the point of requiring a digitised survey-style plan. Specifically, the Categorisation Plan (Figure 14) inadequately details the Park/Natural Area Bushland category boundary in the Reserve's far southeast, and</p>	<p>The purpose of categorisation is primarily to identify applicable (legislatively described) management objectives for various areas of a park or reserve. The (then) NSW Department of Planning, Industry and Environment's (DPIE) 2021 publication <i>Developing plans of management for community land Crown reserves - Guideline for Council Crown land managers</i> (Crown reserves Guideline) describes categorisation as determining "the core objectives for the land".</p>	<p>There is no amendment or alteration required to the Plan of Management's Categorisation Plan (Figure 14) or to section 4.6 Land Categorisation.</p>

Issue	Consideration/Response	Recommendation
<p>consequently, is ineffective in defining the limit for any car park expansion in this area.</p>	<p>Similarly, the (then) Department of Local Government's Practice Note on <i>Public Land Management</i> (revised edition, 2000) advises that "categorisation is intended to focus council's attention on the essential nature of the land and how that may best be managed".</p> <p>As described in these two guidelines, categorisation is a broad planning and management tool and not intended to prescribe detailed management guidelines for individual developments or activities at particular locations. Where warranted, such level of detail is more appropriately provided in a Plan of Management's incorporated Master Plan, the description of permitted uses or development details, or the management action tables (as they have been for Moore Reserve).</p> <p>The DPIE 2021 Crown Reserves guideline also provides advice as to appropriately mapping categories in a PoM. It advises that "Councils must ensure that any map included in a PoM has a sufficient level of detail to allow the easy identification of category boundaries, important natural features and any existing or proposed infrastructure, such as buildings, roads and parking areas."</p> <p>The Categorisation Plan in Figure 14 in the Amended PoM provides a superior degree of clarity and level of detail than the "model" categorisation plan offered in the DPIE Crown Reserve guideline. (Refer to <b>Attachment 3</b> for detail and 'model' plan).</p> <p>In view of this, and the size of Moore Reserve, it is not considered either practical or necessary for the Amended PoM to contain a more detailed Categorisation Plan.</p> <p>The Amended Plan of Management also includes:</p> <ul style="list-style-type: none"> <li>• <i>Table 10 Rationale for Categorisation</i> which summarises the reasons underlying the area's categorisation with a brief description of those areas of the Reserve falling within each</li> </ul>	

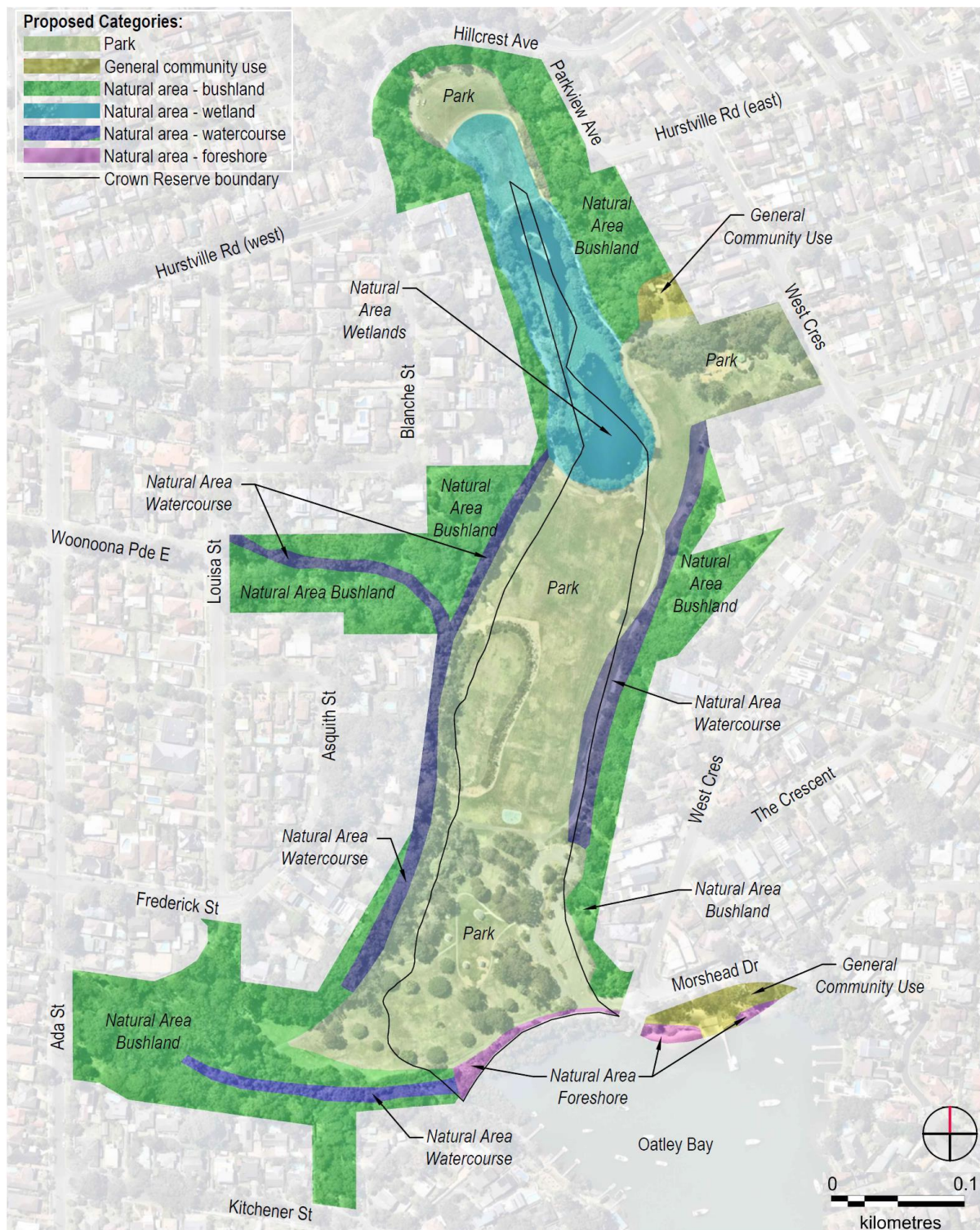
Issue	Consideration/Response	Recommendation
	category; and <ul style="list-style-type: none"> <li>• a word description (in section 4.6 <i>Land Categorisation</i>, page 102) of the Park and Natural Area (Bushland) category boundary in the Reserve's far south-east.</li> </ul>	

**Table 3: Public Hearing – Issues raised, their consideration and recommendation**

### **Amendments to the Draft Categorisation Plan**

36. As demonstrated in **Table 3**, consideration of the issues raised by the community member at the Public Hearing on 11 May 2023, has not resulted in any amendment or alterations to the Moore Reserve PoM or categorisation plan.
37. **Figure 4** below shows the final categorisation plan for Moore Reserve.





**Figure 4 – Categorisation Plan for Moore Reserve - (Source: Moore Reserve PoM and Master Plan, 2023)**

### **Amendments to the Draft Plan of Management and Master Plan**

38. As a result of community feedback from the public exhibition and the Public Hearings (as explained in points 39 to 45), a range of amendments have been made to the final Moore Reserve PoM and Master Plan.
39. These amendments include changes to the draft document's directions regarding:
  - the adoption of an “adaptive management” approach to providing for, and managing, on-leash and off-leash dogs within the Reserve – particularly within the Reserve’s central area;

- changes to management of landfill legacy issues, to better align the Plan of Management with Council's latest contamination study for Moore Reserve and its recommendations;
  - undertaking usage assessments and further detailed design prior to any redevelopment (expansion, reconfiguration or altered gate locations/times) of the Reserve's carpark off Morshead Drive; and
  - further improvements to drainage within the Reserve.
40. The "Summary and Analysis of Submissions" table, prepared by Council staff and the consultant – as provided in **Attachment 2** – includes both a response for each of the 178 topics or issues raised, as well as any recommended amendments to the draft documents with respect to the matters raised.
41. Most amendments to the draft Plan of Management are in response to community feedback. However, changes to the draft documents have also been made:
- as recommended by the Categorisation Public Hearing Report, August 2022;
  - in consideration of further internal Council comments;
  - to reflect legislative/planning changes (e.g., to the State Environmental Planning Policies)
  - "consequential" changes – to action numbering, cross-references, layout, etc.; and
  - minor information and typographic corrections.
42. The draft Master Plan has been amended to align with the amended Plan of Management. The amended Moore Reserve Plan of Management (and Master Plan) is provided in **Attachment 4**. The amended Moore Reserve Master Plan is also provided separately in **Attachment 5**.
43. The following table (**Table 4**) sets out the major changes to the draft Plan of Management (in page order as per the amended Plan as provided in **Attachment 4**), and to the draft Master Plan where applicable. It also provides the issue(s) or comment(s) to which each amendment responds. Further details of these and other more minor amendments (arising from the community exhibition and comments process) can be found in the "Summary and Analysis of Submissions" table – as provided in **Attachment 2**. The elements of the amended Master Plan have been included in point 45 below.
44. The amendments are, in substance, not considered to be of sufficient significance to warrant any re-exhibition of the draft documents.

Page / Section	Issue / Comment	Amendment
<b>1. Introduction – Setting the Scene</b>		
Page 8, <i>1.5 Preparing this Plan of Management</i>	Request to update the overview of plan preparation process – to include exhibition, submissions, amendment and finalisation steps.	The process steps have been added to Section <i>1.5 Preparing this Plan of Management</i> re public exhibition of draft documents, categorisation public hearing, review and analysis of submissions, determination of required amendments, preparation of the final Plan of Management (and Master Plan), and adoption by Council.
<b>2. Description of Moore Reserve</b>		
Page 16, <i>2.2 Brief History</i>	The initial creation of the fenced off-leash dog park was omitted from the	Text has been added to the Reserve timeline that states that the fenced off-



Page / Section	Issue / Comment	Amendment
	Reserve history of the exhibited draft.	leash dog enclosure was established by the then Kogarah Council in 2013.
Pages 18 and 20 - 2.3.2 <i>Landform, Soils and Drainage</i> and <i>Figure 5 Landforms and drainage</i>	Inaccuracies in details of the Reserve drainage and overland flow paths.	Minor amendments to the text have been made as well as text added to 2.3.2 <i>Landform, Soils and Drainage</i> and <i>Figure 5 Landforms and drainage</i>
Pages 29, 43, and <i>Appendix D Condition and Use of Land and Facilities</i>	Strip of vegetation east of the Morshead Drive carpark, behind West Crescent residences, not accurately described in the exhibited draft.	The Plan of Management (PoM) has been amended to include more detail on the description of vegetation east of the carpark as well as including a note that the area is the site of previous National Tree Day community planting efforts in the body of the PoM. More detail on the description of the vegetation in the area east of the carpark has been included in <i>Appendix D Condition and Use of Land and Facilities</i> .
Pages 31 and 32	PoM should reference the latest contamination study for the Reserve.	Additional text has been inserted regarding the latest contamination investigations carried out by Council and as per the advice of Council's Assets and Infrastructure Directorate.
Page 34 and Appendix C	<ul style="list-style-type: none"> <li>▫ Previous site/contamination assessments not as relevant now - the latest contamination study is available.</li> <li>▫ PoM is too long.</li> </ul>	The summaries of <i>Previous Site/Contamination Assessments</i> have been relocated to a new Appendix C.
Page 42	PoM does not reference the signposted 5kph speed limit for cyclists.	Reference to the signposted 5kph speed limit (and other requirements) for cyclists on the Reserve's shared paths has been included in Section 2.6.1 <i>Access</i> .
<b>3. Planning and Management Context</b>		
Page 59-62, and new Appendix E	▫ PoM is too long.	Relocated the majority of less directly relevant Commonwealth and State legislation to a new Appendix E.
Page 63-4, Table 3, and new Appendix E	▫ PoM is too long.	Relocated the majority of less directly relevant State and regional level strategies and plans to a new Appendix F.
Page 64, and new Appendix E	▫ PoM is too long.	The text relating to the relevant State Environmental Planning Policies (SEPPs) has been updated to reflect legislative/planning changes. The text on the SEPPs has been relocated to a new Appendix E. Only a list of SEPPs is listed in the body of the PoM.
Page 75	▫ Recommendations of previous	<i>Table 7 Planning Directions /Solutions</i>

Page / Section	Issue / Comment	Amendment
	contamination/remediation or environmental assessment reports are no longer relevant, given the latest Reserve contamination investigations and report. □ PoM is too long.	<i>Recommended in Previous Site Assessment or Contamination Reports</i> has been deleted as it is not relevant given the new Reserve contamination investigations and report which are included in the PoM.
<b>4. Basis for Management of Moore Reserve</b>		
Page 88, Section 4.2.3 <i>Public Exhibition of the Draft Plan of Management</i>	Update the PoM with details of the public exhibition of the draft PoM.	Text has been inserted into <i>Section 4.2.3 Public Exhibition of the Draft Plan of Management</i> – explaining the public exhibition methods, raising community awareness and inviting submissions regarding the draft PoM.
Pages 89-92, Section 4.2.4 <i>Community Comments on the Draft Plan of Management</i>	Update the PoM with a summary analysis and discussion of community submissions/feedback.	Text has been inserted into <i>Section 4.2.4 Community Comments on the Draft Plan of Management</i> – discussing the number and type of submissions received during the public exhibition of the draft PoM and providing a summary analysis of community comments.
Page 92-93, Section 4.2.5 <i>Categorisation Public Hearing</i>	Update the PoM with a description of the Categorisation Public Hearing.	Text has been inserted into <i>Section 4.2.5 Categorisation Public Hearing</i> – explaining the two Categorisation Public Hearings, and related comments and outcomes.
Page 102-3, Section 4.6 <i>Land Categorisation</i> , and <i>Figure 14 Categorisation plan</i>	Update <i>Section 4.6 Land Categorisation</i> to better explain the categorisation process and changes to the PoM's categorisation post exhibition.	Text has been updated in <i>Section 4.6 Land Categorisation</i> – to better explain the categorisation process (including directions from the DPE re draft PoM categories), the two Categorisation Public Hearings and Reports, and changes to categorisation between the draft and final PoM (including changes to the Categorisation Plan).
Page 110	The PoM should recognise /emphasise the Reserve's role in addressing climate change.	Text has been added to elaborate and separate the objectives of addressing the impacts of climate change and reinforcing the Reserve's role as a cool, green foreshore zone within the wider urban landscape, and moved higher on the list of the PoM's <i>Secondary or Supporting Management Objectives</i> .
<b>5. Permitted Park Purposes, Intensity of Use and Development, and Master Plan</b>		
Consequential and cross-referencing changes to <i>Section 5.2.1 Intensity of Use</i> and <i>Section 5.2.2 Scale and Intensity of Development</i> – as detailed elsewhere in this Table.		
Changes to <i>Section 5.3 Moore Reserve Master Plan</i> and <i>Figure 15 Moore Reserve Master Plan</i> to incorporate and/or align with amendments to the Management Actions and other changes to the PoM – as detailed elsewhere in this Table.		
<b>6. Management Actions</b>		

Page / Section	Issue / Comment	Amendment
Pages 137 and 138	Proposed new playground and learn-to-ride track in an inappropriate location, will be subject to overland stormwater flows.	Text has been added to elaborate on Actions BCL38 (and BCL40) to better describe/explain that minor to moderate flows along the western stormwater flow path will be redirected into the proposed vegetated drainage swale (south of the existing fenced off-leash dog park) and away from the site of the proposed new playground and learn-to-ride track.  The drainage measures in the PoM are supported by Council's Assets and Infrastructure Directorate.
Pages 137 and 138	Opposed to the proposed east-west vegetated drainage swale and retention basin - north of the picnic area/carpark and south of the fenced dog park – is not necessary to address “two small puddles on the path.”	Text has been added to elaborate on Actions BCL38 and BCL40 to better describe/explain the role of the east-west grassed drainage swale in improving drainage and reducing flooding of the main loop path.  The drainage measures in the PoM are supported by Council's Assets and Infrastructure Directorate.
Page 140	Residential stormwater that discharges into bushland areas is not adequately addressed.	Text has been added to elaborate on Action BCL44 to also reference the improved management of stormwater/drainage entering the Reserve's bushland areas from adjacent residential properties.
Page 140	Update management actions in Section 6.2.5 <i>Managing Landfill Legacy Issues</i> to better align with the findings and recommendations of the Reserve's most recent contamination study.	The text in Action BCL46 relating to environmental /contamination assessments has been updated with text provided by Council's Assets and Infrastructure Directorate.  Action BCL47 is deleted at the request of Council's Assets and Infrastructure Directorate.
Pages 149-151	<ul style="list-style-type: none"> <li>▫ Opposed to changes to dog areas - leave as is.</li> <li>▫ Opposed to extension of the fenced off-leash dog area – citing dog behaviour problems, not suitable, unappealing area, unused, etc.</li> <li>▫ Opposed to extension of the fenced off-leash dog area – citing loss of a more useful/desirable open off-leash dog area.</li> <li>▫ Opposed to extension of the fenced off-leash dog area – citing not justified by community feedback.</li> <li>▫ Opposed to extension of the fenced off-leash dog area – citing impacts on native plantings.</li> </ul>	<p>The text in Action LRU6 (previously only addressing enlargement of the fenced off-leash dog park) has been replaced with details of an “adaptive management” approach to providing for, and managing, on-leash and off-leash dogs within the Reserve's central area.</p> <p>This adaptive approach provides flexibility to the Council on how the off-leash dog area can be managed and means that Council will not need to amend the PoM in relation to the management of, and provision for dogs – both on and off leash. Operationally Council will be able to restrict the management of dogs if issues arise or reduce the restriction on dogs –</p>

Page / Section	Issue / Comment	Amendment
<p>Pages 118-120, Figure 15 Moore Reserve Master Plan</p> <p>Page 114, Section 5.2.1 Intensity of Use</p> <p>Page 116, Section 5.2.2 Scale and Intensity of Development</p> <p>Page 117, Section 5.3 Moore Reserve Master Plan</p> <p>Pages 146-7, Action LRU2</p> <p>Page 151, Action LRU7</p> <p>Page 152, LRU8</p> <p>Pages 172-4, DF12</p> <p>Page 183, Action GL8</p>	<ul style="list-style-type: none"> <li>▫ Opposed to extension of the fenced off-leash dog area – citing exacerbation of existing dog noise problems.</li> <li>▫ Opposed to extension of the fenced off-leash dog area – citing existing size/adequacy.</li> <li>▫ More consideration required for needs of dog owners.</li> <li>▫ Opposed to any further fencing or restrictions on dogs.</li> <li>▫ Opposed to reduction in (open) off-leash dog area generally.</li> <li>▫ Opposed to any reduction in provisions, or areas, for dogs.</li> <li>▫ PoM should extend permitted times for use of (open) off-leash dog area.</li> <li>▫ Enlarged or additional (open/unfenced) off-leash dog areas.</li> <li>▫ Fence entire existing central off-leash dog area.</li> <li>▫ In favour of proposed dog management measures.</li> <li>▫ Opposed to dogs and noise, off-leash dog park should be removed and parkland restored.</li> <li>▫ Dogs and dog owners afforded too much priority in the draft PoM.</li> </ul>	<p>depending on how responsible dog owners are within the Reserve.</p> <p>In summary, this action/approach is as follows (for further details/explanation of this approach see the full amended Action LRU6):</p> <p>Within the Reserve's central open grassed area (including the existing fenced off-leash dog park) Council will pursue a 6-stage "adaptive management" approach in relation to the management of, and provision for dogs – both on and off leash:</p> <ul style="list-style-type: none"> <li>▫ Stage 1 - retain current arrangements, existing fenced off-leash dog park and time regulated off-leash dog use of central grassed area.</li> <li>▫ Stage 2 - regular and closely spaced low-profile signage (reinforced by low-profile "barriers") around the perimeter of the central grassed area (inside loop path).</li> <li>▫ Stage 3 - band of dense barrier plantings (to 8 metres wide), more or less continuous around the perimeter of the central grassed area (inside loop path).</li> <li>▫ Stage 4 - reduce hours and/or days for permitted off-leash dog activity on the central grassed area, avoiding busy periods when areas/path heavily used by other Reserve visitors.</li> <li>▫ Stage 5 - fence entire perimeter of the central grassed area, in conjunction with earlier plantings.</li> <li>▫ Stage 6 - expand fenced dog park towards the east (double existing area) for off-leash use at all times, upgrade and embellish the dog park (and internal fencing as needed), remaining northern grassed area becomes 'on-leash dogs only' at all times, remove earlier fencing and separate/open earlier plantings.</li> </ul> <p>Corresponding changes have been made to the Master Plan and accompanying legend.</p> <p>Consequential changes and cross-referencing – as/where necessary – in other parts of the PoM; where providing for and/or managing dogs is discussed, to refer to "adaptive management" approach.</p>
Page 156	Accommodate mobile food/refreshment vending.	Amended Action LRU20 (previously LRU19) to clarify that the pop-up on-site

Page / Section	Issue / Comment	Amendment
Pages 188-9		<p>kiosk/café is not permitted, but mobile food/refreshment vending can be approved under appropriate licence or permit – as requested by Council's Property Team.</p> <p>Text has been added to elaborate on Action LL4 to include mobile food/refreshment vending – as requested by Council's Property Team – and other low-key commercial activities, under appropriate licence or permit.</p>
<p>Pages 158-160</p> <p>Pages 118 and 120, Figure 15 Moore Reserve Master Plan</p> <p>Page 115, Section 5.2.1 Intensity of Use</p> <p>Page 116, Section 5.2.2 Scale and Intensity of Development</p> <p>Page 117, Section 5.3 Moore Reserve Master Plan</p>	<ul style="list-style-type: none"> <li>▫ Opposed to widening/redevelopment of carpark.</li> <li>▫ Opposed to changes to parking area.</li> <li>▫ Opposed to eastwards expansion of the carpark.</li> <li>▫ Expand carpark, but without damaging the vegetation on the east side.</li> <li>▫ Layout of existing carpark be improved, rather than expanded.</li> </ul>	<p>Action AM2 has been amended to indicate that prior to any redevelopment of the carpark (off Morshead Drive), Council will undertake usage assessments and further detailed design. The text includes the likely assessments/investigations that will be required to be completed by Council.</p> <p>Action AM2 has been amended to clarify that any eastwards expansion of the carpark will be limited to the narrow/flatter eastern margins of the current sealed area and not intrude into the rock ledges/steeper slopes and native vegetation areas.</p> <p>The Master Plan has been amended as well as the accompanying legend, to note conduct of usage assessments and detailed design prior to any redevelopment of the carpark.</p> <p>Consequential changes and cross-referencing – as/where necessary – in other parts of the PoM where redevelopment of the Reserve's carpark is addressed, to note that this is "subject to Council undertaking usage assessments and further detailed design."</p>
Pages 182-3 and 183-4	Visual impact of redeveloped carpark for neighbouring properties.	Text has been added to elaborate on Actions GL7 and GL9 to provide for additional/replacement amenity and screening plantings within and surrounding the carpark if redeveloped.
Page 158	Opposed to possible dual operation (gating and locking) of redeveloped carpark.	Action AM1 has been amended to note that prior to implementing any dual gating/locking system in the reconfigured carpark, Council would undertake usage assessments and further detailed design to determine potential use/benefits of the gate functions.

Page / Section	Issue / Comment	Amendment
Pages 161-2	More emphasis on maintenance of paths.	Action AM9 has been broadened to cover maintenance of all paths to a high standard – suitable for safe and comfortable visitor use.
Page 162	Reduced cyclists' speeds, and improved safety for pedestrians, on paths.	Additional measures have been added in Action AM10 to slow cyclists (and others) on sections of paths where there may be conflicts or congestion with other users. Action AM10 has been amended to a "HIGH" priority.
Pages 162, 163 and 164  Pages 162-3	Support for better lighting on new pathways, with preference for bollard lighting on all pathways.	Actions AM11, AM14 and AM15 have been amended to note preference for bollard or low-level lighting of paths, with illumination directed to path surface and avoidance of light spill near residences and bushland.  Action AM12 has been amended to note preference for bollard or low-level lighting with illumination directed to path surface.
Page 164	Boardwalk over Oatley Bay.	Text has been added to elaborate on Action AM16 to cite possible requirement for approvals from Crown Lands, Maritime Services and NSW Fisheries as well as necessary environmental assessments.
Pages 170 and 189  Pages 118 and 120, <i>Figure 15 Moore Reserve Master Plan</i> , Pages 155, and Pages 158-9	<ul style="list-style-type: none"> <li>▫ Opposed to a kiosk/café.</li> <li>▫ Kiosk/café not viable due to infrastructure requirements.</li> </ul>	<p>Actions DF4 and LL5 have been deleted (in the draft PoM) – relating to the possible installation/operation of a "pop-up" or relocatable kiosk/café near the south-eastern carpark. The Council's Property Team support this deletion.</p> <p>Text has been removed relating to a "pop-up" or relocatable kiosk/café from the Master Plan and legend.</p>
Page 170  Page 118-119, <i>Figure 15 Moore Reserve Master Plan</i>  Page 115, <i>Section 5.2.1 Intensity of Use</i> Page 116, <i>Section 5.2.2 Scale</i>	<ul style="list-style-type: none"> <li>▫ Opposed to the Seymour Reserve toilet.</li> <li>▫ Seymour Reserve toilet is in poor/inappropriate location, should be placed elsewhere.</li> </ul>	<p>Action DF5 (previously DF6) has been amended to no longer nominate a specific location for the toilet – but that it will be positioned at a "suitable site" in Seymour Reserve and "located proximate to, and readily accessible from, the playground and picnic facilities," as well as other siting considerations.</p> <p>The Master Plan, and accompanying legend, have been amended to note the toilet site is "to be determined."</p> <p>Consequential changes and cross-referencing have been made – as/where</p>

Page / Section	Issue / Comment	Amendment
<i>and Intensity of Development</i> Page 117, Section 5.3 Moore Reserve Master Plan		necessary – in other parts of the PoM where the Seymour Reserve toilet is addressed, to note that its final location is a “site to be determined.”
Page 172-4	Opposed to extension of the fenced off-leash dog area – citing impacts on native plantings.	Action DF12 (previously DF13) has been amended to address, as far as possible, protection of the native species volunteer/community planting area in the design of any enlarged off-leash dog enclosure.
Pages 172-4	Design of fenced off-leash dog area.	Text has been added in relation to the provision of enrichment activities in the off-leash dog area in Action DF12 (previously DF13).
Page 175	<ul style="list-style-type: none"> <li>▫ More emphasis or more specific re improved fencing of the wetland (“duck pond”).</li> <li>▫ Secure fencing of wetland’s upper detention basin required.</li> </ul>	Action DF16 (previously DF17) has been amended to specify fencing to a standard that prevents entry by children and dogs and amended to “HIGH” priority.
Page 177	Opposed to plantings at Oatley Bay boat ramp.	Text has been added to elaborate on Action DF21 (previously DF22) to prescribe low-growing native vegetation, grass or other ground-cover species, so as not to significantly impair views.
Pages 178-9  Page 161	<ul style="list-style-type: none"> <li>▫ Opposed to additional lighting of the Reserve generally.</li> <li>▫ Opposed to lighting of the dog park.</li> <li>▫ All lighting to become LED.</li> </ul>	<p>Text has been added to elaborate on Action DF24 (previously DF25) to emphasise that new lighting is to be directed internally and away from natural bushland areas; wayfinding pedestrian lighting directed to paths/footpaths and lights with lateral spread not considered near existing bushland and private dwellings; and to reference the use of LED (or other sustainable) lighting where feasible and effective.</p> <p>Text has been added to elaborate on Action AM7 in relation to the preference for solar and/or LED lighting in the underpass from Renown Park, below Hillcrest Avenue.</p>
Pages 181 and 182-3	Tree planting and additional natural shade over paths.	Text has been added to elaborate on Actions GL4 and GL7 to provide for shade tree planting at selected locations, where feasible and safe, around margins of the large central open grassed area and along the shared path.
Page 181	Better maintenance of parkland areas required.	Text has been added to elaborate on Action GL5 to also identify infilling / levelling (where necessary) and top-dressing as maintenance actions for

Page / Section	Issue / Comment	Amendment
		mown grass/lawn areas.
Pages 189-190	Residents' access through/across the Reserve.	A new action (Action LL6) has been inserted for Council to allow, at its discretion, access across the Reserve to adjoining properties for emergency access or transporting materials / equipment for approved works – subject to a range of conditions.
Page 194	Neighbour/community notification required before undertaking wetland works, and other disruptive works.	Text has been added to elaborate on Action RMA13 to include notification of major works likely to disrupt the use of all or parts of the area where/when warranted to Reserve neighbours / users.
Page 195	Poor definition of the Reserve boundary and identification of encroachments in bushlands.	A new Action RMA14 has been added regarding the on-ground survey / clarification, and marking, of the Reserve's boundary with private properties where this will aid management – with a focus on bushland areas.
Page 196	<ul style="list-style-type: none"> <li>▫ Increased monitoring of dog activities and issues within the Reserve needed to support the “adaptive management” approach to dog activities.</li> <li>▫ Lack of Council enforcement of dogs, dog noise and dog owners.</li> </ul>	A new Action RMA17 has been added to provide for greater monitoring, recording and enforcement of dog activities within the Reserve. This will provide Council with the necessary information on which to make informed decisions re the need for, and timing of, implementation of varying stages of the “adaptive management” approach to providing for and managing on-leash and off leash dogs within the Reserve.
Page 197	<ul style="list-style-type: none"> <li>▫ Better management of waste/hazards protruding from the grass in the Reserve's central area.</li> <li>▫ Better maintenance of parkland areas required.</li> </ul>	Action RMA20 (previously RMA18) has been expanded to include reference to managing possible hazards from protruding waste in the Reserve's central open grassed area and amended to “HIGH” priority.
Page 198	<ul style="list-style-type: none"> <li>▫ Stormwater management should acknowledge the likely increased frequency of extreme weather events.</li> <li>▫ Climate change impacts not adequately considered in stormwater management.</li> </ul>	Text has been added to elaborate on Action RMA26 (previously RMA24) to recognise potential for more frequent extreme weather events and increased stormwater volumes and/or intensities.

## 7. Funding And Implementation

No amendments

## Appendices



Page / Section	Issue / Comment	Amendment
Page 211	PoM is too long.	A new <i>Appendix C Pre-2005 Contamination Assessments, Studies or Plans</i> has been created to contain information on the previous contamination assessments. This text was previously in the draft PoM.
Page 225	PoM is too long.	Text from the PoM has been relocated to a new <i>Appendix E Other Commonwealth and State Legislation</i> .
Page 232	PoM is too long.	Text from the PoM has been relocated to a new <i>Appendix F Other Regional Level Strategies and Plans</i> .

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**Table 4 - Amendments to the Moore Reserve Plan of Management and Master Plan**

Note: This table does not include changes relating to minor typographical, grammatical and consequential changes to action numbering, cross-references, layout and the like.

45. The elements of the amended Master Plan are (see **Figure 5**):

- a. expansion of the “southern passive use zone” and the provision of additional facilities in this area (including an accessible toilet);
- b. removal of the existing toilet below Frederick Street;
- c. expansion and reconfiguration of the Morshead Drive carpark (subject to Council undertaking usage assessments and further detailed design);
- d. an “adaptive management” approach to providing for, and managing, on-leash and off-leash dogs within the Reserve’s central area – including possible significant expansion, and embellishment, of the fenced off-leash dog park and alterations to permitted off-leash dog areas and/or times;
- e. realignment of sections of the shared loop path, and provision of a “missing” shared path connection;
- f. provision of a single cubicle toilet at Seymour Reserve (final siting to be determined);
- g. a range of landscape and amenity plantings; and
- h. a range of native vegetation plantings and drainage or stormwater management measures.

46. The Master Plan’s elements would be implemented over time, as resources become available. The Master Plan is contained in **Attachment 5** and a copy provided in **Figure 5**.

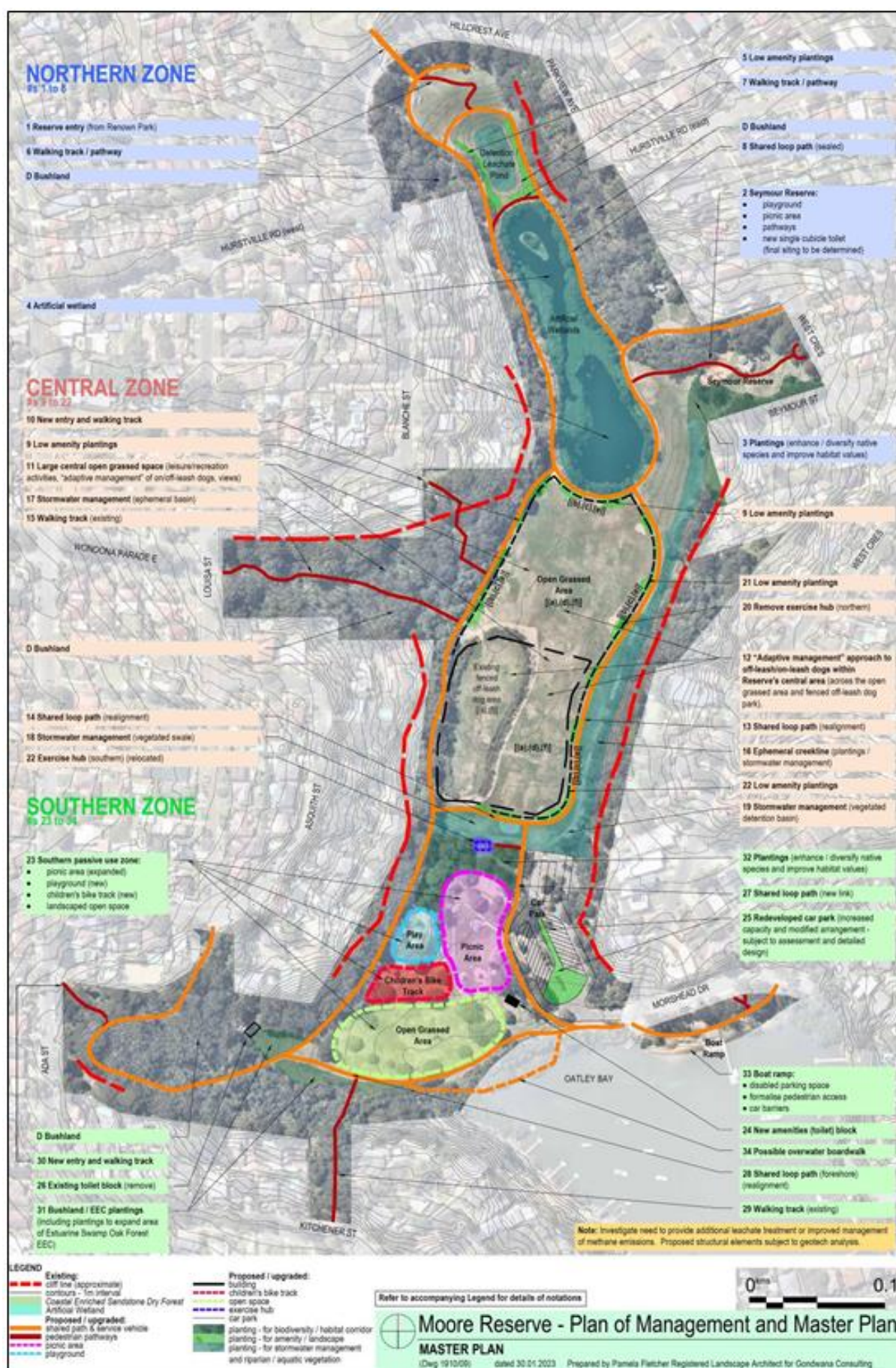


Figure 5 – Moore Reserve Master Plan - (Source: Moore Reserve PoM and Master Plan, 2023)

## NEXT STEPS

47. It is noted that consent to adopt the Moore Reserve Plan of Management and Master Plan was received from the Department - Crown Lands on 27 April 2023 in accordance with section 3.23(6) of the NSW CLM Act 2016.
48. If Council resolves to adopt the amended draft Moore Reserve PoM and Master Plan, the next steps will be as follows:
  - The Moore Reserve PoM and Master Plan will be forwarded to the Department - Crown Lands for information;
  - Submitters will be advised of the adoption of the PoM and Master Plan;
  - The PoM and Master Plan will be placed on Council's website; and
  - Council will publish notice of its decision on its website within 28 days after the decision is made.

## FINANCIAL IMPLICATIONS

49. Preparation of the Moore Reserve PoM and Master Plan was within budget allocation.
50. The final Plan of Management notes that implementation of the works/measures included in the PoM and Master Plan, is subject to the funding and resources available to Council and is determined by Council's overall Delivery Program and shorter-term annual Operational Plans, annual budget cycles, and works/activity planning for Council's various units.

## RISK IMPLICATIONS

51. No risks identified.



## COMMUNITY ENGAGEMENT




52. The draft Moore Reserve PoM and Master Plan were placed on exhibition for community comment from Wednesday 15 June to Friday 22 July with submissions accepted until Friday 5 August 2022. Paragraph 22 describes the measures taken to promote community awareness of, and invite comments on, the draft documents.
53. A total of 80 written submissions were received. The submissions were the subject of an Environment and Planning / Council report in March 2023.
54. Three on-site drop-in information/discussion "kiosks" were held in late June 2022 (both weekday and weekend sessions). These attracted between 180 and 190 participants.
55. Two Categorisation Public Hearings were held, one (on-line) on Wednesday 27 July 2022 with 4 people making representations and the second on Thursday 11 May 2023 with one person making representations.

## FILE REFERENCE

19/1873

## ATTACHMENTS

- |   |   |
|---|---|
| Attachment<br>1  | Attachment 1 - Draft Moore Reserve Plan of Management & Master Plan - Summary of Submissions & Key Themes - <i>published in separate document</i> |
| Attachment<br>2  | Attachment 2 - Draft Moore Reserve PoM & Master Plan - Submission Summary & Analysis and Recommendations - <i>published in separate document</i>  |

- Attachment 3  Attachment 3 - Second Independent Public Hearing Report - Proposed Categorisation of Moore Reserve - 24 May 2023 - *published in separate document*
- Attachment 4  Attachment 4 - Moore Reserve Plan of Management - V9 - 24 May 2023 - *published in separate document*
- Attachment 5  Attachment 5 - Moore Reserve Final Master Plan - 23 May 2023 - *published in separate document*



**Item:** ENV020-23 Development and Building Department Functions and Services Metrics Report - Q3 2022/2023

**Author:** Manager Development and Building

**Directorate:** Environment and Planning

**Matter Type:** Committee Reports

ENV020-23

**RECOMMENDATION:**

That Council receive and note the Development and Building Department Functions and Services Metrics Report for the reporting period being January – March 2023.

**EXECUTIVE SUMMARY**

1. This report provides Development and Building Department Functions and Services Metrics for the reporting period of Q3 of the 2022/23 financial year being January to March 2023 with relevant comparative data.
2. In order to consider trends and performance associated with Development and Building application assessment, information provided within the report includes:
  - Applications Received for Processing and Determination;
  - Applications Considered by the Local Planning Panel;
  - Applications Considered by the Sydney South Planning Panel;
  - Total Application Processing Times;
  - Estimated Value of Development Applications Determined;
  - Information pertaining to the Development Advisory Service; and
  - Other Service Related Matters.

**BACKGROUND**

3. This report provides Development and Building Team Metrics for the reporting period of Q3 of the 2022/23 financial year being 1 January 2023 to 31 March 2023 with relevant comparative data.

**REPORT*****DEVELOPMENT APPLICATIONS, MODIFICATIONS AND REVIEWS*****Determining Authority**

4. As Councillors would be aware, under NSW Planning legislation, the Elected Council no longer have any involvement in determining Development Applications, Modifications to Consents, Review of Determinations or Building Information Certificates under the Environmental Planning and Assessment Act 1979 and the provisions of Council's Code of Conduct.
5. As a result, most applications are now determined under Delegated Authority by Council's Senior Development and Building Staff, unless they are required to be referred to the

Georges River Local Planning Panel or the Sydney South Planning Panel for determination.

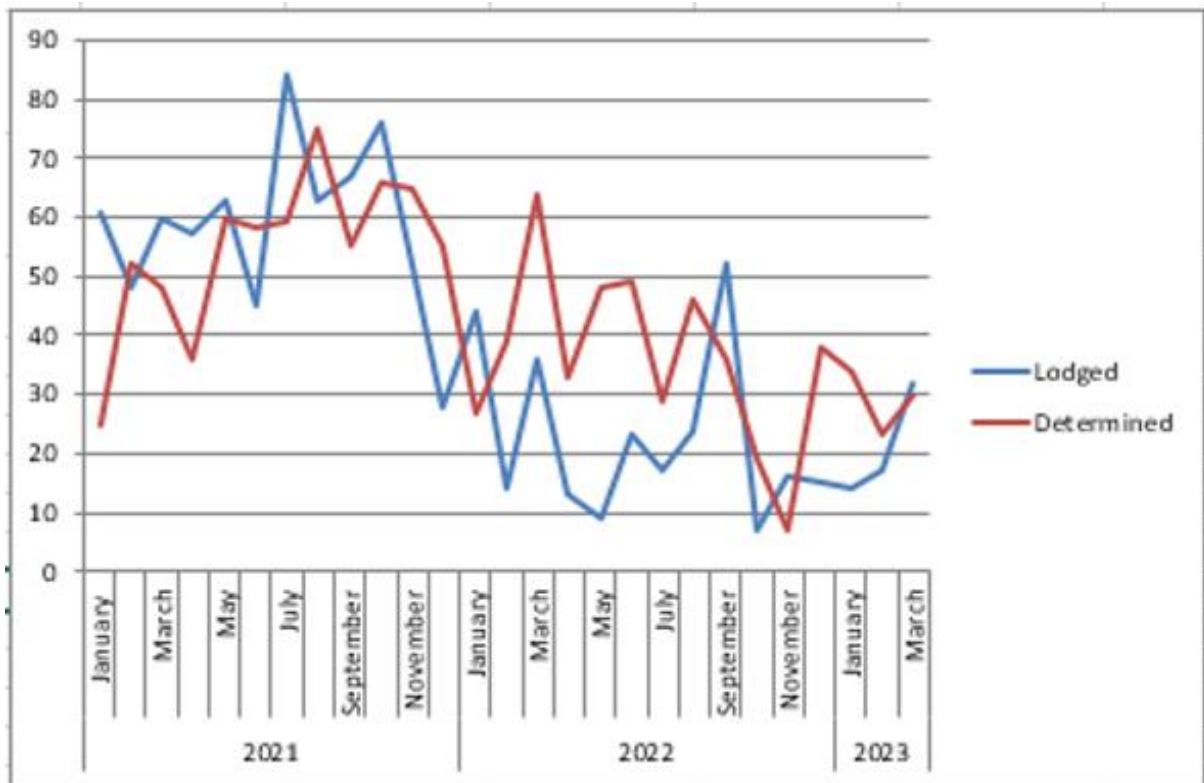
6. In making a determination, Council uses a peer review process. This ensures that all recommendations made by our assessment officers are reviewed by a senior officer and where required by the relevant planning panel. This ensures transparency and consistency in the recommendations and decisions made by our staff.
7. Metrics associated with the application processing is detailed below:

<b>FY2021/2022</b>	<b>DA ('L')</b>	<b>DA ('D')</b>	<b>MOD ('L')</b>	<b>MOD ('D')</b>	<b>REV ('L')</b>	<b>REV ('D')</b>	<b>TOTAL ('L')</b>	<b>TOTAL ('D')</b>
July	53	41	31	18	0	0	84	59
August	45	52	17	20	1	3	63	75
September	40	41	27	11	0	3	67	55
October	56	42	19	23	1	1	76	66
November	32	50	20	15	0	0	52	65
December	24	33	4	21	0	1	28	55
January	30	19	14	7	0	1	44	27
February	9	33	5	6	0	0	14	39
March	24	47	12	17	0	0	36	64
April	7	24	6	9	0	0	13	33
May	3	36	6	11	0	1	9	48
June	17	32	6	17	0	0	23	49
<b>FY2022/2023</b>								
July	14	15	3	14	0	0	17	29
August	14	38	10	8	0	0	24	46
September	28	25	24	9	0	2	52	36
October	6	13	1	6	0	0	7	19
November	16	5	0	2	0	0	16	7
December	10	26	5	11	0	1	15	38
January	12	20	2	14	0	0	14	34
February	13	20	4	3	0	0	17	23
March	23	23	9	7	0	0	32	30

Table 1

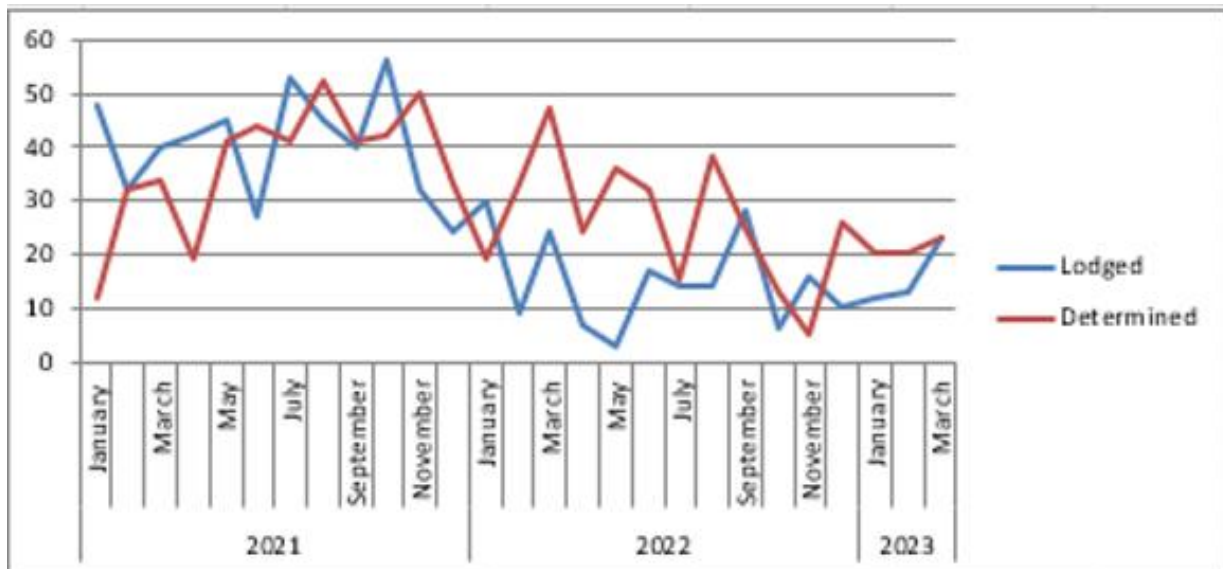
8. It is noted from the above table that in the quarter that 63 applications were lodged, while 87 were determined, continuing the positive trend in reductions in overall application numbers on hand.
9. For ease of reference and comparative purposes a graph of all applications (DA's, Modifications and Reviews) from July 2021 to the current reporting period is outlined as follows:

## All Applications (DAs, Modifications and Reviews)



Graph 1 – The graph demonstrates the time link between lodgement and determination, and visually shows the lodgement dip and spike resulting from the implementation of the new lodgement system and the result of resources committed to return lodgements to a level consistent with the general trend.

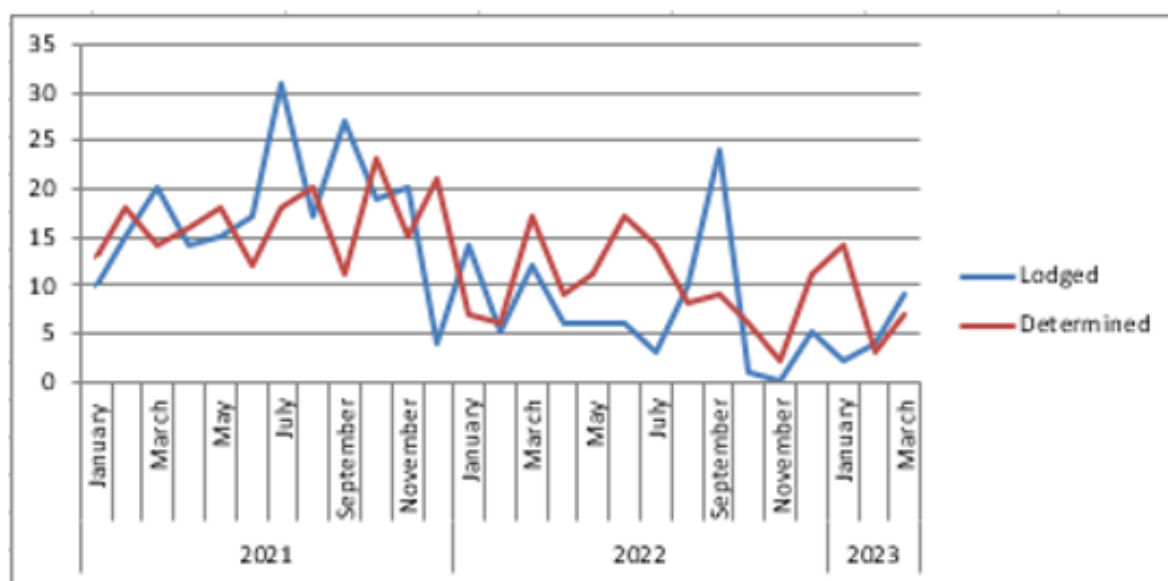
## Development Applications



Graph 2 – The above graph, which accounts for the majority of the data in Graph 1, reflects that graph.



## Modification Applications



Graph 3 – Modification applications demonstrate the same trends as Development Applications but given the lower sample size and troughs are more extreme.

## Processing Times – Determined Applications

10. The median determination times of all applications (DAs, Modifications and Reviews), processed in FY2021/2022 was 138 days.
11. The median determination times of all applications (DAs, Modifications and Reviews) processed in the current reporting period was 123 days.
12. Staff turnover and challenges in recruiting planners in a difficult competitive environment (shortage of planners) continues to impact on processing times.
13. Provided current staffing levels can be maintained, and Principal Planners, Senior Development Assessment Planner, Fast-Track Planner and Student Planner positions are filled, it is anticipated that the average assessment days figure will show improvement either by Q4 22/23 or by Q1 23/24. The aim is to reach the target of 85 days to determine an application.

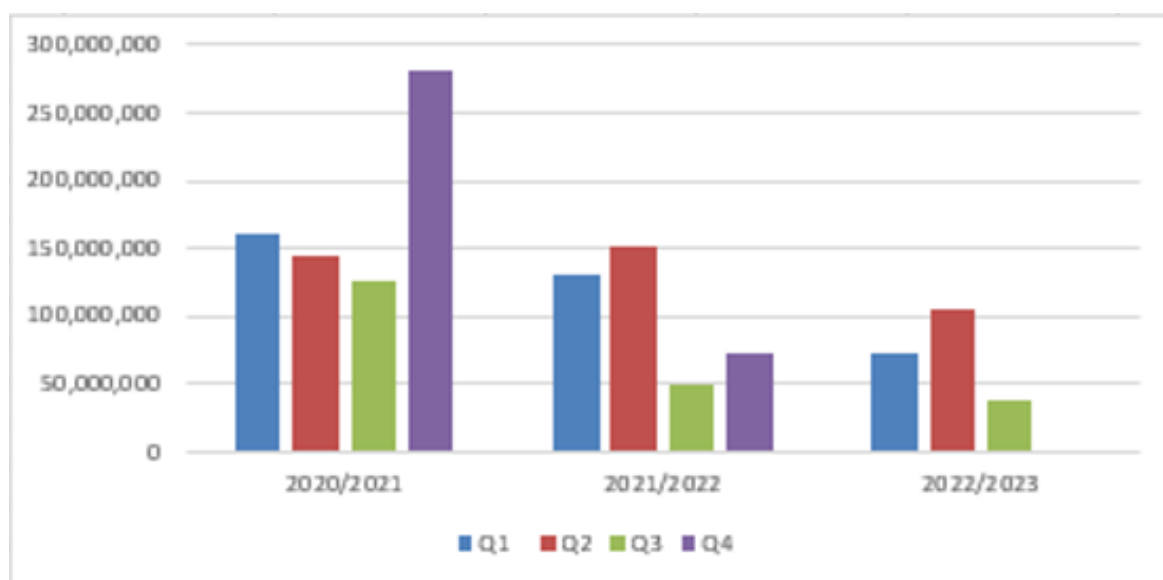
## Current Number of Undetermined Applications (DAs, Modifications and Reviews)

14. The number of undetermined applications (DAs, Modifications and Reviews) at the time of finalising this report was 229 (171 DA's, 57 Modifications and 1 Review). In addition, there are 85 applications currently undertaking preliminary review and awaiting lodgement in the Planning Portal.

## Value of Development

### **Estimated Value of Development Applications Determined**

15. The total estimated value of applications determined by Council in the Financial years 2021/2022 and 2022/2023 financial years is detailed below:

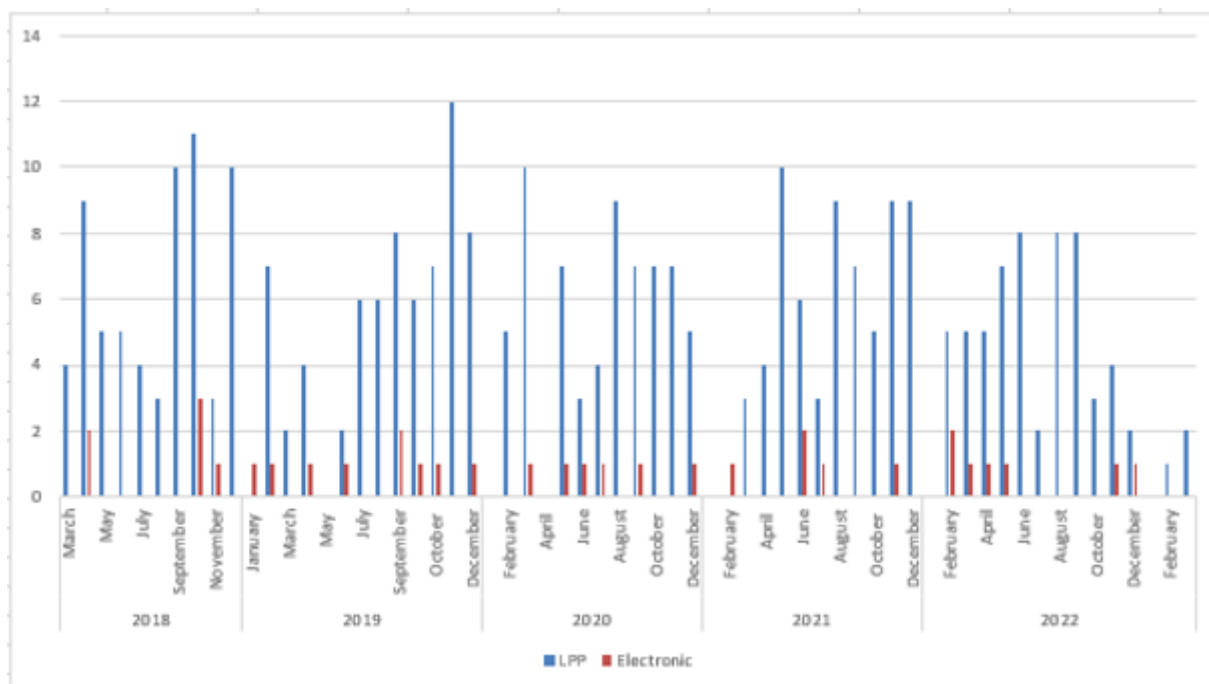


Graph 4

16. The total estimated value of all Development Applications and Reviews determined by Council in the reporting period is: \$37,041,555.
17. It is noted that the decline in value from previous years is a result of broader market conditions and the consequent reduction in large development proposals across the board following a general market downturn and its impacts on the construction industry.

#### Local Planning Panel

18. The Georges River Local Planning Panel was established in March 2018.
19. For ease of reference and comparative purposes a graph of all applications (DA's, Modifications, Reviews and Planning Proposals) considered since July 2021 to the current reporting period is outlined as follows:



Graph 5

20. The total number of applications (DAs, Modifications, Reviews, Building Information Certificates and Planning Proposals) considered by the Georges River Local Planning Panel in the current reporting period is 3. A breakdown of this data is provided below:

<b><u>FY2020/2021</u></b>	<b>DA / Mod / Review / BIC</b>	<b>PP</b>	<b>TOTAL</b>
July	5	0	5
August	9	0	9
September	8	1	9
October	7	2	9
November	7	1	8
December	6	0	6
January	0	0	0
February	1	0	1
March	3	4	7
April	4	0	4
May	10	1	11
June	8	1	9
<b><u>FY2021/2022</u></b>			
July	4	0	4
August	9	1	10
September	7	0	7
October	5	0	0
November	9	0	1
December	9	0	0
January	0	0	0
February	6	1	7
March	6	0	6
April	6	0	6
May	8	0	8
June	7	1	8
<b><u>FY2022/2023</u></b>			
July	2	0	2
August	8	0	8
September	8	0	8
October	3	0	3
November	5	0	5
December	3	0	3

January	0	0	0
February	1	0	1
March	2	0	2

Table 2

21. A list of the applications (DAs, Modifications, Reviews, Building Information Certificates and Planning Proposals) considered by the Georges River Local Planning Panel in the current reporting period is outlined below:

Application No.	Address	Proposal	Recommendation	LPP Decision
DA2021/0361	50 Lily Street Hurstville	Boarding House	Refusal	Refusal
DA2021/0192	31-33 Bailey Street Peakhurst	Child Care Centre	Refusal	Refusal
DA2022/0001	185 Queens Road Connells Point	Dwelling House	Refusal	Deferral

Table 3

### Sydney Regional Planning Panel

22. The Sydney South Planning Panel was established by the NSW Government to consider and determine regionally significant development.
23. The total number of applications (DAs, Modifications, Reviews, and Planning Proposals) considered by the SSPP in the reporting period is nil.

### **BUILDING INFORMATION CERTIFICATES**

24. Information on metrics of processing Building Information Certificate (BIC) is detailed below:

#### Lodged and Determined

<b><u>FY2021/2022</u></b>	<b>BIC ('L')</b>	<b>BIC ('D')</b>
July	2	4
August	6	5
September	0	8
October	2	3
November	2	7
December	1	1
January	3	5
February	4	17
March	7	4
April	1	6
May	8	7

<b>FY2021/2022</b>	<b>BIC ('L')</b>	<b>BIC ('D')</b>
June	3	10
<b>FY2022/2023</b>		
July	4	4
August	5	0
September	9	2
October	4	1
November	4	6
December	7	8
January	7	4
February	9	5
March	5	11

Table 4

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#### Processing Times – Determined BIC Applications

25. The median determination times of all BIC applications, processed in FY2021/2022 was 557 days resulting from reduction of a longstanding backlog.
26. The median determination times of all BIC applications processed in the current reporting period was 217 days due to the clearing of a number of historical matters resulting from a targeted program to reduce outstanding BIC applications.

#### Current Number of Undetermined Applications

27. The number of undetermined BIC applications at the time of finalising this report is 67.
28. It is noted that, as a consequence of the Land and Environment Court decision of *Ku-ring-gai Council vs Buyozo Pty Ltd [2021] NSWCA 117* there has been an increase in BIC applications given modifications to development applications can no longer be accepted if works have been carried out retrospectively. That is the unauthorised building work is required to be assessed via a BIC and not a DA.

#### **BUILDING CERTIFICATION WORK - Complying Development Certificates and Construction Certificates**

29. Information metrics on processing Comply Development Certificates (CDC) and Construction Certificates (CC) is detailed as follows:

Applications Lodged  
***Complying Development Certificates***

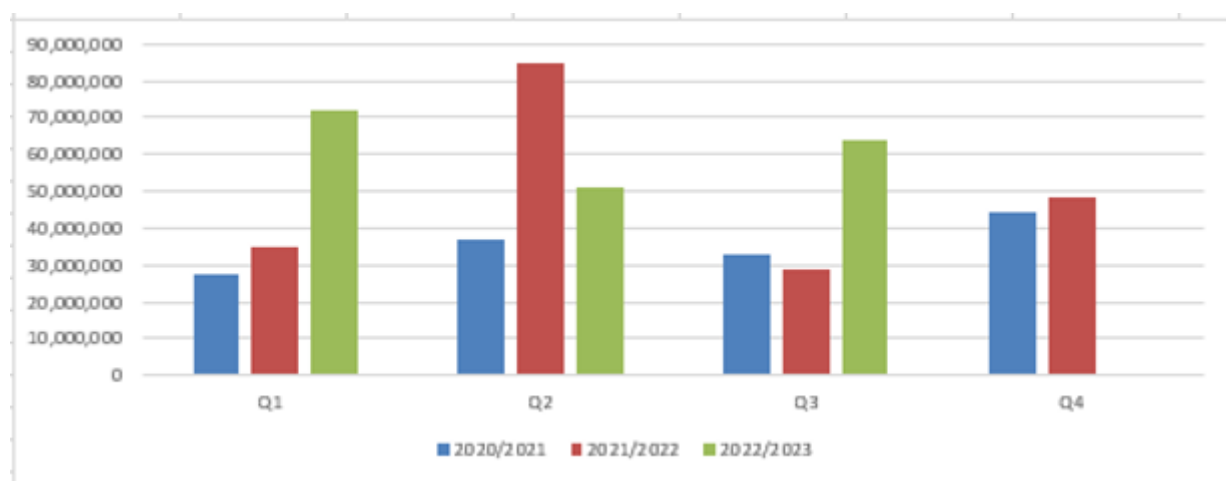
	Private Certifier CDC	Council CDC	% Council Market Share ((Council Issued/Total) x 100 = % Market Share))
<b><u>FY2021/2022</u></b>			
July	45	1	2.2
August	32	0	0.0
September	40	0	0.0
October	63	1	1.6
November	20	1	4.8
December	71	3	4.1
January	15	4	21.1
February	51	4	7.3
March	35	1	2.8
April	35	0	0.0
May	29	3	9.3
June	86	4	4.4
<b><u>FY2022/2023</u></b>			
July	12	0	0.0
August	55	2	3.6
September	38	0	0.0
October	41	5	10.9
November	68	1	1.4
December	51	0	0.0
January	36	0	0.0
February	28	1	3.5
March	63	0	0.0

Table 5

Value of Development under CDC for LGA

**Estimated Value of Complying Development Certificates Determined**

30. The total estimated value of applications determined through CDCs for the GRC LGA in the 2021/2022 financial year is \$197,017,965 this is graphically shown as:



Graph 6

### Applications Lodged

#### **Construction Certificates**

	Private Certifier CC	Council CC	% Council Market Share ((Council Issued/Total) x 100 = % Market Share))
<b><u>FY2021/2022</u></b>			
July	29	2	6.5
August	12	3	20.0
September	29	0	0.0
October	27	1	3.6
November	15	0	0.0
December	30	7	18.9
January	14	0	0.0
February	21	1	4.5
March	20	0	0.0
April	19	2	9.5
May	8	1	11.1
June	19	2	9.5
<b><u>FY2022/2023</u></b>			
July	21	1	4.7
August	28	0	0.0
September	16	1	6.2
October	33	4	12.1
November	6	2	33.3
December	16	2	12.5
January	1	0	0.0
February	37	2	5.1
March	27	3	10.0

Table 6

### **Advisory Service**



31. The Development Advisory Service (DAS) commenced in July 2020.
32. It has been introduced to help streamline the development assessment process and make it easier for community members and building professionals to access planning and development advice. Services provided comparative to other similar sized Councils include:
- The Duty Planner Service;
  - Evening Development Information Sessions for community members and building professionals (recommencing in March 2023);
  - Expanded Pre-lodgement Advisory Service; and
  - Complying Development Consultation Service.
33. For comparative purposes of pre-lodgements held, the graph for July 2021 financial years to date is provided as follows:

Graph 8

<b><u>FY2020/2021</u></b>	<b>PRE DA ('L')</b>	<b>PRE DA ('D')</b>
July	16	5
August	13	8
September	9	11
October	6	6
November	6	12
December	8	12
January	3	5
February	8	8
March	15	2
April	11	11
May	8	8
June	8	4
<b><u>FY2021/2022</u></b>		
July	9	5
August	12	5
September	9	19
October	12	7
November	7	8
December	3	12
January	5	1
February	4	3
March	8	5

April	6	6
May	8	5
June	7	8
<b><u>FY2022/2023</u></b>		
July	0	8
August	4	6
September	3	12
October	3	3
November	4	0
December	6	5
January	0	3
February	2	2
March	5	7

Table 7

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## Other Matters

### **Planning Portal Integration**

34. It is noted that upgrades and improvements of the NSW Planning Portal are ongoing with the implementation of API 2 due in June/July this year. Dependent upon the success of this implementation, it may have an impact on application lodgement.

### **CONCLUSION**

35. The Development and Building Team continues to implement actions that assist in improving processing times and customer service, and operationally continues to reduce outstanding applications on hand.
36. Business improvement actions include the implementation of the API 2 integration with the NSW Planning Portal, task flow upgrades in TechOne, referral templates and standardised conditions of consent.

### **FINANCIAL IMPLICATIONS**

37. Service is operating within current budget allocation.

### **RISK IMPLICATIONS**

38. No risks identified.

### **FILE REFERENCE**

17/2543

**Item:** ENV021-23 Review of Stormwater Management Policy

**Author:** Manager Development and Building

**Directorate:** Environment and Planning

**Matter Type:** Committee Reports

ENV021-23

**RECOMMENDATION:**

- (a) That Council endorse the amendments to the Georges River Stormwater Management Policy 2020 as detailed in the report and place the draft policy on exhibition for a period of not less than 28 days.
- (b) That a further report be submitted to Council after the exhibition period outlining the public submissions for the adoption of the amended policy.

**EXECUTIVE SUMMARY**

1. The Georges River Stormwater Management Policy was adopted by Council on 27 July 2020.
2. This report details the outcome of a review of the Stormwater Management Policy and amendments required. The review was required as part of the adoption of the Stormwater Management Policy following operational application of the Policy.
3. Operational use of the Policy has identified areas requiring correction, clarification or updating. The proposed changes are detailed later in this report.
4. These amendments to the Georges River Stormwater Management Policy are referred to Council for endorsement and to be placed on exhibition for a period of 28 days.

**BACKGROUND**

5. The Georges River Stormwater Management Policy operates to ensure that development in the Georges River Local Government Area is designed to:
  - Protect quality and manage the quantity of water conveyed through the receiving trunk drainage system and waterways;
  - Ensure the water quality of run-off drainage from urban developments;
  - Reduce peak flows from developments by on-site detention measures;
  - Conserve water and reduce mains water consumption;
  - Prevent the risk of flooding increasing within the site or at any adjacent or downstream properties; and
  - Minimise public drainage infrastructure costs.
6. This is delivered through requiring new development to incorporate appropriate stormwater management infrastructure and flood sensitive design.
7. The Policy applies to development granted approvals under:
  - Complying Development Certificates; and
  - Development Applications.

8. The Georges River Stormwater Management Policy was adopted by Georges River Council on 27 July 2020.
9. This report details the outcome of a review of the Policy following on from its implementation and operational application.
10. The review identified a number of areas requiring further clarification, correction, tightening or redrafting informed by this operational application of the Policy. These are detailed in the explanation of amendments below.

## OBJECTIVE

11. The objective of the proposed amendments is to improve the operation of the Georges River Stormwater Management Policy by correcting anomalies and omissions to the existing clauses and requirements identified through the operation of the Policy.

## THE REVIEW PROCESS

12. The review of this Policy was conducted as follows:
  - (a) Following adoption of the Stormwater Management Policy, an issues list was maintained by Council's Development Engineers recording matters identified for review arising from operational matters.
  - (b) The Policy – as originally adopted – was reviewed by Council's Principal Development Engineer to identify needed updates due to standards or policy change, and to identify minor anomalies/errors in the adopted Policy.
  - (c) Council's Development Engineers and Asset and Infrastructure Engineers were consulted to identify parts of the Policy resulting in common customer enquiries, areas of the Policy that have been identified as ambiguous, and areas where the Policy required strengthening to support efficiency and consistency in stormwater assessment.
  - (d) In addition to the issues list, Council's Development Engineers have also maintained a record of problematic on-site stormwater issues emerging following building works and have used this to inform the Policy review.
13. In addition to the above, an initial review was overseen by Council's Coordinator Advisory and Specialist Assessment as part of a workshop process with Council's Development Engineers to identify the specific areas of the Policy requiring correction, updating, amendment or refining.
14. The key issues identified in the review were as follows:
  - (a) The applicability of the requirement to provide on-site detention infrastructure as part of the construction of dual occupancy developments was ambiguous in the Policy and required clarification.
  - (b) The need to address issues in assessing exceptions to the allowable location list for the use of absorption trenches as a primary drainage solution, especially around the reliability of information provided to support such exceptions. It was recommended that the performance exception be removed given the general unsuitability of soil

profiles outside the allowable locations identified in the Policy to provide greater policy certainty to applicants.

- (c) The Policy contains insufficient detail around stormwater modelling parameters including in the use of TU-FLOW and DRAINS models.
- (d) The Policy provides insufficient clarity around flood affected sites in terms of the use of flood gates, and diagrammatic representation of the velocity vs depth flood hazard assessment matrix.
- (e) The Policy needs to be updated to better reflect industry best practice and the latest Australian Standards.
- (f) The Policy requires to be updated to tighten up requirements around the applicability of the Policy:
  - to Complying Development,
  - the drainage of stormwater into natural areas,
  - the design and use of charged lines as a drainage solution.
- (g) Update the Policy to remove redundant references and correct minor typographical errors.

15. Based upon this review process, the following amendments are proposed to address these identified issues.

## **EXPLANATION OF AMENDMENTS**

16. The amendments proposed to the Policy are detailed in the Table below:

Item	Clause	Summary of proposed amendment
1	1.1 About this Policy	<p><b>Description of change</b> Amend dot points to improve clarity.</p> <p><b>Proposed wording</b></p> <ul style="list-style-type: none"> <li>• Protect quality and ensure adequate management of the quantity of water conveyed through the receiving trunk drainage system and waterways.</li> <li>• Ensure run-off draining from urban developments does not adversely impact water quality.</li> <li>• Reduce peak flows from developments by on-site detention measures.</li> <li>• Conserve water and reduce mains water consumption.</li> <li>• Prevent the risk of flooding increasing within the site or at any adjacent or downstream properties.</li> <li>• Minimise public drainage infrastructure costs.</li> </ul>
2	1.4 Exempt and Complying Development	<p><b>Description of change</b> Insert “involve low level property” at (c) to apply to Complying Development Certificates.</p> <p><b>Proposed new wording</b> (c) Involve low level properties as defined by Section 1.5 of this document.</p> <p>NOTE: “Low Level Property” is defined in the policy as: <i>A property:</i></p> <ul style="list-style-type: none"> <li>• <i>That naturally falls away from the street frontage and / or</i></li> <li>• <i>At which the ground levels at the property boundary at the street frontage are lower than the adjacent street kerb level.</i></li> </ul>
3	1.4 Exempt and Complying Development	<p><b>Description of change</b> Clarify responsibility of the certifier to ensure compliance with Policy.</p> <p><b>Proposed new wording</b> The types of proposals that will require the above-mentioned approval from Council’s development engineers are identified in Section 2.3. The</p>

		applicant, developer and certifier are ultimately responsible for ensuring that this requirement has been met.
4	1.5 Definitions	<p><b>Description of change</b> Insert close bracket to correct error in definition of Below Ground OSD Storage.</p> <p><b>Proposed new wording</b> A below-ground structure constructed for storage of On-Site Detention (OSD). This is typically a concrete or masonry tank.</p>
5	1.5 Definitions	<p><b>Description of change</b> Delete FMM (Flood Plain Management Manual) reference. This document has been superseded.</p> <p><b>Proposed new wording</b> Nil – definition deleted.</p>
6	1.5 Definitions	<p><b>Description of change</b> Wording correction to remove 'the' from definition of Infiltration.</p> <p><b>Proposed new wording</b> The vertical movement of water through a permeable substance, such as sand or soil. The rate at which the flow occurs is dependent on the properties of the substance and the relative volume of voids (air spaces) that it contains. In the case of clay soils or sandstone, infiltration rates are extremely slow whereas in sandy soils the rate of infiltration may be much faster. Various underground systems include void type storage, trench type storage, and soak ways.</p>
7	1.5 Definitions	<p><b>Description of change</b> Wording correction to remove 'typically' from definition of Low Level Property.</p> <p><b>Proposed new wording</b> A property:</p> <ul style="list-style-type: none"> <li>• That naturally falls away from the street frontage and / or</li> <li>• At which the ground levels at the property boundary at the street frontage are lower than the adjacent street kerb level.</li> </ul>
8	2.1 Stormwater Concept Plan	<p><b>Description of change</b> Requirements amended to be numbered for ease of reference.</p>



		<b>Proposed new wording</b> Numbers 1-9 replace dot points.
9	2.1 Stormwater Concept Plan	<b>Description of change</b> The new clauses are added to provide greater clarity where easements are required and the processes around easements as informed by Environmental Law and the Georges River Local Environmental Plan.  <b>Proposed new wording</b> 6. For any low-level property, where site stormwater disposal cannot be drained to the street frontage, a drainage easement is required through adjoining downstream property(ies). Council requires that adequate arrangements have been made with documentary correspondence provided to demonstrate:  (a) That the applicant or proponent has contacted the owner of the property proposed to be burdened by the stormwater easement with an in-principle proposal for the creation of an easement, specifying the location of this, the width, drainage system design, and the final works required.  (b) That the adjoining burdened property owner has agreed, in principle to the proposal which shall be documented in the form of legal agreement prepared by solicitors, at full cost to the applicant.  In the absence of this documentation, Council cannot be satisfied that adequate arrangements with respect to site stormwater disposal have been made and would not therefore be able to approve the application.
10	2.2 Stormwater Detailed Plan	<b>Description of change</b> Requirements amended to be numbered for ease of reference.  <b>Proposed new wording</b> Numbers 1-6 replace dot points.
11	2.3 Council Assessment of Stormwater Impacts due to	<b>Description of Change</b> Retitle to more accurately describe the clause operation.

	proposed Complying Development	<b>Proposed new wording</b> 2.3 Requirements where Council approval of stormwater management design is required prior to release of a Complying Development Certificate.
12	2.3 Council Assessment of Stormwater Impacts due to proposed Complying Development	<b>Description of change</b> Requirements amended to be numbered for ease of reference.  <b>Proposed new wording</b> Numbers 1-6 replace dot points.
13	2.3 Council Assessment of Stormwater Impacts due to proposed Complying Development	<b>Description of change</b> Amend wording to specify that approval is a pre-requisite to the release of a Complying Development Certificate.  <b>Proposed new wording</b> Prior to the release of a Complying Development Certificate, stormwater design details and plans must be lodged with Council, and the written approval of Council must be obtained where the following are proposed:
14	2.4.4 Variations to the Approved Stormwater Drainage Design	<b>Description of change</b> Amend wording to clarify distinction between Complying Development and Development Application processes.  <b>Proposed new wording</b> Any proposed modification to the design of the development that impacts upon site drainage and the stormwater system must be submitted for assessment by Council.  Where the Development was approved under a Complying Development Certificate, written approval of Council's Development Engineer will be required prior to release of an amended Complying Development Certificate where the operation of site drainage is affected.  Where the Development was approved via a Development Application, modification through a Section 4.55 application under the Environmental Planning and Assessment Act 1979.  The stormwater engineer will need to certify that proposed amended system satisfies the requirements of Council as outlined in this document and submits all calculations and information that lead to this assertion. Council will not allow the variation unless these requirements have been met to the satisfaction of Council's assessing Development Engineer.  Where Council standards outlined in this document

		have not been met, the unsatisfactory components of the system shall be removed and reconstructed. The certifying stormwater engineer is to inspect and confirm that the system has been rectified to meet the requirements of this Policy and AS/NZS 3500.3:2018.
15	3.2.4 Collection of condensates from air conditioners	<p><b>Description of change</b> Additional section added to ensure condensation from air conditioners, where proposed, is collected into the site stormwater system.</p> <p><b>Proposed new wording</b> <b>Collection of condensates from air conditioners</b> The collection of condensates from air conditioning systems to the site's drainage system is acceptable subject to:</p> <ul style="list-style-type: none"> <li>(a) The site's discharge being connected directly to an underground drainage system and not to the street gutter and.</li> <li>(b) It being discharged in a manner that will not cause environmental issues including stagnation causing algae growth or breeding of mosquitoes in the summer months and;</li> <li>(c) It being discharged in a manner that will not cause safety issues including slipperiness.</li> </ul>
16	3.4.1 General	<p><b>Description of change</b> Amend to remove the word 'typically'.</p> <p><b>Proposed new wording</b> A low-level property is defined in this Policy as a property:</p> <ul style="list-style-type: none"> <li>(a) That naturally falls away from the street frontage; and / or</li> <li>(b) At which the ground levels at the property boundary at the street frontage are lower than the adjacent street kerb level.</li> </ul>
17	3.4.2 Charged Drainage Systems	<p><b>Description of change</b> Clarification of where charged drainage systems may be used, and of tank storage requirements to support charged systems.</p>

		<p><b>Proposed new wording</b></p> <p>Charged lines will be generally permitted for the discharge of roof runoff from Dwelling Houses, Dual Occupancy, Secondary Dwellings, Ancillary Outbuildings (for all new dwelling houses or alteration and additions to existing dwelling houses).</p> <p>For commercial / industrial sites of up to 750 square metres charged drainage systems may be permitted.</p> <p>Charged drainage systems must be drained via a rainwater tank as per the BASIX requirements for the site.</p> <p>In instances where there is no BASIX requirement a Rainwater tank system with a minimum storage capacity of 2500 litres for residential and minimum 5000 litres for commercial / industrial shall be provided that connects to one or more of the following:</p> <ul style="list-style-type: none"> <li>(i) A flushing toilet;</li> <li>(ii) A laundry for washing purposes;</li> <li>(iii) A combined landscaped area within the property of more than 60 square metres.</li> </ul> <p>Charged systems will not be permitted in cases where the discharge is proposed to be diverted to a catchment that does not naturally receive this water where there are known flooding issues downstream of the discharge point, or the discharge will cause or aggravate flood conditions downstream of the discharge point.</p> <p>The use of a charged system does not exempt a property from the installation of On-Site Stormwater Detention in accordance with this Policy.</p> <p>The following design requirements are applicable to charged systems:</p> <ul style="list-style-type: none"> <li>(a) All stormwater from the site must drain by gravity piped drainage within all Council land including roads, footways, and prior to the connection or discharge to any connection point.</li> <li>(b) Only sewer grade PVC or pressure pipes are to be used to convey charged flows. All pipes must be a minimum of 100mm diameter and all joints must be solvent welded.</li> <li>(c) All pipes and downpipes are to be sealed to a minimum of 0.5m above the</li> </ul>
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		<p>maximum water level in the system.</p> <ul style="list-style-type: none"> <li>(d) Raised pit at the property boundary will not be supported.</li> <li>(e) Adequate head should be provided (preferably 1.5 m or greater) between the pipe outlet level at the road kerb and the rainwater tank overflow pipe invert level. A Hydraulic Grade Line analysis shall be provided where this height is less than 1 metre.</li> <li>(f) All gutters and pipes in the system must be designed for a 1% AEP storm event.</li> <li>(g) A cleaning eye must be provided at all low points in the system within a pit that is drained to an on-site absorption system. The cleaning eye is to have a cap with a 5mm overflow hole to allow for trapped water to discharge slowly.</li> <li>(h) The design and installation shall comply with Standards Australia HB 230—2008 Rainwater Tank Design and Installation Handbook.</li> <li>(i) All impervious ground surfaces must be drained to an appropriate system. Any proposed absorption system is to be designed in accordance with Section 3.4.4.</li> <li>(j) A typical drawing of a charged stormwater line is illustrated in Appendix A12.</li> </ul>
18	3.4.3 Discharge to Natural Areas	<p><b>Description of change</b></p> <p>Clarify to include requirement for anti-scour and energy dissipation infrastructure for outlets into natural areas.</p> <p><b>Proposed new wording</b></p> <p>Discharge to natural areas such as bushland, a watercourse, creek or bay is allowed subject to approval by Council, and compliance with the following requirements:</p> <ul style="list-style-type: none"> <li>(a) For discharge to creeks and bays, the natural area is to be protected against erosion at the point of discharge by means of an energy dissipator (level spreader) located within the property and positioned so that it will not impact on neighbouring properties. The dissipator must be setback a minimum of 5.0m from the rear boundary.</li> <li>(b) For discharge to bushland the natural areas are to be protected against erosion at the</li> </ul>

		<p>point of discharge by means of anti-scouring measures such as an energy dissipator (level spreader) and outlet apron located within the property and positioned so that it will not impact on neighbouring properties. The dissipater must be setback a minimum of 3.0m from the rear boundary.</p> <p>(c) Where there is an existing open channel or creek or pipe system in proximity connection may be permitted subject to seeking Council approval prior to determination of the application.</p> <p>(d) Outflow aprons are normally constructed of riprap or concrete with embedded rip-rap. Pipelines larger than 375mm diameter with an outlet in a location that will result in scour must have the outlet angled at 30 degrees to the direction of the flow within the watercourse.</p> <p>(e) Energy dissipaters reduce water velocity by directing the water stream into obstructions placed in the flow path and/or by inducing a hydraulic jump. Energy dissipaters are to be designed to reduce velocities to below 2.0 m/s for the 1% AEP flood event flow.</p> <p>(f) For discharge to a Council reserve or bushland, the stormwater dissipation measures must be incorporated fully within the property with the energy dissipation at the pipe outlet to reduce the velocity of runoff and the incidence of scour.</p> <p>(g) The structure of any spreader installed is to be of a robust and durable construction type.</p> <p>(h) At Council's discretion, it may be required to install either a rock-lined natural channel or a pipeline to convey runoff from the property to the nearest drainage line or water course. Any such works would need to be approved through the Stormwater Drainage Application process and require the applicant to acquire a drainage easement.</p>
19	3.4.4.1 Absorption System as the Primary Method of Stormwater Discharge	<p><b>Description of change</b></p> <p>Amendment to provide clarity as to the only circumstances where absorption infrastructure will be considered, to provide more detail of required soil testing required to support proposals to use absorption and detail the minimum requirement for absorption.</p>

		<p><b>Proposed new wording</b></p> <p>Note that absorption systems are often not suitable as a method of stormwater disposal due to reasons including but not limited to unsuitable soil conditions such as heavy clays, limited depth to rock (e.g. less than 1.5-meters), a high water table and steepness of a site (greater than 10%) all of which prevent the effective absorption of water into the ground to a sufficient degree to manage stormwater run-off.</p> <p>An absorption system that meets all technical requirements within this Policy may be considered as the primary method of draining a single dwelling and / or a secondary dwelling in suitable parts of the following suburbs:</p> <ul style="list-style-type: none"> <li>• Connells Point</li> <li>• Kyle Bay</li> <li>• Blakehurst</li> <li>• Hurstville Grove</li> <li>• Sans Souci</li> <li>• Carss Park</li> <li>• Kogarah Bay</li> </ul> <p><b>Absorption systems will not be considered (regardless of any geotechnical report and supporting information) as the primary method of draining a development site in all other locations within the Local Government Area.</b></p> <p><b>The absorption system design will need to be lodged and approved by Council prior to any development consent or Complying Development Certificate being obtained.</b></p> <p>The design will need to be proven to meet the following design requirements:</p> <p>(a) The design plan must be accompanied by a geotechnical report from a suitably qualified practising geotechnical engineering consultant and results of a recognised Constant Head Test conducted as per the methods detailed <b>under sections 6.7.1 of AS1289-2001 (Methods of testing soils for engineering purposes)</b>.  <b>Note:</b> Constant head test is the most appropriate method in the Georges River Local Government Area.</p> <p>(b) The hydraulic conductivity / infiltration rate must be tested at a minimum of two (2) test samples taken per site at the location of the proposed absorption system (samples</p>
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		<p>collected from a minimum depth of 1.00 m below the surface). The On-Site Stormwater Absorption System is to be designed using the infiltration rate of the soil of the site. The geotechnical report is to also determine the depth to rock and the presence and depth of the water table.</p> <p>(c) The trench depth must be minimum 1.0m below natural ground level. Evidence is to be provided that the base of the proposed system will be at least 500mm above both the bedrock and the water table. Alternative design should be considered where there is difficulty in achieving above requirement.</p> <p>(d) The absorption system will need to allow for runoff from 2% AEP (1 in 50-year ARI) event for all hard surfaces that are drained to it. This will need to be accurately determined and calculations are to be provided to Council. The calculations for the absorption system are to include storms ranging in duration from 5 minutes to 72 hours. The IFD data used is to be that detailed in Appendix A8. A reservoir routing calculation with Inflow and Outflow calculations may be used.</p> <p>(e) Absorption systems cannot be considered if the design soil hydraulic conductivity /infiltration rate is less than 100mm/hour (0.0277 lit/m<sup>2</sup>/sec or 2.7x10<sup>-5</sup> m/sec). The maximum natural grade of the ground levels at the site of the system is 1 in 10 (vertical: horizontal) (10%) in any direction.</p> <p>(f) The absorption trench shall be located parallel to proposed or existing site contours. The maximum natural grade of the ground levels at the site of the system is 1 in 10 (vertical: horizontal) or 10% in any direction.</p> <p>(g) A debris/silt collection pit shall be placed immediately upstream of the underground system, with a capped observation riser installed over the underground system.</p> <p>(h) An earth mound (750wide X 400high is) to be placed 400mm downstream from the trench to prevent flow concentration and disperse any likely system overflow. The absorption system is to meet the following setback requirements:</p> <ol style="list-style-type: none"> <li>It must be a minimum 3 metres clear from all property boundaries.</li> <li>It must be a minimum 3 metres clear from all structures. This</li> </ol>
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		<p>may be reduced to 1.5 metres subject to certification by a suitably qualified practising structural engineer that both structure and absorption system's integrity, stability and function will not be impacted by their proximity.</p> <ul style="list-style-type: none"> <li>(i) The existing ground levels above and adjacent to the system are not to be raised to allow for additional storage, to meet depth to bedrock.</li> <li>(j) Absorption systems must not contribute in any way to saturating soils behind retaining walls, existing or proposed. The entire design storage volume of the absorption system is to be below ground.</li> <li>(k) The absorption system is not to be within one metre of any Sydney Water Sewer main. See Sydney Water's 'Technical guidelines, Building over and adjacent to pipe assets, October 2015'.</li> <li>(l) Detail will need to be included to show that the absorption system is not within the Tree Protection Zone of any trees (either within the property or on neighbouring properties). Council may require the lodgement for assessment of a report by an AQF Level 5 arborist.</li> </ul>
20	3.4.4.2 Minor Absorption Systems	<p><b>Description of change</b> Additional detail required to document required depth, the requirement for an adequate existing drainage system, and ensure the proposed system does not compromise the existing system.</p> <p><b>Proposed new wording</b> Up to a maximum of 50m<sup>2</sup> of impervious area may be discharged to an absorption system on a site subject to:</p> <ul style="list-style-type: none"> <li>(a) The system meeting all the required setbacks as detailed in Section 3.4.4.1 and;</li> <li>(b) The area available for the absorption system being greater than or equal to a quarter of the impervious area being drained (Eg. 20m<sup>2</sup> of impervious area would need to be drained to an absorption system of 5m<sup>2</sup> or larger), and;</li> <li>(c) The proposed absorption system should have a depth at least 1.00 m below the surface; and</li> <li>(d) Certification by a qualified stormwater</li> </ul>

		<p>engineer that the absorption system and soil conditions are sufficient for storms up and including the 5% AEP (1 in 20 years) event.</p> <p>(e) The existing stormwater disposal system is functioning and in satisfactory operational condition. Documentary evidence must be provided such as a service protection report, and</p> <p>(f) The submitted stormwater plan must include the location of the existing system and ensure the proposed system does not compromise the existing system</p>
21	3.4.5.3 Discharge to an Existing Inter-Allotment Drainage System	<p><b>Description of change</b> Amended to reflect legal requirement around easements where inter-allotment drainage is proposed by including (d).</p> <p><b>Proposed new wording</b> (d) Evidence being provided to Council demonstrating that the development site benefits from a legal easement to drain water such as an 88B instrument, legal in principle agreement for grant of an easement or transfer granting easement documents.</p>
22	3.6 Pump Out Systems	<p><b>Description of change</b> Additional clarification added with respect to the requirements for basement pump-out infrastructure in line with industry best practice.</p> <p><b>Proposed new wording</b> The system must be designed in accordance with the following criteria:</p> <p>(a) The pumped system shall be designed in accordance with all requirements of AS/NZS3500.3:2018.</p> <p>(b) The pump system shall consist of two pumps, connected in parallel, with each pump being capable of emptying the holding tank at the rate equal to the minimum of either 4 litres per second or the rate of inflow generated from 1% AEP 5-minute duration storm event of the area of the contributing ramp that draining into the system.</p> <p>(c) Pump holding tank shall be capable of holding the total volume of runoff generated by the 1% AEP 3-hour storm event of for the area of the contributing ramp assuming</p>

		<p>pumps are not working. The minimum tank must be greater than 3.0 cubic meters.</p> <p>(d) Install two 900x900 mm square grates at the opposite corner of the basement pump tank top surface.</p> <p>(e) Rising main from the pumped system must discharge into the OSD system on site when applicable.</p> <p>(f) For proposals that do not require OSD, the rising main must be discharged to a silt arrestor pit that drains to the site's discharge point by gravity fall.</p> <p>(g) In accordance with Section 2.4.8, a Restriction on Use of the land and Positive Covenant will be required for developments that have stormwater systems that include a pump-out system. The pump system shall be regularly maintained and serviced, every six (6) months.</p>
23	4.2 (i)	<p><b>Description of change</b> Clarification added to ensure that where charged lines are used, they must be in accordance with the standards outlined in the Policy.</p> <p><b>Proposed new wording</b> (h) OSD systems are to drain by gravity to Council's drainage system or other public drainage network. In the case of a single dwelling, or primary house and secondary dwelling where it is not feasible to drain the OSD storage by a gravity system, consideration may be given by Council to drain the OSD system via a charged system to the front of the site. The charged system must be in accordance with section 3.4.2 of this policy. Gravity drainage shall be required between the property boundary and Council's Street gutter or drainage system.</p>
24	4.2(k)	<p><b>Description of change</b> Clarification added requiring provision of an overland flow path where direct connection into Council infrastructure is proposed.</p> <p><b>Proposed new wording</b> (k) In cases where a connection is to be made directly to Council's or another authority's</p>

		<p>pit/ pipe system, it is required that design details be provided demonstrating that there is to be a safe overland flow path designed to the 1% AEP event from the OSD to the street gutter in the event of the connection to Council's stormwater system becoming blocked.</p>
25	4.2(n)	<p><b>Description of change</b> Requirement added that new stormwater infrastructure be located so as not to impact on any existing and still necessary stormwater infrastructure.</p> <p><b>Proposed new wording</b> (n) Council requires the submission of Concept OSD drawings to assist in determining the likely impacts that the development may have on the existing natural and built environments, both public and private. The location of the proposed OSD shall not impact on existing and necessary site stormwater infra-structure, overland flows, and flooding conditions. The design of the OSD shall also consider and comply with the requirements of Council's Development Control Plans.</p>
26	4.2(q)	<p><b>Description of change</b> Clarification added detailing where OSD must be provided based on development type regardless of site coverage percentages. The applicability of OSD based on site coverage percentages is to only apply to residential dwelling houses.</p> <p><b>Proposed new wording</b> (q) For aspects of the design that are not included in this Policy the engineer is to design in accordance with the requirements of AS/NZS 3500 (as amended). OSD must be provided for the following development types regardless of the site's impervious percentage:</p> <p>Dual occupancies, town houses, Villas, home units, Residential Flat Buildings, all commercial, industrial, special-use development and buildings and structures including public buildings, Tennis Courts, Private Roads, Car Parks and other sealed areas and Subdivisions</p>
27	4.4 – Exemptions	<p><b>Description of change</b> Amend (a) to clarify what development types are</p>

		<p>exempt from the provision of OSD.</p> <p><b>Proposed new wording</b></p> <p>(a) For developments that meet both of the following requirements:</p> <ol style="list-style-type: none"> <li>The development proposal is a Single Dwelling, Secondary Dwelling, Single and Secondary Dwelling combination, alteration, and additions to a dwelling house and or ancillary development for a dwelling house such as a garage, carport, cabana, awning, deck, swimming pool.</li> <li>The total impervious area upon completion of the development will be less than 55% of the lot as calculated in accordance with Appendix A7. Any requirements detailed in Section 4.5 in relation to OSD requirements for subdivisions override this exemption.</li> </ol> <p>(<u>Note</u>: As detailed in Appendix A7 all areas of less than 1.5 metres clearance between the outer wall of a building and the nearest adjacent property boundary shall be a minimum 50% impervious. This excludes the area under a roof eave overhang that is to be considered 100% impervious.)</p>
28	4.6 Site Storage and Permissible Site Discharge	<p><b>Description of change</b></p> <p>Amend the table to clarify the requirement for provision of on-site detention for all dual occupancies.</p> <p><b>Proposed new wording</b></p> <p>OSD is not required for dwelling house, secondary dwelling, alteration, and additions to dwelling house and ancillary development for dwelling house such as garage, carport, cabana, awning, deck, swimming pool. For all other development types OSD is required.</p>
29	4.9.1 Above Ground OSD Storage	<p><b>Description of change</b></p> <p>Insert new (f) to clarify that OSD basins must not contain trees due to maintenance, and life-cycle impacts.</p> <p><b>Proposed new wording</b></p> <p>(f) No trees are allowed within the OSD basin area.</p>
30	4.9.1(i) Above Ground OSD	<p><b>Description of change</b></p> <p>Clarification added to detail limitations on use of</p>

	Storage	<p>above ground tanks.</p> <p><b>Proposed new wording</b>  Above-ground rainwater tanks may only be used for OSD storage for runoff from the roof of a single dwelling <u>or</u> secondary dwelling <u>or</u> ancillary development or commercial and industrial development (area less than 300 square metres). Above ground OSD/OSR rainwater tanks will not be permitted where it involves the construction of a dwelling house and secondary dwelling on the site simultaneously.</p> <p>The design of above-ground tanks must consider appearance and urban design issues. Above-ground tanks shall comply with the same engineering criteria as below-ground tanks. Particular attention must be given to access for inspection and maintenance. Note the following design requirements applicable to above ground OSD tank storage:</p> <ul style="list-style-type: none"> <li>• If the outlet control is to be a choke pipe, then choke pipe is to be as short as practical and is to have a maximum length of 300mm.</li> <li>• The design is to include an inspection point that allows for cleaning and inspection of the orifice or choke pipe.</li> <li>• Debris and leaf screens or devices are to be installed on all downpipes and / or all inlets. The screens are to be designed to be self-cleaning and in a location that is easily accessible to allow cleaning and maintenance.</li> </ul>
31	4.9.1.2 Landscape Area	<p><b>Description of Change</b>  Amend Clause to remove potential for confusion with landscaped area definition in GRLEP.</p> <p><b>Proposed new wording</b>  <b>Above Ground OSD Basins adjoining landscaped areas</b></p> <p>The following design requirements apply for above-ground OSD storage in landscaped areas:</p> <ol style="list-style-type: none"> <li>(a) Above ground OSD storage basins must be within common areas;</li> <li>(b) The design must be undertaken in consultation with the landscape designer to ensure that the engineering and</li> </ol>

		<p>landscaping plans are not in conflict;</p> <p>(c) The above ground OSD storage basin shall be located in an area not required for access. Areas of the storage that will be affected by frequent ponding in minor storms are to be designed and located so as to not create a nuisance;</p> <p>(d) Careful consideration shall be given to types of planting and landscaping treatment within the area of ponding, to ensure that the area can be readily maintained and the storage volume is not reduced over time;</p> <p>(e) Landscaping within above ground OSD storage basins shall be designed so as not to generate large amounts of debris or other material likely to cause stormwater pollution or blockage of the system. Treatments such as wood chips / mulch or bare soil and the like shall not be permitted within the area of inundation;</p> <p>(f) Vertical sides near driveways or pedestrian areas are to be protected with an appropriate treatments such as fencing, kerb, edging or landscaping, to minimise hazard to pedestrians and vehicles;</p> <p>(g) Suitable access shall be provided for maintenance purposes, which may include ramps or accessible gradients;</p> <p>(h) Consideration must be given to the likelihood of access by children in rainfall events and the subsequent need for fencing or other controls;</p> <p>(i) Subsoil drainage shall be installed in above ground OSD storage basin areas to prevent the area remaining saturated during wet weather;</p> <p>(j) The base of above ground OSD storage basin is to have a minimum 1% fall to the outlet pit;</p> <p>(k) Any buildings forming the walls of the above-ground storage shall be adequately waterproofed to prevent water entering the sub-floor area;</p> <p>(l) Above ground OSD storage basin areas shall be defined by separate watertight dwarf walls of masonry or concrete</p>
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		<p>construction.</p> <p>(m) Fencing will not be required in situations where the storage has batter slopes no greater than 1:6 (vertical: horizontal) for its full perimeter.</p> <p>(n) Batter slopes in landscaped areas shall be generally no greater than 1:6 (vertical: horizontal). Steeper slopes may be permitted subject to the approval of Council's engineers. Any request for steeper slopes must indicate the benefits of this and adequately address safety and maintenance issues.</p> <p>(o) Large open grassed above ground OSD storage basins may be permitted in commercial or industrial developments. These open basins shall have minimum base dimensions of 5m and shall have 1:6 (vertical: horizontal) internal batters, with the batters to be designed by a suitably qualified and experienced geotechnical engineer. Childproof fencing and a lockable gate may be required.</p>
32	5.3 Modification to Council's Drainage system	<p><b>Description of change</b></p> <p>Clarification added to state that any modifications proposed to the public drainage system must not negatively impact on the general functioning of that system.</p> <p>Clarification added to specify the materials standard for public drainage.</p> <p>Clarification added that stormwater designs must have regard to impacts on existing trees.</p> <p><b>Proposed new wording</b></p> <p>Any development that proposes a modification including the extension or realignment of Council's stormwater system will be assessed on merit. The applicant will be responsible for providing sufficient information to demonstrate to Council's satisfaction that the proposal is feasible, can be built to current standards and specifications, will allow for suitable and safe access for inspection and maintenance, and will meet the requirements as specified below.</p> <p>A proposal to modify Council's drainage system will not be approved if it is determined that the modification will negatively impact the system or Council's ability to maintain the system.</p> <p>Any approval to modify Council's drainage system</p>

	<p>shall be subject to conditions imposed by Council under Development Consent and a separate Stormwater Drainage application must be lodged as required in accordance with Section 68 of the Local Government Act 1993 and Section 138 of The Roads Act 1993. See Section 5.5 for more information regarding this application process.</p> <p>Typically a concept design is to be prepared for Council's review and approval prior to development consent. This concept design will include:</p> <ul style="list-style-type: none"><li>• A detailed survey that includes all features including but not limited to property boundaries, kerb and gutter, road pavement, driveways, footpaths, buildings, walls, stairs and other structures, trees, finished ground surface types, the surrounding drainage system, service covers, pits and poles. The alignments and levels of all underground services in the vicinity of the Council stormwater pipe deviation works are also to be plotted on to the survey.</li><li>• A peg-out survey of the Council Stormwater pipe of an extent as specified by Council will need to be undertaken. The pipe will need to be physically located by careful excavation or by a professional service locating contractor. The alignment of the pipe, level of the pipe and confirmation of its size will need to be identified and surveyed and a copy of this peg-out survey forwarded to Council. The peg-out is to show the width of the pipe (to scale). It is likely that the applicant may need to engage a professional service-locating contractor in liaison with their surveyor to meet this requirement.</li><li>• A full scaled long section of the proposed stormwater pipe, indicating the existing surface levels, design levels of the pipe, surface and invert levels of all pits, location of all stormwater pits and the location and level of all service lines that are in the vicinity of the works. This long section will need to show that the pipe can be installed with adequate clearances from all existing underground service lines. These clearances are to be as specified by the relevant service providers.</li><li>• The design alignment of the proposed</li></ul>
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		<p>works and details of proposed pipe material, size and class.</p> <ul style="list-style-type: none"> <li>• Locations of all stormwater pits and pit types proposed.</li> <li>• The minimum pipe size shall be 375mm (Class 4) laid with cover as specified by the manufacturer with a typical allowable minimum depth of: <ul style="list-style-type: none"> <li>➤ 600mm in road ways, driveways or other areas traversed by vehicles.</li> <li>➤ 400mm in areas that are not traversed by vehicles.</li> </ul> <p>The minimum pipe slope is to be 1%.</p> </li> <li>• Location and full dimensioning of existing or proposed easements.</li> </ul> <p>The design shall be in accordance with Council's required performance standards, as detailed in any Council construction specification supplied.</p> <p>The design will need to be accompanied by a Local Catchment analysis by a qualified Hydraulic Engineer that shows that the system designed will:</p> <ol style="list-style-type: none"> <li>(a) Have a capacity greater than the existing system that is being replaced; and</li> <li>(b) Meet the required design capacity as specified by Council. Council will typically require that the system's capacity meets or exceeds the 5% AEP event.</li> </ol> <p>In locations where high hazard flows will occurs in large storm events the system's capacity may need to be increased above the 5% AEP event. The designer will need to confirm with Council's infrastructure section the design requirement.</p> <ol style="list-style-type: none"> <li>(c) Will not increase or concentrate flooding on any private property (including the site being developed) or the road reserve. The supporting evidence is to include details and modelling of any surcharge that will occur at the downstream end of the proposed drainage system in cases where the new system has greater capacity than the existing downstream pipes.</li> </ol> <p>Council will review the concept design as part of the development application process. Note that at Council's discretion additional information including but not limited to the following may be required:</p> <ul style="list-style-type: none"> <li>• Flood modelling in accordance with Section</li> </ul>
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		<p>6.11 is to be prepared in conjunction with the concept design.</p> <ul style="list-style-type: none"> <li>• Dilapidation (CCTV) reports of the existing stormwater system.</li> <li>• Extended detailed surveys of the catchment or downstream areas.</li> <li>• Structural reports with respect to any impacts of the proposal on existing or proposed footings.</li> <li>• An arborist's report with respect to the impact of the proposed works on all trees in the vicinity of the works. The report may be required to detail work methods and setbacks required. The report will need to be prepared by an AQF5 qualified consulting arborist.</li> <li>• A full Detailed Stormwater Plan prior to a development consent in cases where a concept design does not satisfy Council regarding the proposal's feasibility and / or suitability.</li> </ul> <p>All costs associated with this exercise must be borne by the applicant.</p>
33	5.4 Connection to Council's Trunk Drainage System	<p><b>Description of change</b> Add clarification that works impacting on Council's public drainage infrastructure requires in-principle approval prior to approval of any application for works where this is required.</p> <p><b>Proposed new wording</b> In instances where a direct connection to Council's drainage system is proposed this will need to be approved in concept during the development assessment. If the connection is considered appropriate and feasible at the time of development consent an approval for the connection is still required through the Stormwater Drainage application process, See Section 5.5 regarding this application process.</p> <p>All connections to Council systems must be undertaken in a manner approved by Council's Assets and Infrastructure engineers prior to the determination of a Development Application or Complying Development Consent.</p> <p>Plans and specifications must be provided to Council. Inspection must be carried out by Council's works representative. Approval for a</p>

		<p>connection cannot be provided by an external certifier. Council's required performance standards, as detailed in any Council construction specification supplied must be adhered to.</p> <p>The following requirements for direct connections to Council's drainage system apply:</p> <ul style="list-style-type: none"> <li>(a) A connection from a single residential dwelling or dual occupancy may generally be made with a proprietary saddle slope junction to an existing Council pipe.</li> <li>(b) Any connections from any other multi dwelling residential developments, commercial or industrial developments will require the installation of a new pit to Council's requirements. If a connection is being made at the roadway Council will typically require the installation of a standard grated kerb inlet pit with a 2.4 metre (overall) lintel.</li> <li>(c) The invert of the connecting pipe is to be at or above the top third of the Council pipe or culvert, or at a level approved by Council.</li> <li>(d) For both the above connection types the connecting pipe is to finish flush and not to protrude into the Council pit or pipe.</li> </ul>
34	5.5 Stormwater Drainage Application and Assessment Process	<p><b>Description of change</b> Requirement added that vehicle loadings must be appropriately incorporated into the design.</p> <p><b>Proposed new wording</b> Access cover and grate details including load class rating. All accesses within areas that are or may be subject to vehicular loadings will be required to be a minimum Load Class D. For other areas a minimum Load Class B will normally be acceptable.</p>
35	5.7 Development Adjacent to Council Drains or Easements	<p><b>Description of change</b> Insert clarification that registered survey is required to carry out peg-out surveys and to add details of information required for existing infrastructure condition and adequacy investigations.</p> <p><b>Proposed new wording</b> In respect to all footings and other load bearing structures proposed:</p> <ul style="list-style-type: none"> <li>(a) They shall be completely outside of any drainage easements either existing or required to be created prior to the finalisation of the development; and</li> </ul>

		<p>(b) Structural design and certification is to be prepared that certifies that the zone of influence of all footings and other load bearing structures will not impart loading upon the Council stormwater system. Certification to this effect will be required both at the design stage and upon completion of construction.</p> <p>Note that other requirements including but not limited to the following are enforced by Council. These requirements would typically need to be met prior to the development consent:</p> <p>(a) A peg-out survey of the Council Stormwater pipe to determine its location for its full extent within the property (or as otherwise specified) will need to be undertaken and prepared by a registered surveyor.</p> <p>(b) The pipe will need to be physically located by careful excavation or by a professional service locating contractor at the property boundaries and at changes of direction or junctions of the system. The alignment of the pipe, level of the pipe and confirmation of its size will need to be identified and surveyed and a copy of this peg-out survey forwarded to Council. The peg-out is to show the width of the pipe (to scale). This peg-out will need to be plotted onto architectural and stormwater plans. It is likely that the applicant may need to engage a professional service-locating contractor in liaison with their registered surveyor to meet this requirement.</p> <p>(c) A pre-development dilapidation report is required and will include CCTV footage of the full extent of the Council stormwater pipe within the property (or as otherwise specified). The dilapidation report is to include CCTV footage &amp; condition reporting for the full extent of the pipe within the completed route, and is to include the inspection and notation of all visible defects and joints along the pipe and photographic evidence with drainage pit depths, size etc. An industry based specialised contractor experienced in conducting CCTV reporting/conditioning that can access the pipe and provide suitable quality footage with pdf and electronic files, will need to be engaged.</p>
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36	6.6 Flood Risk Precincts	<p><b>Description of change</b> Figure 1 amended to include velocity and depth relationship chart (for the calculation of flood hazard and risk).</p> <p><b>Proposed new wording</b> Nil.</p>
37	6.12 Flood Gate	<p><b>Description of change</b> Inclusion of flood gate option to Policy for circumstances where driveway cresting is inadequate to protect basements from inundation on flood prone land.</p>

		<p><b>Proposed new wording</b></p> <p><b>6.12 Flood Gate</b></p> <p><b>6.12.1 Purpose</b></p> <p>Flood affected development requires flood protection for events up to and including the 1% AEP with flood related development controls, namely the raised habitable floor levels and raised basement car park entry levels to flood planning level (FPL).</p> <p>However, as basement car parks levels are situated lower than habitable floor levels and below the flood planning level, these may become flooded in rarer flood events. Thus, there is a need for further protection of basement areas against inundation of the basement car parking area by the provision of a flood gate located across the driveway ramp in certain circumstances.</p> <p>The rationale behind flood gate requirement is to provide a means by which floodwater can be prevented from reaching the basement in rarer but possible flood scenarios leading up to the PMF.</p> <p>Where proposed and required, the gate is to be permanently fitted at the driveway entrance to ensure that response time is minimal. The use of a flood gate is to be used to minimise flood damage to both the basement and parked vehicles in the basement from flood water inundation. A robust on-going operation and maintenance plan is required to be in place and must be implemented throughout the development life cycle.</p> <p><b>6.12.2 Requirements</b></p> <p>Where basement ramps are proposed within areas affected by 1% AEP and PMF flood events, or are in close proximity of overland flow systems, a creek or an open drain, protection of basement areas from inundation is not always possible through the use of basement ramp crest heights.</p> <p>To manage the risk for floods above the 1% AEP level in such circumstances, a flood gate may be installed subject to the following requirements to ensure appropriate protection of people and property from flood water inundation:</p> <ol style="list-style-type: none"> <li>1. The Flood gate should be installed along the basement access ramp.</li> <li>2. The ramp crest must be set at the FPL (Flood Planning Level)</li> <li>3. The flood gate is to have a minimum gate height of 1200mm.</li> <li>4. The Flood Gate is to be operable 24 hrs/365 days a year.</li> </ol>
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		<ol style="list-style-type: none"> <li>5. Flood Gate design details, including an operation and maintenance plan prepared by a qualified Civil/hydraulic Engineer must be submitted accompanying applications proposing a flood gate.</li> <li>6. Sufficient flood warning systems including signages are to be provided at noticeable locations.</li> <li>7. The flood gate must be installed along ramp crest of the basement driveway to prevent direct entry of floodwater into the basement.</li> </ol> <p>Following concept approval of a flood gate installation at Development Application stage, full installation and design details will be required to be submitted at Construction Certificate stage.</p> <p>Certification of installation and the details of the installation, design, and operation and maintenance plan will be required to be provided to Council for record keeping prior to the release of an Occupation Certificate.</p>
38	6.13 DRAINS Model requirements	<p><b>Description of change</b></p> <p>Detail included to clarify the modelling tools to be used and the specifications for the use of this specific tool.</p> <p><b>Proposed new wording</b></p> <p><b>6.13 DRAINS Model Requirements</b></p> <p>DRAINS models are to be utilised to undertake drainage investigation and design. It is a public domain modelling tool and requires minimal data entry and is consistent with Council's drainage database.</p> <p>The following are the minimum requirements for DRAINS Modelling:</p> <ol style="list-style-type: none"> <li>(a) Use the latest version of DRAINS model software.</li> <li>(b) DRAINS model is to be run in the standard hydraulic mode with all required storm events and durations.</li> <li>(c) Apply Council's blockage policy for inlet pits. Blockage factors of 0.5 and 0.2 are to be applied for sag pits and on-grade pits respectively.</li> <li>(d) Standard Drains pit inlet capacity curves shall be used wherever appropriate. For non-standard pit, inlet capacities should be derived based on pit lintel and grate openings outlining the calculation and justification for the adopted inlet capacities.</li> <li>(e) The time of concentration (Tc) can be calculated using the kinematic wave</li> </ol>

		<p>equation from AR&amp;R (1987) with suitable surface resistance coefficients.</p> <p>(f) The flow path length, L is the distance from the furthest point of the site to the exit to Council's stormwater drainage system. This length may be modified by the development either by piping, paving, or redirecting.</p> <p>(g) The minimum time of concentration should not be less than 5 minutes for the total flow travel time from any catchment to its point of entry into the drainage network. The maximum time of concentration in urban areas shall be 20 minutes unless sufficient evidence is provided to justify a greater time.</p> <p>(h) Fraction impervious value for existing residential development is to be considered 70% as minimum.</p> <p>(i) Pipe Roughness/Friction - A default value of 0.6mm, for old (existing) pipes, is to be adopted within the DRAINS model. A Colebrook-White value of 0.3mm should be used when modelling new pipes during the concept design phase.</p> <p>(j) Pit Pressure Loss Coefficients – Queensland Urban Drainage Manual (QUDM) methods can be utilised, as automated in DRAINS. However, Council's understanding is that the QUDM method is not always appropriate in the assessment of existing urban drainage systems. Accordingly, should the QUDM method be adopted, sensitivity checks at locations where the networks are sensitive to head-loss must be undertaken.</p> <p>(k) Where Ku values are greater than 4 in the DRAINS model, sensitivity checks are to be undertaken and the use of a higher Ku value justified to Council; Council's preferred method of sensitivity assessment is to refer to the "Missouri Charts".</p> <p>(l) Downstream model boundary should be extended sufficiently downstream of the study area boundary so that backwater effects from the boundary condition have minimal impacts on hydraulic grade line.</p> <p>(m) Sensitivity analyses shall be carried out to assess how much influence the model parameter values have on the results. The principal parameters are rainfall losses, catchment storage and lag, friction, energy losses and pipe roughness. The sensitivity of the model results to downstream boundary conditions shall also be tested.</p>
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**Proposed new wording****6.14 TUFLOW Model Requirements**

Following are the minimum requirements for TUFLOW 1D/2D Fixed Grid Hydraulic Modelling application in Urban Areas:

1. TUFLOW Version  
The latest version of TUFLOW model to be used (current version 2020);
2. Digital Elevation Model (DEM)  
Study area DEM for the study area to be developed using ALS data and/or site survey data;
3. Grid Size  
Model grid size is to represent the flow behavior to be modelled in an urban environment, with the consideration of narrow overland flow paths, such as between building and permanent obstructions. One meter grid size is recommended to achieve appropriate results (unless a larger grid size justified);
4. Flow path Obstructions and Constrictions  
Obstructions across a flow path, such as buildings, sheds, fences and road embankments etc. are to be satisfactorily incorporated in the model with reference to the recent physical modelling undertaken as part of Australian Rainfall & Runoff - Revision Projects and Document Updating Project 15 - Two-Dimensional (2D) Modelling in Urban Areas.
5. Modelling Fences  
Standard approach to be used in modelling Fences located within flow paths. Refer to TUFLOW User Manual for further information.
6. Downstream Boundary  
Downstream boundary conditions in TUFLOW model may be defined using one of flowing approaches:
  - (a) Assigning a water level versus flow curve (HQ Curve); or
  - (b) Assigning a water level versus time curve (HT Curve);

The available hydraulic models from previous studies may be used to obtain these relationships for the drainage catchments.

		<p>Model boundary should be extended sufficiently downstream of the study area boundary so that backwater effects from the boundary condition have minimal impacts on predicted flooding behaviour. A sensibility analysis is required for the model to be acceptable.</p> <p>7. Upstream Flow Boundary For single lot developments hydrograph generated using standard procedure at the downstream site boundary has to be applied as upstream flow boundary.</p> <p>8. Initial Water Level (IWL) A constant water level can be set up as the IWL. Allocated IWL is to be commensurate with the starting water level of downstream water level boundaries.</p> <p>9. Critical Duration Developed model shall be run for a range of storm durations sufficient to identify the critical duration.</p> <p>10. Design Events Minimum 1% and 5% AEP design storm event results for existing and developed conditions are run and satisfactorily documented in a report. Any recommended flood management measures identified are also to be modelled and comparison of results in terms of flood impacts shall be reported.</p> <p>11. Cumulative Mass Error It is to be demonstrated that the TUFLOW model is fit for purpose through the assessment of the allowable mass balance error percentage values as follows; (a) All three Cumulative Mass Error percentage values such as for the overall model, for all the 2D domains and for any 1D domains should be within a <math>\pm 3\%</math> to <math>\pm 5\%</math> limit. The model will not be accepted by Council where the Mass Error is outside the above specified range.</p> <p>12. Modelling Results and Flood/Overland Flow Path Mapping: (a) Cut off depth of 0.1m to be used for mapping flood extents.</p>
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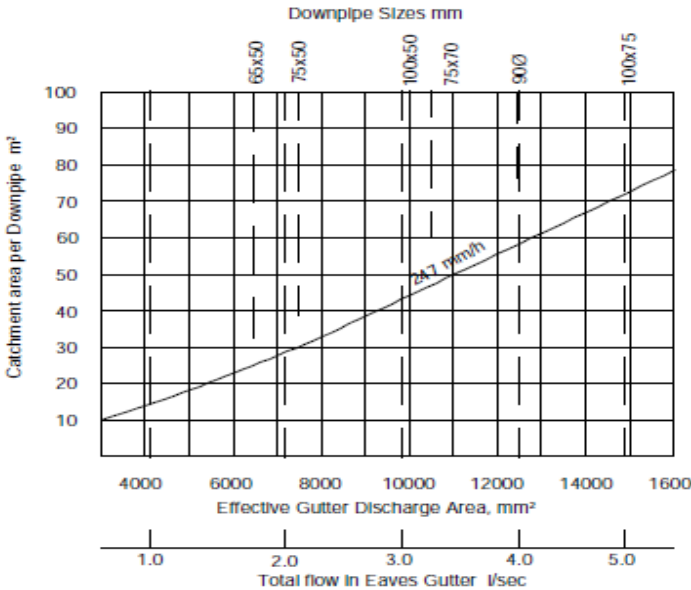
		<p>(b) At least 0.2m contour intervals to be used in flood level and flood depth mapping.</p> <p>(c) Existing and developed scenario flood contours and flood levels (mAHD) must be clearly presented in a more readable format.</p> <p>13. TUFLOW Input and Output Files Requirements</p> <p>TUFLOW input files and folders could be corrupted or missed while manually compiled and copied on USB. In the interest of copying the complete set of input and output files without any corruption it is recommended that following procedure is followed:</p> <p>(a) All the model files be copied using the in-built 'copy' function in TUFLOW, as described under TUFLOW Manual. This ensures that all input files that are necessary to run the model are copied into one folder;</p> <p>(b) Any files that are read in as 'mid' rather than 'mi' or 'mif', the 'mif' file corresponding to that 'mid' file will also need to be manually copied into the folder;</p> <p>(c) Any file read as binary XF file corresponding original input data file need to be manually copied into the folder;</p> <p>(d) In addition to the input files, a complete set of output files are to be provided for all the scenarios/options run to ensure that the same results are produced when the files are rerun;</p> <p>14. TUFLOW Modelling Quality Assurance Log</p> <p>(a) The consultant is to use a modelling log to maintain the records of model development, traceability and quality assurance. The format of the modelling log is at the consultant's discretion. However, a spreadsheet should be developed for use as a modelling log;</p> <p>(b) Typical details to be entered into the log are:</p> <ul style="list-style-type: none"> <li>Names of TUFLOW simulation control files;</li> <li>Date of simulation;</li> <li>Details of the event modelled</li> </ul>
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		(duration, recurrence interval, etc.); (c) Modelling log is to be submitted with the final model;
40	Appendix A12 – Design Guide for Charged Drainage Systems	<p><b>Description of change</b> Details of requirements added to outline submission requirements and design specifications to be considered.</p> <p><b>Proposed new wording</b> <b>APPENDIX A12 - Design Guide for Charged Drainage Systems</b> Stormwater Management, the design of a charged drainage system must be completed in full with the Development Application Submission. The following information is provided to assist in preparing this design and ALL parts must be completed.</p> <p><b>1. Prerequisite Information</b> This type of system:</p> <ul style="list-style-type: none"> <li>• Is ONLY permissible for single occupancy and alterations and additions.</li> <li>• Will only be considered as a last resort and letters from adjoining property owners indicating a refusal to grant a drainage easement MUST accompany the application. The letter must indicate that a reasonable amount of compensation has been offered for a drainage easement.</li> <li>• Must have a minimum of 1.8 metres between the roof gutters and the front boundary of the site.</li> <li>• Must have a fall from the front boundary to the kerb line.</li> <li>• Will only be permitted if there are no drainage problems downstream from the site.</li> </ul> <p><b>This MUST be checked with the Council before proceeding and may require an analysis of the downstream kerb capacity to be undertaken.</b></p> <p><b>2. Submission</b> The following information is required to be provided on or with the application and must be prepared by a suitably qualified Hydraulic Engineer.</p> <ul style="list-style-type: none"> <li>• All plans must be to mAHD levels.</li> <li>• A roof/site plan clearly showing catchment areas, direction of flows in gutters, and the location and sizes of all downpipes, pipes,</li> </ul>

		<p>pits, and discharge point.</p> <ul style="list-style-type: none"> <li>• Details of the gutter type, capacity, and gutter guard system to be used.</li> <li>• Calculations for: gutter sizing, Downpipe sizing, Pipeline sizing including hydraulic losses on pipe system</li> <li>• A longitudinal section of the pipe system showing <ul style="list-style-type: none"> <li>⇒ Gutter levels</li> <li>⇒ Cleaning eye / pit levels</li> <li>⇒ Isolation pit at boundary with invert and surface levels</li> <li>⇒ Location and levels of any services in footpath</li> <li>⇒ Discharge point</li> <li>⇒ Pipe sizes, capacity, and design flows in each section.</li> </ul> </li> <li>• Calculations for any on site disposal system that may be required to drain paved areas that cannot be directed to the charged system.</li> <li>• Detail drawings of pits, gutters, and dispersal system if included.</li> </ul> <p><b>NOTE:</b> A Positive Covenant will be required to be registered against the property title to ensure the ongoing maintenance of the system. This will be required prior to the issue of the Occupation Certificate.</p> <p><b>3. Checklist for Charged Drainage System submissions to the Georges River Council</b></p> <ol style="list-style-type: none"> <li>1. Letter(s) from adjoining owners (see sample letter from ATTACHMENT A below)</li> <li>2. Hydraulic calculations submitted</li> <li>3. Catchment areas detailed.</li> <li>4. Gutters designed for 1 in 100-year storm event.</li> <li>5. Downpipes sized</li> <li>6. Details of gutter guard system included</li> <li>7. Detail of cleaning pit included</li> <li>8. Detail of isolation pit included</li> <li>9. Services in footpath located and shown on plans</li> <li>10. Detail of any on site dispersal shown.</li> <li>11. Details of any on-site stormwater detention system if applicable</li> <li>12. Details longitudinal sectional information with pipeline chainage, ground surface/invert/HGL levels in the charged line up to street gutter connection where a</li> </ol>
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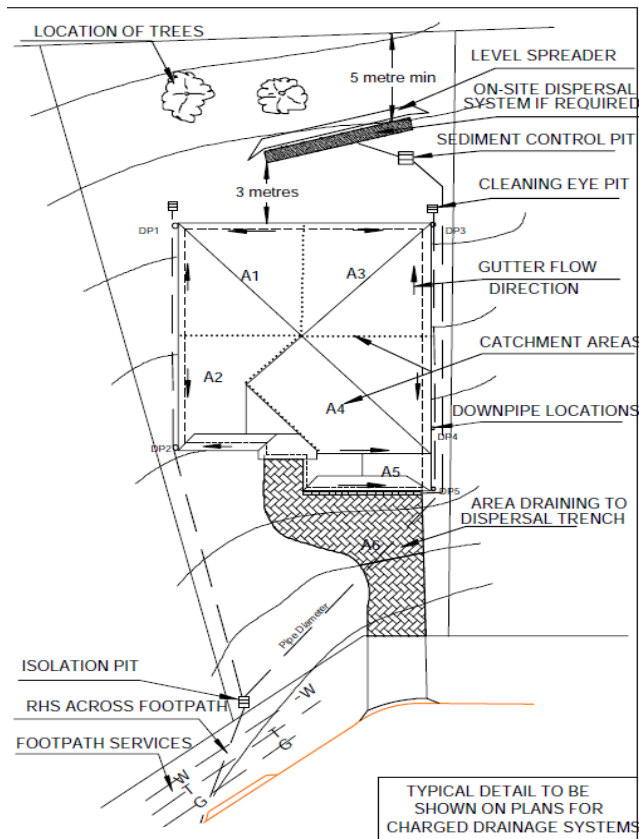


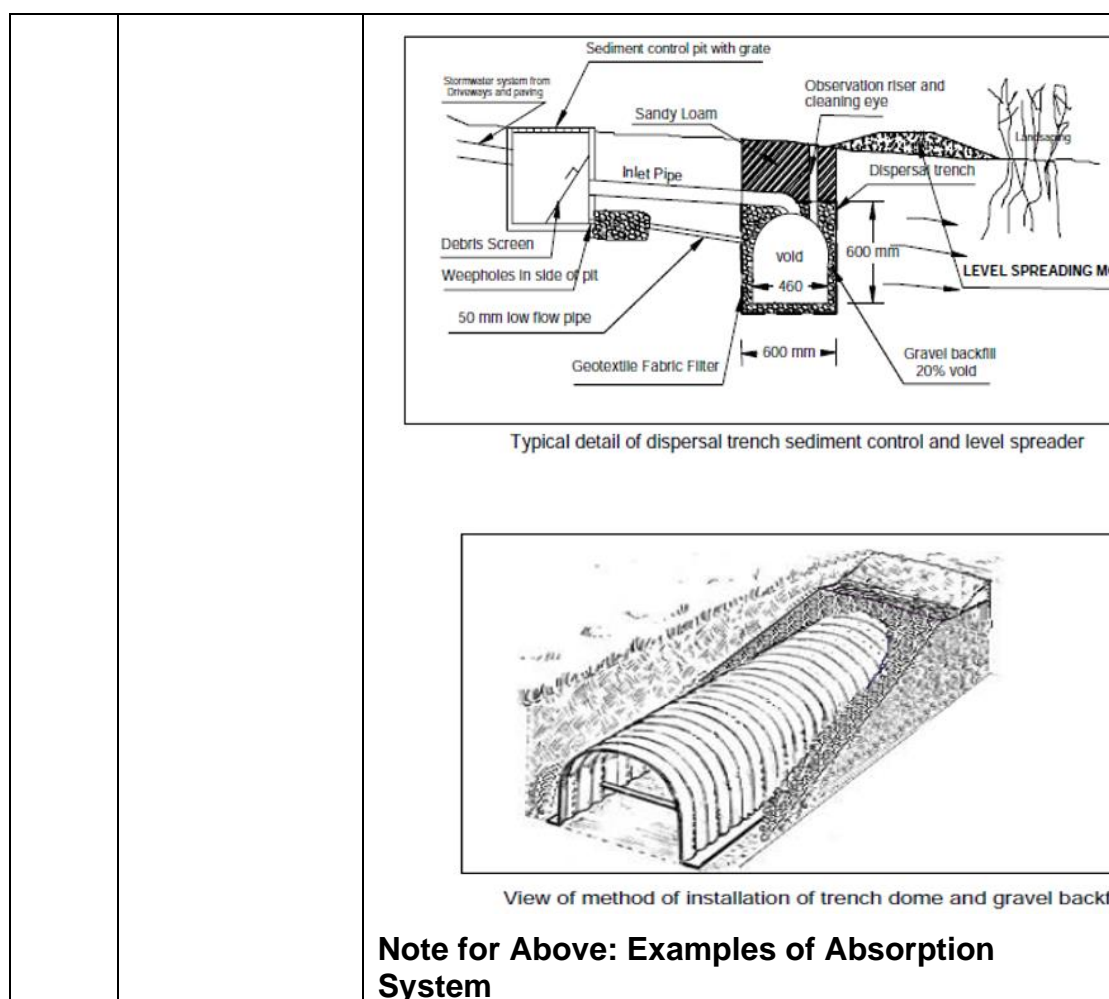
gravity drainage is required from the boundary pit. DRAINS model output long section is not acceptable. The plan and longitudinal section must document very clearly and legibly existing ground levels and finished ground levels within frontage areas as well as pipe alignment up to boundary pit then leading to street gutter connection. Note: these levels are critical information to be presented in the plan and must be consistent with the survey, drainage and architectural plans which need to be demonstrated.



Eave Gutter and Downpipe Sizing Chart (As per Figure 5.1 of AS 2180 – 1986)

4. Typical Details are Presented Below:





## CONCLUSION AND NEXT STEPS

17. If the amended draft Policy is endorsed, the draft will be publicly exhibited for a period of 28 days in accordance with Council's Community Engagement Strategy. This will involve informing the community of the amendments in the local newspaper and via Council's Your Say website. During the exhibition period, targeted consultation will occur with key local industry professionals and customers such as architects, builders and certifiers to obtain their feedback on the amendments to the draft Policy.
18. Following on from this exhibition period, all received submissions will be reviewed and considered. A further report to Council will then be provided reporting on these submissions, amendments to the draft policy based on issues raised in submissions and seeking adoption of the Policy.

## FINANCIAL IMPLICATIONS

19. Within budget allocation.

## RISK IMPLICATIONS

20. No risks identified.

## FILE REFERENCE

20/1457

## ATTACHMENTS

Attachment 1  Stormwater Management Policy - Updated 29-5-23



# STORMWATER MANAGEMENT POLICY

May 2023

## POLICY ADMINISTRATION

<b>Dates</b>	Policy approved 08/04/2021 (Version 1.1) This Policy is effective upon its approval. Policy is due for review 07/2023
<b>Approved by</b>	Council Meeting 26 June 2023 (Version 1.2) General Manager 08/04/2021 which includes minor amendments to Appendix A1 (Version 1.1) Council Meeting 27/07/2020 (Version 1)  Refer to Version Control Table for further details (page 76)
<b>Exhibition Period</b>	Version 1 previously exhibited 1 February 2020 - 13 March 2020
<b>Policy Owner</b>	Manager Development and Building Environment and Planning Directorate
<b>Related Documents</b>	<ul style="list-style-type: none"> <li>• Georges River Council (2018) OSD Policy Review for Georges River Council (Anstad Pty Ltd)</li> <li>• Georges River Council DA Procedure – Stormwater Drainage from Low Level Properties</li> <li>• Georges River Council – 2016 Overland Flow Flood Study for Hurstville, Mortdale and Peakhurst Wards (SMEC and Catchment Simulation Solutions)</li> <li>• Kogarah Council (2009) Kogarah Bay Creek Risk Management Study and Plan (Webb, McKeown &amp; Associates)</li> <li>• Kogarah Council (2011) Poulton Park Overland Flow Risk Management Study and Plan (Cardno)</li> <li>• Kogarah Council (2007) Beverley Park Overland Flow Risk Management Study and Plan February 2007, (Cardno Lawson Treloar)</li> <li>• Kogarah Council (2011) Moore Reserve Catchment Overland Flow Study February 2011 (BMT WBM)</li> <li>• Geoscience Australia Australian Rainfall and Runoff, latest version (available from <a href="http://www.arr.ga.gov.au">www.arr.ga.gov.au</a>)</li> </ul>
<b>Appendices</b>	<p>APPENDIX A1 - DA Stormwater and OSD Documentation Checklist</p> <p>APPENDIX A2 - Stormwater Concept Plan (SCP) Preparation Flow Chart</p> <p>APPENDIX A3 - Stormwater Detailed Plan (SDP) Preparation Flow Chart</p> <p>APPENDIX A4 - Certificate of Stormwater Compliance for On-Site Stormwater Management System</p>

	<p>APPENDIX A5 - Standard wording for Restriction to Use of Land and Positive Covenant for On-Site Stormwater Management System</p> <p>APPENDIX A6 - Standard wording for Restriction to Use of Land and Positive Covenant for Overland Flow Path</p> <p>APPENDIX A7 - Calculating % impervious area of a site for determination of OSD Storage requirements</p> <p>APPENDIX A8 - Design Rainfall Data</p> <p>APPENDIX A9 - Typical warning signs</p> <p>APPENDIX A10 - Flood Compatible Materials</p> <p>APPENDIX A11 - Policy for Stormwater Drainage from Low Level Properties</p> <p>APPENDIX A12 - Design Guide for Charged Drainage Systems</p>
<b>References &amp; Legislation</b>	<ul style="list-style-type: none"> <li>• Australian Building Codes Board National Construction Code – latest edition (available from <a href="http://www.abcb.gov.au">www.abcb.gov.au</a>)</li> <li>• Landcom, New South Wales (2004) Managing Urban Stormwater: Soil and Construction, 2004 (Blue Book), Landcom</li> <li>• New South Wales Government (2005) Floodplain Development Manual</li> <li>• Standards Australia (2018) AS 1657:2018 Fixed platforms, walkways, stairways and ladders - Design, construction and installation</li> <li>• Standards Australia (2009) AS/NZS 2890 (Set):2009 Parking Facilities Set</li> <li>• Standards Australia, AS/NZS 3500.3:2018 (As Amended) – Plumbing and Drainage - Stormwater Drainage</li> <li>• Standards Australia (2008) HB 230—2008 Rainwater Tank Design and Installation Handbook</li> </ul>
<b>Document Identifier</b>	<p>Policy #: Pol-073.01.01</p> <p>Doc No.: D20/181037</p>
<b>Breaches of Policy</b>	<p>Breaches of any Policy will be dealt with and responded to in accordance with adopted codes and/or relevant legislation.</p>
<b>Record Keeping</b>	<p>All documents and information obtained in relation to the implementation of this Policy will be kept in accordance with the NSW State Records Act 1998, Georges River Council's Corporate Records Policy and adopted internal procedures.</p>

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## 1. INTRODUCTION

### 1.1 About This Policy

This Policy provides detailed information in relation to on-site stormwater management, and details the allowable management options and design requirements applying in the Georges River Council Local Government Area. The Policy includes requirements with respect to development in flood affected areas and requirements with respect to any works that will impact on Council or other public authorities.

The developer is responsible for ensuring any development proposal complies with this Policy along with relevant Australian Standards.

Urban development increases the area of impervious surfaces such as roofs, footpaths and other paved areas, which causes significant alteration to a site's hydrological cycle. Impervious surfaces act to reduce the quantity of rainwater that can infiltrate into the soil, thereby causing most rainfall to become runoff. This change results in increasing peak flow rates during flood events and increasing pollutant loads in stormwater runoff. In order to manage the potential impact of increasing impervious areas due to urban development, the following principles are embedded in this document.

- Protect quality and ensure adequate management of the quantity of water conveyed through the receiving trunk drainage system and waterways.
- Ensure run-off draining from urban developments does not adversely impact water quality.
- Reduce peak flows from developments by on-site detention measures.
- Conserve water and reduce mains water consumption.
- Prevent the risk of flooding increasing within the site or at any adjacent or downstream properties.
- Minimise public drainage infrastructure costs.

The implementation of the requirements of this document will help to achieve the above water cycle principles.

These principles collectively call for an enhanced or more considered approach to the integration of land and water planning at all levels of the urban development process. In this context, Georges River Council requires that documentation, including architectural, landscape and stormwater management plans, shall be developed in an integrated manner.

This document adopts Water Sensitive Urban Design (WSUD) principles in managing the water cycle in the urban environment of the Georges River Council area. The objective of WSUD is to maintain or to replicate (as practically as possible) the predevelopment water cycle of the development site. This is primarily undertaken through the use of design techniques and the implementation of measures that manage the impact of increasing impervious areas in a sustainable way.

This Policy is intended to provide guidance to residents, professionals, developers, private certifiers and Council staff regarding the selection, sizing and assessment of management measures to achieve defined water cycle objectives and performance criteria.

### 1.1A Savings Provisions Relating to Development Applications

If an application for development under the Environmental Planning and Assessment Act 1979 has been made before the commencement of this Policy in relation to land which this Policy applies and the application has not been finally determined before that commencement, the application must be determined as if this Policy had not commenced.

### 1.2 Objectives of this Policy

**The Policy is intended to result in developments that:**

- (a) Reduce the peak flows from the site that passes through Council's drainage system.
- (b) Reduce the likelihood and severity of downstream flooding.
- (c) Do not divert flows from one drainage sub-catchment to another, unless it is proved by a qualified hydraulic engineer that there are no adverse effects to the receiving sub-catchment. The levels of the site may not be changed to redirect stormwater to another drainage sub-catchment.
- (d) Minimise run-off volumes and replenish ground water.
- (e) Provide drainage systems that integrate into Council's existing drainage network with minimal impact on existing users.
- (f) Provide drainage systems that are low maintenance and long lasting.
- (g) Prevent, or at worst minimise, the release of pollutants from the developed area.
- (h) Provide drainage systems that incorporate rainwater tanks or other systems to reduce the development's reliance on mains supplied water.
- (i) Provide drainage systems that improve the natural environment, or at worst have nil, or minimal impact, on the surrounding environment

**The Policy is also intended to:**

- (a) Encourage the production of high quality drainage plans that can be quickly assessed.
- (b) Provide clear understanding of the information and documents that must be submitted with the drainage plans.

### 1.3 Scope of this Policy

This Policy is applicable to all development proposals within the Georges River Council Local Government Area. It is applicable to both public and private land.

Large developments involving site areas in excess of 2000m<sup>2</sup> require detailed water quality modelling. Water quality requirements are detailed in Section 7.

### 1.4 Exempt and Complying Development

The requirements of this Policy are applicable for all types of development, including but not limited to development applications lodged with Council, Complying Developments, Exempt Developments and State Significant Developments.

With respect to Complying Development, in certain circumstances the applicant will be required to lodge plans and associated information with Council and receive written approval

from Council's Development Engineers prior to a certifier issuing a Complying Development Certificate. This Council approval will typically only be required for proposals that may:

- (a) Impact on Council's stormwater infrastructure that is either within or in close vicinity to the proposed development, and/or;
- (b) Involve a proposed method of disposal of stormwater from the site is that is identified by Council as having the potential to cause or aggravate flooding conditions affecting adjacent or downstream properties.
- (c) Involve low level property as defined in Section 1.5 of this document.

The types of proposals that will require the above-mentioned approval from Council's development engineers are identified in Section 2.3. The applicant, developer and certifier are ultimately responsible for ensuring that this requirement has been met.

It is noted that that failure to meet this requirement could incur additional costs to the applicant and delays during the construction works. Such a failure may also lead to legal action being taken against the applicant, developer or any associated persons or companies.

## 1.5 Definitions

Term	Meaning
<b>Above-ground OSD Storage</b>	A storage system for On-Site Detention (OSD), generally above-ground, where the volume is contained within an open area.
<b>Absorption System</b>	A method of disposal of stormwater run-off to a below ground storage to allow for infiltration into the underlying soil stratum. Note, these systems are often not feasible as the primary method of stormwater disposal from a site. Council does not allow these systems as the primary method of stormwater disposal from a site in some areas of the LGA. In other areas Council will allow their use subject to the applicant providing sufficient design and supporting documentation that the system will work effectively and not detrimentally affect any adjacent structures or properties. See Section 3.4.4 for further information.
<b>AEP - Annual exceedance probability</b>	The probability that a given rainfall intensity or depth or runoff flow rate or volume will be exceeded in any one year, expressed as a percentage.  <u>Note:</u> A 1% AEP event is equal to a 1 in 100 year event (or 100-year event).
<b>AHD - Australian Height Datum</b>	Is a common national plan of level corresponding approximately to mean sea level.
<b>ARI - Average Recurrence Interval</b>	Means 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 or with an annual exceedance probability of 5%. ARI is another way of expressing the likelihood of occurrence of a flood event.
<b>Basement Car Parking</b>	Refers to a car parking area wholly or partly accommodated underground, below a building.

<b>Below Ground OSD storage</b>	A below-ground structure constructed for storage of On-Site Detention (OSD). Is typically a concrete or masonry tank.
<b>Charged System</b>	A system consisting of sealed PVC downpipes and stormwater pipes that provides for the discharge of roof water to a point (eg. an isolation pit or the inlet of a water tank) at a level higher than the ground level at the downpipe.
<b>DCP - Discharge Control Pit</b>	A chamber that receives the majority of stormwater from a site and discharges it to the gutter or drain at a controlled rate not exceeding the PSD (Permissible Site Discharge).
<b>Design Floor Level</b>	Means the level specified in this Policy which applies to the relevant land use type within the relevant Flood Risk Precinct.
<b>ESD - Ecologically Sustainable Development</b>	Development practices using, conserving and enhancing natural resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be maintained or increased. A more detailed definition is included in the Environmental Planning and Assessment Act 1979 and Protection of the Environment Administration Act 1991.
<b>Effective Warning Time</b>	The time available after receiving advice of an impending flood and before the floodwaters prevent appropriate flood response actions being undertaken. The effective warning time is typically used to raise furniture, evacuate people and transport their possessions.
<b>Extreme Flood</b>	An estimate of the probable maximum flood (PMF), which is the largest flood likely to ever occur.
<b>Flood</b>	A relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and / or local overland flooding associated with major drainage as defined by the FMM before entering a watercourse, and/or coastal inundation resulting from super-elevated sea levels and/or waves overtopping coastline defences excluding tsunamis.
<b>Flood Awareness</b>	An appreciation of the likely effects of flooding and knowledge of the relevant flood warning and evacuation procedures.
<b>Flood Compatible Building Components</b>	A combination of measures incorporated in the design and/or construction and alteration of individual buildings or structures subject to flooding, and the use of flood compatible materials for the reduction or elimination of flood damage.
<b>Flood Compatible Materials</b>	Those materials used in buildings which are resistant to damage when inundated.
<b>Flood Evacuation Strategy</b>	The proposed strategy for the evacuation of areas within effective warning time during periods of flood as specified within any Policy of Council, the FRMP, the relevant State government disaster plan, by advices received from the State Emergency Services (SES) or as determined in the assessment of individual proposals.

<b>Flood Fringe Areas</b>	The remaining area of flood prone land after floodway and flood storage areas have been defined.
<b>Flood Storage areas</b>	Those parts of the floodplain that are important for the temporary storage of floodwaters during the passage of a flood.
<b>Floodplain</b>	(Being synonymous with flood liable and flood prone land) this is the area of land that is subject to inundation by the probable maximum flood (PMF).
<b>FDM - Floodplain Development Manual</b>	The document published by the New South Wales Government entitled "Floodplain Management Manual: the management of flood liable land April 2005".
<b>FRMP - Floodplain Risk Management Plan</b>	A plan prepared for one or more floodplains in accordance with the requirements of the FDM.
<b>FRMS - Floodplain Risk Management Study</b>	A study prepared for one or more floodplains in accordance with the requirements of the FDM.
<b>Floodway Areas</b>	Areas of the floodplain where a significant discharge of water occurs during floods. They are often aligned with naturally defined channels. Floodways are areas that, even if only partially blocked, would cause a significant redistribution of flood flow, or a significant increase in flood levels.
<b>Freeboard</b>	A factor of safety expressed as the height above the design flood level. Freeboard provides a margin to compensate for uncertainties in the estimation of flood levels across the floodplain, such as wave action, localised hydraulic behaviour and impacts that are specific event related, such as levee and embankment settlement, and other effects such as climate change.
<b>Gravity Drainage System</b>	One that consists of pits and pipes conveying roof and paving run-off with gravity fall.
<b>Habitable Floor Area</b>	<ul style="list-style-type: none"> <li>In a residential situation: a living or working area, such as a lounge room, dining room, rumpus room, kitchen, bedroom or workroom;</li> <li>In an industrial or commercial situation: an area used for offices or to store valuable possessions susceptible to flood damage in the event of a flood.</li> </ul>
<b>Hazard</b>	A source of potential harm or a situation with a potential to cause loss. In relation to this plan, the hazard is flooding which has the potential to cause harm or loss to the community.
<b>Hydraulic Grade Line Analysis</b>	A set of hydraulic calculations or software outputs defining the position of the peak hydraulic grade line (HGL) along a drainage pipe during storms of a given AEP. The HGL indicates the depth to which water will rise in the system, and the pressures on pipes.



<b>Inter-Allotment Drainage</b>	A system of stormwater pipes located within an easement through a property that receives stormwater from two or more development sites for connection to the external stormwater drainage network (a local or State Government authority).
<b>Infiltration</b>	The vertical movement of water through a permeable substance, such as sand or soil. The rate at which the flow occurs is dependent on the properties of the substance and the relative volume of voids (air spaces) that it contains. In the case of clay soils or sandstone, infiltration rates are extremely slow whereas in sandy soils the rate of infiltration may be much faster. Various underground systems include void type storage, trench type storage, and soak ways.
<b>LGA</b>	Local Government Area
<b>Local Overland Flooding</b>	Means inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.
<b>Low Level Property</b>	A property: <ul style="list-style-type: none"> <li>• That naturally falls away from the street frontage and / or</li> <li>• At which the ground levels at the property boundary at the street frontage are lower than the adjacent street kerb level.</li> </ul>
<b>Maintenance Schedule</b>	A set of operating instructions for prospective property owners or occupiers setting out the routine maintenance necessary to keep a site's stormwater system working properly.
<b>OSD - On-Site Stormwater Detention System</b>	A system of temporary storage of stormwater generated within a site so as to restrict the discharge leaving the site to a pre-determined rate.
<b>On-Site Stormwater Retention</b>	Procedures and schemes whereby stormwater is retained for on-site utilisation. They include various types of rainwater tanks and stormwater harvesting systems.
<b>Orifice</b>	Circular hole with sharp edges machined to 0.5mm accuracy in a corrosion resistant steel plate which controls the rate of discharge from the Discharge Control Pit of an On-Site Detention (OSD) System.
<b>Outbuilding</b>	A building which is ancillary to a principal residential building and includes sheds, garages, carports and similar buildings.
<b>Overland Flow Path</b>	The natural or formed route that stormwater runoff will take when it cannot enter the below ground stormwater system.
<b>Permeable</b>	A property of a porous material (or surface) that allows a liquid to flow through it.
<b>Policy</b>	Council's adopted Stormwater Management Policy.
<b>Positive Covenant / Restriction of Use</b>	A legal obligation placed on a property title requiring owners to repair and/or maintain a site's stormwater system or dedicated overland flow paths.

<b>Probability</b>	A statistical measure of the expected chance of flooding (see AEP and ARI).
<b>PMF - Probable Maximum Flood</b>	The largest flood that could conceivably occur at a particular location, usually estimated from probable maximum precipitation.
<b>PMP - Probable Maximum Precipitation</b>	The greatest depth of precipitation for a given duration meteorologically possible over a given size storm area at a particular location at a particular time of the year, with no allowance made for long-term climatic trends (World Meteorological Organisation, 1986. <i>Manual for Estimation of Probable Maximum Precipitation</i> , 2 <sup>nd</sup> edition, Operational Hydrology Report No. 1, WMO-No. 332, Geneva, ISBN 92-63-11332-2). It is the primary input to the estimation of the probable maximum flood.
<b>PSD – Permissible Site Discharge</b>	The maximum allowable discharge leaving the site in litres/second/hectare (L/s/ha), or in litres/sec (L/sec) when applied to a specific site.
<b>Qualified Stormwater Engineer or Stormwater Engineer</b>	A person who is a practising Civil Engineer registered on Engineers Australia's National Engineering Register (NER)) with competence in stormwater engineering.
<b>Reliable Access</b>	During a flood, the ability for people to safely evacuate an area subject to imminent flooding within effective warning time, having regard to the depth and velocity of flood waters, the suitability of the evacuation route, and without a need to travel through areas where water depths increase.
<b>Risk</b>	The chance of something happening that will have an impact. It is measured in terms of consequences and probability (likelihood). In the context of this plan, it is the likelihood of consequences arising from the interaction of floods, communities and the environment.
<b>SCP – Stormwater Concept Plan</b>	The conceptual layout of the site stormwater drainage management plan submitted with a development or subdivision <i>application</i> .
<b>SDP – Stormwater Detailed Plan</b>	A plan that includes and defines all designed components of the drainage system. The plan is of sufficient detail to allow for construction of the system. The design will ensure that all components of the system are functional and include structural certification for these.
<b>SDA – Stormwater Drainage Application</b>	An application required in addition to any development consent in accordance with Section 68 of the Local Government Act 1993 and Section 138 of The Roads Act 1993, for any proposed extension or modification of Council's stormwater system or direct connection to Council's stormwater system.
<b>SSR – Site Storage Requirement</b>	The minimum volume of OSD (in m <sup>3</sup> /hectare or in m <sup>3</sup> when applied to a specific site) required for storage to ensure that spillage will not occur when the stormwater outflow is restricted to the PSD.
<b>Survey Plan</b>	A plan prepared by a registered surveyor which shows the information required for the assessment of an application in accordance with the provisions of this Policy.

<b><i>Water Sensitive Urban Design</i></b>	A process of urban design for development or re-development that seeks to mimic the natural water cycle so as to create a sustainable development in terms of its treatment of stormwater, supply of water and conveyance of wastewater.
<b><i>Works as Executed (WAE) Plan</i></b>	<p>A plan showing the levels, dimensions and location of what is constructed. In the context of this Policy, the plan refers to the stormwater drainage system including any OSD system, and where applicable, any overland flow paths.</p> <p><b>Note:</b> The WAE Plan must be prepared by a registered surveyor and certification provided by a practising qualified Stormwater Engineer.</p>

## 1.6 Relationship to BASIX

BASIX applies to all residential dwelling types and is part of the development application process in NSW. There are BASIX requirements for water and energy usage and thermal comfort performance.

BASIX may require the installation of rainwater tank storage for reuse. This Policy specifies additional requirements that are independent of BASIX in order to achieve Council's required stormwater quantity and quality targets.

## 2. THE DEVELOPMENT ASSESSMENT PROCESS

This Section sets out the steps in the development assessment process from the Stormwater Concept Plan through the detailed design to the construction. It also provides a summary of requirements both at and after the completion of construction and final approval.

Council will assess stormwater and flood controls in accordance with the requirements of this Policy. In cases where a proposal deviates from the requirements of this Policy, but is shown to meet criteria including but not limited to all objectives defined in Section 1.2, Council may assess the proposal based on performance provisions meeting the objectives of the Policy.

### 2.1 Stormwater Concept Plan

A Stormwater Concept Plan is required to support the Development Application for the proposed development. The objective of the Stormwater Concept Plan is to identify the site's drainage constraints and to demonstrate that the proposed on-site stormwater management system can be integrated into the proposed site layout.

The Stormwater Concept Plan shall include:

1. A Survey Plan prepared by a registered surveyor showing boundaries, detail of existing features of the site including all buildings, other structures, trees, driveways, pathways, grass and landscaped areas, utility services within and in the vicinity of the site and in front of property (street), any easements, contours and spot levels.
2. A proposed layout of the site including location of all buildings, other structures, trees and landscaped areas, identifying all pervious and impervious areas as well as surface flow paths and the location of the proposed on-site stormwater management systems.
3. If the site is (wholly or partly) affected by local overland or mainstream flooding, locations of overland flow paths/ floodways, calculations of the peak 1% AEP (Annual Exceedance Probability, equivalent to 100 year ARI (Average Recurrence Interval)) flow rate and flood levels. Where flood studies have been completed by the Council, available information can be obtained on application to the Council.
4. Method of draining the site including the location of the connection to Council's stormwater system, if applicable. The location and method of discharge to natural areas such as bushland and waterways are to be identified.
5. Any existing or proposed Council or private drainage easements or stormwater infrastructure within or adjoining the site.
6. For any low-level property, where site stormwater disposal cannot be drained to the street frontage, then a drainage easement is required through adjoining downstream property(ies). Council requires that adequate arrangements have been made with documentary correspondence provided to demonstrate:
  - (a) That the applicant or proponent has contacted the owner of the property proposed to be burdened by the stormwater easement with an in-principle proposal for the creation of an easement, specifying the location of this, the width, drainage system design, and the final works required.
  - (b) That the adjoining burdened property owner has agreed, in principle to the proposal which shall be documented in the form of legal agreement prepared by solicitors, at full cost to the applicant.

In the absence of this documentation, Council cannot be satisfied that adequate arrangements with respect to site stormwater disposal have been made and would not therefore be able to approve the application.

7. Drawings to scale depicting the size and dimensions of drainage components including OSD tanks, rainwater tanks, absorption systems and overland flow paths.
8. On-Site Stormwater Detention System details including the storage location, dimensions, design levels of the storage including the orifice level, top water level and ground surface levels, cross sections, volume calculations and orifice size calculations and details.
9. A Soil and Water Management Plan is to be lodged with the Development Application. The plan is to detail the measures that will be provided to manage erosion, sediment control and water during development. The plan is to be consistent with the objectives and controls as detailed in Landcom, New South Wales (2004) Managing Urban Stormwater: Soil and Construction (the 'Blue Book').

Any proposal to use an absorption system as the primary method of stormwater discharge to Council must submit a Detailed Stormwater Plan and associated documentation including a geotechnical report for assessment prior to any development consent.

**Note:** Council will only consider proposals for absorption systems in locations as specified in Section 3.4.4.1 of this Policy. Systems will only be acceptable if it is confirmed in writing by Council's Development Engineers that the design meets the requirements of Section 3.4.4 of this Policy.

Aside from absorption systems, as stated above, a Stormwater Concept Plan that meets the requirements of this Policy will typically be sufficient during the development assessment stage. A Detailed Stormwater Plan prepared by a professional engineer specialising in hydraulic engineering shall be submitted for approval with the Construction Certificate to the Principal Certifier (PC).

However, at Council's discretion applicants may be required to lodge a Stormwater Detailed Plan, prior to development consent particularly for designs that include one or more of the following:

- On-Site Detention;
- A Charged Drainage System;
- Drainage to either an existing or proposed inter-allotment drainage system;
- A site identified as being flood affected.

## 2.2 Stormwater Detailed Plan

A Stormwater Detailed Plan is required to support the application for a Construction Certificate for a proposed development. The objective is to finalise the design of all components of the proposed on-site stormwater management system and provide a set of plans and details for construction purposes.

The Stormwater Detailed Plan shall include:

1. All information required for a Stormwater Concept Plan as stated in Section 2.1.
2. Any required additional calculations to support any variation to the approved concept design or detailed component design.
3. Design plans and supporting documentation showing:
  - (a) Location and layout of all buildings, other structures, driveways, impervious and landscaped surfaces.
  - (b) Location and extent (including cross sections) of storages, management measures and discharge control devices.
  - (c) Full OSD design including the OSD layout, proposed construction materials and detailed level design, and full orifice details. Calculations are to be included to show that the OSD storage provided is in accordance with the requirements of Section 4.6.
  - (d) Clear identification and quantifying of any impervious areas that bypass the OSD system and how these areas are to be drained.
  - (e) Hydrologic and hydraulic calculations for sizing management measures and estimating flow rates and velocities of runoff leaving the site under post development conditions.
  - (f) Catchments draining to proposed management measures.
  - (g) Maximum water surface levels and surcharge paths.
  - (h) Internal drainage system details including location of downpipes, surface channels, kerbs, pits, pipes and sub-surface drainage.
  - (i) Detailed roof drainage design including calculations.
  - (j) Invert and surface levels of pits, pipe sizes and gradients and finished surface levels of paved and landscaped areas.
  - (k) Floodway / flow path extent with levels shown on the plans. Information relating to overflow paths shall include contours of the land within which the overflow path will be located, overflow path cross sections and details of ground surfaces (such as surface types, e.g. grass).
  - (l) Fencing details and any openings details to allow for overland flow paths.
  - (m) Full details of any notification and warning signage required and details of its permanent fixing. See Appendix A9 for examples of standard warning signage.
4. Details of the connection to Council's drainage system including the location and levels of the point of connection (kerb, public or private pipe/pit or a natural area).
5. When the proposed development is located in a flood affected area, or discharges into a stormwater pipe, channel, or natural water body, a Hydraulic Grade Line Analysis that recognises the effect of downstream controls shall be provided. The 1% AEP flood levels of the external system are to be used for this purpose.
6. Location of drainage easements within or near the development site including any stormwater infrastructure details.

## **2.3 Requirements where Council approval of stormwater management design is required prior to release of a Complying Development Certificate.**

Prior to the release of a Complying Development Certificate, stormwater design details and plans must be lodged with Council, and the written approval of Council must be obtained where the following are proposed:

1. The property is low level as defined in this Policy and it is proposed to discharge a portion or all of the site's stormwater to the street gutter at the street frontage
2. It is proposed to discharge a portion or all of the site's stormwater directly into Council's pit / pipe drainage system. This includes Council's existing system or a proposed modification or extension to Council's system.
3. A proposal that includes development of a site that is burdened by a Council drainage easement.
4. A proposal for a site for which a current Council diagram requested through 'Dial Before You Dig' displays Council stormwater asset(s) for e.g. a pit and/or pipe within the property being developed, or at any location within 2 metres of the property.
5. An absorption system is proposed to drain the whole development or a portion of the development that is greater than 50 square metres.
6. The drainage system is proposed to be discharged to another authority's stormwater infrastructure, for example, a Sydney Water channel, pipe or culvert, a Road and Maritime Service owned street drainage on a State Road, or infrastructure within Railway Lands. In all of these cases the applicant will need to provide Council with evidence that the authority has reviewed and approved the proposed discharge into their system.

In the above circumstances, the applicant must receive written approval from Council's Development Engineers with respect to the proposal prior to a certifier issuing a Complying Development Certificate.

**Note:** Council's engineers may require additional design, information or reports including, but not limited to, peg-outs of stormwater infrastructure, CCTV of Council's drainage system, and flood modelling to allow for assessment of the proposal.

## **2.4 Post Development Approval Process**

### **2.4.1 Inspections on Private Property**

The developer is to liaise with the certifying stormwater engineer about the organisation of inspections through the construction process. They are to provide the engineer adequate access during the construction of the on-site stormwater management system and prior to filling, to check the general locations and size of pipes and any hidden elements of the system.

Final inspection shall be carried out by the certifying stormwater engineer prior to issuing the Compliance Certificate. This inspection is to be comprehensive and shall include checks that:

- (a) The method of disposal and the discharge connection from the site are in accordance with the approved stormwater plans.

- (b) On-Site Stormwater Detention systems are sized in accordance with the development consent.
- (c) Rainwater tank systems and connections from these systems for reuse have been installed and are compliant with BASIX requirements along with any additional requirements detailed in the development consent.
- (d) Any absorption systems are sized and have been constructed in accordance with the approved stormwater plans.
- (e) Pits and pipes are clean and are free draining, pipes are cut flush and do not protrude into pits and benching is provided at the bottom of pits.
- (f) Orifices are secure and correctly sized and located, and trash screens have been installed as detailed.
- (g) All design details are according to approved plans.
- (h) All roof and hard paved areas have been drained in accordance with the approved stormwater plans.
- (i) Any required warning signs are permanently fixed and detail the correct information.

#### **2.4.2 Works within the Public Road or Footway to install Piped Connection to the Street Gutter**

Most developments require a drainage connection to the street gutter located in the public road. Consequently, most development involves the carrying out of excavation or other work within the footway or carriage way of a public road (road reserve).

Work must not be carried out in a public road unless consent has been granted by the Council (or other relevant roads authority such as NSW Roads and Maritime Services) under the Roads Act 1993.

A person wishing to undertake such work must obtain a Road Opening Permit from the Roads Authority, usually Council, for routine works such as connection to the kerb and gutter across a nature strip for a single domestic drainage connection.

##### **Note that:**

- Private accredited certifiers do not have authority to grant consent under the Roads Act 1993.
- Approval for carrying out works in a public road or footway is granted separately to development consent or a Complying Development Certificate.
- Most developments require a Damage Deposit (Bond) to be lodged with Council prior to the issuing of a Construction Certificate to ensure the reinstatement and protection of Councils assets. A satisfactory final inspection of the public road including, but not limited to, the footway, footpath, kerb and gutter and road pavement will be required to be undertaken by a Council inspector prior to release of the damage deposit. This inspection will be undertaken after the issuing of an Occupation Certificate or Subdivision Certificate.
- Regardless of the controls set out in this section, any overriding requirements of the Roads Authority shall be met in accordance with the Roads Act 1993.



#### **2.4.3 Works on Council Stormwater Infrastructure**

Any modifications or connections to Council's Stormwater system (ie. the drainage pit / pipe system) are required to be assessed and approved by Council through the Stormwater Drainage Application process. An application is required in accordance with Section 68 of the Local Government Act 1993 and Section 138 of the Roads Act 1993.

This approval is granted separately by Council to a Development Application Consent or Complying Development Certificate.

If works are required in association with the development consent, the Stormwater Drainage Application approval will be required to be obtained prior to the issuing of a Construction Certificate.

See Section 5 for further details for this application process including the requirements for inspections.

#### **2.4.4 Variations to the Approved Stormwater Design**

Any proposed modification to the design of the development that impacts upon site drainage and the stormwater system must be submitted for assessment by Council.

Where the Development was approved under a Complying Development Certificate and this required the approval of Council's engineer as outlined in this policy, the further written approval of Council's Development Engineer to any amended stormwater design will be required prior to release of an amended Complying Development Certificate where the operation of site drainage is affected.

Where the Development was approved via a Development Application, modification through a Section 4.55 application under the Environmental Planning and Assessment Act 1979.

The stormwater engineer will need to certify that proposed amended system satisfies the requirements of Council as outlined in this document and submits all calculations and information that lead to this assertion. Council will not allow the variation unless these requirements have been met to the satisfaction of Council's assessing Development Engineer.

Where Council standards outlined in this document have not been met, the unsatisfactory components of the system shall be removed and reconstructed. The certifying stormwater engineer is to inspect and confirm that the system has been rectified to meet the requirements of this Policy and AS/NZS 3500.3:2018.

#### **2.4.5 Works-As-Executed (WAE) Drawings**

Works-As-Executed drawings for the system shall be submitted to Council to demonstrate that adequate storage capacities, finished surface levels and pit and pipe invert levels have been provided in the constructed system. Where the built system varies from the approved design plans, the certifying stormwater engineer shall certify that the constructed system satisfies Council requirements in this document and shall submit all supporting documentation including verifying compliance to design standards including capacity requirements.

The WAE drawings are also to include survey detail of the provision of any overland flow paths, flood storage and other allowances for flood affectation, for example open style fencing on flood affected sites.

The WAE drawings (plans) must be prepared by a registered surveyor and certification provided by a practising qualified Stormwater Engineer.

#### **2.4.6 Maintenance Schedule**

A maintenance schedule is to be prepared by either the plumber or the certifying stormwater engineer that details the components of the stormwater system. The schedule is to include the required maintenance and frequency for each component to allow the system to function effectively.

For flood affected properties the maintenance schedule must be prepared or certified as suitable by the stormwater engineer.

#### **2.4.7 Compliance Certificate**

A Certificate of Stormwater Compliance shall be prepared and certified by the certifying stormwater engineer in conjunction with the works as-executed drawings and the final inspection prior to the issue of a Subdivision or Occupation Certificate. The Compliance Certificate shall include:

- Certification that the built management measures will function in accordance with the approved design.
- Identification of any variations from the approved design and their impact on performance.
- Certification that these variations will not impair the performance of the built management measures or alternatively, provision of details of the remedial works required to make the system function according to the required design standard and in accordance with the development consent.

The certifying stormwater engineer is to issue a 'Certificate of Stormwater Compliance for On-Site Stormwater Management System' as provided in Appendix A4.

#### **2.4.8 Creation of Restriction on Use of the Land and Positive Covenant**

To ensure that an on-site stormwater management system is not altered during the life of the development, a Restriction on Use of the land is created. This prevents owners making changes to any of the site drainage components which would alter the way the on-site facilities work, without the permission of Council. To ensure that the on-site stormwater management system is adequately maintained, a Positive Covenant is registered on the title of the property which places the responsibility for the maintenance on the owner of the land. By registering the covenant and restriction on the property title, the obligations will be transferred to future owners. The Positive Covenant is to be stated to benefit Georges River Council.

A sketch plan showing the location of the various components of the on-site stormwater management system and a copy of the maintenance schedule must be included as attachments to the Positive Covenant. This will ensure future owners are aware of their maintenance obligation.

For existing lots, the Positive Covenant and Restriction on Use shall be registered on the title of Torrens Title land. For newly created lots the covenant and restriction on use shall be imposed under Section 88B of the Conveyancing Act, 1919.

The creation of a Restriction on Use of the land and Positive Covenant over the on-site stormwater management system and its registration with Land Registry Services shall be undertaken prior to the issue of an Occupation Certificate for the site. It should also be noted

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that only in exceptional circumstances shall Council permit deferral of the construction of the on-site stormwater management systems.

A Restriction on Use of the Land and Positive Covenant will be required for developments that have stormwater systems that include one or more of the following:

- (a) On-Site Detention;
- (b) Any pump-out system;
- (c) Any system that includes an absorption system that is the primary method of draining the site.

Council will also require a creation of Restriction on Use of the Land and a Positive Covenant to allow for the preservation and maintenance of any designated overland flow path through the site.

The terms and conditions are to be in accordance with the development consent.

Standard terms and conditions to be used for Restrictions on Use of the Land and Positive Covenants in relation to both on-site stormwater management systems and overland flow paths are presented in Appendix A5 and Appendix A6 respectively. Council may require these terms and conditions to be altered in some instances.

### **3. STORMWATER DRAINAGE SYSTEMS – GENERAL**

#### **3.1 Design Standards**

The stormwater plans and documentation shall comply with this Policy.

The consulting engineer is also to ensure that the requirements and guidelines of Australian Rainfall and Runoff 2019, the NSW Floodplain Development Manual 2005 and AS/NZS 3500:2018 (or documents that supersede these) have been met.

#### **3.2 Roof and Property Drainage Systems**

For developments involving new buildings and extensions to existing buildings, roof drainage is to be designed according to the current editions of the National Construction Code and Standards Australia AS/NZS 3500:2018 (as amended). Generally, roof eaves gutters and downpipes are to be designed for rainfall intensities up to the 5% AEP event using the methods presented in the standard noted above. If a development has box gutters or eaves gutters that may possibly overflow into the interior of a building, the design shall need to verify that the gutters will safely overflow without water entering the building for rainfall intensities up to the 1% AEP event. Design details and calculations of the roof drainage shall be included in the Detailed Stormwater plan.

Gravity pipe drainage systems within properties must be designed for at least the 5% AEP event and design consideration must allow the safe passage of surface overflows through a property up to the 1% AEP event. Pipe diameters shall be a minimum 100mm sewer-grade PVC for all developments. Outlet pipes from surface inlet pits shall be at least 150mm diameter. Minimum pipe covers and gradients, minimum pit dimensions and other factors relating to pipelines through the site shall conform to AS/NZS 3500:2018 or the version of the standard that supersedes this.

This Policy may not provide specific requirements for all aspects of a drainage system design. Where this is the case, and the Policy does not direct the designer to another document, the designer is to comply with the National Construction Code (NCC) and Standards Australia AS/NZS 3500:2018 (as amended). In the case that the NCC and the Australian Standards have contradicting requirements the NCC is to be followed.

The provision of OSD systems is applicable for all areas of the Council. For further information on whether an OSD system is required for a development and the design requirements see Section 4.

##### **3.2.1 Silt Arrestor Pit**

A grated pit must be located inside the property just upstream of the point of discharge from the site. This pit must have minimum dimensions of 450mm x 450mm and shall have a 150mm deep sump and galvanised mesh screen permanently fixed over the outlet pipe or pipes. A minimum of 4 x 30mm diameter seepage holes shall be provided in the pit base.

For drainage into the surrounding soil, the pit base shall be constructed on a layer of 200mm thick aggregate base wrapped in geotextile fabric. All non-plastic drainage pits must be benched and streamlined. The use of plastic pits is limited to areas not subject to vehicle loads.

### **3.2.2 Collection of Water from Driveways sloping toward the Street**

For driveways on private property sloping to a street and greater than 10m in length, drainage control devices grated surface inlet pits are to be installed across the front boundary in order to control excess stormwater flowing across Council's footpath.

In addition to the above requirement, collection of stormwater runoff from driveways is to be undertaken for discharge to the site's OSD system when applicable.

### **3.2.3 Ground Level Adjacent to Buildings**

The ground level and any required grading adjacent to buildings with respect to floor levels is to be in accordance with the requirements of the National Construction Code (NCC). On sites that have been identified as flood affected it is likely that requirements exceeding those stated in the NCC will be applicable.

### **3.2.4 Collection of condensates from air conditioners**

The collection of condensates from air conditioning systems to the site's drainage system is acceptable subject to:

- (a) The site's discharge being connected directly to an underground drainage system and not to the street gutter and.
- (b) It being discharged in a manner that will not cause environmental issues including stagnation causing algae growth or breeding of mosquitoes in the summer months and;
- (c) It being discharged in a manner that will not cause safety issues including slipperiness.

## **3.3 Property Drainage Outlet Connection**

Any connection to the street gutter or a connection to a Council or other public authority pit / pipe drainage system within the road reserve must meet the following requirements:

- (a) If the proposed discharge is from a low-level property as defined within this Policy it must meet the requirements set out in Section 3.4. Written confirmation from Council's Development Engineers will be required that confirms that discharge to the street gutter or a pit / pipe drainage system at the street fronting the site will be permitted by Council. This confirmation must be received prior to development consent.
- (b) A boundary silt arrestor pit (minimum 450mm by 450mm) shall be provided for any stormwater outlet discharging from the site. The silt arrestor pit is to be wholly within the property boundary.
- (c) Piped drainage within all Council land including roads and footways shall be laid at minimum 1% gravity fall directed toward the point of discharge. Charged systems on Council land will not be permitted.
- (d) When the maximum design stormwater discharge from the property does not exceed 25 L/s as calculated:
  - (i) In accordance with the Permissible Site Discharges in Table 3 for properties that are required to provide OSD; or

- (ii) By the stormwater engineer for the critical 5% AEP storm event for properties that are not required to provide OSD this flow can be discharged to the kerb and gutter,

the following requirements apply:

- Discharge to the kerb shall be made via 100mm diameter pipes or 75 or 100mm high rectangular hollow section if the kerb is at least 150mm high. If the kerb is less than this height a suitable proprietary galvanised steel kerb adapter is to be installed to avoid cracking. Where multiple conduits are required across the footpath a minimum clear separation of 100mm is to be provided at the kerb.
- The Concept Design is to clearly detail the proposed alignment of the connection from the property boundary to the connection point at the street gutter with design and existing levels (as shown on the Detailed Survey) to show evidence that:
  - The pipeline can be made without altering the footway levels.
  - The alignment of the pipeline is feasible and does not conflict with any structures, trees, existing underground services and does not encroach along the standard service authorities network corridors within the footway.
  - The pipeline will have consistent minimum 1% gravity fall. This is to be verified on the plan by detailing design levels of the pipe and existing levels at relevant locations as shown on the Detailed Survey Plan.
  - An inspection opening is to be provided at any bends in the system. Any inspection opening is to be buried under the grassed section of a nature strip unless otherwise approved by Council.
- Discharge to the street gutter will be limited to a single outlet point, to be located directly in front of the site.
- A minimum of 75mm cover is to be consistently achieved. A minimum of 150mm cover is to be achieved for pipes under driveways.
- The piped connection to the street gutter may be extended beyond the frontage of the development site subject to all of the following requirements being met:
  - The connection to the street gutter must be made within a 45 degree splay of the frontage corner of the site being developed. For example if the perpendicular distance between the property boundary and the street kerb is 3.6 metres the connection at the street gutter must be made within 3.6 metres of the development's street frontage.
  - The connection may not cross any existing or approved neighbouring driveway access and connection to street gutter is to be made a minimum of 500mm clear of any driveway layback.
  - In the event that a pipeline needs to extend beyond the frontage of the development site, consideration may need to be given to the acquisition of an easement to drain water within a neighbouring

property/properties near the street boundary so as to achieve gravity fall to the street.

(e) A direct connection into Council's (or another authority's) underground stormwater system will be required in instances when one or more of the following is applicable:

- The development includes 3 or more dwellings;
- The development is commercial or industrial with a site area greater than 800m<sup>2</sup>.
- For development types stated above and where the closest direct connection to Council or other Authority's drainage system is 100 metres or further from the subject site, Council will consider an exemption to this requirement provided the following parameters are met:
  - Each connection must have a design maximum discharge rate of less than 25 litres per second.
  - The longitudinal grade along the street gutter between all connections is a minimum of 3% and the connections at the street gutter are at a minimum 15 metre spacings.
  - All discharge from basements must be connected to the internal stormwater system within the site and draining via the OSD where applicable.
  - The connections meet all other requirements specified in this Section 3.3.

**Note:** The maximum design discharge is:

- For developments that do not require OSD the maximum design discharge rate is to be determined in accordance with Table 3.
- For developments that do not require OSD the maximum design discharge is to be calculated for the critical 5% AEP storm event by a qualified stormwater engineer.

**Any proposal to discharge a low level property to an existing or proposed stormwater system at the street frontage of the site shall need to meet the requirements of Section 3.4.**

Any direct connection into Council's stormwater system shall typically be required to be made with the connecting pipe's invert at or above at the top third of the Council pipe or at a level approved by Council.

If necessary to allow for a direct connection, an extension of Council's piped drainage system may be required. An extension will typically require a Council pit to be constructed within the street frontage of the development site.

A proposed connection or extension to Council's piped drainage system will need to be applied for through the Stormwater Drainage Application process as required under Section 68 of the Local Government Act 1993 and Section 138 of the Roads Act 1993. A Hydraulic Grade Line Analysis of the connecting pipeline will be required to accompany the application for Council's consideration. All costs

associated with this application and any approved works are at the applicant's expense. Refer to Section 5 for further details regarding the Stormwater Drainage Application process.

- (f) Any connection to a Sydney Water or Roads and Maritime Services owned stormwater system will need their approval.

### **3.4 Drainage of Low Level Properties**

#### **3.4.1 General**

A low level property is defined in this Policy as a property:

- (a) That naturally falls away from the street frontage; and / or
- (b) At which the ground levels at the property boundary at the street frontage are lower than the adjacent street kerb level.

The procedural document 'Stormwater Drainage for Low Level Properties' as included in Appendix A11 provides guidance in relation to the options to drain low level properties.

This section provides more detail with respect to these options, including when they will be permitted and the applicable design requirements.

#### **3.4.2 Charged Drainage Systems**

Charged lines will be generally permitted for the discharge of roof runoff from Dwelling Houses, Dual Occupancy, Secondary Dwellings, Ancillary Outbuildings (for all new dwelling houses or alteration and additions to existing dwelling houses).

For commercial / industrial sites of up to 750 square metres- charged drainage systems may be permitted.

Charged drainage systems must be drained via a rainwater tank as per the BASIX requirements for the site.

In instances where there is no BASIX requirement a Rainwater tank system with a minimum storage capacity of 2500 litres for residential and minimum 5000 litres for commercial / industrial shall be provided that connects to one or more of the following:

- (i) A flushing toilet;
- (ii) A laundry for washing purposes;
- (iii) A combined landscaped area within the property of more than 60 square metres.

Charged systems will not be permitted in cases where the discharge is proposed to be diverted to a catchment that does not naturally receive this water where there are known flooding issues downstream of the discharge point, or the discharge will cause or aggravate flood conditions downstream of the discharge point.

The use of a charged system does not exempt a property from the installation of On-Site Stormwater Detention in accordance with this Policy.

The following design requirements are applicable to charged systems:

- (a) All stormwater from the site must drain by gravity piped drainage within all Council land including roads, footways, and prior to the connection or discharge to any connection point.



- (b) Only sewer grade PVC or pressure pipes are to be used to convey charged flows. All pipes must be a minimum of 100mm diameter and all joints must be solvent welded.
- (c) All pipes and downpipes are to be sealed to a minimum of 0.5m above the maximum water level in the system.
- (d) A raised pit at the property boundary will not be supported.
- (e) Adequate head should be provided (preferably 1.5 m or greater) between the pipe outlet level at the road kerb and the rainwater tank overflow pipe invert level. A Hydraulic Grade Line analysis shall be provided where this height is less than 1 metre.
- (f) All gutters and pipes in the system must be designed for a 1% AEP storm event.
- (g) A cleaning eye must be provided at all low points in the system within a pit that is drained to an on-site absorption system. The cleaning eye is to have a cap with a 5mm overflow hole to allow for trapped water to discharge slowly.
- (h) The design and installation shall comply with Standards Australia HB 230—2008 Rainwater Tank Design and Installation Handbook.
- (i) All impervious ground surfaces must be drained to an appropriate system. Any proposed absorption system is to be designed in accordance with Section 3.4.4.
- (j) A typical drawing of a charged stormwater line is illustrated in Appendix A12.

### 3.4.3 Discharges to Natural Areas

Discharge to natural areas such as bushland, a watercourse, creek or bay is allowed subject to approval by Council, and compliance with the following requirements:

- (a) For discharge to creeks and bays, natural areas are to be protected against erosion at the point of discharge by means of an energy dissipator (level spreader) located within the property and positioned so that it will not impact on neighbouring properties. The dissipator must be setback a minimum of 5.0m from the rear boundary.
- (b) For discharge to bushland the natural area is to be protected against erosion at the point of discharge by means of anti-scouring measures such as an energy dissipator (level spreader) and outlet apron located within the property and positioned so that it will not impact on neighbouring properties. The dissipator must be setback a minimum of 3.0m from the rear boundary.
- (c) Where there is an existing open channel or creek or pipe system in proximity connection may be permitted subject to seeking Council approval prior to determination of the application.
- (d) Outflow aprons are normally constructed of riprap or concrete with embedded riprap. Pipelines larger than 375mm diameter with an outlet in a location that will result in scour must have the outlet angled at 30 degrees to the direction of the flow within the watercourse.
- (e) Energy dissipaters reduce water velocity by directing the water stream into obstructions placed in the flow path and/or by inducing a hydraulic jump. Energy dissipaters are to be designed to reduce velocities to below 2.0 m/s for the 1% AEP flood event flow.

- (f) For discharge to a Council reserve or bushland, the stormwater dissipation measures must be incorporated fully within the property with the energy dissipation at the pipe outlet to reduce the velocity of runoff and the incidence of scour.
- (g) The structure of any spreader installed is to be of a robust and durable construction type.
- (h) At Council's discretion, it may be required to install either a rock-lined natural channel or a pipeline to convey runoff from the property to the nearest drainage line or water course. Any such works would need to be approved through the Stormwater Drainage Application process and require the applicant to acquire a drainage easement.

### 3.4.4 Absorption Systems

#### 3.4.4.1 Absorption System as the Primary Method of Stormwater Discharge

Note that absorption systems are often not suitable as a method of stormwater disposal due to reasons including but not limited to unsuitable soil conditions such as heavy clays, limited depth to rock (e.g. less than 1.5-meters), a high water table and steepness of a site (greater than 10%) all of which prevent the effective absorption of water into the ground to a sufficient degree to manage stormwater run-off.

An absorption system that meets all technical requirements within this Policy may be considered as the primary method of draining a single dwelling and / or a secondary dwelling in suitable parts of the following suburbs:

- Connells Point
- Kyle Bay
- Blakehurst
- Hurstville Grove
- Sans Souci
- Carss Park
- Kogarah Bay

**Absorption systems will not be considered (regardless of any geotechnical report and supporting information) as the primary method of draining a development site in all other locations within the Local Government Area.**

**The absorption system design will need to be lodged and approved by Council prior to any development consent or Complying Development Certificate being obtained.**

The design will need to be proven to meet the following design requirements:

- (a) The design plan must be accompanied by a geotechnical report from a suitably qualified practising geotechnical engineering consultant and results of a recognised Constant Head Test conducted as per the methods outlined **under sections 6.7.1 of AS1289-2001 (Methods of testing soils for engineering purposes).**

**Note:** Constant head test is the most appropriate method in the Georges River Local Government Area.

- (b) The hydraulic conductivity / infiltration rate must be tested at a minimum of two (2) test samples taken per site at the location of the proposed absorption system (samples collected from a minimum depth of 1.00 m below the surface). The On-Site Stormwater Absorption System is to be designed using the infiltration rate of the soil of the site. The geotechnical report is to also determine the depth to rock and the presence and depth of the water table.
- (c) The trench depth must be minimum 1.0m below natural ground level. Evidence is to be provided that the base of the proposed system will be at least 500mm above both the bedrock and the water table. Alternative design should be considered where there is difficulty in achieving above requirement.
- (d) The absorption system will need to allow for runoff from 2% AEP (1 in 50-year ARI) event for all hard surfaces that are drained to it. This will need to be accurately determined and calculations are to be provided to Council. The calculations for the absorption system are to include storms ranging in duration from 5 minutes to 72 hours. The IFD data used is to be that detailed in Appendix A8. A reservoir routing calculation with Inflow and Outflow calculations may be used.
- (e) Absorption systems cannot be considered if the design soil hydraulic conductivity /infiltration rate is less than 100mm/hour (0.0277 lit/m<sup>2</sup>/sec or 2.7x10<sup>-5</sup> m/sec). The maximum natural grade of the ground levels at the site of the system is 1 in 10 (vertical: horizontal) (10%) in any direction.
- (f) The absorption trench shall be located parallel to proposed or existing site contours. The maximum natural grade of the ground levels at the site of the system is 1 in 10 (vertical: horizontal) or 10% in any direction.
- (g) A debris/silt collection pit shall be placed immediately upstream of the underground system, with a capped observation riser installed over the underground system.
- (h) An earth mound (750wide X 400high) to be placed 400mm downstream from the trench to prevent flow concentration and disperse any likely system overflow.

The absorption system is to meet the following setback requirements:

- i. It must be a minimum 3 metres clear from all property boundaries.
  - ii. It must be a minimum 3 metres clear from all structures. This may be reduced to 1.5 metres subject to certification by a suitably qualified practising structural engineer that both structure and absorption system's integrity, stability and function will not be impacted by their proximity.
- (i) The existing ground levels above and adjacent to the system are not to be raised to allow for additional storage, to meet depth to bedrock.
- (j) Absorption systems must not contribute in any way to saturating soils behind retaining walls, existing or proposed. The entire design storage volume of the absorption system is to be below ground.

- (k) The absorption system is not to be within one metre of any Sydney Water Sewer main. See Sydney Water's 'Technical guidelines, Building over and adjacent to pipe assets, October 2015'.
- (l) Detail will need to be included to show that the absorption system is not within the Tree Protection Zone of any trees (either within the property or on neighbouring properties). Council may require the lodgement for assessment of a report by an AQF Level 5 arborist.

#### **3.4.4.2 Minor Absorption Systems**

Up to a maximum of 50m<sup>2</sup> of impervious area may be discharged to an absorption system on a site subject to:

- (a) The system meeting all the required setbacks as detailed in Section 3.4.4.1 and;
- (b) The area available for the absorption system being greater than or equal to a quarter of the impervious area being drained. (Eg. 20m<sup>2</sup> of impervious area would need to be drained to an absorption system of 5m<sup>2</sup> or larger), and;
- (c) The proposed absorption system should have a depth at least 1.00 m below the surface; and
- (d) Certification by a qualified stormwater engineer that the absorption system and soil conditions are sufficient for storms up and including the 5% AEP (1 in 20 years) event.
- (e) The existing stormwater disposal system is functioning and in satisfactory operational condition. Documentary evidence must be provided such as a service protection report, and
- (f) The submitted stormwater plan must include the location of the existing system and ensure the proposed system does not compromise the existing system

#### **3.4.5 Discharge to an Easement**

##### **3.4.5.1 Introduction**

Any formal stormwater discharge from a property through other privately-owned land, Council-owned land other than the road reserve, Crown land and land owned by another government agency requires a drainage easement to be registered on the land title(s). This registration will define the extent of the easement, the properties and authorities burdened by and benefitting from the easement, and may include details as to any restrictions and rights and responsibilities including access and maintenance.

##### **3.4.5.2 Discharge to Council's or other Public Authority's Drainage System**

Council will generally allow discharge from a site to a Council-owned drainage system that passes through the development site.

In situations where Council's drainage system passes through an adjacent property, the owner would need to acquire an easement to allow for the connection between the property boundary and the Council system or easement.

The proposed connection to Council's piped drainage system will need to be applied for through the Stormwater Drainage Application process. Refer to Section 5 for further details regarding this process.

In the case of a connection to a stormwater system belonging to another Authority, the applicant shall be required to produce evidence to Council's Development Engineer's satisfaction of compliance with the requirements of that Authority, prior to the issue of a Development Consent or Complying Development Certificate.

#### **3.4.5.3 Discharge to an Existing Inter-Allotment Drainage System**

In cases where an existing inter-allotment drainage system is in place and the property developing is legally entitled to connect into the system, connection will be allowable subject to:

- (a) Evidence including detailed calculations being provided to show that the system is of sufficient capacity to allow for the connection. The critical duration 5% AEP storm event (typically the 5 minute duration storm) will be required to be assessed to determine if this requirement has been met.
- (b) Council may also consider it acceptable if it can be shown that the proposal will allow for the capacity of the system to be significantly increased in comparison to the existing situation.
- (c) Evidence being provided to show that the system is in a serviceable condition.
- (d) Evidence being provided to Council demonstrating that the development site benefits from a legal easement to drain water such as an 88B instrument, legal in principle agreement for grant of an easement or transfer granting easement documents.

#### **3.4.5.4 Proposed New Inter-Allotment Drainage**

Where an inter-allotment drainage easement is proposed to be created to facilitate a development, it is the responsibility of the applicant to negotiate with affected property owners to secure an easement. Typically Council will require a deferred commencement condition that a plan of easement prepared by a registered surveyor has been registered with Land Registry Services.

Prior to development consent a detailed plan of the proposed stormwater pipeline will need to be prepared. The plan will need to clearly identify that the inter-allotment drainage system can feasibly be built through all affected properties. The pipeline is to be designed in accordance with AS/NZS3500.3:2018. The capacity of the system is to be designed to allow for a 1% AEP event. Sufficient calculations and methodology of the system's capacity is to accompany the detailed plan.

The detailed plan will need to include:

- (a) A survey of the full extent of the proposed easement to the downstream connection point and surroundings. The survey is to be prepared by a registered surveyor and is to include boundaries, detail of existing features of the site including buildings and other structures, walls and retaining walls, driveways, paths, trees, grass and landscaped areas, utility services, spot levels and contours.
- (b) Full details of the proposed alignment and width of the easement.

- (c) The stormwater drainage to be installed within the easement and detail of its connection to the downstream system.
- (d) A long-section of the drainage pipe within the easement to the downstream connection point including a hydraulic grade line, pipe invert levels, surface levels, design grades, pit details and flow rates, etc. for the critical 1% AEP storm event.
- (e) All trees that overhang the proposed easement, or are within 5 metres of the proposed easement shall be accurately indicated.

The proposed drainage system will need to be shown to not disturb any structures or the root zone of any tree. Council may require that a qualified structural engineer or AQF5 qualified consulting arborist respectively certify that these requirements have been met.

### 3.5 Dedication of Easements

#### 3.5.1 Requirement to Create an Easement over Council's Drainage System

Where an easement has not been registered over a Council-owned stormwater system within a property, an easement to drain water, located centrally over the pipe / flow path system shall be created in favour of Council in conjunction with the Development Application process.

In cases where an easement is registered but is not in accordance with the required width identified in Table 1 or is not accurately located over the Council system, the existing easement will need to be extinguished and a new compliant easement be created.

In instances where the development proposal does not require or propose the relocation of Council's stormwater system, Council will typically agree to reimburse the applicant the costs charged by NSW Government Land Registry Services in relation to the registration of the drainage easement. The survey and related costs associated with the registration of the easement may be submitted to Council prior to engagement. Council will consider the reimbursement of these costs to the applicant upon completion of the easement's registration subject to them being at market rate.

#### 3.5.2 Required Easement Widths

For Council owned pipes and inter-allotment drainage easements, the required width of easements shall be according to Table 1 and Table 2 respectively:

**Table 1 – Required Drainage Easement Widths for Council Stormwater Assets**

<b>Council's Pipe Diameter (mm) / Stormwater Asset Width</b>	<b>Easement Width (m)</b>
Council pipes less than 500mm diameter <sup>b</sup>	2.5 <sup>a</sup>
Council pipes greater than 500mm	Pipe internal diameter plus 1 metre on both sides (rounded to the nearest 100mm) <sup>a</sup>
Culverts	Culvert external width plus 1 metre on either side (rounded to the nearest 100mm) <sup>a</sup>
Open Channel and Creeks	Subject to Council consideration. It is recommended that the applicant organise a meeting with

	Council's development and drainage engineers to discuss the proposal and easement requirements.
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<sup>a</sup> Subject to the depth and profiles of the pipe or culvert the necessary easement width may be required to be altered to vary from this table.

<sup>b</sup> Typically the minimum allowable diameter of a newly constructed Council pipe is 375mm.

**Table 2 – Required Drainage Easement Widths for Inter-Allotment Drainage**

Pipe Diameter (mm)	Easement Width (m)
100 or 150	0.9m <sup>a</sup>
225 and 300	1.5m <sup>a</sup>
Greater than 300mm diameter	Subject to Council consideration. It is recommended that the applicant organise a meeting with Council's development and drainage engineers to discuss the proposal and easement requirements.

<sup>a</sup> Subject to the depth and profiles of the pipe or culvert the necessary easement width may be required to be altered to vary from this table.

### 3.6 Pump-Out Systems

The use of a pump-out system for stormwater disposal will only be permitted for drainage of sub-surface seepage flows from underground areas, such as basement garages where the seepage flows are minor and intermittent, and for the drainage of basement driveways only. The system must be designed in accordance with the following criteria:

- The pumped system shall be designed in accordance with all requirements of AS/NZS3500.3:2018.
- The pump system shall consist of two pumps, connected in parallel, with each pump being capable of emptying the holding tank at the rate equal to the minimum of either 4 litres per second or the rate of inflow generated from 1% AEP 5-minute duration storm event of the area of the contributing ramp that draining into the system.
- Pump holding tank shall be capable of holding the total volume of runoff generated by the 1% AEP 3-hour storm event of the area of the contributing ramp assuming pumps are not working. The minimum tank must be greater than 3.0 cubic meters.
- Install two 900x900 mm square grates at the opposite corner of the basement pump tank top surface.
- The rising main from the pumped system must discharge into the OSD system on site when applicable.
- For proposals that do not require OSD, the rising main must be discharged to a silt arrestor pit that drains to the site's discharge point by gravity fall.

- (g) In accordance with Section 2.4.8, a Restriction on Use of the land and Positive Covenant will be required for developments that have stormwater systems that include a pump-out system.



## 4. ON-SITE STORMWATER DETENTION (OSD) SYSTEMS

### 4.1 Introduction

On-Site Stormwater Detention (OSD) involves the temporary storage and controlled release of stormwater generated within a site. OSD is required to ensure that the change in stormwater runoff from a site due to development does not increase flooding problems downstream. OSD systems must be properly maintained to make sure that stormwater flows from the site are regulated for the life of the development.

OSD is only one aspect of the management of the water cycle on a site. OSD can be provided most efficiently and effectively when it is considered as early as possible in the development process, so that the most efficient and effective system can be designed and installed.

Developers and designers are encouraged to use principles of good aesthetics when preparing an OSD design. Long term viability, ease of maintenance, access to the drainage system and storage areas also need to be considered in the design process. The OSD system designer must consult with the architect and landscape designer prior to completing an OSD design. This will ensure that all drawings correspond in terms of location of buildings, walls, existing trees being retained, and landscaping treatments proposed on the site.

The system is most easily maintained when owners have a clear idea of the location and function of the components of the system.

### 4.2 On-Site Stormwater Detention – General Requirements

The OSD Policy aims to ensure that developments will not increase the risk of flooding at any downstream properties, in all flood events up to and including the 1% AEP storm event.

OSD systems shall be provided to all new developments and redevelopments unless otherwise exempted by Council.

The OSD system shall be designed on the following basis:

- (a) OSD designs shall be prepared by a qualified Hydraulic Engineer. OSD systems shall be designed and constructed in accordance with the requirements of this Policy, except as otherwise authorised by Council at the time of development consent.
- (b) All runoff generated from the development site shall be directed to the OSD storage. All pipes shall be a minimum 100mm diameter and designed to convey the 5% AEP design storm event.
- (c) For sites with minimal falls towards the street, and other sites where it is not possible to discharge all runoff to the OSD system, a maximum of 20% of the total site area of the development may bypass the OSD. Any impervious surfaces that bypass the OSD are to drain to an appropriate system. If an absorption system is to be utilised, it must be designed in accordance with Section 3.4.4 of this Policy.
- (d) The OSD storage volume and maximum discharge rates are to be in accordance with the requirements within this Policy.
- (e) OSD can be provided in the form of an above-ground basin or an underground tank. Above-ground tanks may be considered for development as detailed in Section 4.9.1.
- (f) OSD is **not to be designed** as a High Early Discharge (HED) system unless specifically requested by Council. It has been determined that HED systems are

not typically advantageous within the LGA with respect to the severity and characteristics of downstream flooding.

- (g) The orifice diameter shall not be less than 35mm.
- (h) Overland flows into the site from the external catchments upstream of the development shall not be blocked or enter the OSD system. These flows shall be collected separately and conveyed to bypass the OSD system via a suitable pipeline or gravity flow path without detention.
- (i) OSD systems are to drain by gravity to Council's drainage system or other public drainage network. In the case of single dwellings, or primary house and secondary dwellings where it is not feasible to drain the OSD storage by a gravity system, consideration may be given by Council to drain the OSD system via a charged system to the front of the site. Gravity drainage shall be required between the property boundary and Council's street gutter or drainage system.
- (j) OSD systems shall be provided with an overflow spillway directed towards the street or other approved point of discharge. Spillways are not to direct the overflow onto adjoining properties.
- (k) In cases where a connection is to be made directly to Council's or another authority's pit / pipe system, it is required that design details be provided demonstrating that there is to be a safe overland flow path designed to the 1% AEP event from the OSD to the street gutter in the event of the connection to Council's stormwater system becoming blocked.
- (l) The OSD system is to be designed to be clear of all underground sewers and other services. The engineer is to ensure that the requirements of all service authorities with assets in the vicinity of the system are met.
- (m) For sites with multiple owners/tenants (other than strata/stratum/community title subdivisions), the discharge control pit and the OSD storage area shall be contained fully within or under common property rather than on private lots. This will reduce complications for inspections and maintenance, and these will remain the responsibility of the joint owners rather than an individual. In situations where this is not feasible, Council may consider a proposal that has an underground storage tank partly under a private courtyard or other private outdoor area. In all instances the above-ground storage tanks and control pits must be located within common areas. Relevant Restrictions on Title and Easements would be required.  
**Note:** These provisions do not apply to strata/stratum/community title subdivisions.
- (n) Council requires the submission of Concept OSD drawings to assist in determining the likely impacts that the development may have on the existing natural and built environments, both public and private. The location of the proposed OSD shall not any impacts on existing stormwater systems, overland flows and flooding conditions. The design of the OSD shall also consider and comply with the requirements of Council's Development Control Plans.
- (o) All grated pits and access covers shall be provided with child proof locks.
- (p) On partially flood-affected properties the OSD storage is to be located outside of the 1% AEP flood extents. On properties that are fully within the 1% AEP flood extents the OSD storage is to be located in an area within the site that is relatively

unlikely to be affected in flood events. The OSD storage is not to impede the flood flow path through the site.

- (q) For aspects of the design that are not included in this Policy the engineer is to design in accordance with the requirements of AS/NZS 3500 (as amended). OSD must be provided for the following development types regardless of the site's impervious percentage:

Dual occupancies, town houses, Villas, home units, Residential Flat Buildings, all commercial, industrial, special-use development and buildings and structures including public buildings, Tennis Courts, Private Roads, Car Parks and other sealed areas and Subdivisions

### 4.3 Developments to Which OSD Applies

OSD requirements apply to all types of development and re-development within the LGA and apply to both flood-labile and flood-free sites, including the following:

- (a) Single Dwellings
- (b) Secondary Dwellings (Granny Flats)
- (c) Single Dwelling and Secondary Dwelling combinations
- (d) Townhouses, Villas, Home Units, Residential Flat Buildings
- (e) All commercial, industrial, special-use development and buildings and structures including public buildings
- (f) Dual Occupancies
- (g) Tennis Courts
- (h) Private Roads, Car Parks and other sealed areas
- (i) Subdivisions

### 4.4 Exemptions

OSD will not be required for the following proposals:

- (a) For developments that meet both of the following requirements:
    - i. The development proposal is a Single Dwelling, Secondary Dwelling, Single and Secondary Dwelling combination, alteration, and additions to a dwelling house and or ancillary development for a dwelling house such as a garage, carport, cabana, awning, deck, swimming pool.
    - ii. The total impervious area upon completion of the development will be less than 55% of the lot as calculated in accordance with Appendix A7. Any requirements detailed in Section 4.5 in relation to OSD requirements for subdivisions override this exemption.
- (Note: As detailed in Appendix A7 all areas of less than 1.5 metres clearance between the outer wall of a building and the nearest adjacent property boundary shall be a minimum 50% impervious. This excludes the area under a roof eave overhang that is to be considered 100% impervious.)
- (b) A lot where the site's stormwater discharges directly to a bay or stream.
  - (c) One-off minor developments, minor additions and repairs where the proposed development footprint area is less than 50m<sup>2</sup> **and** the total impervious area of the

site will be less than 75%, upon completion of the development, as calculated in accordance with Appendix A7.

- (d) A change of use without any modifications to the building footprint and impervious areas.
- (e) Subdivisions of existing dual occupancies where no changes to the buildings or site are proposed.
- (f) Boundary adjustments and consolidations of allotments where no additional lots are created, and consolidation of lots without any building works.
- (g) New developments in subdivisions where OSD has already been provided for the entire subdivision.

#### **4.5 OSD Requirements for Subdivisions**

The following OSD requirements apply for subdivisions:

- (a) OSD is required for any new lot created by a subdivision.
- (b) Where an existing residential property is to be subdivided, the OSD requirements shall only relate to the area of the new allotment(s), and the OSD storage facilities shall be located on the new allotment(s).
- (c) In the case of multi lot subdivisions where strata/stratum/community subdivision can occur, a common OSD system should be constructed on one lot rather than a separate system on each individual lot. For all other types of subdivisions please refer to the requirements in 4.2(l).
- (d) The OSD system is to be constructed at the time of subdivision and not to be deferred until building construction.
- (e) Any easement and/or inter-allotment drainage cannot be deferred and must be created/installed at the time of subdivision.
- (f) Separate OSD systems are required for each lot of a Torrens title subdivision.

#### **4.6 Site Storage and Permissible Site Discharge**

Council, with the assistance of an independent consultant, has determined appropriate OSD storage requirements and maximum permissible discharge rates.

The method of derivation modelled detention storages controlled by a single orifice outlet, allowing for both 1% AEP and 0.5 EY (exceedances per year) storm events on a single lot. Checks were also made for runoff from multiple lots.

The storage and discharge rates have been adopted to allow for a fair and equitable approach to the provision of OSD that provides the designer with clear requirements. This also removes the need for complex calculations by the designer.

The required OSD storage requirements and permissible discharge are to be calculated in accordance with Table 3.

**Table 3 - Maximum Permissible Discharge (PSD) and Minimum Site Storage Requirements (SSR)**

Site's Impervious Area Percentage upon completion of development (as calculated in accordance with Appendix A7) **	Maximum Permissible Discharge (PSD) L/s/ha	Minimum Site Storage Requirements (SSR) m <sup>3</sup> /ha
Less than 55% (by considering drainage, landscape, and architectural plans)	OSD is not required for dwelling house, secondary dwelling, alteration, and additions to dwelling house and ancillary development for dwelling house such as garage, carport, cabana, awning, deck, swimming pool. For all other development types OSD is required.	
55% to less than 65%	182	206
65% to less than 75%	166	240
75% to less than 85%	152	270
85% or higher	136	295

**\*\* As detailed in Appendix A7 all areas of less than 1.5 metres clearance between the outer wall of a building and the nearest adjacent property boundary are to be considered as minimum 50% impervious. This excludes the area under a roof eave overhang that is to be considered 100% impervious.**

The maximum permitted discharge from the OSD is the PSD multiplied by the site area in hectares. For example for the 550m<sup>2</sup> lot considered in Appendix A7, with a post-developed impervious percentage of 60%, the maximum discharge would be  $182 \times 0.0550 = 10$  L/s. This can be used to determine the diameter of an orifice plate used as a flow control using the equation shown in Section 4.11.

The volume of the OSD storage is the SSR multiplied by the site area in hectares. In the example in Appendix A7, the required volume is  $206 \times 0.0550 = 11.3$ m<sup>3</sup>.

#### 4.7 Rainwater Tank Offset

**Up to a maximum of 20% of the OSD storage volume required may be offset by rainwater tank storage for reuse.** One third of the provided rainwater tank storage can be used to offset the OSD up to this maximum 20% limit. The rainwater tank storage must be connected in accordance with the BASIX requirements or in the case of no rainwater tank reuse required under BASIX to one or more of the following:

- (i) A flushing toilet
- (ii) A Laundry for washing purposes
- (iii) A tap for irrigation of a combined landscaped area of more than 60m<sup>2</sup> within the property.

The discharge from the rainwater tank storage must be directed into the OSD system unless impractical, in which case the OSD offset concession will not apply.

Note that a Rainwater Tank Offset is not permissible to reduce the required OSD storage as specified for developments that comply with Section 4.8.

#### **4.8 Provision of On-site Detention for Secondary Dwellings and Minor Additions**

Developments **that meet all of the following requirements** 1 to 3 as below will be required to provide On-Site Detention (OSD) for the development proposal only.

1. The roof area of the development is no greater than 80 square metres.
2. The total of all new paved, concrete or other impervious ground surfaces is no greater than 15 square metres.
3. The Site's Impervious Area Percentage upon completion of development is no greater than 75% (as calculated in accordance with Appendix A7).

The OSD will meet the following requirements:

- (a) The OSD storage will be a minimum of 1200 litres.
- (b) The outlet control i.e. the orifice or internal diameter of the choke pipe is to have a diameter within the range of 35mm to 40mm.
- (c) The full extent of the roof of the development is to be connected to the OSD storage.
- (d) A Rainwater tank offset as detailed in Section 4.7 is not allowable.
- (e) If an above ground tank or combined Rainwater and OSD tank is to be utilised the design requirements for above ground tanks as specified in Section 4.9.1 are applicable.

#### **4.9 OSD Storage Requirements**

##### **4.9.1 Above-Ground OSD Storage**

The following design requirements apply for above-ground OSD storage:

- (a) Any retaining walls surrounding the above-ground storage, including a spillway, shall be in watertight concrete or masonry construction (timber construction is not permitted) and structurally adequate to accommodate the hydrostatic loading from full storage.
- (b) Council does not permit above-ground OSD systems in areas of fill that are not accompanied by an adequate sub-surface gravity drainage system to a suitable underground drainage system.
- (c) The finished floor levels of any adjacent non-habitable and habitable buildings/structures shall be a minimum 100mm and 300mm respectively, above the maximum top water level of the OSD system.
- (d) In the interests of safety and amenity, ponding of water in the storage area shall be designed in a manner that minimises inconvenience and nuisance. This will require that runoff in small frequent storms is stored where minimal inconvenience results.
- (e) The preferred maximum design ponding depth is to be 300mm. In instances where this is not feasible, maximum ponding depth may be increased to 500mm.
- (f) No trees are allowed within the OSD basin area.
- (g) Any areas of maximum ponding depths greater than 300mm are to be enclosed with childproof pool type fencing including a self-closing gate.

- (h) For all above-ground storages, a warning sign shall be permanently fixed in a prominent location. Examples of signs are shown in Appendix A9.
- (i) Above-ground tanks may only be used for OSD storage for runoff from the roof of a single dwelling **or** secondary dwelling **or** ancillary development or commercial and industrial development where site area is area less than 300 square metres. Above-ground OSD/OSR rainwater tanks will not be permitted where it involves the construction of a dwelling house and secondary dwelling on the site simultaneously. The design of above-ground tanks must consider appearance and urban design issues. Above-ground tanks shall comply with the same engineering criteria as below-ground tanks. Particular attention must be given to access for inspection and maintenance. Note the following design requirements applicable to above ground OSD tank storage:
- If the outlet control is to be a choke pipe. The choke pipe is to be as short as practical and is to have a maximum length of 300mm.
  - The design is to include an inspection point that allows for cleaning and inspection of the orifice or choke pipe.
  - Debris and leaf screens or devices are to be installed on all downpipes and / or all inlets to prevent. The screens are to be designed to be self-cleaning and in a location that is easily accessible to allow cleaning and maintenance.

Additional maximum ponding depth requirements are detailed in Table 4.

**Table 4 - Maximum Depth for Above-Ground OSD Storage**

OSD Storage Location	Maximum Depth (mm)
Driveway and open car park	200
Landscaped areas, private courtyards	450mm – Maximum average depth 500mm – Maximum depth allowable including at the Discharge Control pit
Fenced off storage	1000 (one metre)
Pedestrian areas	50

**Note:** A design is not permitted to result in any development meeting the definition of a swimming pool under the Swimming Pools Act 1992 and that any development shall not result in inconsistencies with the provisions of the Swimming Pools Act 1992.

#### 4.9.1.1 Driveway and Open Car Park Areas

The following design requirements apply for above-ground OSD storage in driveways and open car park areas:

- (a) The first 10% or 1m<sup>3</sup> of the storage volume, whichever is the greater, shall be provided underground or in an area where access is not required and the frequent ponding in minor storms will not create a nuisance;
- (b) Any shaping of car parking area or driveways shall ensure that the gradients of vehicle accesses comply with the criteria set out in AS/NZS 2890.1, AS/NZS 2890.2 and / or AS/NZS 2890.6;

- (c) Stored water shall not inundate gardens or areas with bare soil, mulch or the like around parking or other hardstand areas. These areas must be above the storage top water level or be protected by concrete kerbing or other robust treatments capable of withstanding vehicle impact. Timber kerbing is not permitted;
- (d) For development under State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004, the gradients of vehicle accesses and hardstand areas shall comply with the criteria set by the SEPP; and
- (e) Paved areas shall have a minimum grade of 1%.

#### **4.9.1.2 Above Ground OSD Storage Basin Areas Adjoining Landscaped Areas**

The following design requirements apply for above-ground OSD storage in landscaped areas:

- (a) Above ground OSD storage basins must be within common areas;
- (b) The design must be undertaken in consultation with the landscape designer to ensure that the engineering and landscaping plans are not in conflict;
- (c) The above ground OSD storage basin shall be located in an area not required for access. Areas of the storage that will be affected by frequent ponding in minor storms are to be designed and located so as to not create a nuisance;
- (d) Careful consideration shall be given to types of planting and landscaping treatment within the area of ponding, to ensure that the area can be readily maintained and the storage volume is not reduced over time;
- (e) Landscaping within above ground OSD storage basins shall be designed so as not to generate large amounts of debris or other material likely to cause stormwater pollution or blockage of the system. Treatments such as wood chips / mulch or bare soil and the like shall not be permitted within the area of inundation;
- (f) Vertical sides near driveways or pedestrian areas are to be protected with an appropriate treatments such as fencing, kerb, edging or landscaping, to minimise hazard to pedestrians and vehicles;
- (g) Suitable access shall be provided for maintenance purposes, which may include ramps or accessible gradients;
- (h) Consideration must be given to the likelihood of access by children in rainfall events and the subsequent need for fencing or other controls;
- (i) Subsoil drainage shall be installed in above ground OSD storage basin areas to prevent the area remaining saturated during wet weather;
- (j) The base of above ground OSD storage basin is to have a minimum 1% fall to the outlet pit;
- (k) Any buildings forming the walls of the above-ground storage shall be adequately waterproofed to prevent water entering the sub-floor area;
- (l) Above ground OSD storage basin areas shall be defined by separate watertight dwarf walls of masonry or concrete construction.
- (m) Fencing will not be required in situations where the storage has batter slopes no greater than 1:6 (vertical: horizontal) for its full perimeter.



- (n) Batter slopes in landscaped areas shall be generally no greater than 1:6 (vertical: horizontal). Steeper slopes may be permitted subject to the approval of Council's engineers. Any request for steeper slopes must indicate the benefits of this and adequately address safety and maintenance issues.
- (o) Large open grassed above ground OSD storage basins may be permitted in commercial or industrial developments. These open basins shall have minimum base dimensions of 5m and shall have 1:6 (vertical: horizontal) internal batters, with the batters to be designed by a suitably qualified and experienced geotechnical engineer. Childproof fencing and a lockable gate may be required.

#### 4.9.2 Below-Ground OSD Storage

The following design criteria must be met for below-ground storage tanks:

- (a) The underground OSD storage shall be preferably located underneath approved pavements such as service, manoeuvring or parking areas.
- (b) Underground OSD storage shall not be located:
  - In areas defined as 'deep soil'.
  - Within the Tree Protection Zone and / or canopy drip line of any tree.
  - Under habitable floors. If no other alternatives exist, OSD may be located in a garage subject to Council approval;
  - In any area where site services such as water, sewer, electricity and gas are to be laid.
- (c) No modular / cellular type systems that are internally braced and or include an internal matrix are allowed. This is due to the full system not being accessible and to the potential for blockages.
- (d) Any underground storage shall be designed to enable the property owner / contractor to carry out routine maintenance. The following shall be incorporated in the design:
  - Residents / owners must be able to inspect critical parts of the storage from the surface without having to remove heavy access covers. Concrete covers shall be avoided for this reason.
  - A continuous fall on the floor of the storage of at least 1% must be provided to the storage outlet to minimize ponding in the storage.
  - To provide suitable maintenance access to the underground storage tank, all access grates to the tank shall be a minimum of 600mm x 900mm and at no more than 6m spacing from another access grate.
  - For all grated pits that connect to the OSD system (except overflow pits), the surface level of the pit shall be a minimum 100mm above the top water level in the underground storage tank.
  - Step irons shall be provided in the tank in cases where the depth exceeds 900mm. Step irons shall be plastic-coated, galvanised mild steel, textured for grip and must have formed returns on the sides. The installation of the step irons is to be in accordance with AS 1657:2018.

- The minimum clearance depth for tanks shall be 900mm. If this cannot be achieved due to level or other constraints, Council may consider the acceptance of internal heights of the tank absolutely not less than:
  - Commercial/industrial developments: 750mm
  - Residential developments: 600mm
 Provided that:
  - All grates accessing the tank shall be a minimum of 900mm x 900mm, with a maximum lifting weight of 20kg for the access grates;
  - Grates are installed at the extremities of the tank and as necessary to ensure there is a maximum distance of 3 metres from any point in the tank to the edge of the nearest grate. This should allow any point in the tank to be reached with a broom or similar implement without the need to enter the tank.
  - The base of the tank shall be shaped with a 1% cross-fall to a V drain and with a 2% longitudinal slope along the V drain;
  - Tanks less than 750mm high shall be precast to avoid difficulties with removing formwork.
- (e) The main access over the orifice must be grated.
- (f) All other accesses to the OSD should be grated. Council may allow sealed covers in locations where it is not feasible to install grates.
- (g) All surface inlet drains upstream of the Discharge Control Pit (DCP) and the storage must be designed so that there is no overflow from these before the storage is full.
- (h) If a sealed OSD storage is approved, the build-up of noxious odours in storages without a grated access can create problems. If the storage is sealed, vents are to be provided.
- (i) The storage shall have a sump adjacent to the orifice with a minimum depth of 250mm below the orifice. The sump volume is to not to be included in the storage calculation.
- (j) The storage is to be designed and certified to be structurally adequate for all maximum estimated loadings including earth, traffic and hydrostatic loads generated by a full storage.
- (k) In accordance with Work Health and Safety requirements, only persons with Confined Space Training shall be permitted to enter below-ground storage tanks for any required maintenance. Council requires that a Confined Space Danger sign be placed at all access points to the below-ground storage tanks. See Appendix A9 for examples of standard warning signage.

#### 4.10 Discharge Control Pit

The Discharge Control Pit shall comply with the following requirements:

- (a) The Discharge Control Pit shall be designed to:
  - Minimise the risk of becoming blocked by debris;

- Be located in a suitable position;
  - Be readily inspected;
  - Be accessed readily for cleaning; and
  - Have a minimal risk of being tampered with.
- (b) The minimum size of the Discharge Control Pit shall be:
- 600 x 900mm for pits up to 900mm depth.
  - 900 x 900mm for pits greater than 1200mm depth.
- (c) The Discharge Control Pit shall be a separate compartment to the main storage volume.
- (d) The Discharge Control Pit is not to be located within the canopy dripline of existing or proposed trees.
- (e) The grates shall be fitted with a childproof J-lock or similar.
- (f) The grate shall be hinged and be able to be opened by one person.
- (g) Step irons are required for pits greater than 900mm depth. The step irons shall be placed in a wall clear of the flow.
- (h) All discharge control pits shall be fitted with orifice plates. Orifice plates shall be:
- Manufactured from a corrosion resistant stainless steel plate with a minimum thickness of 3mm (5mm where the orifice diameter exceeds 150mm), with a central circular hole machined to 0.5mm accuracy; The machined hole shall retain a sharp edge;
  - Permanently fixed to the pit wall using four stainless steel bolts at each corner and be epoxy sealed to prevent the entrance of water around the edges; and
  - Engraved with the orifice diameter and an identifying mark.
- (i) The orifice diameter shall not be less than 35mm.
- (j) The centreline of the orifice shall match with the centreline of the outlet pipe.
- (k) All discharge control pits shall be fitted with an internal trash screen which shall:
- Be manufactured from galvanised RH3030 Maxi-mesh (or approved equivalent) with a galvanised angle steel frame;
  - Screen all pit inflows to the orifice;
  - Have a screen area 50 times the orifice area;
  - Include handle(s) for easy removal;
  - Be located to a minimum distance of 150mm from the outlet orifice; and
  - Be positioned as close to vertical as possible. Note: Pits that are 600mm deep should have screens no flatter than 45 degrees. In pits over 600mm deep or in remote positions, this should be increased to 60 degrees.

#### 4.11 Orifice Sizing

The orifice free discharge equation is:

$$Q = C A \sqrt{2gh}$$

where Q is the discharge in m<sup>3</sup>/s

C is the coefficient of discharge = 0.61

A is the orifice area in m<sup>2</sup>

g is the acceleration due to gravity (m/s<sup>2</sup>) = 9.80

h is the depth of water above the centre of the orifice (m).

This equation relies on a circular sharp-edged orifice and free discharge from the orifice.

#### 4.12 Freeboard

For above-ground OSD storage, habitable and/or office floor levels shall be fixed so that they are a minimum of 300mm above the top water level (TWL) of the OSD. Non habitable floors including garages shall have floor levels set a minimum of 100mm above the TWL.

Below-ground tank systems do not require freeboard below floor levels subject to the designing engineer certifying that appropriate design measures have been taken to ensure that all buildings including any downstream neighbouring properties are protected from flooding in the case of the OSD system malfunctioning or reaching full capacity. The design of the system is to consider the maximum water level that can be achieved within a below-ground storage before the tank surcharges and ensure that all floor levels are protected.

For all OSD systems a safe overflow route to the receiving stormwater system designed to the 1% AEP storm event is to be provided in case of the orifice becoming blocked or the storage reaching full capacity.

#### 4.13 Drowned Orifices

OSD systems shall be designed wherever possible to allow for the system to be free draining with the invert of the orifice 100mm above the Hydraulic Grade Line (HGL) at the discharge point of the pipe into which the orifice discharges.

The HGL will be determined as:

- (a) Top of kerb if discharging to the street gutter.
- (b) 300mm above the obvert level of the Council pipe if discharging to Council pit / pipe system.
- (c) The 1% AEP flood level at the discharge point as determined by a Council flood study, or to Council's requirement, a local flood study by a Hydraulic Engineer engaged by the applicant.

For below-ground OSD tanks where this is not possible, and it is proposed to have a drowned orifice, it will be required that no more than 30% of the OSD storage volume is below the HGL at the discharge point.

For above-ground OSD the full storage volume must be above the HGL at the discharge point.

#### 4.14 Maintenance Schedule

A Maintenance Schedule for the proposed on-site stormwater management measures is to be prepared and submitted with the Construction Certificate Plans. The Maintenance Schedule shall include details of all of the OSD components, an outline of the required

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maintenance works, how and when these will be performed, and who will be carrying out these maintenance works.

#### **4.15 Works-As-Executed (WAE) Drawings and Compliance Certificate**

For drainage systems that include OSD the works-as-executed drawings must include the following details:

- (a) Invert and surface levels of all drainage pits.
- (b) Sufficient levels and dimensions to verify the OSD volumes.
- (c) Finished levels of the ground floor levels and garages.
- (d) Verification that the orifice plates have been fitted and the diameter of the orifice.
- (e) Verification that trash screens have been correctly installed.
- (f) Weir dimensions and levels.
- (g) The structural adequacy of the OSD system.
- (h) Location and finished contour levels on any overland flow paths formed through the site.
- (i) Details of any variations or omissions made from the approved plans.
- (j) Registered surveyor's details and signature.

**Note:** The WAE drawings (plan) must be prepared by a registered surveyor and certification provided by a practising qualified Stormwater Engineer.

The Compliance Certificate shall certify addressing the following items:

- (a) The Works-as-executed works comply with the Development Consent;
- (b) The works have been constructed in accordance with the Construction Certificate and approved drawings;
- (c) All structural elements including storage tanks and retaining walls are structurally sound and fit for purpose; and
- (d) Any variations from the approved design will not impair the performance of the OSD system.

#### **4.16 Restriction to Use of Land and Positive Covenant**

In accordance with Section 2.4.8 a Restriction on Use of the Land and Positive Covenant will be required for developments that have stormwater systems that include On-Site Detention.

## **5. DEVELOPMENT IMPACTING ON COUNCIL'S OR ANOTHER REGULATORY AUTHORITIES DRAINAGE SYSTEMS**

### **5.1 Introduction**

Council has stormwater infrastructure throughout the Local Government Area including within road reserve, parklands, reserves, crown land and private property. This is essential infrastructure and Council has strict requirements in regard to any development and constructions works that may affect the integrity of the stormwater network.

### **5.2 Potential Impacts on other Regulatory Authorities Drainage Systems**

There are instances where developments will be in the vicinity of the infrastructure of other regulatory drainage authorities, for example Sydney Water and Roads & Maritime Services (RMS) infrastructure.

In these instances it will be required that the applicant gains written acknowledgement and approval from the relevant authority. This approval will need to confirm that:

- (a) The authority has reviewed the development proposal and that they do not object to its undertaking.
- (b) The authority has reviewed and approved any proposed discharge of stormwater from the development directly to the authority's drainage system.
- (c) In cases where it is proposed to discharge to an RMS-owned road's street gutter, Council may require that RMS approves the design. This would be generally in cases where the proposal diverts stormwater away from its natural catchment. Note that such an approval does not exclude the possibility that Council may separately refuse such a proposal if it identifies that it will detrimentally affect Council's drainage system and/or cause or aggravate flood conditions.

It is noted that these authorities may enforce requirements that will be in addition to conditions that have been formalised with the development consent.

### **5.3 Modifications to Council's Drainage System**

Any development that proposes a modification including the extension or realignment of Council's stormwater system will be assessed on merit. The applicant will be responsible for providing sufficient information to demonstrate to Council's satisfaction that the proposal is feasible, can be built to current standards and specifications, will allow for suitable and safe access for inspection and maintenance, and will meet the requirements as specified below.

A proposal to modify Council's drainage system will not be approved if it is determined that the modification will negatively impact the system or Council's ability to maintain the system.

Any approval to modify Council's drainage system shall be subject to conditions imposed by Council under Development Consent and a separate Stormwater Drainage application must be lodged as required in accordance with Section 68 of the Local Government Act 1993 and Section 138 of The Roads Act 1993. See Section 5.5 for more information regarding this application process.

Typically a concept design is to be prepared for Council's review and approval prior to development consent. This concept design will include:

- A detailed survey that includes all features including but not limited to property boundaries, kerb and gutter, road pavement, driveways, footpaths, buildings, walls, stairs and other structures, trees, finished ground surface types, the surrounding drainage system, service covers, pits and poles. The alignments and levels of all underground services in the vicinity of the Council stormwater pipe deviation works are also to be plotted on to the survey.
- A peg-out survey of the Council Stormwater pipe of an extent as specified by Council will need to be undertaken. The pipe will need to be physically located by careful excavation or by a professional service locating contractor. The alignment of the pipe, level of the pipe and confirmation of its size will need to be identified and surveyed and a copy of this peg-out survey forwarded to Council. The peg-out is to show the width of the pipe (to scale). It is likely that the applicant may need to engage a professional service-locating contractor in liaison with their surveyor to meet this requirement.
- A full scaled long section of the proposed stormwater pipe, indicating the existing surface levels, design levels of the pipe, surface and invert levels of all pits, location of all stormwater pits and the location and level of all service lines that are in the vicinity of the works. This long section will need to show that the pipe can be installed with adequate clearances from all existing underground service lines. These clearances are to be as specified by the relevant service providers.
- The design alignment of the proposed works and details of proposed pipe material, size and class.
- Locations of all stormwater pits and pit types proposed.
- The minimum pipe size shall be 375mm (Class 4) laid with cover as specified by the manufacturer with a typical allowable minimum depth of:
  - 600mm in road ways, driveways or other areas traversed by vehicles.
  - 400mm in areas that are not traversed by vehicles.
 The minimum pipe slope is to be 1%.
- Location and full dimensioning of existing or proposed easements.

The design shall be in accordance with Council's required performance standards, as detailed in any Council construction specification supplied.

The design will need to be accompanied by a Local Catchment analysis by a qualified Hydraulic Engineer that shows that the system designed will:

- (a) Have a capacity greater than the existing system that is being replaced; and
- (b) Meet the required design capacity as specified by Council. Council will typically require that the system's capacity meets or exceeds the 5% AEP event.

In locations where high hazard flows will occurs in large storm events the system's capacity may need to be increased above the 5% AEP event. The designer will need to confirm with Council's infrastructure section the design requirement.

- (c) Will not increase or concentrate flooding on any private property (including the site being developed) or the road reserve. The supporting evidence is to include details and modelling of any surcharge that will occur at the downstream end of the

proposed drainage system in cases where the new system has greater capacity than the existing downstream pipes.

Council will review the concept design as part of the development application process. Note that at Council's discretion additional information including but not limited to the following may be required:

- Flood modelling in accordance with Section 6.11 is to be prepared in conjunction with the concept design.
- Dilapidation (CCTV) reports of the existing stormwater system.
- Extended detailed surveys of the catchment or downstream areas.
- Structural reports with respect to any impacts of the proposal on existing or proposed footings.
- An arborist's report with respect to the impact of the proposed works on all trees in the vicinity of the works. The report may be required to detail work methods and setbacks required. The report will need to be prepared by an AQF5 qualified consulting arborist.
- A full Detailed Stormwater Plan prior to a development consent in cases where a concept design does not satisfy Council regarding the proposal's feasibility and / or suitability.

All costs associated with this exercise must be borne by the applicant.

#### **5.4 Connections to Council's Trunk Drainage System**

In instances where a direct connection to Council's drainage system is proposed this will need to be approved in concept during the development assessment. If the connection is considered appropriate and feasible at the time of development consent an approval for the connection is still required through the Stormwater Drainage application process, See Section 5.5 regarding this application process.

All connections to Council systems must be undertaken in a manner approved by Council's Assets and Infra-structure engineers prior to the determination of a Development Application or Complying Development Consent.

Plans and specifications must be provided to Council. Inspection must be carried out by Council's works representative. Approval for a connection cannot be provided by an external certifier. Council's required performance standards, as detailed in any Council construction specification supplied must be adhered to.

The following requirements for direct connections to Council's drainage system apply:

- (a) A connection from a single residential dwelling or dual occupancy may generally be made with a proprietary saddle slope junction to an existing Council pipe.
- (b) Any connections from any other multi dwelling residential developments, commercial or industrial developments will require the installation of a new pit to Council's requirements. If a connection is being made at the roadway Council will typically require the installation of a standard grated kerb inlet pit with a 2.4 metre (overall) lintel.
- (c) The invert of the connecting pipe is to be at or above the top third of the Council pipe or culvert, or at a level approved by Council.



- (d) For both the above connection types the connecting pipe is to finish flush and not to protrude into the Council pit or pipe.

## 5.5 Stormwater Drainage Application and Assessment Process

To carry out any works on Council's drainage system a Stormwater Drainage Application will need to be lodged by the applicant and approved by Council. This application is required in accordance with Section 68 of the Local Government Act 1993 and Section 138 of The Roads Act 1993. If the works are required in association with development consent, the Stormwater Drainage Application approval will be required to be obtained prior to the issuing of a Construction Certificate.

A Detailed Plan of the proposed works will need to be lodged with the application. This Detailed Plan will need to include details as per the concept design as listed in Section 5.3 along with additional information including:

- Construction details for all pits within the works.
- Access cover and grate details including load class rating. All accesses within areas that are or may be subject to vehicular loadings will be required to be a minimum Load Class D. For other areas a minimum Load Class B will normally be acceptable.
- Pipe trench and backfill details including compaction.
- The extent and details of any required modifications to above ground or underground service mains.

Along with the Detailed Plan other information that may be required to be submitted for assessment includes but is not limited to:

- (a) An arborist's report with respect to the impact of the proposed works on all trees in the vicinity of the works. The report may detail works methods and setbacks required. The report will need to be prepared by an AQF5 qualified consulting arborist.
- (b) Correspondence received from public service authorities with regard to the works requiring modification of the authority's assets or being in the vicinity of authority's assets.
- (c) Correspondence from other parties including but not limited to Emergency Services and Roads and Maritime Services.
- (d) CCTV footage of the existing drainage system.

A Stormwater Drainage bond in case of damage to the Council system and inspection fees are charged. The cost of these is dependent upon the scope of works. CCTV footage will also be required to be undertaken of the new and adjoining drainage system upon completion of works.

## 5.6 Development over Council Drains or Easements

Council does not permit the construction of any structural features of a development to be built over Council's drainage system or easements. This includes balconies, eaves, roof overhangs and gutters.

If there are severe site constraints due to the alignment of an easement through a property, Council may consider consenting to the installation of a demountable lightweight structure

(such as a carport or timber decking) over a limited section of the easement / drainage system subject to the following:

- (a) Approval has been granted by Council's Infrastructure Section;
- (b) The structure will not obstruct the 1% AEP flood / overland flow path;
- (c) A Deed of Indemnity shall be prepared and entered into between Council and the owner of the subject property for the light and demountable structures erected. The deed shall fully indemnify Council and their representative from all claims, demands and liability, which may arise in respect of the removal of structures and any necessary works associated with the structures that are erected within the existing Council stormwater drainage easement. The deed shall specify that the owner shall bear all costs associated with these removals or other necessary works; and
- (d) All of the structure's foundations shall extend to at least 150mm below the invert of the existing stormwater system or as certified to be below the zone of influence of the stormwater system as certified by a suitably qualified structural engineer. The footings will typically be required to be clear of the easement as well as having a minimum 300mm horizontal clearance from the nearest edge of Council's system.

No walls, retaining walls, fences, stairs, air conditioning units, rainwater tanks or other structures are to be installed where they encroach into a Council easement or over a Council stormwater system unless written approval has been received from Council's Infrastructure section.

It is suggested that any ground surfaces within easements are limited to turf, soft landscaping or plain concrete. These surfaces must be consistent with what is approved in the development consent. With respect to any ground surfaces that Council or its contractors remove to undertake works on Council's drainage system, Council will attempt to reinstate to the pre-existing condition or similar including installation of standard concrete and readily available basic pavers. Council will not be responsible for the reinstatement of intricate and / or expensive finishes or for not being able to exactly match a surface finish.

## **5.7 Development Adjacent to Council Drains or Easements**

In respect to all footings and other load bearing structures proposed:

- (a) They shall be completely outside of any drainage easements either existing or required to be created prior to the finalisation of the development; and
- (b) Structural design and certification is to be prepared that certifies that the zone of influence of all footings and other load bearing structures will not impart loading upon the Council stormwater system. Certification to this effect will be required both at the design stage and upon completion of construction.

Note that other requirements including but not limited to the following are enforced by Council. These requirements would typically need to be met prior to the development consent:

- (a) A peg-out survey of the Council Stormwater pipe to determine its location for its full extent within the property (or as otherwise specified) will need to be undertaken and prepared by a registered surveyor.
- (b) The pipe will need to be physically located by careful excavation or by a professional service locating contractor at the property boundaries and at changes

of direction or junctions of the system. The alignment of the pipe, level of the pipe and confirmation of its size will need to be identified and surveyed and a copy of this peg-out survey forwarded to Council. The peg-out is to show the width of the pipe (to scale). This peg-out will need to be plotted onto architectural and stormwater plans. It is likely that the applicant may need to engage a professional service-locating contractor in liaison with their registered surveyor to meet this requirement.

- (c) A pre-development dilapidation report is required and will include CCTV footage of the full extent of the Council stormwater pipe within the property (or as otherwise specified). The dilapidation report is to include CCTV footage & condition reporting for the full extent of the pipe within the completed route, and is to include the inspection and notation of all visible defects and joints along the pipe and photographic evidence with drainage pit depths, size etc. An industry based specialised contractor experienced in conducting CCTV reporting/conditioning that can access the pipe and provide suitable quality footage with pdf and electronic files, will need to be engaged.
- (d) If deemed necessary by Council a structural report will be required that certifies that the development will not impact upon Council's system or easement and the development will be structurally independent of the easement, i.e. that all structures within the development could be removed without impacting on the easement and vice versa. The report may also need to include machinery and stockpiling exclusion areas and work procedures statements and plans that allow for the protection of Council's system.
- (e) Evidence of the builder / principal contractor having current Product and Public Liability insurance to a minimum 20 million dollars.
- (f) A security bond to be lodged with Council for any damage caused to Council's stormwater system. This bond would be typically required prior to the issue of the Construction Certificate and held for duration of all works on site. The bond amount will be determined in accordance with the cost that would be incurred by Council to reconstruct the system.

A post-development dilapidation report to the same specifications as the pre-development report will be required upon completion of all building works. This report would be reviewed and compared to the pre-development report, with any defects or damage that has occurred between the reports deemed to have been caused by the development works.

## **6. FLOODING AND OVERLAND FLOW**

### **6.1 Introduction**

This chapter of the Policy provides Council's requirements for development upon flood liable land within the Georges River Council Local Government Area (LGA).

This chapter should also be read in conjunction with the NSW Government Flood Prone Lands Policy, the NSW Floodplain Development Manual (FDM) 2005 and relevant Council Development Control Plans which relate to the specific development requirements for specific land uses.

### **6.2 Land to which this Chapter Applies**

This Chapter applies to all floodplains within the Georges River Council LGA.

Flood-affected land and properties are formally identified by Council at the completion and adoption of Flood Risk Management Studies and Plans. This includes that lots are identified as flood-affected upon Section 7.11 Certificates. Council has carried out Flood Risk Management Studies and Plans (FRMS and P) for a number of catchments within the LGA. Copies of these can be provided upon request.

In cases where a FRMS and P have not been adopted, Council may identify a property as flood-affected and require flood related development controls in situations where:

- (a) There is reference to the land being potentially flood affected on a Section 7.11 (2) planning certificate.
- (b) Council has a Flood Study that has determined that the site is within or in close vicinity to a flood flow path.
- (c) Council has knowledge that the site has previously been affected by, or impacts upon flooding or a flood flow path.
- (d) A Council engineer determines from an assessment of the land topography, the upstream catchment size and any known existing drainage systems that the site is likely to be liable to flooding in heavy storm events.
- (e) There is a Council, other regulatory authority, inter-allotment or informal drainage system including overland flow systems, creek or open drains that is within or adjacent to the lot.

Flood mapping is available for catchments that Council has either a FRMS and P or a Flood Study. This is available in the public mapping on Council's website. Council's adopted Flood Studies and Flood Risk Management Plans and associated reports are also available on Council's website.

### **6.3 Objectives**

The key objectives of this Policy with respect to flooding and development controls for flood-affected land are to:

- (a) Increase public awareness of the hazard and extent of land affected by all potential floods, including floods greater than the 100 year average recurrence interval (ARI) flood and to ensure essential services and land uses are planned in recognition of all potential floods.
- (b) Inform the community of Council's Policy for the use and development of flood prone land.

- (c) Avoid significant adverse impacts on flood behaviour and the environment.
- (d) Minimise the risk to human life and damage to property caused by flooding through controlling development on land affected by potential floods.
- (e) Provide detailed controls for the assessment of applications lodged in accordance with the Environmental Planning and Assessment Act 1979 on land affected by potential floods.
- (f) Provide controls, for the use and development of land which reflect the probability of the flood occurring and the potential hazards associated.
- (g) To control development and activity within the LGA having regard to the characteristics and level of information available for each of the floodplains, in particular the availability of FRMS's and FRMP's prepared in accordance with the FDM.
- (h) Minimise the potential impact of development and other activity upon the aesthetic, recreational and ecological value of the waterway corridors.
- (i) Improve riparian corridors during redevelopment and to ensure the ecological values of the creek systems are enhanced without adverse impact on existing development.
- (j) Proposed development should not result in a significant increase in economic or social costs as a result of flooding.
- (k) Deal equitably and consistently with applications for development on land affected by potential floods, in accordance with the principles contained in the FDM.

#### **6.4 Process for Determining Applicable Flood Controls**

The criteria for determining the relevant flood controls for a development proposal is structured in recognition that different controls are applicable to different land uses and levels of potential flood inundation and hazard.

The procedure to determine what controls apply to proposed development involves:

- (a) Identifying the land use category of the development in accordance with Section 6.5 of this Policy.
- (b) Identify if the property is identified as flood affected. Note for properties that are not within a catchment that has an adopted Flood Risk Management Study and Plan, the applicant will be required to confirm with Council whether flood controls will apply to development of the land due to situations a), b), c), d) or e) as identified in Section 6.2
- (c) Determine the Flood Risk precinct that will apply. Note in cases where a Council Flood Risk Management Plan or Flood Study is not available the applicant will be required to engage a Suitably Qualified Stormwater Engineer to carry out an assessment to determine the applicable Flood Risk precinct.
- (d) Apply the controls as outlined in the relevant flood matrix in Section 6.8.

Note that if deemed necessary, Council will require the applicant has an Overland Flow Path Assessment or Local Flood Study be prepared in accordance with Section 6.11. This requirement may be enforced for any flood affected land including land within a catchment area that has a Council adopted Flood Risk Management Study and Plan or Flood Study in cases where Council considers that the studies and or plans available do not provide

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sufficient detail. The Overland Flow Path Assessments or Local Flood Study would be required to determine the relevant Risk Precinct, flood levels and flood characteristics through and adjacent to the site.

## **6.5 Land Use Categories**

Eight major land use categories have been adopted in the Flood Planning matrices. These land uses are:

### **(a) Critical Uses and Facilities**

Community facilities including places of public worship may provide an important contribution to the notification or evacuation of the community during flood events; hospitals; and nursing homes.

### **(b) Sensitive Uses and Facilities**

Telecommunication facilities; offensive storage establishments; seniors housing; child care centres; preschools; schools and other educational institutions; correctional centres; liquid fuel depots; public utility undertakings (including generating works) which are essential to evacuation during periods of flood or if affected would unreasonably affect the ability of the community to return to normal activities after flood events; and waste disposal facilities.

### **(c) Subdivision**

Subdivision of land which involves the creation of new allotments, with the potential for further development.

### **(d) Residential**

Buildings used predominantly as a place of residence excluding those development types specified in another land-use category.

Other development within residential lots including but not limited to construction of garages, swimming pools, and the construction of an outbuilding with a floor area that exceeds 30m<sup>2</sup>.

Note: An outbuilding with a maximum floor area of 30m<sup>2</sup> are defined as concessional development as stated below.

### **(e) Commercial or Industrial**

Business premises; office premises; retail premises or buildings or land used for industrial activity.

### **(f) Tourist Related Development**

Camp sites or caravan parks –short-term sites (1) only.

(1) As defined by the Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Moveable Dwellings) Regulation 2005

### **(g) Recreation or Non-Urban Uses**

Animal boarding or training establishments; boatsheds; dams; extractive industries; helipads; jetties; marinas; mines; recreation areas and minor ancillary structures (e.g. toilet blocks or kiosks/cafes); recreation facilities (indoor and outdoor) other than those categorised as “commercial or industrial” within the

Local Environment Plan (LEP); plant nurseries; sanctuaries; and commercial swimming pools.

**(h) Concessional Developments**

Residential development that involves:

- (i) An addition to existing premises of not more than 10% of the floor area of the building footprint which existed at the date of commencement of this Policy;
- (ii) Rebuilding of a development which substantially reduces the extent and severity of flood effects to the existing development;
- (iii) A change of use which does not increase flood risk having regard to property damage and personal safety;
- (iv) Subdivision which does not propose the creation of new allotments with potential for further development.
- (v) The construction of an outbuilding with a floor area of no greater than 30m<sup>2</sup>.

## 6.6 Flood Risk Precincts

Each of the floodplains within the Local Government Area can be divided based on different levels of potential flood risk. The relevant Flood Risk Precincts (FRP's) for each of the floodplains include:

**(a) Flood Risk Precinct 1 – High Flood Risk**

Flood Risk Precinct 1 is the area of land below the 1% annual exceedance probability (AEP) flood that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties. Most development should be restricted in this precinct as development in high flood risk precinct is associated with higher risk to life and evacuation difficulties during the event of flood. In this precinct, there would be a significant risk of flood damages without compliance with flood related building and planning controls.

**(b) Flood Risk Precinct 2 – Low Flood Risk**

Flood Risk Precinct 2 is land below the 1% AEP flood that is not subject to a high hydraulic hazard and where there are no significant evacuation difficulties. There would still be a significant risk of flood damage in this precinct. However, these damages can be minimised by the application of appropriate development controls.

**(c) Flood Risk Precinct 3 – Outside the 1% AEP flood extents but within the PMF**

Flood Risk Precinct 3 is defined as all other land within the floodplain (within the extent of the probable maximum flood) but not identified within either the High Flood Risk or the Low Flood Risk Precinct. The risk of damages due to flood event in low flood risk precinct is low for most of the land uses.

**Notes regarding determination of a site's Flood Risk Precinct:**

- If an independent engineering assessment is undertaken to determine the applicable Flood Risk Precinct of a site, hazard is to be determined as the provisional hazard as defined by Figure L2 from the 'Floodplain Development Manual' (NSW Government, 2005).
- The hydraulic hazard of the site is the highest hazard level within the site.

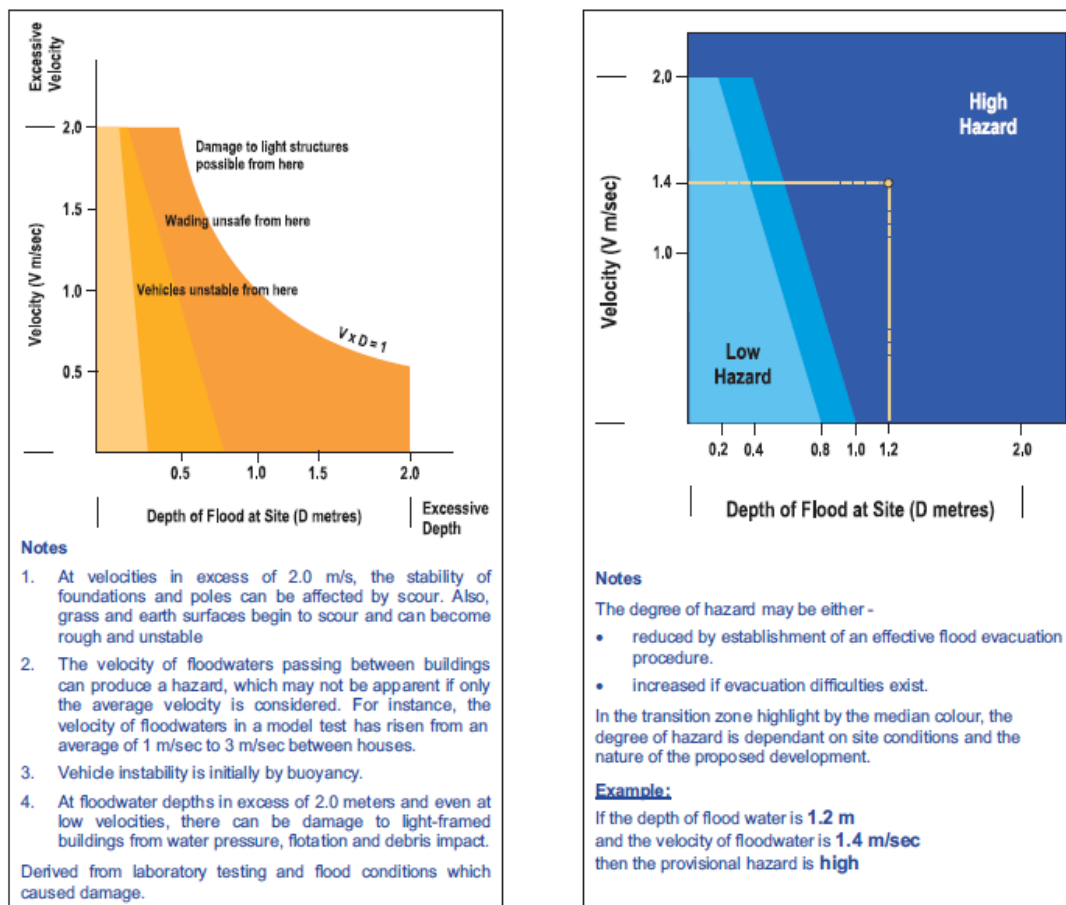
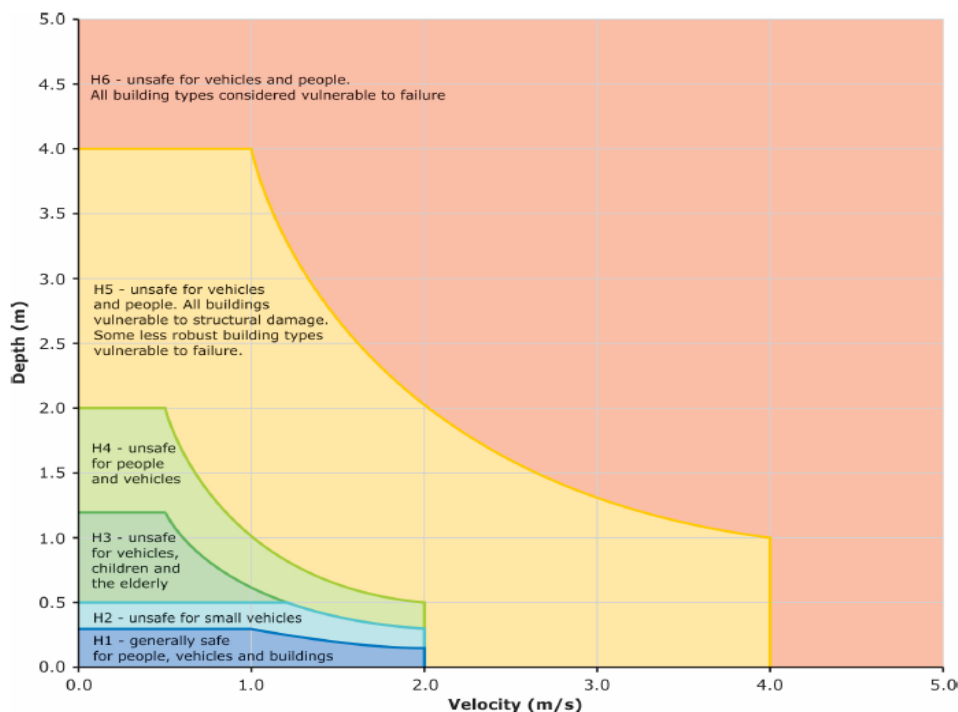


Figure 1 – Provisional Hydraulic Hazard Categories - Figure L2 from the 'Floodplain Development Manual' (NSW Government, 2005).





## 6.7 Flood Levels at the Georges River and Salt Pan Creek

Estimated riverine flood levels along Georges River and Salt Pan Creek are indicated on Figures 2, 3 and 4.

The levels on Figures 2, 3 and 4 are provided for reference purposes only. Note that the levels given do not include allowance for climate change and associated projected sea level rise.

The scope of this Policy does not, and is not intended to specify controls including but not limited to minimum floor levels along foreshore areas.

Any proposed development on land vulnerable to sea level rise will need to be designed and assessed in accordance with requirements for Coastal Hazards and Risks within Council's LEP.

The flood control matrices and related controls listed in Section 6.8 are not applicable for potential flooding related to tidal inundation and the effects of projected sea level rise.

Figure 2 - PMF Flood Levels along Salt Pan Creek and Georges River

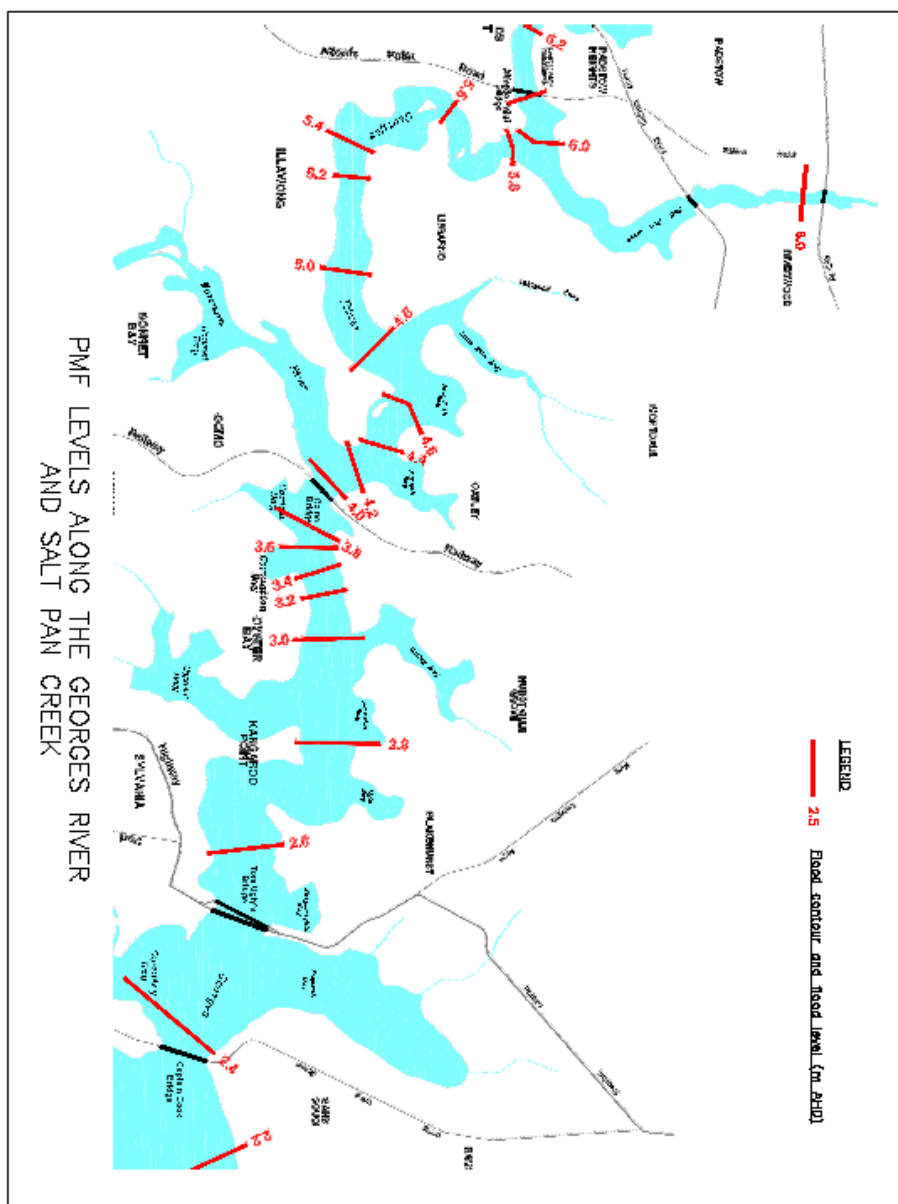
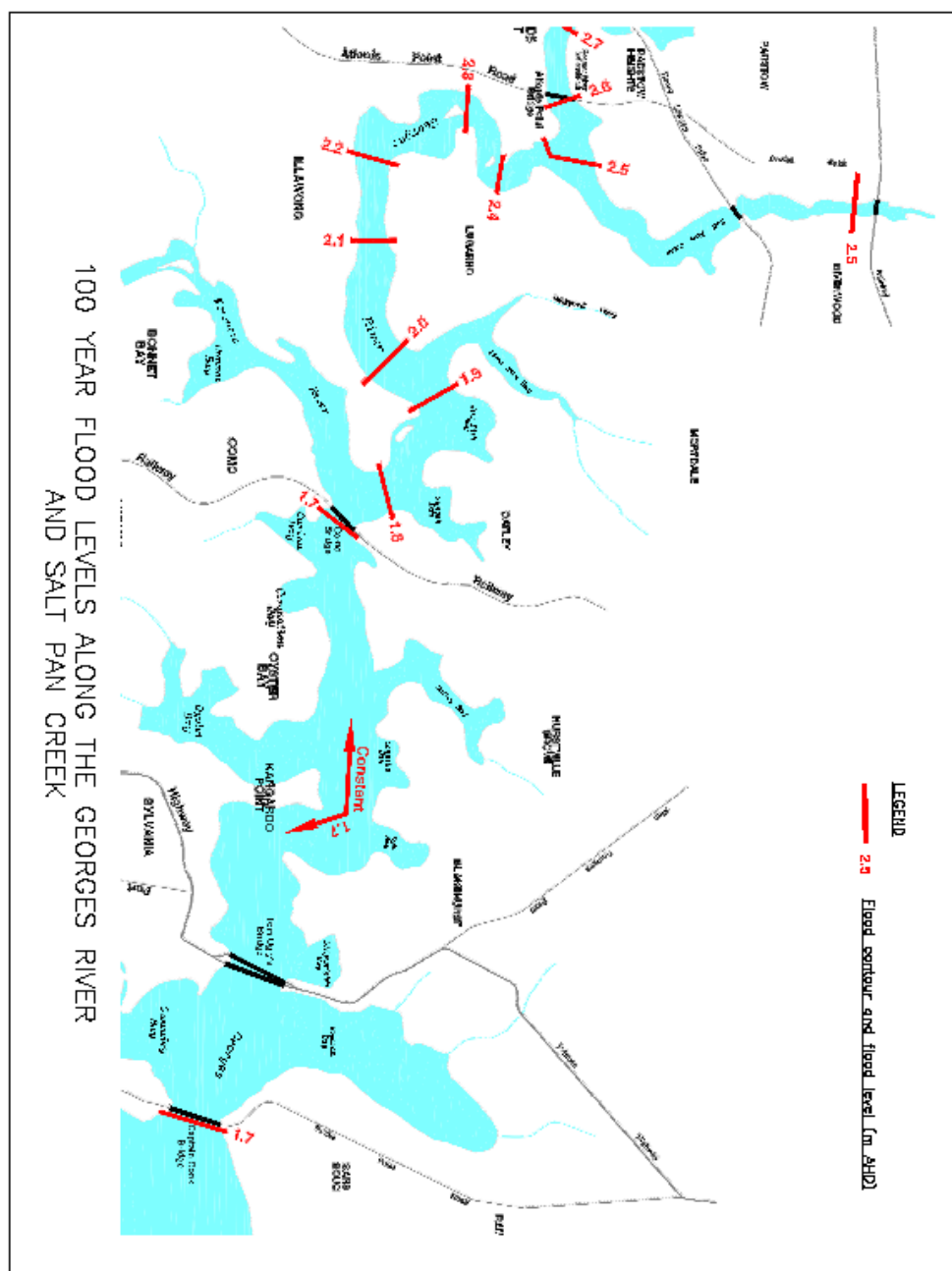
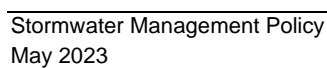


Figure 3 - 100 year Flood Levels along Salt Pan Creek and Georges River



**ENV021-23 Attachment 1**



## 6.8 The Georges River Council Flood Control Matrices



### 6.8.1 Matrices

The Georges River Flood Control Matrices identify specific flood control requirements that are dependent upon both the proposed land use and the Flood precinct that the land is determined to be within. The matrices also identify land uses that are potentially unsuitable due to their location within the floodplain. Refer to Section 6.6 for flood risk precinct definitions.

The numbers in the cells of the matrices refer to conditions that will be place on the proposed development. These conditions are set out in Section 6.8.2. For example, a residential development in a Low Risk Flood Precinct (Matrix 2) would be subject to Flood Effects Conditions 1 and 4 in Section 6.8.2.



**Matrix 1 – Flood Risk Precinct 1 – High Flood Risk**

Flood Precinct	High Risk							
Land Use	Critical uses and facilities	Sensitive uses and facilities	Subdivision	Residential	Commercial or industrial	Tourist related development	Recreation or non-urban uses	Concessional development
Floor level							4, 6	5, 6
Building Components							1	1
Structural Soundness							3	4
Flood Effects							1, 4	1, 4
Parking and Driveway Access							2, 4, 6, 7	1, 5
Evacuation							1, 4	3, 4, 6
Management and Design							2, 3, 4	2, 3, 4

 = Potentially Unsuitable Land Use  
 = Not relevant



**Matrix 2 – Flood Risk Precinct 2 – Low Flood Risk**

Flood Precinct	Low Risk							
Land Use	Critical uses and facilities	Sensitive uses and facilities	Subdivision	Residential	Commercial or industrial	Tourist related development	Recreation or non-urban uses	Concessional development
Floor level				1, 2, 6	1, 2, 6	1, 2, 6	4, 6	5, 6
Building Components				1	1	1	1	1
Structural Soundness				1	1	1	2	1
Flood Effects			3, 4	1, 4	1, 4	1, 4	1, 4	1, 4
Parking and Driveway Access			8	1, 3, 5, 6, 7	1, 3, 5, 6, 7	1, 3, 5, 6, 7	2, 4, 6, 7	1, 5
Evacuation			3, 4, 5	3, 4, 6	3, 4, 6	3, 4, 6	1, 4	3, 6
Management and Design			1	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4

 = Potentially Unsuitable Land Use  
 = Not relevant

**Matrix 3 – Flood Risk Precinct 3 – Outside the 1 in 100 Year Flood Extents but within the PMF**

Flood Precinct	Outside 1 in 100 year flood extents but within the PMF							
Land Use	Critical uses and facilities	Sensitive uses and facilities	Subdivision	Residential	Commercial or industrial	Tourist related development	Recreation or non-urban uses	Concessional development
Floor level		3		1, 2, 6	1, 2, 6	1, 2, 6		
Building Components		2						
Structural Soundness		5						
Flood Effects		2, 4	2, 4	2, 4	2, 4	2, 4		
Parking and Driveway Access		1, 3, 5, 6	8	1, 3, 5, 6	1, 3, 5, 6	1, 3, 5, 6	2, 4, 6, 7	
Evacuation		2, 4, 6	5	3, 4	4	4		
Management and Design		2, 3, 4	1					

 = Potentially Unsuitable Land Use  
 = Not relevant

### **Georges River Council Flood Control Matrices - General Notes**

1. Freeboard equals an additional height of 500mm unless otherwise specified in the Georges River Council Flood Control Matrices – Specific Controls
2. The relevant environmental planning instrument (generally the LEP) identifies development permissible with consent in various zones in Georges River Council. However, constraints specific to individual sites may preclude Council granting consent for development on all or part of a site, whether or not there is compliance with this Policy, and whether or not the use is permissible under the LEP. The above matrices identify where certain development types will be considered unsuitable due to flood related risks. If development consent is granted, compliance with the controls in this Policy may also lead to design constraints that could reduce the development yield for the site.
3. Uses identified as "potentially unsuitable" will generally not be considered as a result of their overall incompatibility with flood risk. Such uses may however be considered where they show compliance with the key objectives of this chapter of the Policy. In such cases, these uses will also need to comply with controls as specified by Council.
4. Any filling of a site that is affected by flooding (if acceptable to Council) may change the flood risk precinct, and the associated development controls that apply to development on the site.
5. Development controls relate to the flood risk precinct identified for the site. Where a site has two or more flood risk categories the relevant sets of controls apply.
6. Refer to Section 6.9 for controls for a development involving only the erection of a fence. Any fencing that forms part of a proposed development is subject to the relevant flood effect and structural soundness considerations of the relevant category.
7. Council may have undertaken mapping showing "overland flow paths" (see definitions) in some areas. This mapping is not exhaustive, and in some cases a site specific flood study may be necessary to determine the presence of overland flow paths. Council may require that these flow paths remain undeveloped completely or partially, to provide for the conveyance of floodwaters.  
  
Some overland flow paths are protected by an easement, and in these cases, development would not be permitted over the easement. Refer to Council to determine whether these areas have been mapped for particular catchments and / or properties.
8. Regarding the floor level control for commercial and industrial uses, it is generally expected that the habitable floor level should be at the 100-year flood level plus freeboard. A lower floor level could be considered where compliance with this standard would result in complications with designing and operating the development, as well as any significant inconsistencies with the floor levels of existing developments.

## 6.8.2 Georges River Council Flood Control Matrices – Specific Controls Floor Level

1. Non-habitable floor levels should be no lower than 300mm above the 1% AEP (annual exceedance probability) flood level.
2. All habitable floor levels to be equal to or greater than the 1% AEP flood level plus freeboard.
3. All floor levels to be equal to or greater than the PMF level plus freeboard.
4. All floor levels to be equal to or greater than the 5% AEP (1 in 20 year) flood level plus freeboard.
5. All floor levels to be equal to or greater than the 1% AEP flood level plus freeboard. Where this is not practical due to compatibility with the height of adjacent buildings, or with the floor level of existing buildings, or the need for access by persons with disabilities, a lower floor level may be considered. In these circumstances, the floor level is to be as high as practical. When undertaking alterations or additions, the floor level is to be no lower than the existing floor level. However in all cases, any storage of dangerous goods, plant etc. is to be above the 100-year flood level plus freeboard.
6. If a qualified stormwater engineer provides evidence to the satisfaction of Council's development engineers that in the 1% AEP flood the maximum depth of flooding does not exceed 150mm, and the hydraulic hazard determined in accordance with Figure 1 is low:
  - (i) Habitable floor levels are to be equal to or greater than the 1% AEP flood level plus 300mm freeboard; and
  - (ii) Non-habitable floor levels should be no lower than 150mm above the 1% AEP flood level.

### Building Components

1. All structures to have flood compatible building components below the 1% AEP flood level plus *freeboard*.
2. All structures to have flood compatible building components below the PMF.

### Structural Soundness

1. Applicant to demonstrate that the structure can withstand the forces of floodwater, debris, and buoyancy up to and including a 1% AEP flood plus *freeboard*, or up to the probable maximum flood (PMF) if required to satisfy the evacuation requirement (see below); an engineer's report may be required.
2. Applicant to demonstrate that the structure can withstand the forces of floodwater, debris, and buoyancy up to and including a 1% AEP flood plus *freeboard*. An engineer's report may be required.
3. Engineer's report is required to certify that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus *freeboard*.
4. Engineer's report is required to certify that the structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP



flood plus *freeboard*, or up to the PMF if required to satisfy the evacuation requirement (see below).

5. Engineer's report is required to certify that the structure can withstand the forces of floodwater, debris and buoyancy up to and including the PMF.

#### **Flood Effects**

1. The applicant is to demonstrate to Council (by way of an Overland Flow Path Assessment or Local Flood Study as per Section 6.11 of this Policy if requested) that the development will not increase flood affectation elsewhere having regard to:
  - (i) Loss of flood storage;
  - (ii) Changes in flood levels, flows and velocities caused by alterations to flood flows; and
  - (iii) The cumulative impacts of multiple potential developments in the vicinity.
2. The impact of the development on flooding elsewhere is to be considered having regard to the three factors listed in No.1 above.
3. The applicant is to demonstrate to Council (by way of an Overland Flow Path Assessment or Local Flood Study as per Section 6.11 of this Policy if requested) that the development resulting from the subdivision will not increase flood affectation elsewhere having regard to:
  - (i) Loss of flood storage;
  - (ii) Changes in flood levels, flows and velocities caused by alterations to flood flows; and
  - (iii) The cumulative impacts of multiple potential developments in the vicinity.
4. Council may require the creation of an easement, or that a Positive Covenant and Restriction on the use of the land be placed on the Title Certificate identifying the location of "overland flow paths", "flood storage" or locations of significant backwater flooding. This may include any sub-floor areas under buildings or other structures that are required to be of an "open structure" to allow for the passage of stormwater flow.

#### **Parking and Driveway Access**

1. The minimum surface level of open car parking spaces or carports shall be as high as practical, but no lower than 300mm below the 1% AEP flood level. In the case of garages, the minimum surface level shall be as high as practical, but no lower than the 1% AEP flood level.
2. The minimum surface level of open car parking spaces or carports shall be as high as practical, but no lower than 300mm above the 5% AEP flood level.
3. Garages capable of accommodating more than 3 motor vehicles on land zones for urban purposes, or enclosed car parking, must be protected from inundation by floods to a level no lower than 150mm above the 1% AEP flood level.

Garages that accommodate no more than 3 motor vehicles on land zones for urban purposes, or enclosed car parking, must be protected from inundation by floods to a level no lower than 1% AEP flood level.

Any garage or car parking that includes the provision of a lift must be protected from inundation by floods to a level no lower than 300mm above the 1% AEP flood level.

4. The driveway providing access between the road and parking spaces shall be as high as practical and generally rising in the egress direction.
5. The level of the driveway providing access between the road and the parking spaces should be as high as practical, and not lower than 0.3 metres below the 1% AEP flood level. However, Council may consider a lower level for the driveway in the following circumstances, where risk to human life is not compromised.
  - (i) Where the road is lower than the parking space, no part of the driveway should be inundated to a greater depth than the roadway.
  - (ii) Where the car parking space is lower than the road, the depth of inundation over the driveway must not be greater than the car park inundation depth, and the driveway must rise continuously in an egress direction.
  - (iii) Where the car parking space and road are both below the 1% AEP flood level, the depth of inundation over the driveway must not be greater than the depth at either the car parking space or the road. Where feasible, the driveway should rise continuously in the egress direction.
6. Enclosed car parking and car park areas accommodating more than 3 motor vehicles, with a floor level below the 1% AEP flood level, shall have adequate warning systems, signage, exits and evacuation routes.
7. Restraints or vehicle barriers to be provided to prevent floating vehicles leaving a site during a 1% AEP flood.
8. Applicant to show that car parking and driveway access for any development resulting from the subdivision can be provided in accordance with this Policy.

#### **Evacuation**

1. Reliable access for pedestrians required during a 5% AEP flood.
2. Reliable access for pedestrians or vehicles is required from the building, commencing at a minimum level equal to the lowest habitable floor level to an area of refuge above the PMF. Such a refuge may comprise a minimum of 20% of the gross floor area of the dwelling being above the PMF level. An engineer's report may be required.
3. Reliable access for pedestrians or vehicles is required. An engineer's report may be needed to address this matter and should consider access for pedestrians or vehicles to a publicly accessible location above the PMF level. Where feasible, an area of refuge within the building or development site that is above the PMF level, and which is equal to 20% of the gross floor area of the development, or such other area capable of accommodating the number of people likely to require evacuation;

4. The evacuation requirements of the development are to be considered. An engineer's report will be required if circumstances are possible that the evacuation of persons may not be achieved within the effective warning time. The development is to be consistent with any flood evacuation strategy, flood plan or similar strategy that has been adopted by Council.
5. Applicant to show that evacuation for development resulting from the subdivision can be provided in accordance with this Policy.
6. An evacuation strategy to be considered and proposals made for improving the evacuation arrangements to the site in relation to the present situation where possible. Adequate flood warning should be available to allow safe and orderly evacuation without undue reliance on the SES or other authorised emergency personnel. Options could include the provision of access for pedestrians or vehicles to a publicly accessible location, or an area of refuge equal to at least 20% of the gross floor area, or such other area capable of accommodating the number of people likely to require evacuation that is above the PMF level.

#### **Management and Design**

1. Applicant to demonstrate that development resulting from the subdivision can be undertaken in accordance with this Policy and any relevant Flood Study or Flood Risk Management Study and Plan.
2. A Site Emergency Response Flood Plan is required where the site is affected by the 1% AEP flood level.
3. Applicant to demonstrate that there is an available area above the 1% AEP flood level plus freeboard to store goods;
4. No storage of materials below the prescribed floor level which may cause pollution or be potentially hazardous during floods.

### **6.9 Fencing**

Fencing is not to be permitted to be installed in flood affected areas if it will cause the undesirable obstruction of the free flow of floodwaters. Fencing must also not become unsafe during floods and potentially become moving debris which threatens the integrity of structures or the safety of people.

Any fencing within a High Flood Risk Precinct and all fencing in other risk precinct that obstructs flood flow will require a development application.

The applicant will need to demonstrate to Council's satisfaction that the fence (new or replacement fence) would create no impediment to the flow of floodwaters. Fences that will be found to be suitable will typically be:

- An open collapsible hinged fence structure or pool type fence, or louver fencing; and
- Other than a brick or other masonry type fence (which will generally not be permitted); and
- Restricted to alignments and locations as instructed or agreed to by Council.

At Council's request, it will be necessary that certification is received by a suitably qualified engineer, that the proposed fencing is adequately constructed so as to withstand the forces

of floodwaters, or collapse in a controlled manner to prevent the undesirable impediment of floodwaters.

### 6.10 Filling of Flood Liable land

The following controls apply with respect to the proposed filling of flood liable land:

- (a) Unless a Floodplain Risk Management Plan for the catchment has been adopted, which allows filling to occur, filling in flood prone areas is not permitted unless an Overland Flow Path Assessment or Local Flood Study prepared in accordance with Section 6.11 is submitted and approved by Council that certifies that the development will not increase flood affectation elsewhere.
- (b) Filling of individual sites in isolation, without consideration of the cumulative effects is not permitted. The NSW Government's Floodplain Development Manual states that a case by case decision making approach cannot take into account the cumulative impact of flooding behaviour, and associated risks, caused by individual developments. Any proposal to fill a site must be accompanied by an analysis of the effect on flood levels of similar filling of developable sites in the area.

### 6.11 Overland Flow Path Assessments and Local Flood Studies

If an assessment of the flood characteristics within a site is required:

- An overland flow path assessment is to be undertaken for sites with upstream catchments with a total area of up to 5 hectares.
- A local flood study is to be undertaken for sites with upstream catchments with a total area of greater than 5 hectares.

The requirements for Overland Flow Path Assessments and Local Flood Studies are detailed below:

#### Overland Flow Path Assessments

For sites with upstream catchments with a total area of up to 5 hectares, a detailed overland flow path assessment in accordance with the current version of Australian Rainfall and Runoff (AR&R) and the NSW Floodplain Development Manual shall be submitted to Council to determine the critical flow characteristics (eg. potential extent) of the overland flow path and its impact on the proposed development and surroundings.

The assessment shall be prepared by a qualified civil engineer experienced in the preparation of flood studies. The assessment shall include the following information:

- (i) A Catchment plan highlighting the full upstream catchment area that generates the overland flow;
- (ii) A pre-construction (existing conditions) & post-construction (proposed development) detailed hydraulic analysis based on the 1% Annual Exceedance Probability (AEP) for the upstream catchment area;
- (iii) Note: A 50% blockage factor shall always apply to the hydraulic analysis of the underground drainage system. Unless otherwise advised by Council it will be acceptable to assume that Council's system has a capacity up to the 20% AEP year storm event.

- (iv) A scaled plan view showing the existing 1% AEP overland flow path extent and levels on the subject property;
- (v) A longitudinal section (at the vertical scale 1:50, horizontal scale to that of plan view) of the drainage system showing existing and proposed surface levels, 1% AEP floodwater levels, hydraulic data and all changes in grade;
- (vi) Scale 1: 50 cross-section details taken perpendicular to the overland flow path with a maximum spacing of every five metres. Cross sections will also be required in the following locations:
  - Immediately at the upstream and downstream property boundaries;
  - Sections extending to a minimum of twenty metres past the property boundaries in both the upstream and downstream directions;
  - At all significant changes in the topography and obstructions within the flow path; and
  - Other cross-sections as required where the flow path and/or drainage system will be affected.

Note: Cross-sections must show the existing and proposed ground levels, pre- and post development top water levels, hydraulic data and flood extents.

- (vii) The Design Rainfall Intensity-Frequency-Duration data used in all calculations are to be as detailed in Appendix A8.

In addition, the following issues will be complied with:

- (i) Impact to the frequency and intensity of the storms from Climate Change in accordance with NSW Sea Level Rise Policy Statement shall be considered;
- (ii) All levels shown on assessment drawings and details shall be to the Australian Height Datum (AHD);
- (iii) The overland flow path assessment must demonstrate that the proposed development will not impede the passage of floodwater to cause a flood effect as defined in Section 6.8.2. It is required that the assessment satisfies Council that the proposed development will not increase the quantity of flow, concentrate, direct flow or otherwise aggravate stormwater overland flow characteristics on another property, roadway or other land;
- (iv) No structures and or fillings are permitted over the 1% AEP overland flow path unless suitable flood mitigation measures are to be implemented. These measures will require assessment and approval from Council;
- (v) The proposed finished floor levels of habitable buildings/structures and non-habitable buildings/structures (including garages, ramps to the basement car parking area) shall be a minimum of 500mm and 300mm above the 1% AEP year flood levels respectively;
- (vi) If the velocity - depth product of the overland flow path exceeds  $0.4\text{m}^2/\text{s}$ , suitable open type fencing or other appropriate measures shall be used to restrict access to such areas affected by hazardous overland flows;
- (vii) In cases where a flow path is proposed to pass under a building or other structure a minimum unobstructed clear height of 250mm is required between the finished ground level and the underside of the structure above. This minimum height is

required to reduce the potential for the flow path to become blocked and to allow for maintenance of the flow path to be feasibly undertaken.

- (viii) Any fencing within the estimated extent of the overland flow path must be replaced with open type fencing to allow unimpeded passage of overland floodwater; and
- (ix) The overland flow path assessment must be signed by an engineer declaring that the study has been undertaken in accordance with Australian Rainfall and Runoff and the NSW Floodplain Development Manual.

### Local Flood Studies

For sites with upstream catchments with a total area of greater than 5 hectares, a detailed flood study in accordance with the current version of Australian Rainfall and Runoff (AR&R) and the NSW Floodplain Development Manual shall be submitted to Council.

The assessment shall be prepared by a qualified civil engineer experienced in preparation of flood modelling and shall address and comply with the following:

- (i) The flood study will include:
  - Flood model of the 1% Annual Exceedance Probability (AEP) design storm events and Probable Maximum Flood (PMF) with the predicted impacts of Climate Change;
  - If Council considers that a one-dimensional (1D) model will not adequately define the flood behaviour and impacts of the proposal, a two-dimensional (2D) flood model (such as TUFLOW) shall be required to be used. The applicant should consult with Council's Development Engineers with respect to this.
  - Scaled maps, including 0.2 m contour lines that show the full upstream extents of the catchment area;
  - Scaled maps showing the flood extent, flood contour, flood depth and velocity of pre-development and post-development 1% AEP and PMF flood; and
  - Detailed scaled plan view showing the pre-development and post-development 1% AEP and PMF flood extent and levels on the subject property.
  - At the discretion of Council's assessing development engineer any requirements that have been defined for an overland flow path assessment.
- (ii) A 50% blockage factor shall always apply to the underground drainage system in flood modelling.
- (iii) A sensitivity analysis on flooding impact when the stormwater drainage system is 100% blocked shall be considered in the modelling.
- (iv) All levels shown on flood study shall be to the Australian Height Datum (AHD).
- (v) The flood study must demonstrate that the proposed development will not impede the passage of floodwater to cause a flood effect as defined in Section 6.8.2. It is required that the assessment satisfies Council that the proposed development will not increase the quantity of flow, concentrate, direct flow or otherwise aggravate stormwater overland flow characteristics on another property, roadway or other land;

- (vi) The proposed finished floor levels of habitable buildings/structures and non-habitable buildings/structures (including garage, ramps to the basement car parking area etc.) shall be a minimum 500mm and 300mm above the 1% AEP flood levels respectively.
- (vii) Flood storage within the site shall be maintained before and after the development.
- (viii) Structures/filling shall not be placed within the flood extent unless suitably and adequate mitigation measures have been proposed and implemented. These measures will require approval from Council.
- (ix) The boundary fence over the estimated flood extent must be replaced with open type fencing to allow unimpeded passage of overland floodwater.
- (x) A Flood Evacuation Plan in PMF storm events shall be submitted for assessment.
- (xi) If the velocity - depth product of the overland flow path exceeds  $0.4\text{m}^2/\text{s}$ , suitable open type fencing or other appropriate measures shall be used to restrict access to such areas affected by hazardous overland flows.
- (xii) In cases where a flow path is proposed to pass under a building or other structure the minimum unobstructed clear height of 250mm is required between the finished ground level and the underside of the structure above. This minimum height is required to reduce the potential for the flow path to become blocked and to allow for maintenance of the flow path to be feasibly undertaken.
- (xiii) The flood study must be signed by an engineer declaring that the study has been undertaken in accordance with Australian Rainfall and Runoff and the NSW Floodplain Development Manual.

## 6.12 Flood Gates

### 6.12.1 Purpose

Flood affected development requires flood protection for events up to and including the 1% AEP with flood related development controls, namely the raised habitable floor levels and raised basement car park entry levels to flood planning level (FPL).

However as basement car parks levels are situated lower than habitable floor levels and below the flood planning level, these may become flooded in rarer flood events. Thus, there is a need for further protection of basement areas against inundation of the basement car parking area by the provision of a flood gate located across the driveway ramp in certain circumstances.

The rationale behind flood gate requirement is to provide a means by which floodwater can be prevented from reaching the basement in rarer but possible flood scenarios leading up to the PMF.

Where proposed and required, the gate is to be permanently fitted at the driveway entrance to ensure that response time is minimal. The use of a flood gate is to be used to minimise flood damage to both the basement and parked vehicles in the basement from flood water inundation. A robust on-going operation and maintenance plan is required to be in place and must be implemented throughout the development life cycle.

### 6.12.2 Requirements

Where basement ramps are proposed within areas affected by 1% AEP and PMF flood events, or are in close proximity of overland flow systems, a creek or an open drain, protection of basement areas from inundation is not always possible through the use of basement ramp crest heights.

To manage the risk for floods above the 1% AEP level in such circumstances, a flood gate may be installed subject to the following requirements to ensure appropriate protection of people and property from flood water inundation:

1. The Flood gate should be installed along the basement access ramp.
2. The ramp crest must be set at the FPL (Flood Planning Level)
3. The flood gate is to have a minimum gate height of 1200mm.
4. The Flood Gate is to be operable 24 hrs/365 days a year.
5. Flood Gate design details, including an operation and maintenance plan prepared by a qualified Civil/hydraulic Engineer must be submitted accompanying applications proposing a flood gate.
6. Sufficient flood warning systems including signages are to be provided at noticeable locations.
7. The flood gate must be installed along ramp crest of the basement driveway to prevent direct entry of floodwater into the basement.

Following concept approval of a flood gate installation at Development Application stage, full installation and design details will be required to be submitted at Construction Certificate stage.

Certification of installation and the details of the installation, design, and operation and maintenance plan will be required to be provided to Council for record keeping prior to the release of an Occupation Certificate.

### 6.13 DRAINS Model Requirements

DRAINS models are to be utilised to undertake drainage investigation and design. It is a public domain modelling tool and requires minimal data entry and is consistent with Council's drainage database.

The following are the minimum requirements for DRAINS Modelling:

- (a) Use the latest version of DRAINS model software.
- (b) DRAINS model is to be run in the standard hydraulic mode with all required storm events and durations.
- (c) Apply Council's blockage policy for inlet pits. Blockage factors of 0.5 and 0.2 are to be applied for sag pits and on-grade pits respectively.
- (d) Standard Drains pit inlet capacity curves shall be used wherever appropriate. For non-standard pit, inlet capacities should be derived based on pit lintel and grate openings outlining the calculation and justification for the adopted inlet capacities.
- (e) The time of concentration (Tc) can be calculated using the kinematic wave equation from AR&R (1987) with suitable surface resistance coefficients.



- (f) The flow path length, L is the distance from the furthest point of the site to the exit to Council's stormwater drainage system. This length may be modified by the development either by piping, paving, or redirecting.
- (g) The minimum time of concentration should not be less than 5 minutes for the total flow travel time from any catchment to its point of entry into the drainage network. The maximum time of concentration in urban areas shall be 20 minutes unless sufficient evidence is provided to justify a greater time.
- (h) Fraction impervious value for existing residential development is to be considered 70% as minimum.
- (i) Pipe Roughness/Friction - A default value of 0.6mm, for old (existing) pipes, is to be adopted within the DRAINS model. A Colebrook-White value of 0.3mm should be used when modelling new pipes during the concept design phase.
- (j) Pit Pressure Loss Coefficients –Queensland Urban Drainage Manual (QUDM) methods can be utilised, as automated in DRAINS. However, Council's understanding is that the QUDM method is not always appropriate in the assessment of existing urban drainage systems. Accordingly, should the QUDM method be adopted, sensitivity checks at locations where the networks are sensitive to head-loss must be undertaken.
- (k) Where Ku values are greater than 4 in the DRAINS model, sensitivity checks are to be undertaken and the use of a higher Ku value justified to Council; Council's preferred method of sensitivity assessment is to refer to the "Missouri Charts".
- (l) Downstream model boundary should be extended sufficiently downstream of the study area boundary so that backwater effects from the boundary condition have minimal impacts on hydraulic grade line.
- (m) Sensitivity analyses shall be carried out to assess how much influence the model parameter values have on the results. The principal parameters are rainfall losses, catchment storage and lag, friction, energy losses and pipe roughness. The sensitivity of the model results to downstream boundary conditions shall also be tested.
- (n) DRAINS runs are to be carried out for a range of storms durations sufficient to identify the critical duration depending on the AEP of the drainage system.
- (o) DRAINS model parameters recommended for use are as follows:
  - Use of values other than those listed here requires Councils prior approval.
  - Where a range of values is given, use of the value selected needs to be justified.
  - Where there is any possibility of variation in values, multiple runs to test sensitivity will be required.

PARAMETER DESCRIPTION	VALUE
Soil type - normal	2.5
Paved (impervious) area depression storage	1 mm
Grassed (pervious) area depression storage	5 mm
Antecedent moisture conditions for all ARIs	3
Sag Pit blockage factor (major systems)	50%
On grade pit blockage factor	20%

Inlet pit capacity	Max 100l/s for on grade pits
Minimum pit freeboard	150 mm

- (p) Catchment plan outlined shall be used as a background with the modelled drainage network elements schematised in their true positions on the plan
- (q) The stormwater network shall be schematised in the model at full scale and in its actual position on the background plan

## 6.14 TUFLOW Model Requirements

Following are the minimum requirements for TUFLOW 1D/2D Fixed Grid Hydraulic Modelling application in Urban Areas:

1. TUFLOW Version  
The latest version of TUFLOW model to be used (current version 2020);
2. Digital Elevation Model (DEM)  
Study area DEM for the study area to be developed using ALS data and/or site survey data;
3. Grid Size  
Model grid size is to represent the flow behavior to be modelled in an urban environment, with the consideration of narrow overland flow paths, such as between building and permanent obstructions. One meter grid size is recommended to achieve appropriate results (unless a larger grid size justified);
4. Flow path Obstructions and Constrictions  
Obstructions across a flow path, such as buildings, sheds, fences and road embankments etc. are to be satisfactorily incorporated in the model with reference to the recent physical modelling undertaken as part of Australian Rainfall & Runoff - Revision Projects and Document Updating Project 15 - Two-Dimensional (2D) Modelling in Urban Areas.
5. Modelling Fences  
Standard approach to be used in modelling Fences located within flow paths. Refer to TUFLOW User Manual for further information.
6. Downstream Boundary  
Downstream boundary conditions in TUFLOW model may be defined using one of flowing approaches:
  - a) Assigning a water level versus flow curve (HQ Curve); or
  - b) Assigning a water level versus time curve (HT Curve);

The available hydraulic models from previous studies may be used to obtain these relationships for the drainage catchments.

Model boundary should be extended sufficiently downstream of the study area boundary so that backwater effects from the boundary condition have minimal impacts

on predicted flooding behaviour. A sensibility analysis is required for the model to be acceptable.

7. Upstream Flow Boundary

For single lot developments hydrograph generated using standard procedure at the downstream site boundary has to be applied as upstream flow boundary.

8. Initial Water Level (IWL)

A constant water level can be set up as the IWL. Allocated IWL is to be commensurate with the starting water level of downstream water level boundaries.

9. Critical Duration

Developed model shall be run for a range of storm durations sufficient to identify the critical duration.

10. Design Events

Minimum 1% and 5% AEP design storm event results for existing and developed conditions are run and satisfactorily documented in a report. Any recommended flood management measures identified are also to be modelled and comparison of results in terms of flood impacts shall be reported.

11. Cumulative Mass Error

It is to be demonstrated that the TUFLOW model is fit for purpose through the assessment of the allowable mass balance error percentage values as follows;

- (a) All three Cumulative Mass Error percentage values such as for the overall model, for all the 2D domains and for any 1D domains should be within a  $\pm 3\%$  to  $\pm 5\%$  limit. The model will not be accepted by Council where the Mass Error is outside the above specified range.

12. Modelling Results and Flood/Overland Flow Path Mapping:

- (a) Cut off depth of 0.1m to be used for mapping flood extents.
- (b) At least 0.2m contour intervals to be used in flood level and flood depth mapping.
- (c) Existing and developed scenario flood contours and flood levels (mAHD) must be clearly presented in a more readable format.

13. TUFLOW Input and Output Files Requirements

TUFLOW input files and folders could be corrupted or missed while manually compiled and copied on USB. In the interest of copying the complete set of input and output files without any corruption it is recommended that following procedure is followed:

- (a) All the model files be copied using the in-built 'copy' function in TUFLOW, as described under TUFLOW Manual. This ensures that all input files that are necessary to run the model are copied into one folder;
- (b) Any files that are read in as 'mid' rather than 'mi' or 'mif', the 'mif' file corresponding to that 'mid' file will also need to be manually copied into the folder;
- (c) Any file read as binary XF file corresponding original input data file need to be manually copied into the folder;

- (d) In addition to the input files, a complete set of output files are to be provided for all the scenarios/options run to ensure that the same results are produced when the files are rerun;

#### 14. TUFLOW Modelling Quality Assurance Log

- (a) The consultant is to use a modelling log to maintain the records of model development, traceability and quality assurance. The format of the modelling log is at the consultant's discretion. However, a spreadsheet should be developed for use as a modelling log;
- (b) Typical details to be entered into the log are:
- (c) Names of TUFLOW simulation control files;
- (d) Date of simulation;
- (e) Details of the event modelled (duration, recurrence interval, etc.);
- (f) Modelling log is to be submitted with the final model.

## 7. STORMWATER QUALITY REQUIREMENTS

### 7.1 Introduction

Council is committed to and has endorsed the following Water Sensitive Urban Design Principles:

- (a) Protection and enhancement of natural watercourses and their associated ecosystems and ecological processes.
- (b) To maintain, protect and/or rehabilitate modified watercourses and their associated ecosystems and ecological processes towards a natural state.
- (c) Minimise potable water demand and wastewater generation.
- (d) Match the post development runoff to the pre development or natural water runoff regime as closely as possible.
- (e) Mitigate the impacts of development on water quality and quantity.
- (f) Mitigate the impacts of development on groundwater, particularly in saline groundwater environments.
- (g) Ensure any changes to the existing groundwater regime do not adversely impact upon adjoining properties.
- (h) Integrate water cycle management measures into the landscape and urban design to maximise amenity.
- (i) Minimise the potential impacts of development and other associated activities on the aesthetic, recreational and ecological values of receiving waters.
- (j) Minimise soil erosion and sedimentation resulting from site disturbing activities.
- (k) Ensure the principles of ecologically sustainable development are applied in consideration of economic, social and environmental values in water cycle management.

Developments that are required to incorporate Water Sensitive Urban Design to meet Design Excellence requirements under the Georges River Local Environmental Plan are required to show that they have implemented design measures to address the applicable principles as listed above.

Designers implementing Water Sensitive Urban Design should refer to documents including the Water Sensitive Urban Design – Greater Adelaide Region Technical Manual – December 2010 for technical information and design guidelines.

### 7.2 General Stormwater Quality Requirements for all Sites

For development of sites that are less than 2000m<sup>2</sup> a silt arrestor pit is required to be installed downstream of all collection points within the site's drainage system and prior to discharge of the stormwater from the site. Silt arresting measures are to be designed for all pits within the site that collect ground surface water.

A silt arrestor pit is also required to be installed directly upstream of any absorption system.

A proprietary oil separator is required for any site that:

- Is an industrial development that has a site area of greater than 1000m<sup>2</sup>.

- Includes an outdoor uncovered parking area that caters for greater than 20 vehicles.

The oil separator is to be installed at a location within the system to allow for it to treat the runoff from the full extent of all areas subject to vehicular movements. The oil separator is to be sized to cater for the full catchment area that it is to treat.

### **7.3 Stormwater Quality Requirements for Sites of Area Greater than 2000 Square Metres**

For sites of area greater than 2000m<sup>2</sup> Stormwater Quality Improvement Devices (SQIDs) are to be installed that will ensure that stormwater discharge from the site meets the following performance criteria:

- All general requirements as specified in Section 7.2.
- Achieve a minimum of 80% retention of the Suspended Solids (SS) average annual load.
- Achieve a minimum of 40% retention of the Total Phosphorus (TP) average annual load.
- Achieve a minimum of 40% retention of the Total Nitrogen (TN) average annual load.
- Achieve a total retention of litter and organic matter greater than 50mm for storm events of up to exceedances per year (EY) (1 in 3 months) frequency.
- Achieve a total retention of oil and grease for storm events of up to EY.

A variety of SQIDs can be implemented to achieve the above objectives and performance criteria such as:

- Rainwater and stormwater tanks
- Porous paving
- Bio-retention systems
- Infiltration devices

A MUSIC model (or similar) will be required to be lodged at the time of the development submission that shows that the measures designed into the drainage system will achieve the above performance criteria.

The following design requirements are to be met:

- Where trash racks are installed, the gaps between the bars shall be 60mm.
- Where litter booms are installed, they are to be placed only where normal flow velocities are low and must incorporate a trap where they are used in tidal waterways.
- Where stormwater pit litter baskets are installed, they shall not exacerbate flooding and must incorporate a bypass.
- Where sand filters are used they shall be restricted to urbanised catchments smaller than 2 hectares. The entry of sediment and oil to the filtration media shall be controlled and a sediment trap provided upstream for pre-treatment. A suitable grain size, which maintains percolation rates, shall be used. Sand replacement schedules shall be included in the maintenance schedule.

- Sand filters should not be used for Developments with large concentrations of oil and litter, which could potentially block the sand filter.
- Provision must be made for convenient and safe regular inspection and periodic cleaning of water quality control measures. The maintenance schedule for the site's stormwater system is to include required inspections and maintenance of all stormwater quality measures.

## VERSION CONTROL AND CHANGE HISTORY

Version	Amendment Details	Policy Owner	Period Active
1.0	New Georges River Council Stormwater Management Policy  Approved by Council (CCL048-20).  Public Exhibition Period - 1 February 2020 to 13 March 2020	Manager Development and Building	27/07/2020 – 8/04/2021
1.1	Updates to DA Stormwater and OSD Documentation Checklist (Appendix A1) to provide clarity for users of the form.	Manager Development and Building	8/04/21 - ongoing
1.2	Housekeeping updates of policy based upon review.	Manager Development and Building	25/5/2023



## APPENDIX A1 - DA Stormwater and OSD Documentation Checklist



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### DA – Stormwater & OSD Documentation Checklist

<b>Advisory Notes:</b>		
a)	This form is to be completed by a Qualified and Practising Engineer on the National Engineer Register (NER) in Civil Engineering, specialising in stormwater modelling and design.	
b)	This form will ensure a more amenable and cost effective design is submitted to Council to avoid delays in the assessment and approval of applications.	
c)	The Qualified and Practising stormwater design engineer must complete and sign this checklist as any inaccurate or incomplete documentation will result in assessment delay or application being returned.	
d)	Stormwater Design and Documents must be prepared taking into consideration Council's Stormwater Management Policy - 2020 (SMP) and other relevant Policies.	
e)	Notwithstanding (a) above a project designer can complete this checklist if:	
	<ul style="list-style-type: none"> <li>- The works comprise alterations and additions to residential development &amp;</li> <li>- OSD is not required (Ref – Section 4.4 of SMP) &amp;</li> <li>- The site is not flood affected &amp;</li> <li>- No absorption or charged drainage system proposed &amp;</li> <li>- Connection is to an existing system (with details submitted) or the site drains by gravity to the street</li> </ul>	
For advice please contact Customer Service on (02) 9330 6400 (8.30am-5.00pm Monday to Friday).		

Part 1 - Property Details		
Unit No.:	House No.:	
Street Name:	Suburb	Postcode:
Lot No:	DP/SP:	
DA Number:		

Part 2 – Registered and Qualified Stormwater Design Engineer's Details	
Company name & ABN: .....	
Registered Stormwater Design Engineer's Current Accreditation Number (NER): .....	
Is the Engineer accredited to carry out Design of Stormwater and OSD Systems: Yes No	
Full Given Name(s):	
E-mail address:	
Contact No.:	

Address:				
<b>Part 3 – Stormwater &amp; OSD Design Plans Checklist</b>				
No.	Items	Yes ( ✓ )	No ( ✓ )	N/A ( ✓ )
<b>1.</b>	<b>Plan Preparation (Ref. – Section 2 of SMP)</b>			
1.1	Stormwater Design Preparation and Documents have been prepared in compliance with Council's Stormwater Management Policy – 2020 (SMP) and other relevant Policies.			
1.2	Name, Signature and NER number of the Stormwater Engineer are clearly indicated on all submitted drawings, certificates, documents and reports.			
1.3	Site inspection undertaken in preparation of the stormwater system design.			
1.4	The stormwater plans: <ul style="list-style-type: none"> <li>• Are based on a Survey Plan prepared by a Registered Surveyor.</li> <li>• Provide spot and contour levels (to m AHD).</li> <li>• Provide location of any existing easements.</li> <li>• Provide location of any existing trees and structures.</li> <li>• Include north point, date and scale.</li> </ul>			
1.5	Does the development require OSD? <b>(Ref. – Section 4.3 &amp; 4.4 of SMP)</b>  If Yes:  Submit site impervious area calculation form (A7).			
1.6	Has the stormwater system or OSD system been designed in accordance with: <ul style="list-style-type: none"> <li>• Georges River Council's requirements. <b>(Ref – Section 4 of SMP)</b></li> </ul>			
1.7	Stormwater concept plans correspond and consistent with: <ul style="list-style-type: none"> <li>• Architectural Plans.</li> <li>• Landscape Plans (no conflict between stormwater infrastructure, trees to be retained or planted and landscaped areas including deep soil).</li> </ul>			
1.8	Construction of new Stormwater Infrastructure  If construction of new stormwater infrastructure within the road network or public space is proposed, design details including pipeline long – sections to be provided.			

<b>2</b>	<b>Flood Affected</b>			
2.1	<p>Is the site (whole or partly) affected by flood as per the 1% AEP flood maps?</p> <p><b>If Yes:</b></p> <ul style="list-style-type: none"> <li>a. Submit Flood Impact Assessment Report for 1% AEP storm events and input/output read files.</li> </ul> <p><b>(Must only be prepared by a registered NER Engineer experienced in flood modelling and noted in the report)</b></p> <ul style="list-style-type: none"> <li>b. Design complies with the flood control matrix requirements of Section 6.8 of the SMP.</li> </ul>			
<b>3.</b>	<b>Stormwater System</b>			
3.1	<p>Is there a Council stormwater pipe traversing the site or within close proximity to the site?</p> <p><b>If Yes:</b></p> <ul style="list-style-type: none"> <li>• Submit an Overland Flow Assessment Report for 1% AEP storm events.</li> </ul> <p><b>(Must only be prepared by a registered NER Engineer experienced in flood modelling and noted in the report)</b></p>			
3.2	Can the stormwater system drain by gravity to the street frontage of the site? <b>(Ref. Section 3.3 of SMP)</b>			
3.3	<p>Is a charged system proposed? <b>(Ref. Section 3.4.2 of SMP)</b></p> <p><b>If Yes:</b></p> <ul style="list-style-type: none"> <li>a. Is there a gravity discharge from the property boundary to the street kerb and gutter?</li> <li>b. Is it draining to the natural sub catchment?</li> </ul>			
3.4	<p>Are absorption trenches proposed? <b>(Ref. Section 3.4.4 of SMP)</b></p> <p><b>If Yes:</b></p> <ul style="list-style-type: none"> <li>a. Is the site located in a suburb as prescribed in Section 3.4.4.1 of the Stormwater Management Policy?</li> <li>b. Is the design supported by a geotechnical report?</li> </ul>			

3.5	<p>Is connection to an existing drainage system on site proposed? <b>(Ref. Section 3.4.5 of SMP)</b></p> <p><b>If Yes:</b></p> <p>Have the full details of the existing drainage system been provided?</p>			
3.6	<p>Is an easement over downstream property or properties required to drain the site by gravity? <b>(Ref. Section 3.4.5.3 of SMP)</b></p> <p><b>If Yes:</b></p> <ol style="list-style-type: none"> <li>1. This is indicated on submitted Plan No .....</li> <li>2. Has the permission of downstream property owners been obtained for any easements? If yes, this approval must be lodged with the stormwater plans / documentation.</li> <li>3. If the site already benefits from an existing drainage easement, has a recent Title Search been provided?</li> </ol>			

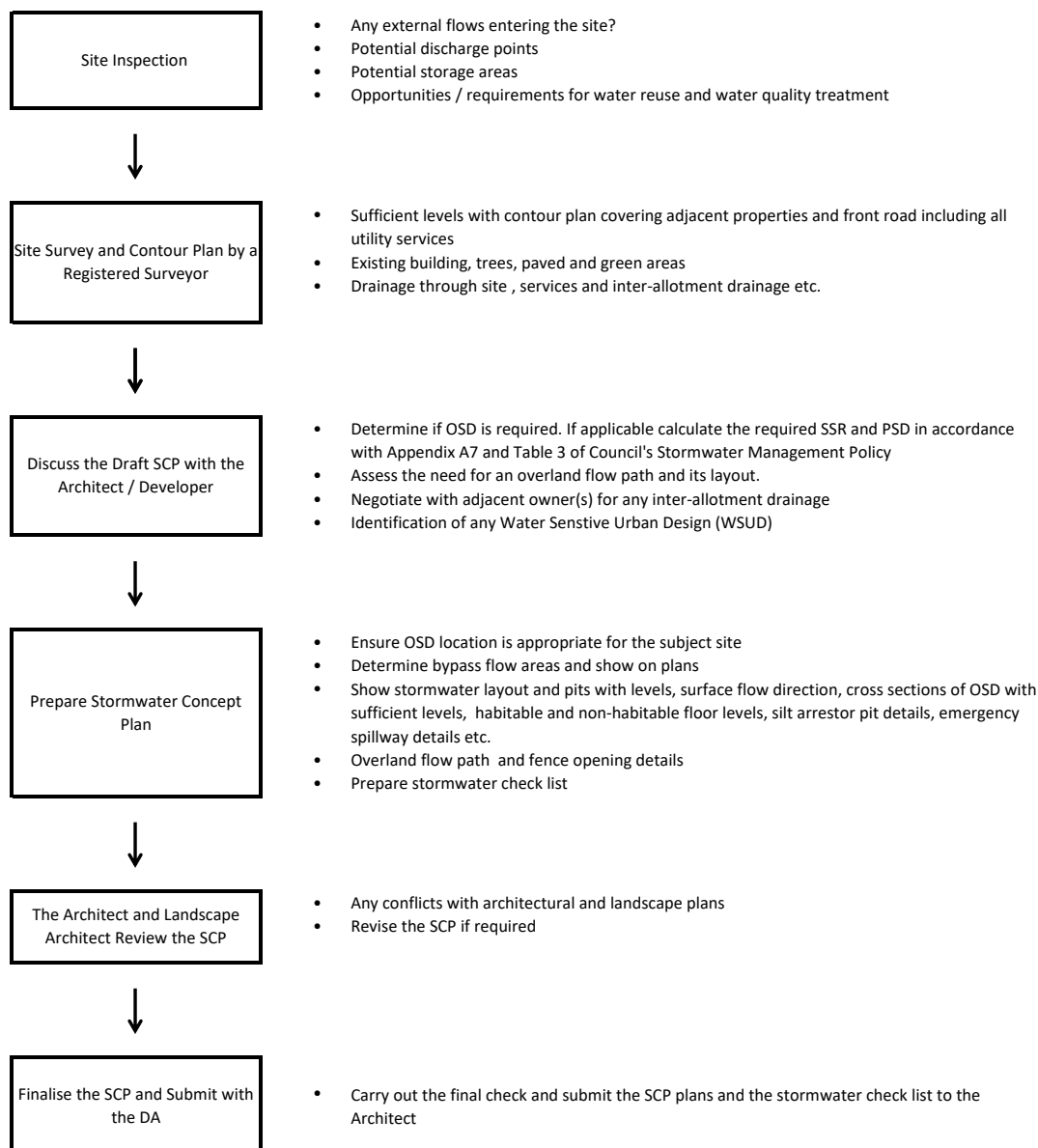
Part 4 – Registered and Qualified Stormwater Engineers' Declaration	
Declaration	<p>I confirm that as the NER Registered Stormwater Design Engineer responsible for designing the stormwater system associated with this development proposal that I have done so with a full understanding of the relevant Council requirements and have read, understood and completed this checklist accurately.</p> <p>_____</p> <p>Registered Stormwater Design Engineer's Signature</p> <p>Date ____/____/____</p>

Part 5 – Project Designer's Declaration	
<p>Declaration</p> <p><i>(Applicable only when advisory note (e) has been fully achieved)</i></p>	<p>I confirm that as the Project Designer responsible for designing the stormwater system associated with this development proposal that I have done so with a full understanding of the relevant Council requirements and have read, understood and completed this checklist accurately.</p> <p>_____</p> <p>Project Designer's Signature</p> <p>Date ____/____/____</p>
Full Given Name(s):	
E-mail address:	
Contact No.:	
Address:	



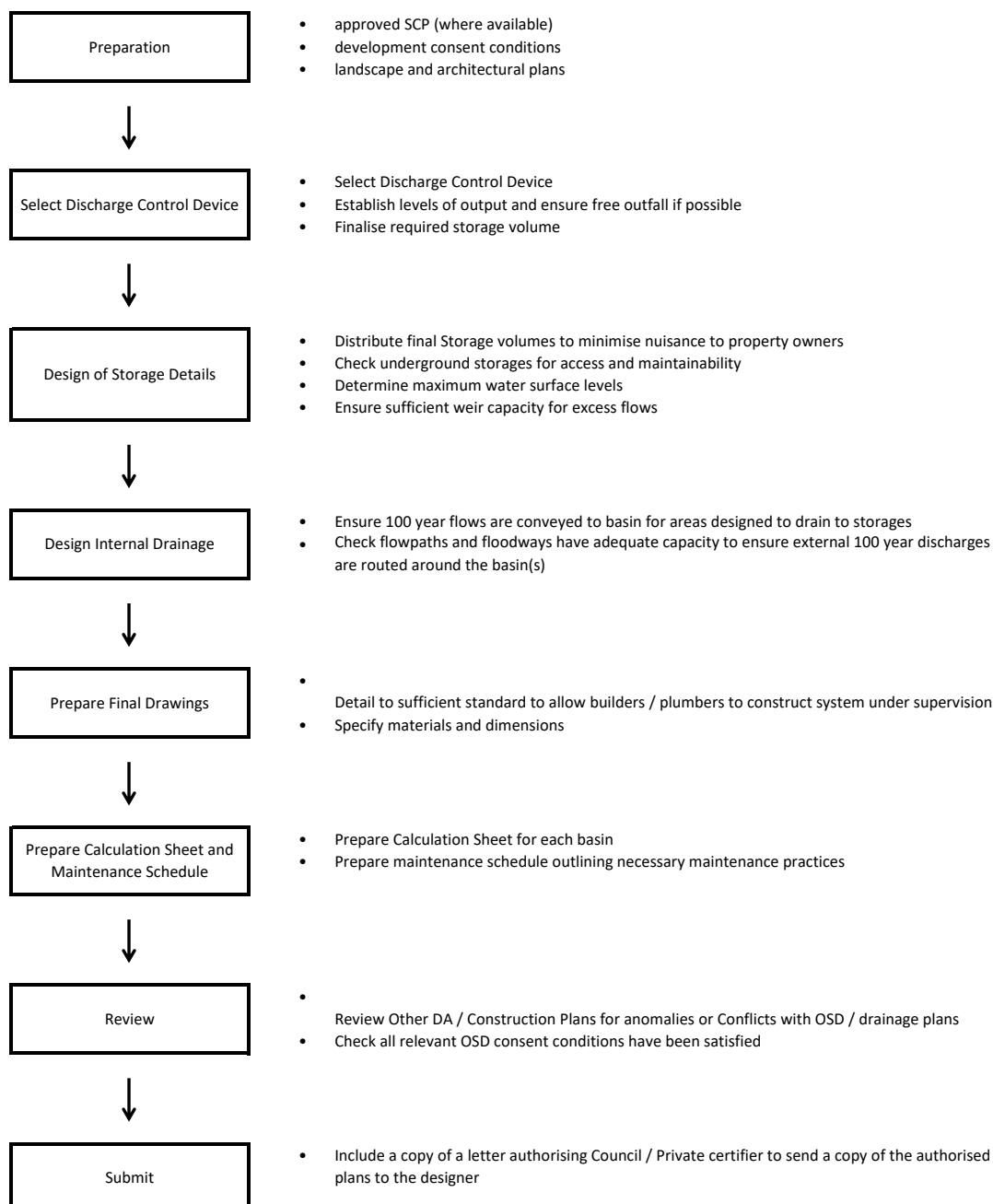
## APPENDIX A2 - Stormwater Concept Plan (SCP) Preparation Flow Chart

NOTE: This flow chart is intended to be a guideline only and is not applicable to all applications



## APPENDIX A3 - Stormwater Detailed Plan (SDP) Preparation Flow Chart

NOTE: This flow chart is intended to be a guideline only and is not applicable to all applications







## APPENDIX A4 - Certificate of Stormwater Compliance for On-Site Stormwater Management System

Job Address: \_\_\_\_\_

DA/CC No.: \_\_\_\_\_

Project: \_\_\_\_\_

Designed by: \_\_\_\_\_

Certified by: \_\_\_\_\_

Qualifications: \_\_\_\_\_

Address and telephone: \_\_\_\_\_

### 1. Works constructed in accordance with design (delete if not applicable)

I \_\_\_\_\_ of \_\_\_\_\_ am a Chartered Professional Civil Engineer, competent in the field of stormwater management design have inspected the above on-site stormwater management system, examined the Works-as-Executed plans prepared by \_\_\_\_\_ dated \_\_\_\_\_ and certify that the works have been constructed in accordance with the approved design details for the above project.  
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### 2. Works constructed in accordance with design (delete if not applicable)

I \_\_\_\_\_ of \_\_\_\_\_ am a Chartered Professional Civil Engineer, competent in the field of stormwater management design have inspected the above on-site stormwater management system, examined the Works-as-Executed plans prepared by \_\_\_\_\_ dated \_\_\_\_\_ and certify that the works have been constructed in accordance with the approved design details for the above project, except for the variations listed below which do not affect the performance of the system, subject to satisfactory maintenance.

**Variations:**

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## APPENDIX A5 - Standard wording for Restriction to Use of Land and Positive Covenant for On-Site Stormwater Management System

A Restriction on Use of the Land and Positive Covenant shall be created and registered on the title of the property, which places the responsibility for the maintenance of the on-site stormwater management system on the owners of the land. The terms of the instrument are to be in accordance with Council's standard terms and restrictions which are as follows:

### Restrictions on Use of Land

*The registered proprietor shall not make or permit or suffer the making of any alterations to any on-site stormwater management system which is, or shall be, constructed on the lot(s) burdened without the prior consent in writing of **Georges River Council**. The expression "on-site stormwater management system" shall include all ancillary gutters, pipes, drains, walls, kerbs, pits, grates, tanks, chambers, basins and surfaces designed to manage stormwater quantity or quality including the temporary detention or permanent retention of stormwater storages. Any on-site stormwater management system constructed on the lot(s) burdened is hereafter referred to as "the system".*

Name of Authority having the power to release, vary or modify the Restriction referred to is **Georges River Council**.

### Positive Covenants

1. *The registered proprietor of the lot(s) hereby burdened will in respect of the system:*
  - a) *Keep the system clean and free from silt, rubbish and debris*
  - b) *Maintain and repair at the sole expense of the registered proprietors the whole of the system so that it functions in a safe and efficient manner.*
  - c) *Permit the Council or its authorised agents from time to time and upon giving reasonable notice (but at any time and without notice in the case of an emergency) to enter and inspect the land for the compliance with the requirements of this covenant.*
  - d) *Comply with the terms of any written notice issued by the Council in respect of the requirements of this covenant within the time stated in the notice.*
2. *Pursuant to Section 88F (3) of the Conveyancing Act 1919 the Council shall have the following additional powers:*
  - a) *in the event that the registered proprietor fails to comply with the terms of any written notice issued by the Council as set out above the Council or its authorised agents may enter the land with all necessary materials and equipment and carry out any work which the Council in its discretion considers reasonable to comply with the said notice referred to in part 1(d) above*
  - b) *the Council may recover from the registered proprietor in a Court of competent jurisdiction:*
    - (i) *any expense reasonably incurred by it in exercising its powers under subparagraph (a) hereof. Such expense shall include reasonable wages for the Council's employees engaged in effecting the work referred to in (a) above, supervising and administering the said work together with costs, reasonably estimated by the Council, for the use of materials, machinery, tools and equipment in conjunction with the said work.*
    - (ii) *legal costs on an indemnity basis for issue of the said notices and recovery of the said costs and expenses together with the costs and expenses of registration of a covenant charge pursuant to section 88F of the Act or providing any certificate required pursuant to section 88G of the Act or obtaining any injunction pursuant to section 88H of the Act. Name of Authority having the power to release vary or modify the Positive Covenant referred to is Georges River Council.*

## APPENDIX A6 - Standard wording for Restriction to Use of Land and Positive Covenant for Overland Flow Path

A Restriction on Use of the Land and Positive Covenant shall be created and registered on the title of the property, which places the responsibility for the maintenance of the overland flow path on the owners of the land. The terms of the instrument are to be in accordance with Council's standard terms and restrictions which are as follows;

### Restriction on Use of Land

*The registered proprietor(s) shall not make or permit or suffer the making of any alterations to the overland flow path, which is on the lot(s) burdened and identified in the report, prepared and certified by ....., Reference No. ...., dated ..... and approved under Development Consent No. ...., without the prior consent in writing of **Georges River Council**.*

*The expression "overland flow path" shall include all ancillary pipes, drains, walls, kerbs, pits, grates and surfaces designed to convey the overland flow path through the site. Any overland flow path on the lot(s) burdened is hereafter referred to as "the overland flow path".*

*Name of Authority having the power to release, vary or modify the Restriction on Use of Land referred to is **Georges River Council**.*

### Positive Covenants for Overland Flow Path

*1. The registered proprietor of the lot(s) hereby burdened will in respect of the overland flow path:*

- a) Keep the overland flow path free from rubbish and debris;*
- b) Maintain the overland flow path clear from any obstructions at the sole expense of the registered Proprietors so that it functions in a safe and efficient manner;*
- c) Permit the Council or its authorised agents from time to time and upon giving reasonable notice (but at any time and without notice in the case of an emergency) to enter and inspect the land for the compliance with the requirements of this covenant; and*
- d) Comply with the terms of any written notice issued by the Council in respect of the requirements of this covenant within the time stated in the notice.*

*2. Pursuant to Section 88F (3) of the Conveyancing Act 1919 the Council shall have the following additional powers:*

- a) in the event that the registered proprietor fails to comply with the terms of any written notice issued by the Council as set out above, the Council or its authorised agents may enter the land with all necessary materials and equipment and carry out any work which the Council in its discretion considers reasonable to comply with the said notice referred to in part 1(d) above; and*
- b) the Council may recover from the registered proprietor in a Court of competent jurisdiction:
  - (i) any expense reasonably incurred by it in exercising its powers under sub-paragraph (a) hereof. Such expense shall include reasonable wages for the Council's employees engaged in effecting the work referred to in (a) above, supervising and administering the**

*said work together with costs, reasonably estimated by the Council, for the use of materials, machinery, tools and equipment in conjunction with the said work*

*(ii) legal costs on an indemnity basis for issue of the said notices and recovery of the said costs and expenses together with the costs and expenses of registration of a covenant charge pursuant to section 88F of the Act or providing any certificate required pursuant to section 88G of the Act or obtaining any injunction pursuant to section 88H of the Act. Name of Authority having the power to release, vary or modify the Positive Covenant referred to is Georges River Council.*

## **APPENDIX A7 - Calculating % impervious area of a site for determination of OSD Storage requirements**

The percentage of impervious areas on the site is a measure of the extent to which the site will be covered by impermeable surfaces following completion of the proposed development.

Impermeable surfaces are surfaces that do not allow natural infiltration of rainfall to the underlying soil, thereby increasing the volume and peak flow rate of surface runoff.

Examples of impermeable surfaces include roofs, roads and conventional (non-porous) paved surfaces.

To calculate the % impervious areas of the site, follow these steps;

### **STEP 1 - Calculate impermeable area of a site**

The impermeable site area is the total area of impermeable surfaces within the site following completion of the development as calculated in accordance with the details and rules provided in Table 5 within this Appendix.

This calculation involves adding up the area (in square metres) for each different type of ground surface that does not allow natural infiltration of rainwater. As some types of surfaces are only partially impermeable, it is necessary to multiply the area of the surface with an appropriate 'impermeability factor', as per the Table. The calculation also requires that all areas of less than 1.5 metres clearance between the outer wall of a building and the nearest adjacent property boundary are considered to be a minimum 50% impervious. This excludes the area under a roof eave overhang that is to be considered 100% impervious.

**Table 5 – Impermeability factors**

Surface type (3)	Material	Impermeability factor
All areas of less than 1.5 metres clearance between the outer wall of a building and the nearest adjacent property boundary (excludes the area under a roof eave overhang that is to be included as a roof surface)	Various	0.50 (1)
Roof surfaces	Various including metal, concrete, terracotta, slate.	1.00
	Green roofs' where there is a minimum 300mm depth soil medium	0.50 If soil medium is less than 300mm depth impermeability factor of 1.00 to be used.
Ground surfaces	Concrete / tiles / paving / permeable paving (2)	1.00
	Gravel / Pebbles	0.75
Timber Deck (over natural ground)	Timber (over natural ground)	0.5
	Timber (over paved concrete or other impervious ground surface)	1.00
Swimming pools (Water surface)	Water Surface	0.50
Swimming pool	Coping and surrounds constructed in concrete / tiles / paving or other impermeable material	1.00

**Notes with respect to Table 5:**

- (1) In setback areas as detailed of less than 1.5 metres it is often impractical for turf / soft landscaping to be installed due to issues including suitable access, installation of air conditioning units, rainwater tanks and other structures. It is also noted that roof

overhangs often cover a proportion of these areas also. As such Council requires that these areas are considered as 50% impervious.

- (2) Permeable, Grid and similar type paving is considered as 100% impervious as Council considers that variability in factors including the method of installation undertaken, proximity of adjacent structures and their foundations, potential for clogging of the paving over time and existing subsurface ground conditions including shallow rock make the effective permeability of the paving unpredictable and unreliable.
- (3) The surface used for the calculation is to be the highest surface at each specific location within the site. For example in an area where a roof overhangs the ground surface the roof is to be used as the surface at this location.

#### STEP 2 - Determine total site area

The total site area corresponds to the allotment area, as shown on the registered plan for the site.

#### STEP 3 - Calculate percentage of impervious areas on your site

The percentage of impervious areas on your site is equal to the impermeable site area as calculated in accordance with this appendix as expressed as a proportion of the total site area.

#### Worked example

It is proposed to erect a detached dwelling-house (200 square metres site coverage) on a 550 square metre allotment. Associated with the dwelling will be paths, deck, driveway and a swimming pool. Each of these ground surfaces is shown in the following table.

Surface Type	Area (Column 2)	Impermeable factor (Column 3)	Impermeable area (Column 2 x Column 3)
Roof	200m <sup>2</sup>	1.00	200m <sup>2</sup>
Driveway (concrete)	35m <sup>2</sup>	1.00	35m <sup>2</sup>
Deck (timber) over natural ground	50m <sup>2</sup>	0.50	25m <sup>2</sup>
Swimming pool	30m <sup>2</sup>	0.50	15m <sup>2</sup>



Setback areas less than 1.5 metres clearance between the outer wall of a building and the nearest adjacent property boundary excluding any roof eave overhang	80m <sup>2</sup>	0.50	40m <sup>2</sup>
Pool coping, Hard paved pool surrounds and concrete pathways	30m <sup>2</sup>	1.00	30m <sup>2</sup>
<b><u>Total Impermeable site area</u></b>			<b>345m<sup>2</sup></b>

The impermeable area for roofs, driveways and other surface types is calculated by multiplying their area (Column 2) with the appropriate impermeability factor (Column 3).

These amounts are then added together, giving a total impermeable site area of 345m<sup>2</sup>. The percentage of impervious areas on the site is then obtained by dividing the impermeable site area (345m<sup>2</sup>) by the total site area (550m<sup>2</sup>):  $345\text{m}^2 / 550\text{m}^2 = 0.63$  (or 63% expressed as a percentage).

## APPENDIX A8 - Design Rainfall Data

The IFD Design Rainfall Depth and Intensity tables listed below have been downloaded from the Bureau of Meteorology (BOM) website and are the data derived for a location at MacMahon Street Hurstville from the Australian Rainfall & Runoff 2019. Council will accept this data as valid for any catchment within the Local Government Area. Alternatively the engineer may download the site specific rainfall and intensity tables from the BOM website.

**Table 6 - Georges River Council IFD Design Rainfall Depth (mm)**

Duration	Annual Exceedance Probability (AEP)						
	63.2%	50%#	20%*	10%	5%	2%	1%
1 min	2.33	2.58	3.35	3.86	4.36	5.00	5.49
2 min	3.88	4.26	5.44	6.25	7.04	8.09	8.88
3 min	5.38	5.91	7.58	8.72	9.82	11.3	12.4
4 min	6.73	7.42	9.56	11.0	12.4	14.3	15.7
5 min	7.94	8.77	11.3	13.1	14.7	16.9	18.6
10 min	12.5	13.9	18.1	20.9	23.5	27.0	29.6
15 min	15.6	17.3	22.5	26.0	29.4	33.7	36.9
20 min	17.9	19.8	25.8	29.8	33.7	38.6	42.3
25 min	19.7	21.9	28.5	32.8	37.0	42.5	46.6
30 min	21.3	23.6	30.6	35.3	39.9	45.8	50.2
45 min	24.9	27.5	35.6	41.1	46.4	53.3	58.6
1 hour	27.6	30.5	39.5	45.5	51.4	59.2	65.1
1.5 hour	31.9	35.2	45.5	52.5	59.5	68.7	75.8
2 hour	35.4	39.0	50.5	58.4	66.2	76.7	84.8
3 hour	41.1	45.4	59.0	68.5	77.9	90.6	101
4.5 hour	48.2	53.3	69.8	81.4	93.0	109	121
6 hour	54.1	60.0	79.3	92.8	106	125	140
9 hour	64.0	71.5	95.7	113	130	153	172
12 hour	72.2	81.1	110	130	150	178	200
18 hour	85.5	96.8	133	159	184	220	247
24 hour	96.0	109	152	182	212	253	285
30 hour	105	120	168	201	235	281	316
36 hour	112	128	181	217	254	304	342
48 hour	123	142	202	243	283	339	382
72 hour	139	161	229	276	321	383	430
96 hour	150	173	246	295	342	406	455
120 hour	157	182	257	307	354	418	467
144 hour	163	188	264	314	361	424	472
168 hour	168	193	269	318	365	425	473

**Table 7 - Georges River Council IFD Design Rainfall Intensity (mm/h)**

Duration	Annual Exceedance Probability (AEP)						
	63.2%	50%#	20%*	10%	5%	2%	1%
1 min	140	155	201	232	262	300	329
2 min	116	128	163	187	211	243	266
3 min	108	118	152	174	196	226	248
4 min	101	111	143	165	186	214	235
5 min	95.3	105	136	157	177	203	223
10 min	75.0	83.2	108	125	141	162	178
15 min	62.3	69.2	90.2	104	117	135	148
20 min	53.6	59.5	77.5	89.5	101	116	127
25 min	47.3	52.5	68.3	78.8	88.9	102	112
30 min	42.5	47.1	61.3	70.7	79.7	91.5	100
45 min	33.2	36.7	47.5	54.8	61.8	71.1	78.1
1 hour	27.6	30.5	39.5	45.5	51.4	59.2	65.1
1.5 hour	21.3	23.5	30.3	35.0	39.6	45.8	50.5
2 hour	17.7	19.5	25.3	29.2	33.1	38.4	42.4
3 hour	13.7	15.1	19.7	22.8	26.0	30.2	33.5
4.5 hour	10.7	11.8	15.5	18.1	20.7	24.2	26.9
6 hour	9.01	10.0	13.2	15.5	17.7	20.8	23.3
9 hour	7.11	7.94	10.6	12.5	14.4	17.0	19.1
12 hour	6.02	6.76	9.15	10.8	12.5	14.8	16.7
18 hour	4.75	5.38	7.40	8.82	10.2	12.2	13.7
24 hour	4.00	4.56	6.34	7.58	8.83	10.5	11.9
30 hour	3.49	3.99	5.59	6.71	7.82	9.36	10.5
36 hour	3.10	3.56	5.03	6.04	7.04	8.43	9.51
48 hour	2.57	2.96	4.20	5.06	5.90	7.07	7.96
72 hour	1.93	2.24	3.19	3.83	4.46	5.32	5.98
96 hour	1.56	1.80	2.56	3.07	3.56	4.23	4.74
120 hour	1.31	1.51	2.14	2.56	2.95	3.49	3.89
144 hour	1.13	1.31	1.83	2.18	2.51	2.94	3.28
168 hour	0.999	1.15	1.60	1.89	2.17	2.53	2.82

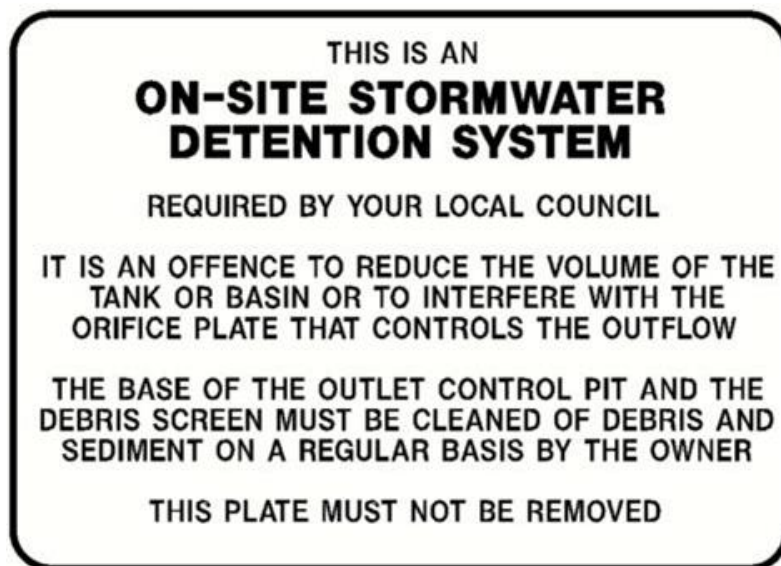
## APPENDIX A9 - Typical Warning Signs

This appendix provides typical warning signs that may be required to be installed.

### Standard Warning OSD Signage



OSD Signage



#### Absorption System Signage



#### Confined Space Signage



## APPENDIX A10 - Flood Compatible Materials

Building Component	Flood Compatible Material
<b>Flooring and Sub-floor Structure</b>	concrete slab-on-ground monolith construction suspended reinforced concrete slab
<b>Floor Covering</b>	clay tiles concrete, precast or in situ concrete tiles epoxy, formed-in-place. mastic flooring, formed-in-place rubber sheets or tiles with chemical-set adhesives. silicone floors formed-in-place vinyl sheets or tiles with chemical-set adhesive. ceramic tiles, fixed with mortar or chemical-set adhesive asphalt tiles, fixed with water resistant adhesive
<b>Wall Structure</b>	solid brickwork blockwork reinforced, concrete or mass concrete.
<b>Roofing Structure</b> (for Situations Where the Relevant Flood Level is Above the Ceiling)	reinforced concrete construction galvanised metal construction
<b>Doors</b>	solid panel with water proof adhesives flush door with marine ply filled with closed cell foam painted metal construction aluminium or galvanised steel frame
<b>Wall and Ceiling Linings</b>	fibro-cement board brick, face or glazed clay tile glazed in waterproof mortar concrete concrete block steel with waterproof applications stone, natural solid or veneer, waterproof grout glass blocks glass glastic sheeting or wall with waterproof adhesive
<b>Insulation Windows</b>	foam (closed cell types) aluminium frame with stainless steel rollers or similar corrosion and water resistant material
<b>Nails, Bolts, Hinges and Fittings</b>	brass, nylon or stainless steel removable pin hinges hot dipped galvanised steel wire nails or similar

### **Electrical and Mechanical Equipment**

For dwellings constructed on land to which this chapter applies, the electrical and mechanical materials, equipment and installation should conform to the following requirements. .

#### **Main power supply**

Subject to the approval of the relevant authority the incoming main commercial power service equipment, including all metering equipment, shall be located above the relevant flood level. Means shall be available to easily disconnect the dwelling from the main power supply. .

#### **Wiring**

All wiring, power outlets, switches, etc., should, to the maximum extent possible, be located above the relevant flood level. All electrical wiring installed below the relevant flood level should be suitable for continuous submergence in water and should contain no fibrous components. Earth core leakage systems (or safety switches) are to be installed. Only submersible-type splices should be used below the relevant flood level. All conduits located below the relevant designated flood level should be so installed that they will be self-draining if subjected to flooding. .

#### **Equipment**

All equipment installed below or partially below the relevant flood level should be capable of disconnection by a single plug and socket assembly. . Reconnection - Should any electrical device and/or part of the wiring be flooded it should be thoroughly cleaned or replaced and checked by an approved electrical contractor before reconnection.

### **Heating and Air Conditioning Systems**

Heating and air conditioning systems should, to the maximum extent possible, be installed in areas and spaces of the house above the relevant flood level. When this is not feasible every precaution should be taken to minimise the damage caused by submersion according to the following guidelines. .

#### **Fuel**

Heating systems using gas or oil as a fuel should have a manually operated valve located in the fuel supply line to enable fuel cut-off.

#### **Installation**

The heating equipment and fuel storage tanks should be mounted on and securely anchored to a foundation pad of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. All storage tanks should be vented to an elevation of 600 millimetres above the relevant flood level. .

#### **Ducting**

All ductwork located below the relevant flood level should be provided with openings for drainage and cleaning. Self-draining may be achieved by constructing the ductwork on a suitable grade. Where ductwork must pass through a water-tight wall or floor below the relevant flood level, the ductwork should be protected by a closure assembly operated from above relevant flood level.

## APPENDIX A11 - Procedure for Stormwater Drainage from Low Level Properties

### 1. PURPOSE

This Appendix is to provide guidance and interpretation of Council DCP requirements for owners of properties when submitting an Application for Development, to determine an appropriate drainage system for low level properties.

In this Policy, a low level property is defined as a property:

- (a) That naturally falls away from the frontage street,  
and / or
- (b) At which the ground levels at the property boundary at the street frontage are typically lower than the adjacent street kerb level.

### 2. PRINCIPLES

This procedural document applies to all types of developments and land uses where these properties fall naturally away from the street. The requirements for stormwater disposal are dependent on the type of proposed development or proposed land use for the property.

For Zone R2 Low Density Residential Dwelling Houses, Dual Occupancies, Secondary Dwellings, alterations and additions to existing dwellings, Ancillary Outbuildings (such as sheds, carports and garages), the property owner or developer is required to manage stormwater drainage according to the sequence of steps outlined in Sections 2.1 and 2.2 of this document.

For all other land uses the property owner or developer is required to manage stormwater drainage in accordance with Section 2.3 of the procedure outlined in this document.

With respect to sections 2.2 to 2.3, Council is to be satisfied that all avenues of the first or preceding step have been exhaustively investigated and considers these avenues to be impractical or unviable, prior to allowing the applicant to progress to the next step.

#### **2.1 Low Density Residential Development including: Dwelling Houses, Secondary Dwellings, Ancillary Outbuildings (for alteration and additions to existing structures) where on-site stormwater detention is not required as per Section 4.4 of Council's Stormwater Management Policy.**

An Application for the applicable development under this section where an on-site stormwater detention (OSD) system is not required for the low level property will require stormwater disposal from the site in accordance with the following steps:

#### STEP 1



Connection of stormwater to the existing stormwater disposal system will be permitted under the following circumstances, as applicable:

- (i) Connection into an existing inter- allotment stormwater pipeline or Council's stormwater pipeline subject to the pipeline having sufficient capacity and the applicant having formal drainage easement(s) created over the above pipeline within the downstream property or properties, and where applicable, the beneficiaries' maintenance obligations for the pipeline are clarified;

Or

- (ii) The existing drainage system was previously approved by Council and its performance is proven to be fully functional and fully meet the requirements of the current Stormwater Management Policy,

In addition, there must be no valid objections regarding overland flow and groundwater / seepage-related damage or issues and associated inconvenience to downstream property owners.

## STEP 2

Charged lines will be generally permitted for the discharge of roof runoff from single occupancy residential developments, dual occupancy developments and commercial / industrial sites of up to 750 square metres when associated with rainwater tanks as per the BASIX requirements for the site.

Where the means of disposal in Step 1 is not available, the use of a charged stormwater line will be permitted for the above development types subject to all of the following conditions:

- (i) Stormwater is discharged into the same catchment (or sub-catchment) that it currently drains into, following the natural fall of the land to the rear of the subject site.
- (ii) A consulting hydraulic engineer demonstrates to Council's Development Engineer's satisfaction that all the following requirements have been met:
  - The kerb and gutter, including any low level driveways, and any existing Council drainage system fronting the street, has sufficient capacity to cater for 1% annual exceedance probability (AEP) storm events from the full extent of the upstream catchment
  - This capacity is met for the full extent of the discharge path from the proposed point of discharge from the property to a location to the rear of the property where it would have drained to naturally by gravity.
  - The upstream catchment calculated is to include allowance for the roof runoff from all similar low level properties fronting the roadway(s).
  - Connection to the street gutter must be in accordance with Section 3.3 of the Stormwater Management Policy.

## NOTES:

Stormwater Management Policy  
May 2023

1. The connection to the Council drainage system is to be by a consistent minimum 1% gravity fall from the property boundary to the discharge connection point.
2. An on-site absorption system will be required to collect stormwater from impervious areas of the development that cannot drain by gravity to the kerb and gutter system. The on-site absorption system must be designed and proven to comply with the requirements of Section 3.4.4 of Council's Stormwater Management Policy.
3. The on-site absorption system shall require the creation of a Positive Covenant and Restriction on Use of Land over the system on an as-needs basis as determined by Council.
4. The charged system has a sufficient head pressure to charge roof water to the street gutter and complies with all requirements of Section 3.4.2 of Council's Stormwater Management Policy.

### STEP 3

Where the means of disposal in Steps 1 and 2 are not available, the use of an on-site absorption system will be permitted subject to strict compliance with all the requirements of Section 3.4.4 of Council's Stormwater Management Policy which relates to absorption systems in the suburbs of Connells Point, Kyle Bay, Blakehurst, Hurstville Grove, San Souci, Carss Park and Kogarah Bay.

Absorption systems are not allowed as the primary method of draining a development site in all other locations within the LGA.

Requirements include that:

- (i) The on-site absorption system is designed by a suitably experienced and qualified civil engineer.
- (ii) The on-site absorption system will not have an adverse impact upon adjoining and / or downstream properties by the redirection or concentration of stormwater on those properties.
- (iii) Soil absorption characteristics and other physical constraints prove that the on-site absorption system is appropriate for the development.
- (iv) Absorption trenches are to be designed based on a geotechnical investigation in accordance with Council's requirements and the geotechnical report is to be provided, for the consideration of Council's development engineering staff.
- (v) The on-site absorption system shall require the creation of a Positive Covenant and Restriction on Use of Land over the system.

### STEP 4

Where the means of disposal in Steps 1, 2 and 3 are not available, the use of a level spreader will be permitted subject to the following circumstances:

- (i) Compliance with all the requirements of Section 3.4.3 of Council's Stormwater Management Policy.
- (ii) The subject site is backing on to a creek, bay, bushland area, or Council reserve (subject to approval by the relevant Council Assets Manager).

- (iii) The level spreader design allows for minimal impact upon adjoining bushland reserves and parks.
- (iv) Compliance with the requirements of all affected downstream property owners being met.
- (v) The level spreader is completely contained within the property.
- (vi) The discharge from the level spreader will not run further downstream to cause damage and or inconvenience to any other private property.
- (vii) In the case of runoff onto a Government-Authority managed property, that authority needs to be consulted and approval given before such a device is utilised.

#### STEP 5

Where the means of disposal in Steps 1, 2, 3 and 4 are not available, stormwater disposal from the site shall be via a gravity fed pipeline. This will require an easement to drain stormwater to Council's drainage infrastructure through the downstream property(s).

The applicant is to approach the adjoining downstream property owner(s) to request an easement be granted for the purpose of draining stormwater to Council's drainage system (See sample letter, Attachment 1). If the applicant is unable to attain any written responses from the adjacent downstream property owner(s), the applicant may seek legal advice to formalise an easement via a section 88K of the Conveyancing Act 1919 through the appropriate NSW Courts.

#### **2.2 Low Density Residential Development including Dwelling Houses, Dual Occupancy, Secondary Dwellings, Ancillary Outbuildings (for all new dwelling houses or alteration and additions to existing dwelling houses) where on-site stormwater detention is required, as required under Section 4 of Council's Stormwater Management Policy.**

In all cases the on-site stormwater detention provided is to be in accordance with the requirements of Section 4 of Council's Stormwater Management Policy.

An Application for the applicable development under this section where an on-site stormwater detention system is required will require stormwater disposal from the site to be in accordance with the following steps:

#### STEP 1

**Option 1** – Connection of stormwater to an existing Council stormwater drainage line located within the subject site, subject to the drainage line having sufficient capacity.

OR

**Option 2** – Connection of stormwater to an existing inter- allotment drainage easement and pipeline subject to

- (i) A qualified hydraulic engineer demonstrating that the inter- allotment pipeline has sufficient capacity, and

- (ii) The applicant having a formal drainage easement created over the inter- allotment pipeline within the downstream property(s), with written clarification regarding the respective beneficiaries' drainage system maintenance obligations.

For both of the above scenarios it is required that the stormwater system, including the OSD components, can drain by gravity to the existing pipeline.

## STEP 2

Charged lines will be generally permitted for the discharge of roof runoff from single occupancy residential developments, dual occupancy developments and commercial / industrial sites of up to 750 square metres when associated with rainwater tanks as per the BASIX requirements for the site.

Where the means of disposal in Step 1 is not available, the use of a charged stormwater line into an OSD system will be permitted for the above development types subject to all of the following conditions:

**Option 1** – The use of a charged line to drain roof runoff into an OSD system and then drain by gravity to the kerb and gutter system fronting the site will be acceptable provided:

- (i) Stormwater is discharged into the same catchment (or sub-catchment), following the natural fall of the land to the rear of the subject site; and
- (ii) The property owner demonstrates that the kerb and gutter system, including any low level driveways fronting the street, has sufficient capacity to cater for the 1% AEP storm event from roof runoff from all applicable properties fronting the same road; and
- (iii) this capacity is met for the full extent of the discharge path from the proposed point of discharge from the property to a location to the rear of the property where it would have drained to naturally by gravity; and as consistent with requirement in Sect 2.1.
- (iv) The upstream catchment calculated is to include allowance for the roof runoff from all similar low level properties fronting the roadway(s); and as consistent with requirement in Sect 2.1.
- (v) A satisfactory hydraulic grade line analysis of the charged line system is to be provided to Council.
- (vi) The design allows for the inclusion of a suitable on-site stormwater detention system; and
- (vii) An on-site absorption system will be required to collect stormwater from impervious areas such as driveways and pavement runoff of the development that cannot drain by gravity to the kerb and gutter system, (Absorption system is to be design and constructed in accordance with section 3.4.4 of the Stormwater Management policy); and
- (viii) A maximum of 20% of the site area on site may bypass the OSD system. (OSD system is to be designed and constructed in accordance with Section 4 of the Stormwater Management Policy); and
- (ix) The connection to the street gutter must be in accordance with Section 3.3 of Council's Stormwater Management Policy; and
- (x) It will be required to create a Positive Covenant and Restriction on Use of Land over the site's drainage system.

**Option 2** – The use of a charged line to drain roof runoff into an OSD system and drain by gravity to a Kerb Inlet Pit directly in front of the property will be acceptable provided:

- (i) Stormwater is discharged into the same catchment (or sub-catchment), following the natural fall of the land to the rear of the subject site; and
- (ii) The property owner demonstrates that the existing Council (or other authorities) piped system has sufficient capacity to cater for the 1% annual exceedance probability (AEP) storm event from the full extent of the upstream catchment.
- (iii) this capacity is met for the full extent of the discharge path from the proposed point of discharge from the property to a location to the rear of the property where it would have drained to naturally by gravity; and
- (iv) The upstream catchment calculated is to include allowance for the roof runoff from all similar low level properties fronting the roadway(s); and
- (v) A satisfactory hydraulic grade line analysis of the charged line system is to be provided to Council; and
- (vi) The design allows for the inclusion of a suitable on-site stormwater detention system; and
- (vii) A maximum of 20% of the site area on site may bypass the OSD system. (OSD system is to be designed and constructed in accordance with Section 4 of the Stormwater Management policy.); and
- (viii) An on-site absorption system will be required to collect stormwater from impervious areas such as driveways and pavements of developments that cannot drain by gravity to the kerb and gutter system, absorption system is to be design in accordance with section 3.4.4 of Council's Stormwater Management policy; and
- (ix) The connection to the Council system must be in accordance with Section 3.3 of Council's Stormwater Management Policy
- (x) The connection and any proposal to extend the Council drainage system would need to be applied for through the Stormwater Drainage Application process.
- (xi) It will be required to create a Positive Covenant and Restriction on Use of Land over the site's drainage system.

### STEP 3

Where the means of disposal in Steps 1 and 2 are not available, the following option can be considered:

The use of a level spreader to discharge stormwater will be acceptable to Council subject to the following conditions:

- (i) Compliance with all the requirements of Section 3.4.3 of Council's Stormwater Management policy.
- (ii) The subject site is backing on to a bushland area, Council reserve (subject to approval by the relevant Council Assets Manager).
- (iii) The level spreader design allows for minimal impact upon adjoining bushland reserves and parks.
- (iv) Compliance with any requirements of all affected downstream property owners.

- (v) The level spreader is completely contained within the property.
- (vi) The discharges from the level spreader will not run further downstream to cause damage and or inconvenience to any other private property.
- (vii) In the case of runoff onto a Government-Authority managed property, that authority needs to be consulted and approval given before such a device is utilised.

**Note** - In the case of discharge directly to a Council reserve or bushland area the applicant will be required to contact Council to determine if the proposal will require an On-site Detention system.

#### STEP 4

Where the means of disposal in Steps 1, 2, 3 and 4 are not available, stormwater disposal from the site shall be via a gravity fed pipeline. This will require an easement to drain stormwater to Council's drainage infrastructure through the downstream property(s).

The applicant is to approach the adjoining downstream property owner(s) to request an easement be granted for the purpose of draining stormwater to Council's drainage system (See sample letter, Attachment 1). If the applicant is unable to attain any written responses from the adjacent downstream property owners, the applicant should seek legal opportunities via. Section 88K of the Conveyancing Act.

### **2.3 All Other Land uses / Developments not covered in Sections 2.1 and 2.2 of this procedure**

An application for development / land use other than Zone R2 Low Density Residential Dwelling Houses, i.e., Subdivision Developments, Multi House and Unit Complex Developments, Commercial Developments, Industrial Development and Mixed Commercial/Industrial/Residential etc. will require stormwater disposal via a gravity fed pipeline where these properties fall naturally away from the street.

This will require an easement to drain stormwater to Council's drainage infrastructure through the downstream property or properties.

An application under Section 88K of the Conveyancing Act 1919 can be made through the appropriate NSW Court to consider making an order to impose an easement over land if the easement is reasonably necessary for the effective use or development of other land that will have the benefit of the easement.

### **2.4 Pump-Out Systems**

Council will only permit pump-out systems for draining sub-surface seepage flows from underground areas, such as basement garages where the seepage flows are minor and intermittent, and for the collection and discharge of runoff from driveways.

If the site is to have an OSD system, the pump-out water must be discharged to the OSD.

Unless otherwise approved by Council, the pump-out water is to be discharged from the site by gravity.

The pump-out system is to meet all requirements as specified in both Sections 3.3 and 3.6 of Council's Stormwater Management Policy including that:

- A direct connection of a pump out discharge line is only to be connected to a Council stormwater gully pit and not to the kerb and gutter.
- If there is no available street drainage system, the connection to the kerb and gutter across the Council footway is to be made by gravity.

Council will not accept stormwater disposal from roof and pavement surfaces to the public road fronting the low level property by employing pump-out systems for the following reasons:

- (i) The public road drainage system fronting the low level property was not designed to adequately cope with the additional stormwater flows from these pump-out systems.
- (ii) Potential failure of the pump-out system and consequent stormwater-related damage to the property and adjacent properties.
- (iii) Diverting flows from one catchment (or sub-catchment) to another catchment (or sub-catchment) burdening that catchment (or sub-catchment) with additional stormwater flows that may cause nuisance flooding or exacerbate existing flooding problems.
- (iv) Noise issues for neighbours.

### 3. Definition of Terms

Term	Meaning
Zone R2 Low Density Residential Dwelling Houses	Land use as referred to in the Kogarah / Hurstville LEP 2012.
Low Level Property	A property: (a) that naturally falls away from the frontage street,  and / or  (b) at which the ground levels at the property boundary at the street frontage are typically lower than the adjacent street kerb level.
Level Spreader	A device that allows for the even distribution of flows across the land.
Downstream Catchment	The direct sub-catchment a low level property would drain to via gravity.

State of Nature	The undeveloped condition of a property, that is, the property is grassed or turfed.
On-Site Stormwater Detention System	A stormwater drainage device to restrict the amount of stormwater discharge to a specified rate. The device is to be constructed on the subject property. Refer to Council's On-Site Stormwater Detention Technical Specification and On-Site Stormwater Detention (OSD) checklist for more information.



## APPENDIX A12 - Design Guide for Charged Drainage Systems

The design of a charged drainage system must be completed in full with the Development Application Submission.

The following information is provided to assist in preparing this design and ALL parts must be completed.

### 1. Prerequisite Information

This type of system:

- Is ONLY permissible for single occupancy and alterations and additions.
- Will only be considered as a last resort and letters from adjoining property owners indicating a refusal to grant a drainage easement MUST accompany the application. The letter must indicate that a reasonable amount of compensation has been offered for a drainage easement.
- Must have a minimum of 1.8 metres between the roof gutters and the front boundary of the site.
- Must have a fall from the front boundary to the kerb line.
- Will only be permitted if there are no drainage problems downstream from the site. This MUST be checked with the Council before proceeding and may require an analysis of the downstream kerb capacity to be undertaken.

### 2. Submission:

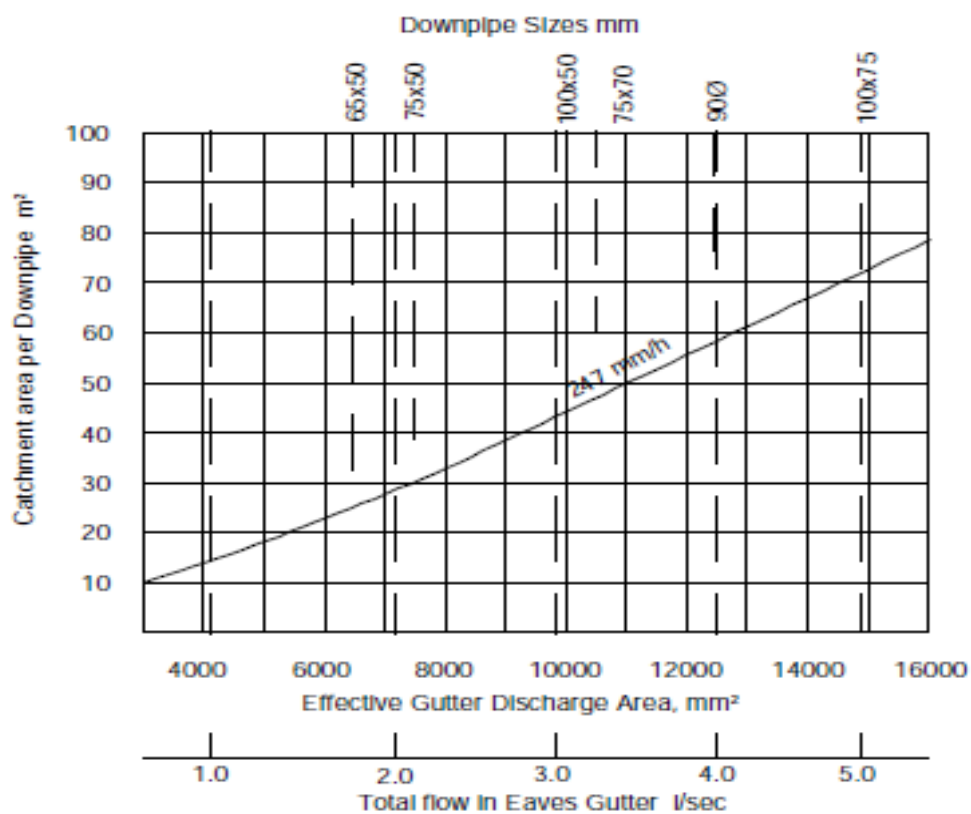
The following information is required to be provided on or with the application and must be prepared by a suitably qualified Hydraulic Engineer.

- All plans must be to mAHD levels.
- A roof/site plan clearly showing catchment areas, direction of flows in gutters, and the location and sizes of all downpipes, pipes, pits, and discharge point.
- Details of the gutter type, capacity, and gutter guard system to be used.
- Calculations for: gutter sizing, Downpipe sizing, Pipeline sizing including hydraulic losses on pipe system
- A longitudinal section of the pipe system showing
  - ⇒ Gutter levels
  - ⇒ Cleaning eye / pit levels
  - ⇒ Isolation pit at boundary with invert and surface levels
  - ⇒ Location and levels of any services in footpath
  - ⇒ Discharge point
  - ⇒ Pipe sizes, capacity, and design flows in each section.
- Calculations for any on site disposal system that may be required to drain paved areas that cannot be directed to the charged system.
- Detail drawings of pits, gutters, and dispersal system if included.  
NOTE: A Positive Covenant will be required to be registered against the property title to ensure the ongoing maintenance of the system. This will be required prior to the issue of the Occupation Certificate.

### 3. Checklist for Charged Drainage System submissions to the Georges River Council

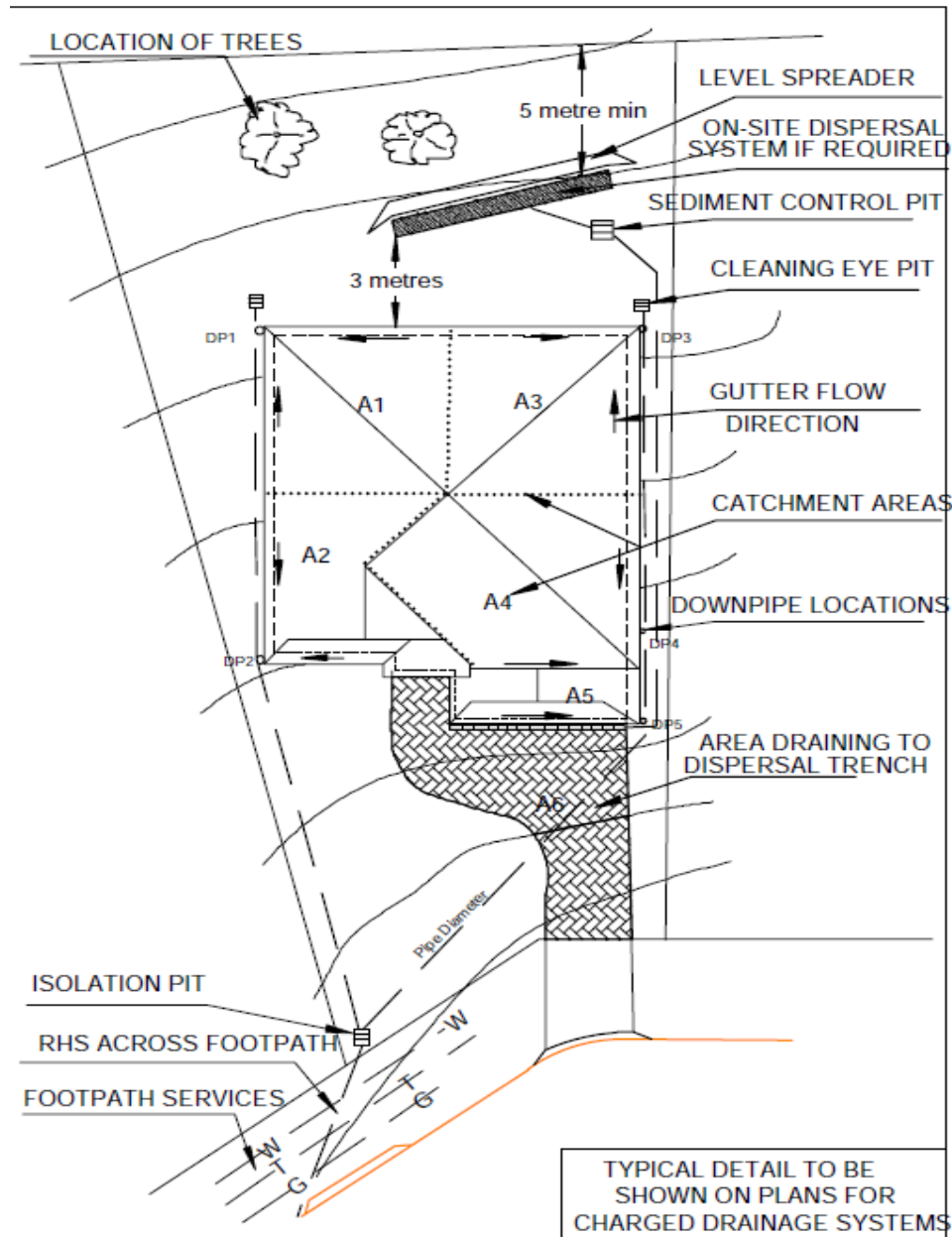
1. Letter(s) from adjoining owners (see sample letter from ATTACHMENT 1 below)

2. Hydraulic calculations submitted
3. Catchment areas detailed.
4. Gutters designed for 1 in 100-year storm event.
5. Downpipes sized
6. Details of gutter guard system included
7. Detail of cleaning pit included
8. Detail of isolation pit included
9. Services in footpath located and shown on plans
10. Detail of any on site dispersal shown.
11. Details of any on-site stormwater detention system if applicable
12. Details longitudinal sectional information with pipeline chainage, ground surface/invert/HGL levels in the charged line up to street gutter connection where a gravity drainage is required from the boundary pit. DRAINS model output long section is not acceptable. The plan and longitudinal section must document very clearly and legibly existing ground levels and finished ground levels within frontage areas as well as pipe alignment up to boundary pit then leading to street gutter connection. Note: these levels are critical information to be presented in the plan and must be consistent with the survey, drainage and architectural plans which need to be demonstrated.



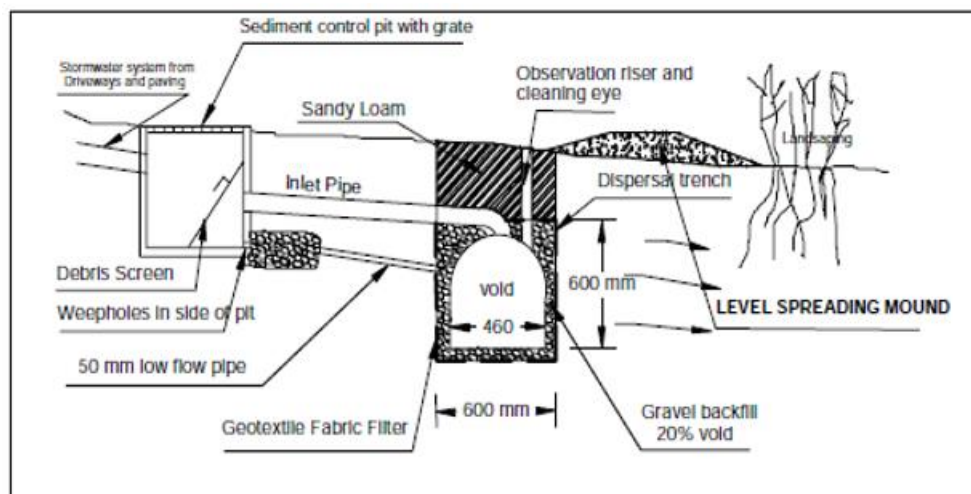
Eave Gutter and Downpipe Sizing Chart (As per Figure 5.1 of AS 2180 – 1986)

#### 4. Typical Details are Presented Below:

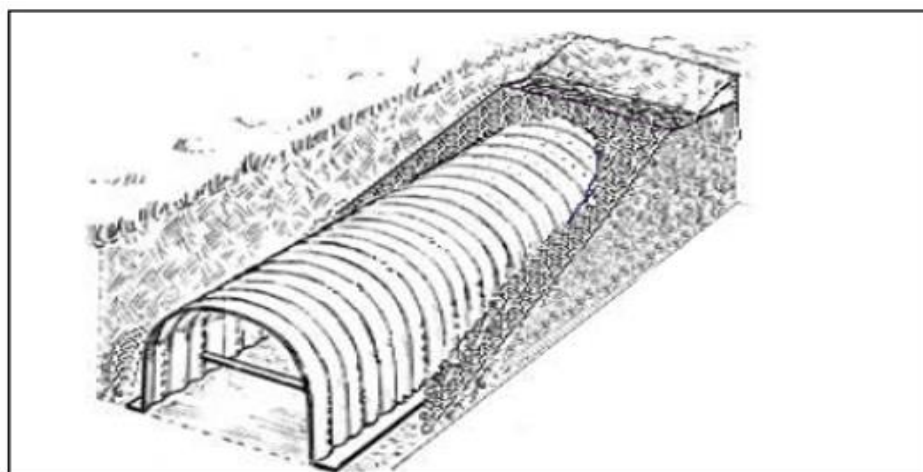


**Note for Above: Charged system with gravity drainage flow from the isolation/boundary silt arrestor pit to the street gutter is required**





Typical detail of dispersal trench sediment control and level spreader



View of method of installation of trench dome and gravel backfill

Note for Above: Examples of Absorption System

## ATTACHMENT 1

Dear

I/we

are proposing to redevelop our property at

Before we can proceed with this proposal Council has advised us that we have two options for the drainage of stormwater, the first, which is Council's preferred method, is to obtain a drainage easement to convey the stormwater runoff from our property to the nearest public stormwater drainage infrastructure or Council approved discharge point, being

This will require you to grant me/us a drainage easement through your property with all legal and survey costs for the creation of the easement being borne by us, together with any consideration for the use of your property as determined by an independent valuation or agreement. (Attach independent valuation or agreement to this form).

The other alternative is to install an underground absorption system or level spreader (if appropriate for this site) to spread and disperse the stormwater flow. As the runoff and seepage from this system may flow towards your property because of the slope of the land, the best solution would be to have a drainage system that will convey our stormwater via an inter- allotment drainage pipe to

You are advised that if Council determines that the only way for the drainage of stormwater is via an easement through your property, I/we may have to use Section 88K of the Conveyancing Act 1919 to request an appropriate Court to grant me/us the drainage easement. This will probably result in legal expenses and time spent for both you and me/us.

Could you please indicate your position regarding this matter so that we can advise Council to enable our application to progress?

YES I / we are willing to grant you a drainage easement.

Name

Address

NO I / we are not willing to grant you a drainage easement.

Name

Address

**Item:** ENV022-23 Report on Submissions - Hurstville Civic Planning Proposal and DCP Amendment.

**Author:** Coordinator Strategic Planning and Independent Assessment

**Directorate:** Environment and Planning

**Matter Type:** Committee Reports

ENV022-23

**RECOMMENDATION:**

- (a) That Council note the submissions received during the public exhibition of the Planning Proposal PP2016/0002 that seeks to amend the *Georges River Local Environmental Plan 2021* as it applies to the Georges River Council owned site known as the Hurstville Civic Precinct Site, bound by Queens Road, Dora Street, MacMahon Street and Park Road.
- (b) That Council endorse the Planning Proposal for the Hurstville Civic Precinct that:
- a. Amends the Land Zoning Map - Sheet LZN\_008A to remove the 'Deferred Matter' and rezone the site to MU1 Mixed Use;
  - b. Amends the Height of Buildings Map - Sheet HOB\_008A to set:
    - i. a maximum height of 20 metres under the height designation of 'Q1' at the south western portion of the site;
    - ii. a maximum height of 30 metres under the height designation of 'U' at the south western corner of the site; and
    - iii. a maximum height of 60 metres under the height designation of 'AA' at the north eastern portion and south eastern corner of the site.
  - c. Amends the Floor Space Ratio Map - Sheet FSR\_008A to set:
    - i. a maximum FSR of 3:1 under the FSR designation of 'V' at the south western portion of the site;
    - ii. a maximum FSR of 7:1 under the FSR designation of 'AB' at the central/north eastern portion of the site; and
    - iii. a maximum FSR of 5:1 under the FSR designation of 'Z' at the north eastern portion of the site.
  - d. Amends Schedule 4 to reclassify Lot 13 in DP 6510 and Lot 14 in DP 6510 (i.e. former Baptist Church and adjoining land, known as 4-6 Dora Street) from 'community' to 'operational' land.
  - e. Amends the Heritage Map – Sheet HER\_008A and Schedule 5 (Environmental Heritage) to include the Hurstville Museum and Gallery (14 MacMahon Street) as a local heritage item.
  - f. Amends the Additional Permitted Uses Map – Sheet APU\_008A to identify 2 Patrick Street (Lots A and B in DP 389008) and part Patrick Street Road Reserve (4 MacMahon Street (Lot 1 in DP 1280799 - to the centreline)) as Area B to permit the use of 'residential flat buildings' via Schedule 1 - Additional Permitted Uses.
  - g. Amends Schedule 1 - Additional Permitted Uses to permit the use of 'residential flat buildings' in Area B.
  - h. Amends Clause 6.13 - Development in Zones E1 and MU1 to exclude the



application of the clause to Area B.

- i. Inserts an Additional Local Provision (Part 6) as follows:

**Clause 6.18 Hurstville Civic Precinct**

- (1) *The objective of this clause is to facilitate the provision of community facilities and public benefits on the Hurstville Civic Precinct site.*
- (2) *This clause applies to land bounded by Queens Road, Park Road, MacMahon Street and Dora Street.*
- (3) *Development consent must not be granted on land to which this clause applies unless the consent authority is satisfied that the development will include:*
  - (a) *Residential land uses to a maximum of 55% of the total permissible GFA; and*
  - (b) *Community uses and facilities to a minimum of 25% of the total permissible GFA; and*
  - (c) *Public open space at ground level to a minimum of 50% of the total site area, inclusive of a civic plaza that receives an average of 50% direct sunlight between 11am and 2pm midwinter; and*
  - (d) *Car parking for general public use that is additional to the requirements for all land uses.*
- (4) *In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must be satisfied that the development –*
  - (a) *is accompanied by a car parking study and traffic impact assessment that assesses the extent to which public car parking for general use is required to be provided at the site; and*
  - (b) *includes the provision of public car parking and traffic mitigation measures identified by the car parking study and traffic impact assessment.*
- (5) *For the purposes of this clause, community facilities for the Hurstville Civic Precinct site means Council administrative and civic offices; multipurpose auditorium, library, museum, art gallery, community centre, associated uses such as cafés; a range of recreation, relaxation or study areas; and any other use that Council may consider appropriate to meet the needs of the community.*
- (6) *For the purposes of this clause, the total permissible GFA and the total site area are calculated relative to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.*
- (7) *For the purposes of this clause, the total site area refers to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.*

- (c) That the Planning Proposal be amended as per the recommendations of this report and be forwarded for gazettal to the Department of Planning and Environment in accordance with Section 3.36 of the *Environmental Planning and Assessment Act 1979*.

- (d) That Council amend the exhibited draft DCP Amendment No. 2 to the *Georges River Development Control Plan 2021* being “Part 10 Precincts, Section 10.3 Hurstville Civic Precinct” by:

- a. inserting Control iii. n. in Section 3.5.1 Public Domain Strategy, as follows:

“n. *The protection of the remembrance plaque on the northern wall of the*

*former Hurstville Baptist Church building located at 4-6 Dora Street which is to be removed prior to any demolition of that building and installed in a publicly visible and appropriate location as part of the future redevelopment of the site.”*

- b. Inserting Control ii. i. in Section 3.11 Car Parking Study and Traffic Impact Assessment as follows:

*“i. A multimodal transport impact assessment.”*

- c. Inserting additional dot points in Control iii. a. in Section 3.11 Car Parking Study and Traffic Impact Assessment as follows:

*“A multimodal transport impact assessment”; and*

*“The identification of active transport links to existing school travel paths.”*

- (e) That Council in accordance with Section 3.43 of the *Environmental Planning and Assessment Act 1979* and Clause 14 of the *Environmental Planning and Assessment Regulation 2021* adopt Amendment No. 2 to the *Georges River Development Control Plan 2021 (Attachment 4)* as amended in response to submissions.
- (f) That Council endorse the Director of Environment and Planning to make minor modifications to any numerical, typographical, interpretation and formatting errors, if required, in the finalisation of the draft plans.
- (g) That Council give public notice of the decision to approve the amended *Georges River Development Control Plan 2021*, on its website within 28 days in accordance with Clause 20 of the *Environmental Planning and Assessment Regulation 2021*.
- (h) That all persons who made a submission to the Planning Proposal and draft DCP amendment be advised of Council’s decision.
- (i) That the Department of Planning and Environment be advised of Council’s decision to approve the amendment to the *Georges River Development Control Plan 2021* in accordance with the *Environmental Planning and Assessment Act 1979*.
- (j) That the adopted DCP become effective when the amendment to the *Georges River Local Environmental Plan 2021* is gazetted.

## EXECUTIVE SUMMARY

1. The purpose of this report is to advise the outcome of the public exhibition of the Planning Proposal (PP 2016/0002) that seeks to amend the *Georges River Local Environmental Plan 2021* (GRLEP 2021) as it applies to the Georges River Council owned site known as the Hurstville Civic Precinct Site, bound by Queens Road, Dora Street, MacMahon Street and Park Road.
2. The intention of the PP is to enable the future development of the Hurstville Civic Precinct to create a new ‘Civic Hub’ delivering a mixed use civic, cultural, commercial and residential destination consisting of the following facilities:
  - a. Georges River Council’s Administration Building and Council Chambers;
  - b. Civic and Entertainment Centre, including multipurpose auditorium (500 seats);
  - c. Civic Plaza;
  - d. Hurstville Library;
  - e. Hurstville Museum;
  - f. Senior Citizens Centre;

- g. Residential and commercial uses;
  - h. Cafés and a range of recreation, relaxation or study areas; and
  - i. Basement car parking including underground parking for 500 potential public car parking spaces in addition to the required over 700 parking spaces for individual land use components of any future development.
3. The Planning Proposal (PP) (**Attachment 1**) was publicly exhibited for a period exceeding 28 days, from Wednesday 18 January 2023 to Friday 17 February 2023. A total of 12 community submissions, four (4) State government agency submissions and one (1) local government agency submissions were received.
4. Of the submissions, six (6) supported the PP with amendments, four (4) remained neutral with or without suggesting amendments, and seven (7) objected to the proposal for reasons including demolition of the Baptist Church, traffic, parking, amenity, and lack of public space.
5. A Public Hearing was held on 30 March 2023 relating to the proposed reclassification of Lot 13 in DP 6510 and Lot 14 in DP 6510 (i.e. former Baptist Church and adjoining land, known as 4-6 Dora Street) from 'community' to 'operational' land in accordance with section 29(1) of the *Local Government (LG) Act 1993*. One (1) verbal submission was received which related to the removal of the remembrance plaque on the northern wall of the former Baptist Church.
6. In response to submissions, it is recommended that the exhibited PP be amended to insert additional wording within the site specific Additional Local Provision of the GRLEP 2021 clarifying how the site area is calculated and how the minimum and maximum GFA requirements for the various components of the proposal are calculated under the clause.
7. In response to submissions, it is recommended that the exhibited Amendment No. 2 to the *Georges River Development Control Plan (GRDCP) 2021* be amended to:
  - a. require the preservation of the memorial plaque at the Baptist Church and its incorporation within the redevelopment of the site in the future;
  - b. include a provision for the required traffic impact assessment and car parking study to address multi-modal transport impact assessment; and
  - c. include a provision for the required traffic impact assessment to identify active transport links to existing school travel paths.
8. It is recommended that:
  - a. The exhibited PP be amended and forwarded to the Department of Planning and Environment (DPE) for gazettal; and
  - b. The exhibited Amendment No. 2 to the GRDCP 2021 be amended as per **Attachment 4** and adopted by Council.
9. The DCP will become effective when the amendment to the GRLEP 2021 is gazetted.
10. The report is accompanied by the following Attachments which have been published in a separate document:
  - a. Attachment 1: Planning Proposal (as exhibited)
  - b. Attachment 2: Independent Public Hearing Report
  - c. Attachment 3: Summary of Submissions, Council Responses and Recommended Changes to the PP and Draft DCP
  - d. Attachment 4: Amendment No. 2 to the *Georges River Development Control Plan (GRDCP) 2021* (exhibited version amended)

**BACKGROUND**

11. The land the subject of the PP, the Hurstville Civic Precinct, is owned by Council.
12. Given Council is the owner of the site, Council engaged an independent town planning consultant (SJB Planning) to undertake the assessment of the PP.
13. A PP request (PP 2016/0002) was submitted by Georges River Council in July 2016 and revised in July 2018.
14. At that time the PP sought to amend the Hurstville Local Environmental Plan (HLEP) 2012, such that the majority of the Civic Precinct was nominated as a “Deferred Matter” within the HLEP 2012 and remained subject to provisions within the HLEP 1994.
15. Since the lodgement of the PP the GRLEP 2021 has come into effect and the majority of the Civic Precinct site is nominated as a “Deferred Matter” within the GRLEP 2021.
16. On 4 April 2019, the PP was considered by the Georges River Local Planning Panel who recommended that the PP, subject to amendments and request for a range of studies to be undertaken, proceed to the next stage of seeking a Gateway Determination.
17. On 25 May 2020, Council resolved to forward the PP to the then Department of Planning, Industry and Environment (DPIE) for a Gateway Determination following amendments.
18. On 26 August 2020, an amended PP was submitted to the then DPIE for a Gateway Determination in accordance with Council’s resolution.
19. In February 2021, the then DPIE raised concerns with overshadowing caused by Building D within the Hurstville Civic Precinct Master Plan Concept Design Report.
20. In April and May 2021, the applicant presented a revised scheme in response to the then DPIE’s concerns.
21. On 26 July 2021, Council resolved to forward the amended PP to the then DPIE for a review of the revised scheme and prepare an amendment to the DCP.
22. On 9 August 2021, the amended PP was forwarded to the then DPIE for a Gateway Determination.
23. On 28 September 2021, a Gateway Determination was received.
24. On 2 December 2022, an Alteration of Gateway Determination was issued by the DPE to extend the time for completing the PP to July 2023.
25. Upon satisfaction of the pre-exhibition Gateway Determination conditions, the PP and draft DCP amendments were publicly exhibited from 18 January to 17 February 2023.
26. To ensure compliance with the LG Act 1993, a Public Hearing relating to the reclassification from community land to operational of the two lots in the south west corner of the site (known as 4-6 Dora Street) was held on Thursday, 30 March 2023.
27. The PP as exhibited was accompanied by the following documents:
  - a. Planning Proposal
  - b. Hurstville Civic Precinct Masterplan Concept Design Report
  - c. Draft DCP Amendment
  - d. Hurstville Civic Precinct Public Domain Plan
  - e. Hurstville Civic Precinct Amenities and Facilities Strategy
  - f. Transport Impact Assessment
  - g. Conservation Management Plan
  - h. Site Survey

- i. Table of SEPPs
- j. Table of Section 9.1 Directions
- k. Community Consultation Outcomes (2016)
- l. Mapping Amendments
- m. Executed Deed of Release (Redacted) for 4-6 Dora Street
- n. Land Titles for 4-6 Dora Street
- o. Lease Agreements (Redacted) for 4-6 Dora Street
- p. Responses from the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, and Sydney Airport

## SITE DESCRIPTION

28. The PP relates to the Georges River Council owned site bound by Queens Road, Dora Street, MacMahon Street and Park Road (subject site). The subject site is known as the Hurstville Civic Precinct.
29. The Hurstville Civic Precinct is comprised of 12 land parcels and a road reserve owned freehold by Georges River Council.
30. The site is 12,645m<sup>2</sup> in area and it is noted that the majority of the site is classified as 'operational' under the LG Act 1993, with the exception of land at the corner of Dora Street and Queens Road known as 4-6 Dora Street (Lots 13 and 14 in DP 6510), which is currently classified as 'community' land.
31. The subject site currently accommodates the following development:
  - a. Georges River Council's Administration Building;
  - b. Civic and Entertainment Centre;
  - c. Baptist Church (acquired by Council and previously approved for demolition);
  - d. Hurstville Museum and Gallery (heritage listed);
  - e. Hurstville Senior Citizens Centre; and
  - f. A car park for the use of Council officers and the public.
32. The land comprising the site is represented in **Figure 1** and in **Table 1**.

Lot and DP	Address	Area m <sup>2</sup>	Classification/ Reserve status (from Land Register)
Lot 5 in DP 137320	91 Queens Road, Hurstville	448.9m <sup>2</sup>	Operational
Lot 6 in DP 137320	91 Queens Road, Hurstville	411m <sup>2</sup>	Operational
Lot 200 in DP 831931	16-32 MacMahon Street, Hurstville	5,739m <sup>2</sup>	Operational
Lot 201 in DP 831931	14 MacMahon Street, Hurstville	788.1m <sup>2</sup>	Operational
Lot 1 in DP 137320	6 MacMahon Street, Hurstville	411m <sup>2</sup>	Operational
Lot B in DP 321590	14A MacMahon Street, Hurstville	486.9m <sup>2</sup>	Operational
Lot A in DP 340310	3 Patrick Street, Hurstville	390.5m <sup>2</sup>	Operational

Lot and DP	Address	Area m <sup>2</sup>	Classification/ Reserve status (from Land Register)
Lot B in DP 340310	1 Patrick Street, Hurstville	429.4m <sup>2</sup>	Operational
Lot A in DP 389008	2 Patrick Street, Hurstville	670.2m <sup>2</sup>	Operational
Lot B in DP 389008	2 Patrick Street, Hurstville	980.1m <sup>2</sup>	Operational
Lot 14 in DP 6510	4-6 Dora Street, Hurstville	493.2m <sup>2</sup>	Community Land
Lot 13 in DP 6510	4-6 Dora Street, Hurstville	436.3m <sup>2</sup>	Community Land
Lot 1 in DP 1280799	4 MacMahon Street, Hurstville (Patrick Street Road Reserve)	960.9 m <sup>2</sup>	Road Reserve (Georges River Council is currently in the process of undertaking a road closure - presently in the process of negotiating the relocation of services located within the road reserve)
<b>Total Area</b>		<b>12,645.5m<sup>2</sup></b>	

**Table 1: Land forming the subject site (Source: Hurstville Civic Precinct Planning Proposal, dated 04/01/2023 prepared by Gyde Consulting)**



**Figure 1: Subject Site (Source: Hurstville Civic Precinct Planning Proposal, dated 04/01/2023 prepared by Gyde Consulting)**

33. The Hurstville Museum and Gallery located at 14 MacMahon Street is a locally listed heritage item under Schedule 2 of the HLEP 1994.
34. The site has frontages of 210 metres to Queens Road, 45 metres to Park Road, 215 metres to MacMahon Street and 85 metres to Dora Street.

35. Surrounding development comprises of a range of building types and land uses including residential and commercial. The site is close to several open space facilities including Woodville Park and Hurstville Oval.
36. The site is also located in close proximity to a number of educational establishments including Sydney Technical High School, Hurstville Public School, Hurstville Boys High School and Bethany College.
37. The Westfield Shopping centre is located approximately 300m to the south-east of the site and provides regionally significant retail facilities and employment.
38. The site is well located to public transport with the Hurstville Train Station located within 200m to the south of the site.
39. Development to the south-west of the site generally comprises residential flat buildings up to 13 storeys in height with some ground floor retail stores along MacMahon Street.
40. The development to the north of the site consists of shop top housing development, between 8 storeys and 10 storeys in height.
41. The development to the south and south-east of the site transitions down in height to a number of single storey dwelling houses with a Church located further to the east on the corner of MacMahon and Park Street.
42. Development to the east of the site generally comprises three storey residential flat buildings.
43. The development to the west of the site comprises the Hurstville Commercial Core with 8 and 9 storey commercial buildings.

## PLANNING PROPOSAL

44. The intention of the PP is to enable the future development of the Hurstville Civic Precinct to create a new 'Civic Hub' delivering a mixed use civic, cultural, commercial and residential destination consisting of the following facilities:
  - a. Georges River Council's Administration Building and Council Chambers;
  - b. Civic and Entertainment Centre, including multipurpose auditorium (500 seats);
  - c. Civic Plaza;
  - d. Hurstville Library;
  - e. Hurstville Museum;
  - f. Senior Citizens Centre;
  - g. Residential and commercial uses;
  - h. Cafés and a range of recreation, relaxation or study areas; and
  - i. Basement car parking including underground parking for 500 potential public car parking spaces in addition to the required over 700 parking spaces for individual land use components of any future development.
45. The PP is supported by a Concept Design Report and draft amendment to the GRDCP 2021. These documents seek to guide the future detailed design and staging of the redevelopment of the site and ensure the future development of the Hurstville Civic Precinct reflects design excellence and embodies the intended place making qualities set out in the design concept.
46. The PP is also supported by the Hurstville Civic Precinct Public Domain Strategy and Hurstville Civic Precinct Amenities and Facilities Strategy which will inform and guide the design and outcomes of the community facilities and public domain aspects of the Hurstville Civic Precinct.



47. **Table 2** outlines the indicative floor space and apartment yield for the site that would be achievable under the PP as reflected in the Concept Design Report prepared by DWP and which informs the built form controls within the proposed draft DCP amendment.

Land Use	Gross Floor Area (m <sup>2</sup> )	Apartment Yield (units)
Commercial	7,490	-
Council Chambers	6,000	-
Community	8,410	-
Retail	3,175	-
Residential	25,975	298
Total	51,050	298

**Table 2 - Indicative GFA/yield per land use as informed by the Concept Design Report prepared by DWP (Source: Hurstville Civic Precinct Planning Proposal, dated 04/01/2023 prepared by Gyde Consulting)**

48. In order to address this intent, the PP seeks to amend the GRLEP 2021 as set out in **Table 3**.

Existing Proposed		
Land Use Zoning (LZN), Height of Buildings (HOB), Floor Space Ratio (FSR)		
LAP – Land Application Map	Hurstville Civic Precinct identified as a Deferred Matter	Remove Hurstville Civic Precinct Deferred Matter from the Land Application Map
LZN – Land use zone	Deferred Matter 4-6 Dora Street is already zoned B4 Mixed Use under the GRLEP 2021.	MU1 Mixed Use (formerly B4 Mixed Use prior to the implementation of the Employment zones reform)
HOB – Height of Buildings	No HOB designation under the HLEP 1994. Hurstville DCP No. 2 (Amendment No. 6) permits heights of "O" 15m, "U" 30m and "Z" 55m.  Under the GRLEP 2021, 4-6 Dora Street is permitted a maximum height of 15m under designation "O1".	'Q1'(20m), 'U1' 30m and 'AA1'(60m)



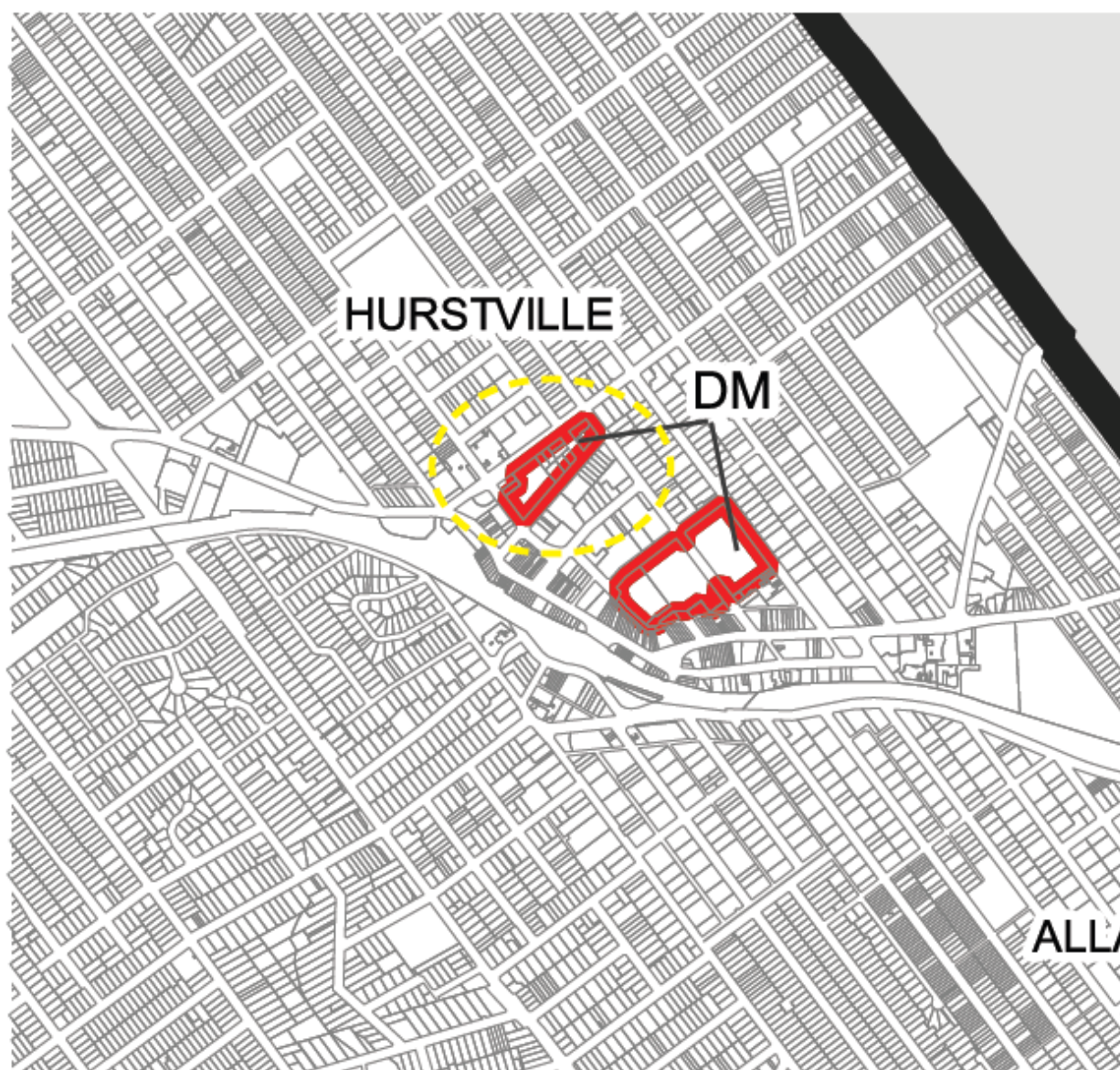
	Existing	Proposed
FSR – Floor Space Ratio	<p>No FSR designation under the HLEP 1994. Hurstville DCP No 2 (Amendment No. 6) permits FSRs of "V" 3:1, "X" 4:1 and "AA" 6:1.</p> <p>Under the GRLEP 2021, 4-6 Dora Street is permitted a maximum FSR of 3:1 under designation "V", with a minimum non-residential FSR of 1:1 subject to the provisions of Clause 4.4B.</p>	<p>V' (3.0:1) 'AB' (7.0:1) and 'Z1' (5.0:1)</p> <p>Exclude the Hurstville Civic Precinct from Area 4 and thus the provisions of Clause 4.4B (Exceptions to floor space ratio - non-residential uses) would not apply.</p> <p><i>Note: Proposed Part 6 Local Provision below mandates minimum non-residential floor space and maximum residential floor space which negates the need to identify the Precinct in Area 4 and thus be subject to the provisions of Clause 4.4B.</i></p>
HER – Heritage	<p>No heritage items listed under Schedule 5 of the GRLEP 2021 (Item I157 (Hurstville Museum and Gallery) at 14 MacMahon Street is listed in Schedule 2 of the HLEP 1994).</p>	<p>Identify 14 MacMahon Street (Lot 201 in DP 831931) (Hurstville Museum and Gallery) on the Heritage Map and include within Schedule 5 (Environmental Heritage) of the GRLEP 2021.</p>
<p>Clause 2.5</p> <p>Additional permitted uses for particular land/</p> <p>Schedule 1</p> <p>Additional Permitted Uses</p>	<p>No additional permitted uses listed</p>	<p>Identify 2 Patrick Street (Lots A and B in DP 389008) and part Patrick Street Road Reserve (4 MacMahon Street (Lot 1 in DP 1280799 - to the centreline)) as Area B on the Additional Permitted Uses Map and permit the use of 'residential flat buildings' via Schedule 1 - Additional Permitted Uses.</p> <p>Include a provision to the following effect (subject to the legal drafting process by Parliamentary Counsel) under Schedule 1 to exclude Area B being 2 Patrick Street (Lots A and B in DP 389008) and part Patrick Street Road Reserve (4 MacMahon Street - Lot 1 in DP 1280799) (to the centreline), from the provisions set out under Clause 6.13 of the GRLEP 2021, which would otherwise restrict the use of a residential flat building in Area B:</p> <ul style="list-style-type: none"> <li>Clause 6.13 does not apply to Area B identified under the Additional Permitted Uses Map.</li> </ul> <p><i>Note: Clause 6.13 would remain applicable to the remainder of the MU1 Mixed Use zone within the Hurstville Civic Precinct boundary.</i></p>
<b>Reclassification of Lot 13 in DP 6510 and Lot 14 in DP 6510 (known as 4-6 Dora Street)</b>		
Land Classification	Community	Operational (all trusts discharged)

	Existing	Proposed
<b>Part 6 Additional Local Provisions</b>		
	No development standards specifically applicable to the Hurstville Civic Precinct.	<p>Insert a development standard under Part 6 Additional Local Provisions as follows (subject to the legal drafting process by Parliamentary Counsel);</p> <p>6.18 Hurstville Civic Precinct</p> <p>(1) The objective of this clause is to facilitate the provision of community facilities and public benefits on the Hurstville Civic Precinct site.</p> <p>(2) This clause applies to land bounded by Queens Road, Park Road, MacMahon Street and Dora Street.</p> <p>(3) Development consent must not be granted on land to which this clause applies unless the consent authority is satisfied that the development will include:</p> <p>(a) Residential land uses to a maximum of 55% of the total permissible GFA; and</p> <p>(b) Community uses and facilities to a minimum of 25% of the total permissible GFA; and</p> <p>(c) Public open space at ground level to a minimum of 50% of the total site area, inclusive of a civic plaza that receives an average of 50% direct sunlight between 11am and 2pm midwinter; and</p> <p>(d) Car parking for general public use that is additional to the requirements for all land uses.</p> <p>(4) In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must be satisfied that the development –</p> <p>(a) is accompanied by a car parking study and traffic impact assessment that assesses the extent to which public car parking for general use is required to be provided at the site; and</p> <p>(b) includes the provision of public car parking and traffic mitigation measures identified by the car parking study and traffic impact assessment.</p> <p>(5) For the purposes of this clause, community facilities for the Hurstville Civic Precinct site means Council administrative and civic offices; multipurpose auditorium, library, museum, art gallery, community centre, associated uses such as cafés; a range of recreation, relaxation or study areas; and any other use that Council may consider appropriate to meet the needs of the community.</p>

**Table 3 - Amendments to the GRLEP 2021 as proposed in the exhibited PP.**

49. The proposed amendments necessitate the following GRLEP 2021 mapping amendments set out in **Figures 2 to 13**.
50. The PP includes a proposed additional permissible use of 'residential flat buildings' to the north east end of the site (refer to **Figure 13**). This matter relates to the transition of the HLEP 2012 to the GRLEP 2021.
51. At the time that the PP was submitted to Council for assessment and when the Gateway Determination was issued, the HLEP 2012 was in effect, and the PP originally sought to amend that instrument.

52. The PP had sought to establish a MU1 Mixed Use zone (formerly a B4 Mixed Use zone) across the entire Precinct, consistent with the surrounding City Centre land and generally equivalent to its then current 3(b) City Centre Business zone under the applicable HLEP 2012 instrument.
53. The DWP Concept Design Report (which provides a Master Plan for the site) includes two buildings intended to accommodate residential uses. Building A in the Master Plan, which is located at the Park Road end of the site, was intended to accommodate a predominantly residential development as non-residential development and ground level commercial activation was considered to be unfeasible and unlikely to occur at that location. As such, the intent was to allow for some ground floor residential uses within Building A.
54. Residential flat buildings in the 3(b) City Centre Business zone (generally equivalent to a B4 Mixed Use zone/MU1 Mixed Use zone) were permissible under the HLEP 2012, which was in effect at the time. This is no longer the case under the GRLEP 2021, which permits shop top housing but prohibits development for the purpose of residential flat buildings.
55. Since lodgement of the PP, the DPE has progressed the delivery of a simplified employment zones framework. As such the Business (B) and Industrial (IN) zones have been replaced with five new employment zones and three supporting zones under the *Standard Instrument (Local Environmental Plans) Amendment (Land Use Zones) Order 2021* (SI LEP Order).
56. This includes a new MU1 Mixed Use zone, which is generally equivalent to the previous B4 Mixed Use zone under the GRLEP 2021.
57. As such, the PP has been amended to seek to zone the land comprising the site as MU1 Mixed Use zone (and not a B4 Mixed Use zone which is no longer relevant).
58. Since residential flat buildings are prohibited in the MU1 zone under the GRLEP 2021, the PP seeks to amend the GRLEP 2021 to allow the additional permitted use of 'residential flat buildings' for the north eastern part of the site in which Building A is envisaged, consistent with the intent of the PP as it was lodged and the land use provisions that were relevant at the time of lodgement of the PP.



Georges River  
Local  
Environmental Plan  
2021

LEP Land Application  
 Included  
 Deferred

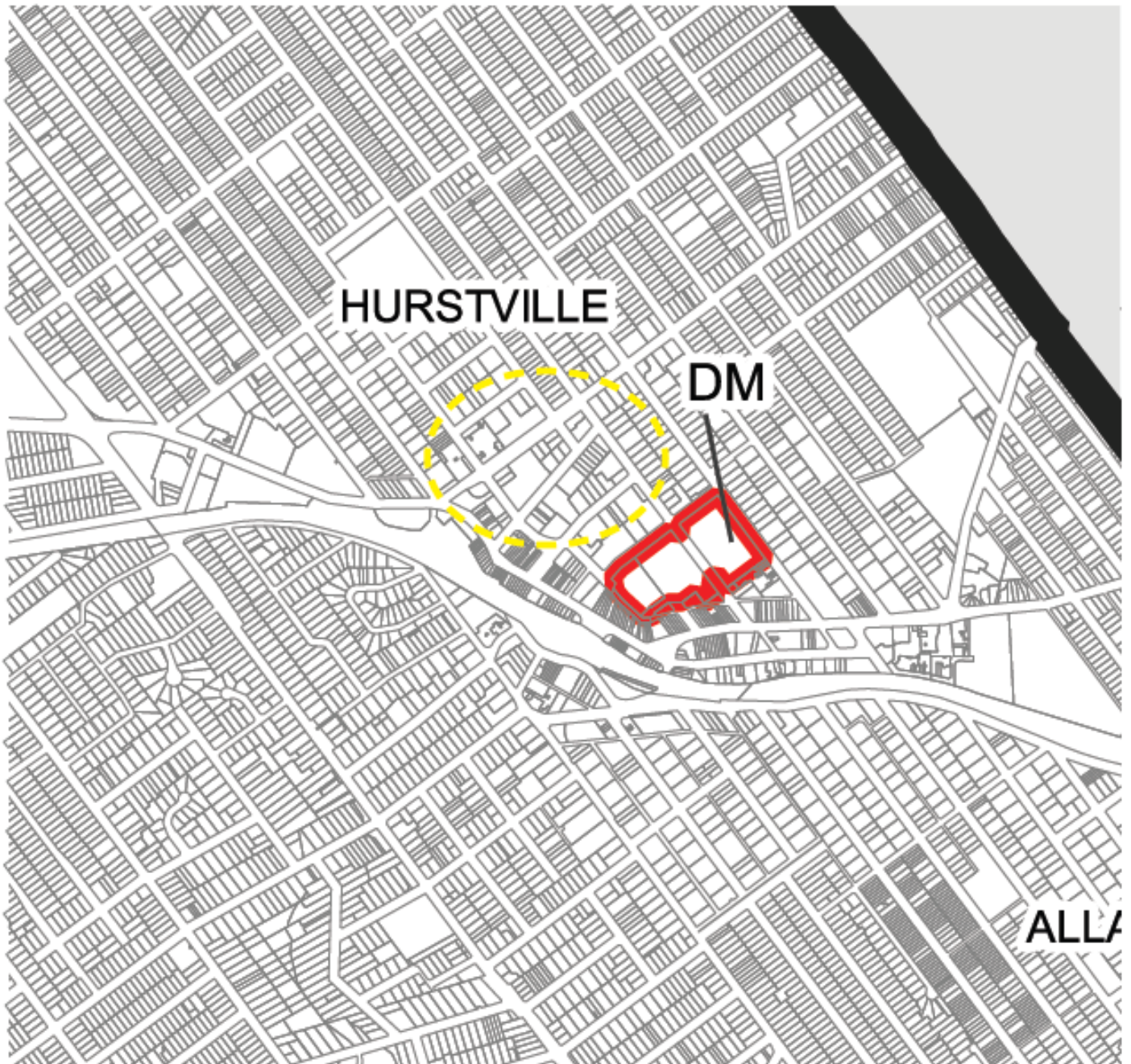
Hurstville Civic  
Precinct Identified  
as a Deferred Matter  
(except 4-6 Dora  
Street)

Land Application Map  
Sheet LAP\_001

 Subject site  
highlighted in yellow

Figure 2 - Existing GRLEP 2021 LAP Map (001)





Georges River  
Local  
Environmental Plan  
2021

LEP Land Application

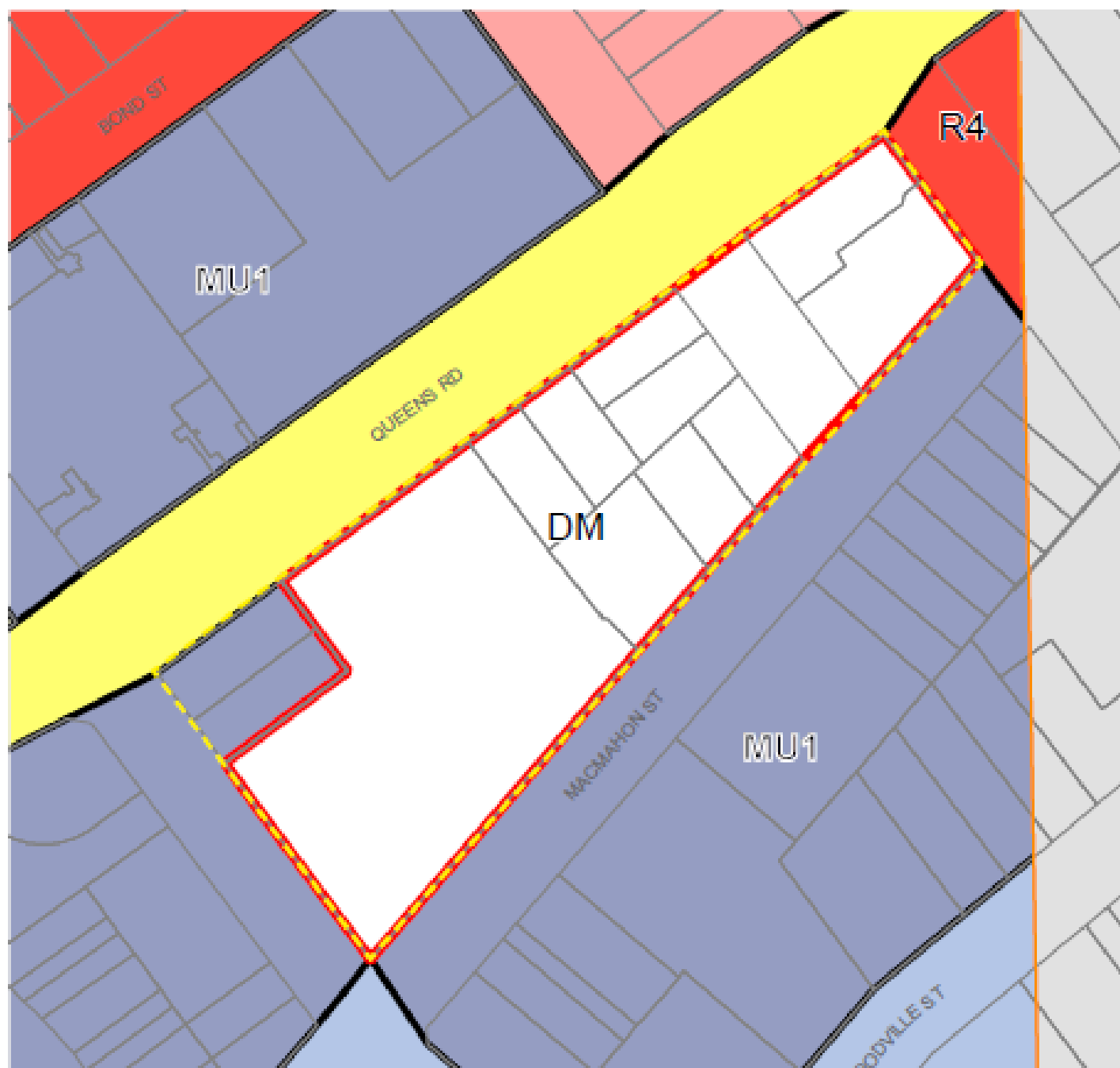


Remove Hurstville  
Civic Precinct Deferred  
Matter

Land Application Map  
Sheet LAP\_001

Subject site  
highlighted in yellow

Figure 3 – Proposed GRLEP 2021 LAP Map (001)



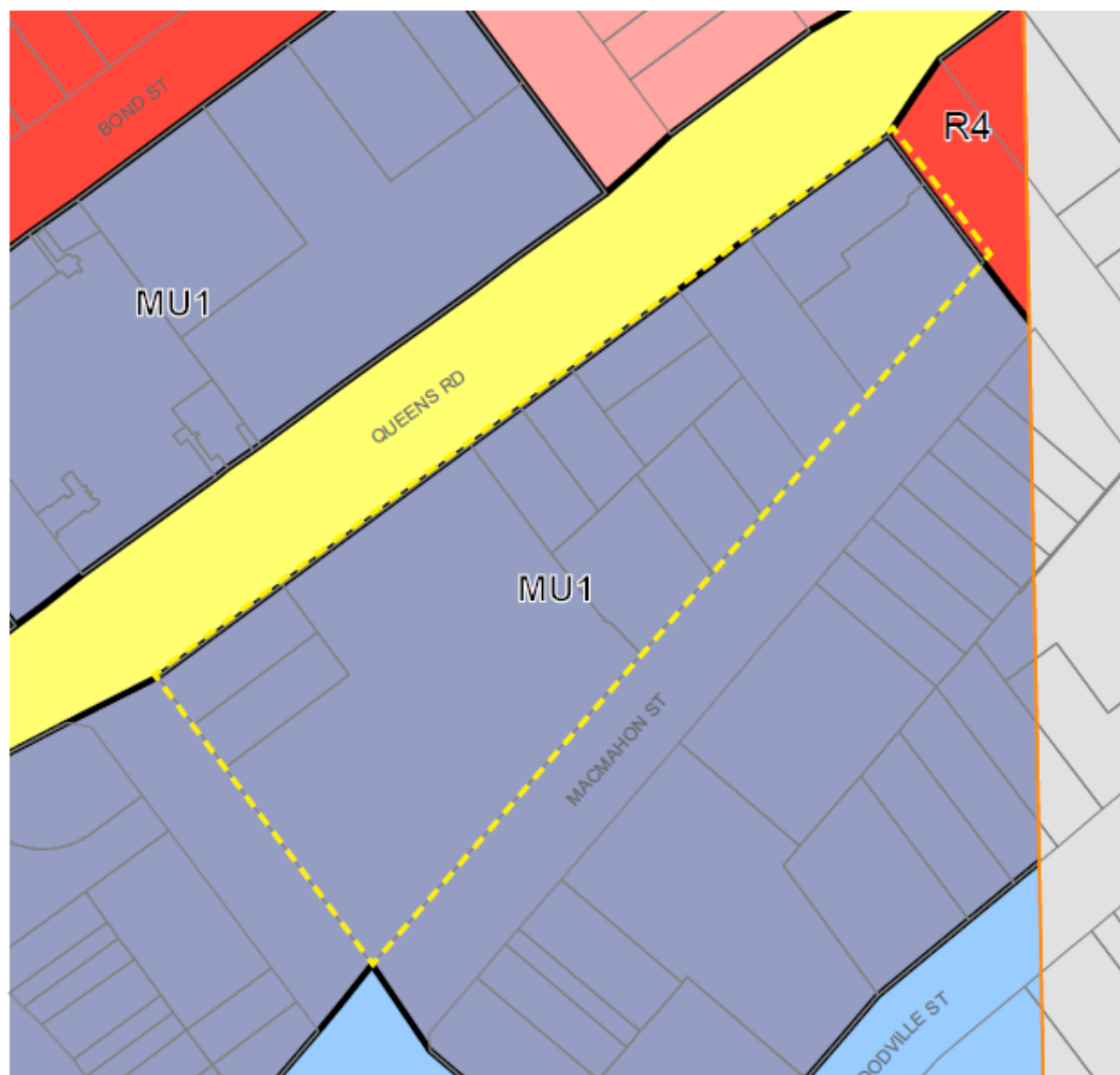
**Georges River  
Local  
Environmental Plan  
2021**

<span style="background-color: #4F81BD; color: white; padding: 2px;">E2</span>	Commercial Centre
<span style="background-color: #4F81BD; color: white; padding: 2px;">MU1</span>	Mixed Use
<span style="background-color: #F08080; color: white; padding: 2px;">R2</span>	Low Density Residential
<span style="background-color: #FF0000; color: white; padding: 2px;">R4</span>	High Density Residential
<span style="background-color: #FFFFFF; color: black; padding: 2px; border: 1px solid red;">DM</span>	Deferred Matter

The subject site's Land Use designation part MU1 Mixed Use (4-6 Dora Street) and the remainder 'Deferred Matter'.

Subject site outlined in yellow

**Figure 4 - Existing GRLEP 2021 LZN Map (008A)**



**Georges River  
Local  
Environmental Plan  
2021**

<span style="background-color: #e0e0ff; border: 1px solid black; padding: 2px;">E2</span>	Commercial Centre
<span style="background-color: #e0e0ff; border: 1px solid black; padding: 2px;">MU1</span>	Mixed Use
<span style="background-color: #ffe0e0; border: 1px solid black; padding: 2px;">R2</span>	Low Density Residential
<span style="background-color: #ff8080; border: 1px solid black; padding: 2px;">R4</span>	High Density Residential
<span style="background-color: #ff8080; border: 1px solid black; padding: 2px;">DM</span>	Deferred Matter

The subject site's Land Use designation to be changed from 'DM' to 'MU1' Mixed Use (4-6 Dora Street to remain MU1 Mixed use).

Subject site outlined in yellow

**Figure 5 – Proposed GRLEP 2021 LZN Map (008A)**

ENV022-23





Georges River  
Local  
Environmental Plan  
2021

Height of Buildings Map -  
Sheet HOB\_008A

J 9	R 21	W 40
L 11	S 23	X1 45
M 12	T 28	X2 45.5
N 13	U1 30	Y 50
O1 15	U2 33	Z 55
O2 16	U3 34.5	AA1 50
P 18	V1 35	AA2 55
Q 19	V2 39	

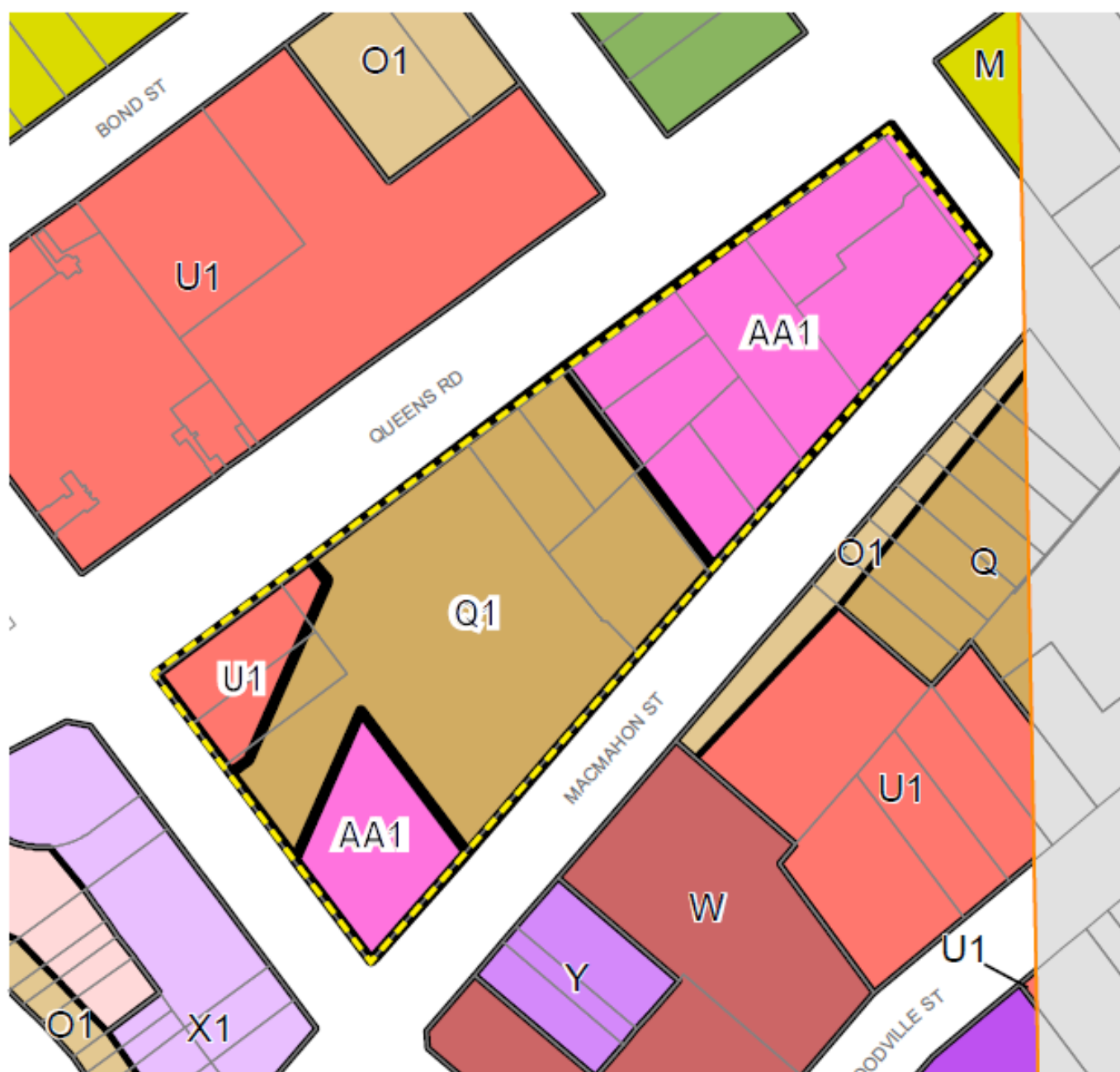
The subject site's Height of  
Buildings (HOB) designation  
Part O-15 (4-6 Dora Street) and  
the remainder with no height  
designation

Subject site outlined in yellow

Figure 6 - Existing GRLEP 2021 HOB Map (008A)

ENV022-23





ENV022-23




**Georges River  
Local  
Environmental Plan  
2021**

Height of Buildings Map -  
Sheet HOB\_008A

J	9	R	21	X1	45
L	11	S	23	X2	46.5
M	12	T	28	Y	50
N	13	U1	30	Z	55
O1	15	U2	33	AA1	60
O2	16	U3	34.5	AA2	65
P	18	V1	35		
Q	19	V2	39		
Q1	20	W	40		

The subject site's Height of Buildings (HOB) designation to be changed from part O-15 and part no height to 'Q1' (20m), 'U1' 30m and 'AA1' (60m)

 Subject site outlined in yellow

**Figure 7 – Proposed GRLEP 2021 HOB Map (008A)**



**Georges River  
Local  
Environmental Plan  
2021**

Floor Space Ratio Map -  
Sheet FSR\_008A

E 0.55	U1 2.5	AD 9
H 0.7	U2 2.8	AREA 1 - Refer to clause 4.4A
N 1	V 3	AREA 2 - Refer to clause 4.4A
P 1.2	W1 3.5	AREA 3 - Refer to clause 4.4B
Q 1.3	W2 3.6	AREA 4 - Refer to clause 4.4B
R 1.4	X 4	AREA 5 - Refer to clause 4.4B
S1 1.5	Y 4.5	AREA 6 - Refer to clause 4.4B
S2 1.8	Z1 5	
T1 2	Z2 5.5	
T2 2.2	AA 6	

The subject site's Floor Space Ratio (FSR) designation Part V-3 - Area 4 (4-6 Dora Street) and the remainder with no FSR designation

Subject site outlined in yellow

**Figure 8 - Existing GRLEP 2021 FSR Map (008A)**

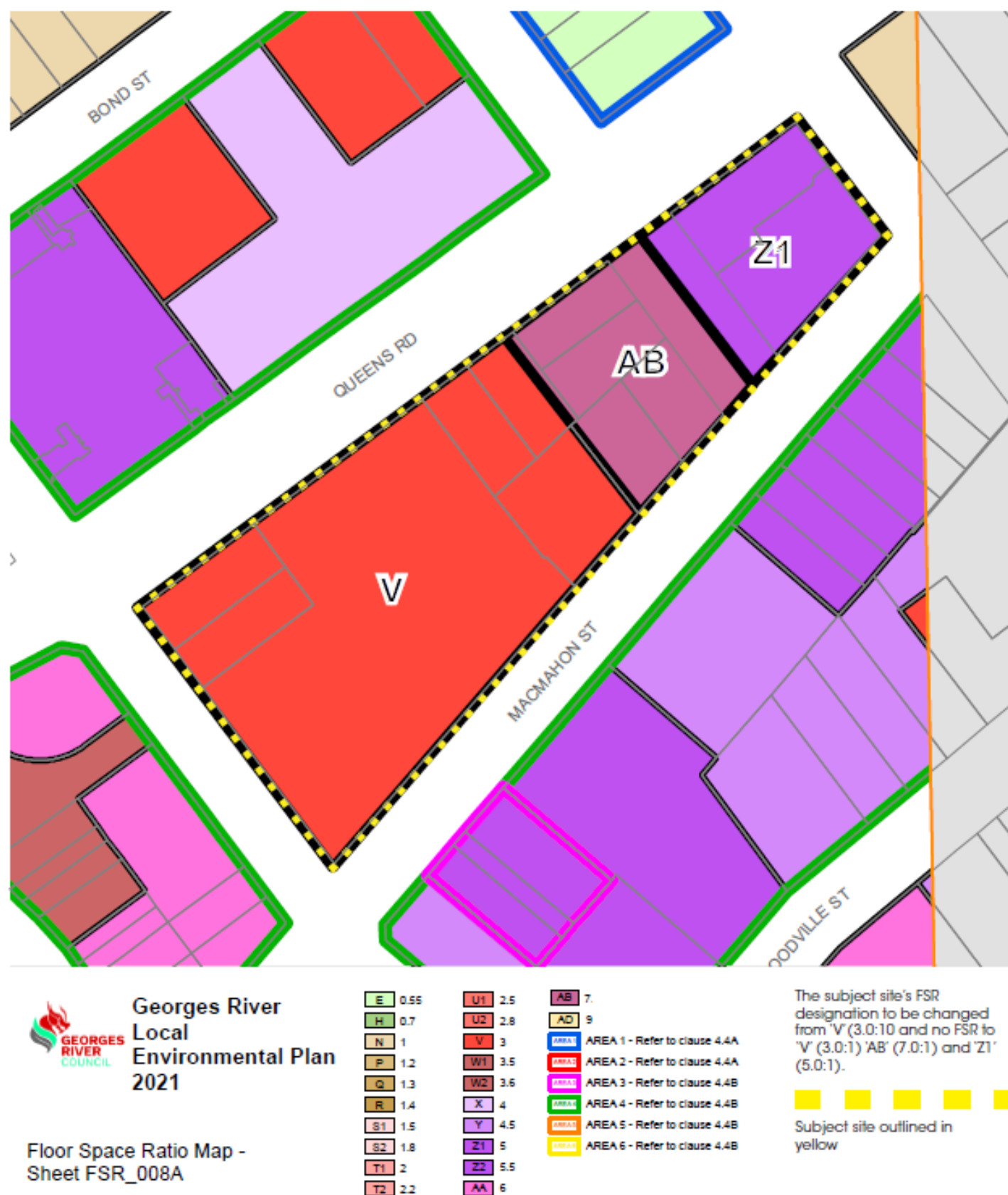


Figure 9 – Proposed GRLEP 2021 FSR Map (008A)

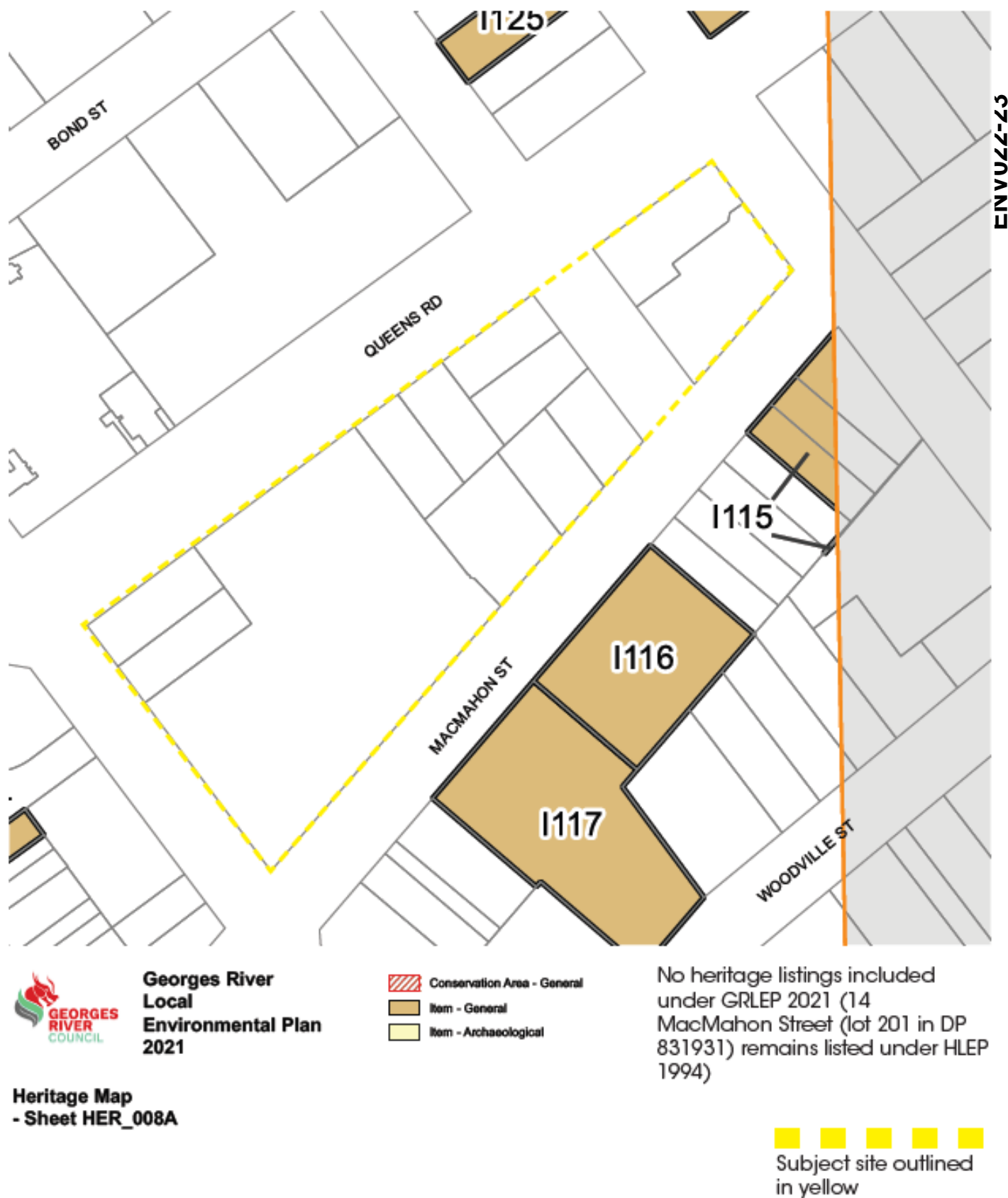





Figure 10 - Existing GRLEP 2021 HER Map (008A)





**Georges River  
Local  
Environmental Plan  
2021**

-  Conservation Area - General
-  Item - General
-  Item - Archaeological

Identify 14 MacMahon Street  
(lot 201 in DP 831931) on the  
heritage map as Item - General

**Heritage Map  
- Sheet HER\_008A**

  
Subject site outlined  
in yellow

*Figure 11 - Proposed GRLEP 2021 HER Map (008A)*



**Georges River  
Local  
Environmental Plan  
2021**

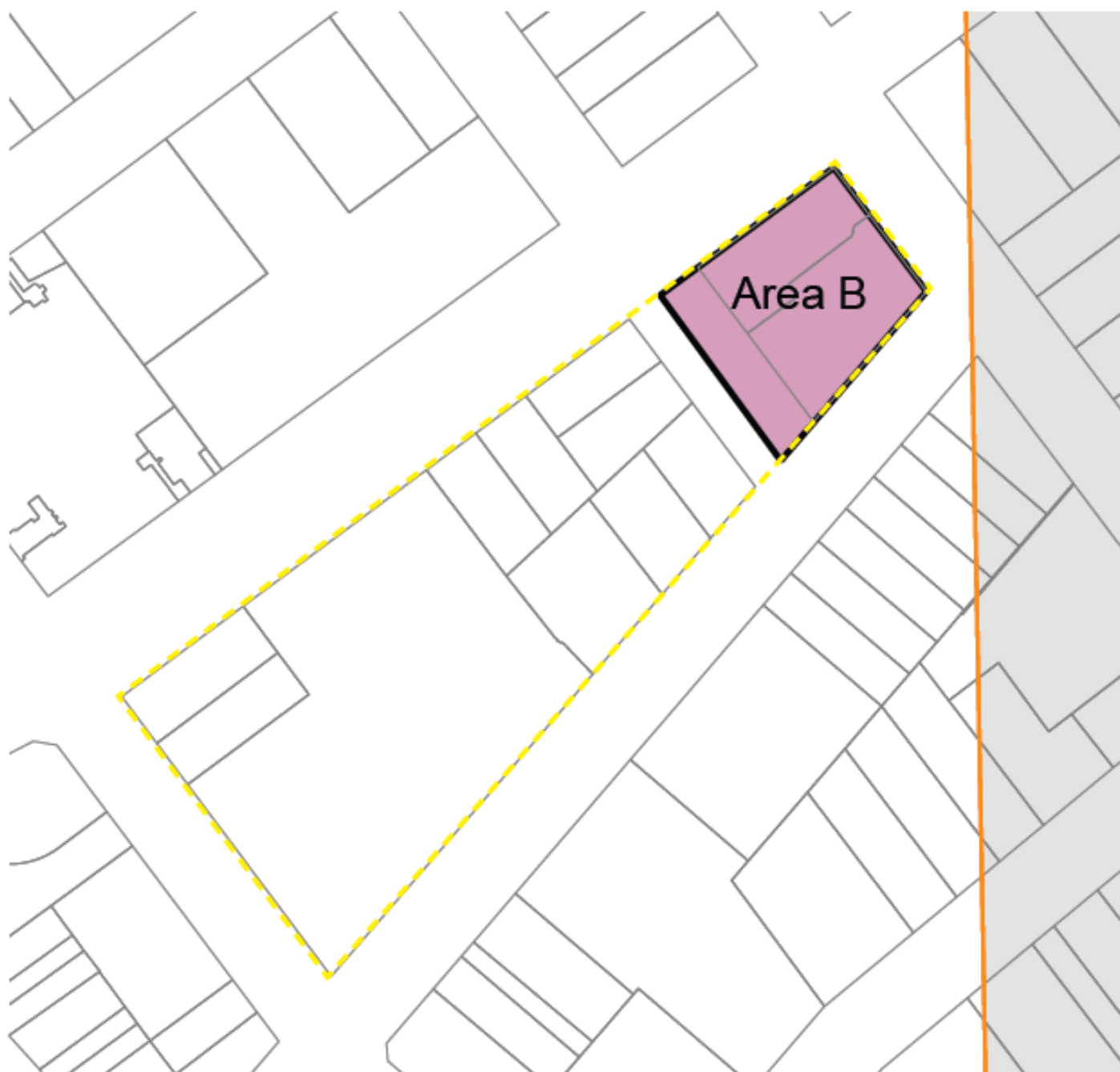


**Refer to Schedule 1**

Site is not identified  
for any Additional  
Permitted Uses

**Additional Permitted Uses Map  
- Sheet APU\_008A**

*Figure 12 - Existing GRLEP 2021 APU Map (008A)*



**Georges River  
Local  
Environmental Plan  
2021**

**Additional Permitted Uses Map  
- Sheet APU\_008A**



**Refer to Schedule 1**

Identify part of the  
site as Area B on the  
Additional Permitted  
Uses Map



Subject site outlined  
in yellow

*Figure 13 - Proposed GRLEP 2021 APU Map (008A)*

## ASSESSMENT OF THE PLANNING PROPOSAL

## Urban Design

59. Having regard to the urban design outcomes, the PP is supported by the Hurstville Civic Precinct Master Plan Concept Design Report prepared by DWP, the Hurstville Civic Precinct Public Domain Strategy and the Hurstville Civic Precinct Amenities and Facilities Strategy.
60. These documents have informed the draft DCP amendment which also supports the PP.
61. Georges River Council requested an independent Urban Design Review of the PP at the early stages of the assessment process. The urban design review was undertaken by SJB Architects, who were also responsible for the Hurstville CBD Urban Design Framework commissioned by Council. The Urban Design Framework informed the preparation of the Hurstville City Centre Urban Design Strategy (HCCUDS) which reviews and updates the existing planning controls for the Centre.
62. The review included consideration of the PP against the Design Principles of *State Environmental Planning Policy 65 – Design Quality of Residential Apartment Development* (SEPP 65) and the Hurstville CBD Urban Design Framework.
63. The urban design review also considered whether the proposed amended LEP and DCP controls would lead to an improved and superior outcome on the site and for the city more broadly.
64. The recommendations from the Urban Design Review were as follows:

*“Greater specificity around the protection of solar amenity and certainty around the size, location and performance of the public open spaces being proposed. These should include quantitative controls in both instances, to ensure a ‘minimum’ outcome that’s acceptable and appropriate*

*Deep soil should be specified for the two public open spaces, beyond the guidance outlined in the ADG, due to the scale of the spaces and their contribution to the city. This may be aligned with further guidance on the ‘extent of basement’*

*Active street frontage controls to ensure all buildings address the public open spaces and through-site connections, whilst ensuring the basement access and servicing has a minimal impact on the performance of the ground plane.*

*Sustainability targets and aspirations beyond those noted, as the scale and Council-ownership of the Civic Precinct presents a unique opportunity to pursue some benchmark targets and outcomes*

*Public Art Strategy that extends beyond the site boundary to include wayfinding that integrates the site into the key destinations*

*Fine Grain retail and activation strategy to provide greater opportunities for local businesses to operate within the city - building on the success of Forest Road as a retail High Street that’s retained a distinctively local character.”*

65. The urban design review recommendations led to the refinement of the Hurstville Civic Precinct Master Plan Concept Design Report and the PP prior to it being forwarded to the then DPIE for a Gateway Determination.
66. In February 2021, the DPIE raised concerns with regard to overshadowing caused by Building D within the Hurstville Civic Precinct Master Plan Concept Design Report.
67. Further detailed shadow analysis was undertaken by the applicant focusing on a reduction in overshadowing to residential development at No.9 and 15 Dora Street. The additional shadow modelling led to a change to the proposed form and arrangement of height for Building D at the south western end of the site.



68. In April and May 2021, the applicant presented a revised scheme in response to the then DPIE concerns. On 26 July 2021, Council resolved to forward the amended PP to the then DPIE and prepare an amendment to the DCP.
69. On 9 August 2021, the amended PP was forwarded to the then DPIE for a Gateway Determination and on 28 September 2021 a Gateway Determination was received.
70. In effect, the Master Plan within the final Hurstville Civic Precinct Master Plan Concept Design Report (as exhibited) provides general guidance on the overall form that redevelopment within the Precinct is likely to take.
71. The Master Plan has been considered against the relevant overarching urban design policies relevant to the Hurstville CBD adopted by Council and the Design Principles of SEPP 65. It has also been reviewed by Council's independent urban design consultant and the DPE's urban design team.
72. The Master Plan provides an indicative site layout and building envelope which includes the following main forms/elements:
  - a. Building A – 18 storey residential building
  - b. Building B – 18 storey residential / mixed use building
  - c. Building C – 5 storey building accommodating library, retail spaces and an auditorium
  - d. Building D – 15 storey mixed use building incorporating community uses, Council Chambers and commercial uses
  - e. Open spaces including a Civic Plaza fronting MacMahon Street and a small park fronting Queens Road.
73. The layout of buildings and arrangement of open space and public domain areas within the proposed Master Plan has been arrived upon having regard to the zoning, applicable built form provisions (i.e. height and FSR standards), existing arrangement of the buildings on the surrounding land to the east, west, north and south of the Precinct, and solar impact analysis.
74. The Master Plan arrangement is demonstrated within **Figures 14 and 15**.



**Figure 14 - Extract from Part 4 Master Plan, page 29 of the Hurstville Civic Precinct Master Plan Concept Design Report.**



**Figure 15 - Extract from Part 4 Master Plan, page 30 of the Hurstville Civic Precinct Masterplan Concept Design Report**

75. The Master Plan has informed and been incorporated into the preparation of the draft DCP amendment, such that the DCP includes detailed built form objectives and controls for each building and the open spaces.
76. The DCP amendment also includes controls that require a Surveyor's Certificate to confirm the gross floor area (GFA) of residential, non-residential and community uses and facilities as part of every Development Application (DA) for the site to ensure compliance with the GRLEP 2021 site specific Additional Local Provision requiring a minimum GFA for non-residential uses, community uses and facilities.
77. Additionally, the DCP amendment includes provisions requiring that development within the Hurstville Civic Precinct (inclusive of Buildings A, B, C and D, and public domain elements) is subject to a competitive design process to ensure compliance with the provisions of Clause 6.10 Design Excellence of the GRLEP 2021.

### Heritage Conservation

78. The exhibited PP includes the retention of the heritage listed Hurstville Museum and Gallery and seeks to include it as a Heritage Item in Schedule 5 (Environmental Heritage) of the GRLEP 2021.
79. The draft DCP amendment (under section 3.9) includes specific heritage provisions relating to the development and treatment of the Hurstville Museum and Gallery as part of any future DAs for the site to address the significance of the heritage item and facilitate its conservation, management and adaptive reuse.
80. Further, a Conservation Management Plan (CMP) has been prepared for the Hurstville Museum and Gallery to guide the future conservation, management and interpretation of the significance of the site. This CMP was placed on exhibition with the PP and draft DCP amendment as a supporting document.

### Traffic and Parking

81. A revised Transport Impact Assessment was also prepared and placed on exhibition with the PP.
82. The Assessment concludes that the PP is expected to generate between 330 and 500 vehicle movements in any peak hour, or an additional 180 to 190 vehicle movements per hour in the peak periods compared to the existing traffic generation of the site. Overall, the study intersections would continue to operate satisfactorily in 2028 (10 year design horizon) with and without development traffic.
83. The Transport Impact Assessment also reviews the required car parking. A summary of the overall parking requirements for the land uses proposed in the PP are summarised in **Table 4**.

Use	Size/No.	Parking Rate	Parking Requirement
Residential – Studio	29 apartments [1]	0.4 spaces per dwelling	12
Residential – 1 bedroom	45 apartments [1]	0.4 spaces per dwelling	18
Residential – 2 bedroom	179 apartments [1]	0.7 spaces per dwelling	125
Residential – 3 bedroom	45 apartments [1]	1.2 spaces per dwelling	54
Residential – Visitor	298 apartments	1 space per 7 dwellings	43
<b>Sub-Total</b>			<b>252 spaces</b>
Retail	3,160m <sup>2</sup> GFA [2]	1 space per 30m <sup>2</sup>	105
Commercial	13,500m <sup>2</sup> GFA	1 space per 60m <sup>2</sup>	225
Community Uses	8,410m <sup>2</sup> GFA	1 space per 60m <sup>2</sup>	140
<b>Total</b>			<b>722 spaces</b>

**Table 4 - Total expected parking supply.**

Note [1]: Apartment mix has been assumed to be 10% studio, 15% 1 bedroom, 60% 2 bedroom and 15% 3 bedroom

Note [2]: The gross floor area has been adopted for this assessment as a conservative approach

84. In total, 722 car spaces are estimated to be required to meet the demand for parking associated with the land uses and density proposed under the PP.
85. In addition, the PP envisages a further 500 potential public car parking spaces to be provided at the site.
86. The provision of additional public car parking is to be based upon the outcome of a detailed precinct specific Car Parking Study and Traffic Impact Assessment which are required under the proposed site specific Additional Local Provision (in the GRLEP 2021) and within the controls of the draft DCP amendment.
87. The proponent has indicated that the Georges River Car Parking Strategy and supplementary Position Paper adopted by Council in 2020 does not identify the need for, or location of future public car parking in the Georges River Local Government Area (LGA) and does not advocate for increased public car parking in the Hurstville City Centre. Therefore, the proponent argues that the development may have public parking but the quantum of any additional car parking will be determined at a later date.
88. Nonetheless, the Hurstville Civic Precinct, as one of the largest Council holdings in the Hurstville CBD, and which currently supports public car parking, should (and is able to) support public car parking upon its redevelopment, given the opportunity will be lost at this important site once it is redeveloped. Accordingly, in accordance with the proposed site specific Additional Local Provision in the GRLEP 2021 and draft DCP amendment, a detailed Car Parking Study is required to be submitted with any DA seeking consent for the construction of a new building or buildings, or car parking (either public and/ or land use related), or creation of public parks, or subdivision of the Hurstville Civic Precinct.

### ***Economic Assessment***

89. The PP will facilitate an increase in retail and commercial floor space with the estimated proposed GFA demonstrated in **Table 2** of this report.
90. The quantum of GFA for each proposed land use in the Master Plan has been determined based on Council's requirements as well as a detailed economic analysis.
91. It is considered that the increased floor space will be in a form and of a quantity that will positively contribute to the economic vitality of the locality and the wider Hurstville City Centre.
92. The PP will enable the future development of the site with a quantum of commercial floor space and non-commercial floor space that will contribute to employment and commerce in the area by providing contemporary spaces for local businesses in a suitable location and result in positive economic and social flow-on effects for the local area.
93. Future residential development achievable through the proposed GRLEP 2021 amendments will deliver additional housing in a well serviced location and will provide flow on economic benefits for surrounding businesses.
94. Overall, the proposed development will support and improve the economic viability of the Hurstville Civic Centre.

### ***Community Infrastructure***

95. The PP envisages significant new community infrastructure at the site in the form of a new Georges River Council Administration Building and Council Chambers; a Civic and Entertainment Centre, including multipurpose auditorium; a Civic Plaza; a new Hurstville Library; a Hurstville Museum; and a new Senior Citizens Centre.
96. As such, the PP will provide the catalyst for the delivery of significant public benefits in terms of community facilities and heritage preservation.

97. Importantly, the PP as exhibited ensures the delivery of the community infrastructure at the site through the proposed site specific Additional Local Provision (Hurstville Civic Precinct) in the GRLEP 2021 which requires a minimum GFA for community uses and facilities.
98. The Hurstville Civic Precinct Amenities and Facilities Strategy provides guidance to support the delivery of the required community facilities. The Strategy was placed on exhibition with the PP and draft DCP amendment as a supporting document.

### **Strategic Planning Context**

99. Consideration of the PP request in relation to the *Greater Sydney Region Plan (A Metropolis of Three Cities)* and the *South District Plan* are provided below.

#### **Greater Sydney Region Plan (A Metropolis of Three Cities)**

100. The *Greater Sydney Region Plan* was finalised and released by the then Greater Sydney Commission in March 2018 and establishes the aspirations for the region over the next 40 years. The Region Plan is framed around 10 Directions relating to infrastructure and collaboration, liveability, productivity, and sustainability.
101. Within the Greater Sydney Region Plan these Directions are presented via the three cities concept, with the cities being the Western Parkland City, Central River City and Eastern Harbour City. The Hurstville City Centre is located in the Eastern Harbour City identified as a strategic centre under the Plan.
102. The Plan notes the importance of enhancing residential supply and employment growth in strategic centres. The proponent has provided an assessment of the PP against the relevant Objectives of the Plan (as detailed below) and is acceptable to Council.

*“The PP is consistent with the following objectives of the Plan:*

**Objective 4** *Infrastructure use is optimised in that it provides for intensification and efficient use of land by co-locating services in close proximity to mass transit services.*

**Objective 6** *Services and infrastructure meet communities’ changing needs in that it will combine renewed civic, social and cultural infrastructure with commercial and residential opportunities to support employment, lifestyle and transport opportunities close to homes.*

**Objective 7** *Communities are healthy, resilient and socially connected in that it will facilitate development of a new mixed-use destination that:*

- *provides walkable places at a human scale with active street life;*
- *prioritises opportunities for people to walk, cycle and use public transport through creation of new civic spaces, and eat streets close to public transport services.*
- *co-locates civic and cultural facilities, recreation spaces, employment, residential and place making opportunities.*

**Objective 8** *Greater Sydney’s communities are culturally rich with diverse neighbourhoods in that it will provide for renewed civic and cultural facilities and civic spaces that cater for a diverse range of cultural and social needs, expressions and interactions.*

**Objective 9** *Greater Sydney celebrates the arts and supports creative industries and innovation by providing renewed cultural facilities in the form of performance, museum, gallery and civic spaces to support arts and creative industries.*

**Objective 10** *Greater housing supply and Objective 11: Housing is more diverse and affordable as it will increase the dwelling capacity of the subject site in close proximity to a railway station, thus allowing for greater housing supply in an area already well serviced by public transport, and which will become even better serviced in the future with the construction of the Sydney Metro West.*

**Objective 12** Great places that bring people together in that it will provide for renewed civic and cultural facilities and civic spaces that facilitate community interaction and cultural expression.

**Objective 13** Environmental heritage is identified, conserved and enhanced in that it will facilitate retention, conservation and adaptive reuse of an existing heritage item within the site.

**Objective 14** A Metropolis of Three Cities – integrated land use and transport creates walkable and 30-minute cities in that it will intensify a diverse range of civic, cultural, commercial, retail and residential activities in a well-connected location in close proximity to the existing Hurstville railway station.

**Objective 22** Investment and business activity in centres in that it proposes a more efficient and intensive use of an underutilised site in a major strategic centre in close proximity to regular road and rail based public transport services.

**Objective 31** Public open space is accessible, protected and enhanced in that it will create new public spaces in a location that is in walking distance to the wider Hurstville CBD and nearby residential areas. The Concept Design Report at Appendix A envisages high quality hard and soft landscaping to cater for a wide variety of place making opportunities.

**Objective 32** The Green Grid links parks, open spaces, bushland and walking and cycling paths in that it will provide for a new civic plaza on an identified green grid. (Refer to below commentary in relation to the South District Plan – Connecting Communities). “

### South District Plan

103. The *South District Plan* was finalised and released by the then Greater Sydney Commission in March 2018. The District Plan is a guide for implementing A Metropolis of Three Cities at the district level and proposes a 20 year vision by setting out aspirations and proposals for the South District.
104. The PP is considered to be consistent with seven (7) of the Planning Priorities of the *South District Plan* as provided in **Table 5** below.

Direction	Planning Priorities relevant to the Planning Proposal
A city for people	<b>Planning Priority S3:</b> Providing services and social infrastructure to meet people's changing needs <b>Planning Priority S4:</b> Fostering healthy, creative, culturally rich and socially connected communities
Housing the city	<b>Planning Priority S5:</b> Providing housing supply, choice and affordability with access to jobs, services and public transport
A city of great places	<b>Planning Priority S6:</b> Creating and renewing great places and local centres, and respecting the District's heritage
Jobs and skills for the city	<b>Planning Priority S9:</b> Growing investment, business opportunities and jobs in strategic centres
A well-connected city	<b>Planning Priority S12:</b> Delivering integrated land use and transport planning and a 30-minute city
Sustainability	<b>Planning Priority S15:</b> Increasing urban tree canopy cover and delivering Green Grid connections

**Table 5 - Planning Priorities of the South District Plan of which the PP is consistent with**

### **Council's Local Strategic Plans**

105. Consideration of the PP in relation to Council's local strategic plans are provided below.

### Georges River LSPS 2040

106. The *Georges River Local Strategic Planning Statement 2040* (LSPS) was endorsed by the then Greater Sydney Commission in March 2020. It informs all land use planning in the LGA for the next 20 years, drawing upon priorities listed under the *Greater Sydney Region Plan - A Metropolis of Three Cities* and the *South District Plan*.
107. A detailed assessment of the proposal against the Themes and Local Planning Priorities of the LSPS is provided in Table 7 of the exhibited PP. The PP complies with the Themes and Local Planning Priorities and is acceptable to Council.

### Georges River Local Housing Strategy

108. The *Georges River Local Housing Strategy* (LHS) sets out the strategic direction for housing in the Georges River Local Government Area (LGA) over the next 20 years. It identifies the housing demand, gaps and issues, and establishes housing objectives to manage future growth.
109. The Strategy aligns with the directions, objectives and actions for housing in the *Greater Sydney Region Plan*, *South District Plan* and LSPS 2040.
110. Georges River is required to meet the *South District Plan* 0-5 year housing target of 4,800 dwellings, deliver a 6-10 year housing target to meet anticipated demand, contribute to the District's 20 year target and include affordable housing targets. The Georges River LGA is required to create capacity to accommodate approximately 14,000 additional dwellings by 2036.
111. The LHS outlines a vision for housing in the Georges River LGA as follows:  
*"The Georges River LGA provides a diverse range of housing to cater for a changing and growing population. Housing types cater to differing needs, life stages and lifestyle choices, and are supported by good access to infrastructure, services and amenities. High quality and affordable housing choices are accessible across the LGA and responsive to the LGA's local character and heritage. As neighbourhoods grow, residents of all ages and abilities remain connected with one another, and can enjoy high levels of amenity, sustainability, accessibility and liveability."*
112. Objective 1 (Accommodate additional housing growth) recognises that major planning proposals are a significant contributor in meeting Council's housing targets in the short (0-5 years) and medium (6-10 years) term.
113. The Hurstville Civic Precinct is specifically recognised within the LHS for its potential contribution to housing supply.
114. The PP is consistent with the following LHS Objectives:
  - Objective 1: Accommodate additional housing growth
  - Objective 2: Coordinate growth with infrastructure
  - Objective 3: Provide affordable and inclusive housing
  - Objective 4: Provide greater housing choice and diversity
  - Objective 6: Enhance and protect the local character
  - Objective 7: Facilitate good design and sustainable development practices.

### Georges River Inclusive Housing Strategy and Delivery Program

115. The *Georges River Inclusive Housing Strategy and Delivery Program* (IHSDP) for the Georges River LGA considers the housing needs for the Georges River community. The Strategy found that Hurstville was one of the fastest growing areas in the Georges River LGA over the decade to 2016 with 2.8% growth per year.



116. The IHSDP also found that the population in the LGA is significantly centred around Hurstville, which held over 20.3% of the population of the Georges River LGA, of which approximately a quarter live in the Hurstville CBD.
117. The IHSDP identified overcrowding as a serious issue in Hurstville with 18% of households requiring at least one extra bedroom and 76% of two bedroom apartments requiring an additional bedroom.
118. The PP, which will enable more housing to be provided in the Hurstville City Centre, will assist in relieving this overcrowding and cater for the growing population.

Georges River Community Strategic Plan 2022-2032

119. The *Georges River Community Strategic Plan 2022-2032* (GRCSPP 2022-2032) was adopted by Council in June 2022.
120. The GRCSPP 2022-2032 is an overarching strategic document which is supplemented by a suite of plans, reports and reviews. It sets clear strategic directions and provides a blueprint for building the future of the Georges River LGA.
121. The GRCSPP contains 'six pillars' guiding the strategic direction of Council, considered important to the community.
122. A detailed assessment of the proposal against the six pillars of the GRCSPP is provided in the exhibited PP and reproduced in **Table 6** below. The assessment demonstrates the alignment of the PP with the strategic direction of Council and the PP is acceptable in this regard.

GRCSPP Goals	Strategies	PP Response
<b>Pillar 1: Our Community</b>		
<b>1.1 Our community is socially and culturally connected, and we strive for social equity.</b>	<p>1.1.1 Initiate, facilitate and support inclusive and accessible events that meet community aspirations and connect people, communities and diverse groups.</p> <p>1.1.2 Foster and support programs and installations such as Art Trails and Public Art that celebrate diversity, our multicultural community, supports innovation and creativity and contributes to the creative economy.</p> <p>1.1.3 Develop, support and promote programs, services and activities that foster social support, participation and wellbeing for our diverse community regardless of age, gender, physical or mental ability, sexual orientation or cultural or religious background.</p> <p>1.1.4 Provide high quality, affordable education, care and protection for children across Council's Early Learning Centres.</p>	<p>The PP will facilitate the establishment of new inclusive cultural facilities and plazas where community interaction, recreation and performance can take place.</p> <p>This will provide a platform for celebrating and showcasing the cultural diversity of the Hurstville and wider Georges River community.</p> <p>The intended outcome of the PP is to enable the development of a gallery and museum.</p>



GRCSP Goals	Strategies	PP Response
<b>1.2 Diverse, vibrant community hubs and facilities are connected, well maintained and have equitable access.</b>	<p>1.2.1 Develop our library services to provide for inclusive hubs, spaces and services, collections, programs and facilities.</p> <p>1.2.2 Provide a range of affordable and accessible facilities and community hubs for community-based activities.</p> <p>1.2.3 Encourage and promote the arts and creativity through Council's cultural facilities including Hurstville Museum and Gallery, Hurstville Entertainment Centre and Cars Park Artists Cottage.</p>	The PP will directly facilitate the establishment of a new community facility inclusive of a library, community centre, museum and gallery. This will also include public plaza spaces and an eat street.
<b>1.3 The community is safe and healthy.</b>	<p>1.3.1 Implement actions to maintain and promote the community safety of our area.</p> <p>1.3.2 Conduct regulatory functions in accordance with legislative requirements.</p>	Management of proposed public spaces is to be considered as a part of detailed design processes.
<b>1.4 Georges River area heritage and history is protected.</b>	<p>1.4.1 Encourage and promote heritage and history through collections, programs, heritage trails and protection policies.</p>	<p>The PP seeks to retain an existing heritage listing to facilitate the conservation and adaptive reuse of a heritage building within the site.</p> <p>The conservation management plan notes that the conservation and interpretation of places and values of heritage significance is required to give current and future generations a better understanding of history and people's past experiences.</p>
<b>Pillar 2: Our Green Environment</b>		

GRCSP Goals	Strategies	PP Response
<b>2.1 Our environmentally sustainable practices inspire us all to protect and nurture the natural environment.</b>	<p>2.1.1 Prepare the Georges River area to be resilient in addressing climate change and reducing energy and water usage.</p> <p>2.1.2 Ensure waste is managed as a resource with minimal impacts from its disposal.</p> <p>2.1.3 Prepare for natural disasters such as bushfires and extreme weather events.</p>	<p>The PP and supporting DCP amendment will enable contemporary high density residential, commercial and community-oriented development to occur in line with design excellence principles that will ensure that environmental impacts are well managed and sustainable design initiatives are incorporated. The DCP will require that development on the site is to demonstrate sustainable principles for energy production, waste management towards carbon neutral and provide energy efficient buildings. A development on the site will also need to comply with Clause 6.11 (Environmental Sustainability) of the GRLEP 2021.</p> <p>The PP will establish a more integrated transit oriented mixed use precinct that reduces reliance on private vehicles. This PP encourages greater public transport use through best practice transit oriented development planning. It also reduces the pressure on Sydney's expanding urban footprint by increasing density in an established urban centre.</p>
<b>2.2 Our waterways are healthy and accessible.</b>	<p>2.2.1 Protect the Georges River and waterways to be clean and naturalised.</p> <p>2.2.2 Maintain and Implement strategies to provide access to our waterways.</p>	Not directly relevant to this PP as the PP is not for land in a foreshore locality. Any wider reaching drainage impacts will be investigated as part of a future DA process.
<b>2.3 Greening, canopy cover and bushland and biodiversity preservation are maximised.</b>	<p>2.3.1 Increase and promote our tree canopy, shrubs and bushland coverage.</p> <p>2.3.2 Protect and reinstate our biodiversity, including endemic flora and fauna.</p>	The PP, supporting master plan and DCP amendment will facilitate the creation of new public places, links and streetscape improvements that will enhance tree coverage. Implementation of these outcomes will be facilitated via the Public Domain Strategy.
<b>Pillar 3: Our Economy</b>		
<b>3.1 Local jobs and local Businesses are supported to grow</b>	<p>3.1.1 Support local businesses to help protect jobs and create employment opportunities.</p> <p>3.1.2 Encourage the Night Time Economy, particularly in Hurstville, Beverly Hills and Kogarah, to grow.</p> <p>3.1.3 Target economic development in key locations and sectors within the LGA</p>	The PP will enable a high density mixed use community focused development that will increase the supply and diversity of residential and business accommodation, creating employment opportunities and increasing the population in the city centre to support existing and future businesses. The proposed increase in non-residential floorspace would be considered in the development of any future employment lands study.

GRCSP Goals	Strategies	PP Response
<b>3.2 Our town centres are green, clean, vibrant and activated and have good amenities.</b>	<p>3.2.1 Provide regular maintenance and cleansing of town centres and public toilets.</p> <p>3.2.2 Encourage and support targeted, place-based events and activities to activate town centres.</p> <p>3.2.3 Implement greening and planting strategies in town centres.</p> <p>3.2.4 Protect employment growth and services during land rezoning processes.</p>	<p>The PP will facilitate the establishment of new cultural facilities and plazas where community interaction and performance can take place. This will provide a platform for celebrating and showcasing the cultural diversity of the Hurstville and wider Georges River community.</p> <p>Management of proposed public spaces will be considered as a part of detailed design processes.</p>
<b>3.3 Georges River is a 30 minute city</b>	<p>3.3.1 Advocate to the NSW Government to support Georges River as a 30 minute city.</p>	<p>The PP will increase population density as well as employment, community facilities and retail opportunities in an existing city centre in close walking distance to a major public transport interchange that provides rail, road based transit links both on a local, metropolitan and regional scale. This will promote greater public transport use and encourage uptake of active transport options by facilitating better cycling connections and walkability.</p>
<b>Pillar 4: Our Built Environment</b>		
<b>4.1 New development should make Georges River more liveable, vibrant and sustainable.</b>	<p>4.1.1 Prepare Development Control Plans and Master Plans to guide liveable development and amenity.</p> <p>4.1.2 Undertake rigorous assessment of development applications (DAs) by Council staff, local planning panel and Sydney South Planning Panel.</p>	<p>The PP is supported by a master plan that sets a vision for the Precinct. It will directly facilitate the establishment of a new community facility inclusive of a library, community centre, museum and gallery. This will also include public plaza spaces and an eat street.</p> <p>Community engagement of DAs will be undertaken at future DA stages to assist in further defining the community offer in the Precinct.</p>
<b>4.2 Affordable and quality housing options are available.</b>	<p>4.2.1 Develop policies that encourage a greater supply of housing diversity and choice.</p> <p>4.2.2 Ensure quality design and sustainability principles underpin the provision of all housing.</p>	<p>The PP will facilitate the establishment of new commercial and retail enterprises as well as providing a new civic hub.</p> <p>The PP will also increase the supply and diversity of residential and business accommodation in the Hurstville City Centre, which will carry benefits for both housing choice and affordability, as well as creating new opportunities for businesses and employment.</p>

GRCSP Goals	Strategies	PP Response
<b>4.3 There are a range of transport options and increased walkability and cycling to connect people, goods and businesses.</b>	<p>4.3.1 Provide expert advice and lobby the State Government to provide and improve public transport options such as train and bus services.</p> <p>4.3.2 Plan for, improve and maintain safe and connected footpaths and cycleways.</p>	<p>The PP allows for a future mixed use cultural and community hub development that can deliver some 1,200 car parking spaces including over 500 public car parking spaces (subject to the outcomes of a car parking strategy for the site). The method of delivery will be refined as a part of a detailed future proposal.</p> <p>The PP will facilitate the future development of a community, cultural, civic and residential transit oriented development (TOD) within 200m of a suburban railway station. The subject site is also located within 100m of a bus interchange. This focuses a higher population within walking distance to a train station and promotes greater public transport patronage.</p> <p>The above initiatives will strengthen Council's case to advocate for improved public transport services.</p>
<b>4.4 Everyone has access to quality parks and open space and active and passive recreation facilities</b>	<p>4.4.1 Ensure public parks and open space and Council buildings are accessible, well maintained and managed.</p> <p>4.4.2 Plan and provide active and passive recreation including skate parks, aquatic facilities and off road biking opportunities.</p> <p>4.4.3 Review Plans of Management for all open space in the LGA.</p>	<p>Accessibility for all user groups is to be considered in the detailed planning, urban design and landscape/ public domain design stages. The PP will directly facilitate the establishment of new plaza spaces, and a community facility inclusive of a library, community centre, museum and gallery providing for a range of passive and active recreational pursuits.</p>
<b>4.5. Council-led development and assets provide quality, long term benefits to everyone.</b>	<p>4.5.1 Provide new and upgraded community assets and services to the LGA.</p>	<p>The intent of the PP is to create an integrated community, civic and cultural precinct that will assist in maximising the use of community assets and optimising maintenance programs.</p>
<b>Pillar 5: Our Place in Sydney</b>		
<b>5.1 Leadership focuses on innovation and improving the customer experience.</b>	<p>5.1.1 Promote Georges River as a place for innovation and collaboration and a desirable location for government and private investment.</p> <p>5.1.2 Provide positive experiences across all customer interactions for our community and visitors.</p>	<p>The PP will enable the development of a new civic centre and cultural hub that will make a direct contribution to the quality of the customer experience.</p>

GRCSP Goals	Strategies	PP Response
<b>5.2 The three spheres of government work together to improve services and facilities in our area.</b>	<p>5.2.1 Advocate to all levels of government to ensure critical infrastructure accompanies residential and employment growth.</p> <p>5.2.2 Investigate the opportunities for government land and shared facilities being used for open space and other uses e.g. schools and health.</p>	The PP will enable the development of a Council asset to accommodate a new civic plaza, a pocket park and other public domain elements that will comprise over 50% of the site area.
<b>5.3 Georges River is known for being environmentally and culturally rich and enhances its metropolitan position as a destination for people and business.</b>	5.3.1 Demonstrate our environmental and cultural riches through policies, programs and projects to showcase and immerse our residents and visitors in our lifestyle.	The PP will enable the establishment of a cultural hub destination that will have wide reaching benefits that extend beyond the Hurstville and Georges River Council community.
<b>Our Governance</b>		
<b>6.1 Our community's voice is considered in planning the area's future.</b>	<p>6.1.1 Commit to consult and engage the community on projects, initiatives and issues which have an impact on their lives.</p> <p>6.1.2 Ensure Council's financial assistance and grants programs are managed effectively.</p>	The PP has taken into consideration community and stakeholder consultation outcomes previously undertaken by (then) JBA. Further consultation with the community was undertaken as part of the public exhibition process for the PP. This included newspaper advertisements, public exhibition at Council offices and on Council's website and notification letters to nearby property owners.
<b>6.2 Our decisions are based on evidence which considers financial impacts, the environment and impacts on future generations.</b>	<p>6.2.1 Ensure the behaviour and decisions of councillors and staff is professional and ethical.</p> <p>Maintain a sustainably strong financial position balanced with demand for essential services and new projects and having regard for Section 8(b)(d) (ii) of the Local Government Act (the current generation funds the cost of its services).</p> <p>6.2.3 Undertake effective risk management to manage risks that may arise.</p> <p>6.2.4 Ensure procurement policies and practices demonstrate best practice in probity assurance and legislative compliance.</p> <p>6.2.5 Undertake effective management of council's digital framework to enable responsive and timely services and information.</p>	<p>The PP proposes appropriate LEP and DCP controls that will provide the necessary implementation pathway to deliver on opportunities and initiatives depicted in the Concept Design Report to ensure intended results are achievable and deliverable.</p> <p>The PP will enable a more appropriate use of a presently underutilised site, while maintaining its current use within a future integrated mixed-use community focused development.</p> <p>Council may use proceeds from the disposal of a portion of the site to fund the provision of major public benefits in the form of a community, cultural and civic destination. A consolidated civic hub will also enable optimal management and maintenance operations.</p>

GRCSP Goals	Strategies	PP Response
<b>6.3 Our community knows why and how decisions are made.</b>	6.3.1 The community is informed, has access to information and Council reports and reports from other levels of government, institutions and organisations pertaining to Georges River are made public.	Proper protocols and processes will be adhered to in the consideration and assessment of this PP.  Given the PP is for a local government asset, this PP is being assessed by an independent planning consultant as well as being considered by the Georges River Local Planning Panel to facilitate impartiality of the determination process.
<b>6.4 The workforce is inspiring, diverse and engaged.</b>	6.4.1 Implement leading people practices to create a high performing, capable and resilient workforce.	Not specifically relevant to this PP.

**Table 6 - Consideration of the PP under the 6 Pillars of the GRCSP**

## State and Regional Statutory Framework

### State Environmental Planning Policies

123. An assessment of the PP against the relevant State Environmental Planning Policies (SEPPs) provided under section 4.2.4 and within a Table in Appendix H of the exhibited PP and reproduced in **Table 7** below, demonstrates that the proposal is consistent with the relevant SEPPs.

SEPP	Consistent
State Environmental Planning Policy (Biodiversity and Conservation) 2021	N/A
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004	N/A
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	N/A
State Environmental Planning Policy (Housing) 2021	N/A
State Environmental Planning Policy (Industry and Employment) 2021	N/A
State Environmental Planning Policy No 65 — Design Quality of Residential Apartment Development	<p>Yes.</p> <p>The Concept Design Report has been prepared with due consideration for SEPP 65 and the Apartment Design Guide. Whilst the objective of the design concept for the site was not to provide a detailed design or built form; overarching design matters such as height, setbacks and solar access are critical issues to be considered at the PP stage to ensure that an appropriate built form can be achieved prior to detailed design processes occurring.</p> <p>As such, the proposed building envelopes are consistent with SEPP 65 and the guiding elements of the Apartment Design Guide, in particular those pertaining to building separation, building depth and solar access for residential flat buildings.</p>

SEPP	Consistent
	The PP includes a table that demonstrates it is consistent with the key principles outlined within the Apartment Design Guide.
State Environmental Planning Policy (Planning Systems) 2021	N/A
State Environmental Planning Policy (Precincts — Central River City) 2021	N/A
State Environmental Planning Policy (Precincts — Eastern Harbour City) 2021	N/A
State Environmental Planning Policy (Precincts — Regional) 2021	N/A
State Environmental Planning Policy (Precincts — Western Parkland City) 2021	N/A
State Environmental Planning Policy (Primary Production) 2021	N/A
State Environmental Planning Policy (Resilience and Hazards) 2021	<p>Yes.</p> <p>The site has been used as a car park and commercial/Civic building for a number of years. These uses are not listed in Table 1 of the Managing Land Contamination Planning Guidelines. Therefore, the site is unlikely to contain contaminated material based on its previous land uses. The site is currently zoned 3(b) City Centre Business zone under the HLEP 1994 and is proposed to be rezoned to MU1 Mixed Use.</p> <p>Notwithstanding this change in zoning, residential uses are already permitted on the site under the 3(b) zone and as such, the proposal is not introducing a more sensitive land use than is currently permitted on the site under the HLEP 1994. Contamination assessment and site studies will be addressed at the DA stage.</p> <p>The PP will not inhibit the implementation of this SEPP at the detailed design stage.</p>
State Environmental Planning Policy (Resources and Energy) 2021	N/A
State Environmental Planning Policy (Sustainable Buildings) 2022	N/A
State Environmental Planning Policy (Transport and Infrastructure) 2021	<p>Yes.</p> <p>The PP will increase population density as well as employment, community facilities and retail opportunities in an existing city centre in close walking distance to a major public transport interchange that provides rail and road based transit links both on a local, metropolitan and regional scale. This will promote greater public transport use and encourage uptake of active transport options by facilitating better cycling connections and walkability.</p>

SEPP	Consistent
	The PP will also result in a more efficient use of land in a transit oriented location. This will enhance the provision of homes, jobs, amenities and community facilities that will improve the connectivity and walkability of the Hurstville area.

**Table 7 - Consistency with the SEPPs****Ministerial Directions**

124. Ministerial Directions under Section 9.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) set out a range of matters to be considered when preparing an amendment to a Local Environmental Plan.
125. An assessment of the PP against the relevant Ministerial Directions provided under section 4.2.5 and within a Table in Appendix I of the exhibited PP and reproduced in **Table 8** below demonstrate the proposal is consistent with all relevant applicable Ministerial Directions.

	Ministerial Direction	Consistent
<b>1</b>	<b>Planning Systems</b>	
1.1	Implementation of Regional Plans	Yes.  As demonstrated above, the PP is consistent with and will directly deliver on the objectives and actions of the <i>Greater Sydney Region Plan</i> . Therefore, the PP is consistent with this Direction.
1.2	Development of Aboriginal Land Council land	N/A
1.3	Approval and Referral Requirements	N/A
1.4	Site Specific Provisions	Yes.  The PP is consistent with this Direction as it does not seek to impose any development standards or requirements in addition to those already contained in the principal environmental planning instrument being amended, which is the GRLEP 2021. The PP does not seek to unnecessarily restrict the site.  While the PP will result in some degree of articulation of building height and FSR controls, it is not considered that the level of articulation provided is unduly onerous as it is consistent with the approach to height articulation permitted under the GRLEP 2021 for other nearby sites. This is intended to provide reasonable certainty with respect to the distribution of massing while providing sufficient flexibility in the detailed design stages as appropriate.



	Ministerial Direction	Consistent
		The PP does propose a local provision that will principally guide land use outcomes for the site. This is to ensure that the area of land uses accommodated on the Hurstville Civic Precinct occurs in accordance with the vision set out in the adopted Hurstville Civic Precinct Master Plan. The local provision will facilitate a diverse mix of uses and the desired level of public benefit commensurate with a civic and community focused destination.
1.5	Parramatta Road Corridor Urban Transformation Strategy	N/A
1.6	Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	N/A
1.7	Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	N/A
1.8	Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	N/A
1.9	Implementation of Glenfield to Macarthur Urban Renewal Corridor	N/A
1.10	Implementation of the Western Sydney Aerotropolis Plan	N/A
1.11	Implementation of Bayside West Precincts 2036 Plan	N/A
1.12	Implementation of Planning Principles for the Cooks Cove Precinct	N/A
1.13	Implementation of St Leonards and Crows Nest 2036 Plan	N/A
1.14	Implementation of Greater Macarthur 2040	N/A
1.15	Implementation of the Pyrmont Peninsula Place Strategy	N/A
1.16	North West Rail Link Corridor Strategy	N/A
1.17	Implementation of the Bays West Place Strategy	N/A
1.18	Implementation of the Macquarie Park Innovation Precinct	N/A
1.19	Implementation of the Westmead Place Strategy	N/A
1.20	Implementation of the Camellia-Rosehill Place Strategy	N/A
1.21	Implementation of South West Growth Area Structure Plan	N/A
1.22	Implementation of the Cherrybrook Station Place Strategy	N/A

	Ministerial Direction	Consistent
<b>2</b>	<b>Design and Place</b>	
<b>3</b>	<b>Biodiversity and Conservation</b>	
3.1	Conservation Zones	N/A
3.2	Heritage Conservation	<p>Yes.</p> <p>The PP proposes to include the heritage item under Schedule 5 of the GRLEP 2021 and amend the Heritage Map - Sheet HER_008A to identify the Item on the map.</p> <p>The Concept Design Report includes an indicative development concept that retains the heritage listing and considers the potential relationship between a future built form on the site and the existing heritage item.</p>
3.3	Sydney Drinking Water Catchments	N/A
3.4	Application of C2 and C3 Zones and Environmental Overlays in Far North Coast LEPs	N/A
3.5	Recreation Vehicle Areas	N/A
3.6	Strategic Conservation Planning	N/A
3.7	Public Bushland	N/A
3.8	Willandra Lakes Region	N/A
3.9	Sydney Harbour Foreshores and Waterways Area	N/A
3.10	Water Catchment Protection	N/A
<b>4</b>	<b>Resilience and Hazards</b>	
4.1	Flooding	N/A
4.2	Coastal Management	N/A
4.3	Planning for Bushfire Protection	N/A
4.4	Remediation of Contaminated Land	<p>Yes.</p> <p>The site has been used as a commercial/Civic building and car park for a number of years. These uses are not listed in Table 1 of the Contaminated Land Planning Guidelines. Therefore, the site is unlikely to contain contaminated material based on its current land</p>

	Ministerial Direction	Consistent
		<p>uses. The site is currently zoned 3(b) City Centre Business zone under the HLEP 1994 and is proposed to be rezoned to a similar MU1 Mixed Use zone under the GRLEP 2021.</p> <p>Notwithstanding this change in zoning, residential uses are already permitted on the site under the 3(b) zone and as such, the proposal is not introducing a more sensitive land use than is currently permitted on the site under the Hurstville LEP 1994. Contamination assessment and site studies will be addressed at the DA stages if necessary. As such, the PP is consistent with the objective of this Direction.</p>
4.5	Acid Sulfate Soils	<p>N/A</p> <p>The PP and any subsequent DA will be considered against any Acid Sulfate Soils (map) prepared by Council. A review of Council's Acid Sulphate Soils map indicates that the subject site is not located within an area affected by Acid Sulfate Soils and therefore this Direction is not relevant.</p>
4.6	Mine Subsidence and Unstable Land	N/A
5	Transport and Infrastructure	
5.1	Integrating Land Use and Transport	<p>Yes.</p> <p>The PP will increase population density as well as employment, community facilities and retail opportunities in an existing city centre in close walking distance to a major public transport interchange that provides rail and road based transit links both on a local, metropolitan and regional scale. This will promote greater public transport use and encourage uptake of active transport options by facilitating better cycling connections and walkability. The PP will also result in a more efficient use of land in a transit oriented location. This will enhance the provision of homes, jobs, amenities and community facilities that will improve the connectivity and walkability of the Hurstville area.</p>
5.2	Reserving Land for Public Purposes	<p>Yes.</p> <p>The PP proposes to put in place the appropriate land use zoning to enable the development of a civic and community hub.</p> <p>The PP does not propose to create or alter the reserve status of any land within the Precinct or create a zone that would preclude the land from being used for public purposes.</p> <p>At a later detailed design or DA stage, the need</p>

	Ministerial Direction	Consistent
		to establish reserves may eventuate; however, this would be subject to a separate planning process and would not occur as a direct result of this PP.
5.3	Development Near Regulated Airports and Defence Airfields	<p>Yes.</p> <p>This Direction applies as this PP seeks to create a zone and height and FSR provision relating to the subject site in the vicinity of a licensed aerodrome, being Sydney Airport and Bankstown Airport.</p> <p>The PP proposes building heights within acceptable limits and does not seek to increase density within a sensitive ANEF zone. Further, in accordance with the Gateway Determination conditions, the PP was referred to aviation authorities, namely the Commonwealth Department of Infrastructure, Transport, Regional Development, Communications and the Arts, and Sydney Airport in 2021. No objections were expressed.</p>
5.4	Shooting Ranges	N/A
<b>6</b>	<b>Housing</b>	
6.1	Residential Zones	N/A
6.2	Caravan Parks and Manufactured Home Estates	N/A
<b>7</b>	<b>Industry and Employment</b>	
7.1	Business and Industrial Zones	<p>Yes.</p> <p>The PP is consistent with the Ministerial Directions as it does not propose the alteration of the subject site's existing land use zoning in that it proposes a like for like translation of the subject site's current Zone No 3 (b) City Centre Business Zone under the HLEP 1994 to a MU1 Mixed Use zone in the GRLEP 2021, as has previously occurred for surrounding land irrespective of the subject site's current status as a 'Deferred Matter' under the GRLEP 2021. Specifically, the PP will create (not reduce) potential floor space area for employment uses and related public services in an area that is predominantly business zoned.</p>
7.2	Reduction in non-hosted short-term rental accommodation period	N/A
7.3	Commercial and Retail Development along the Pacific Highway, North Coast	N/A
<b>8</b>	<b>Resources and Energy</b>	

	Ministerial Direction	Consistent
8.1	Mining, Petroleum Production and Extractive Industries	N/A
<b>9</b>	<b>Primary Production</b>	
9.1	Rural Zones	N/A
9.2	Rural Lands	N/A
9.3	Oyster Aquaculture	N/A
9.4	Farmland of State and Regional Significance on the NSW Far North Coast	N/A

**Table 8 - Consistency with the Ministerial Directions****Reclassification of Public Land**

LEP Practice Note 16-001: Classification and reclassification of public land through a local environmental plan

126. The then DPIE issued a Practice Note (PN 16-001) which provides guidance on classifying and reclassifying public land through a Local Environmental Plan (LEP).
127. A planning proposal to classify or reclassify public land will need to be prepared in accordance with the practice note and the additional matters specified in Attachment 1 to this practice note. An assessment against the practice note and its attachment is provided in **Table 9** below.

Matters for Consideration	Comments
<i>The current and proposed classification of the Land.</i>	<p>Lot 13 in DP 6510 and Lot 14 in DP 6510 (i.e. former Baptist Church and adjoining land, known as 4-6 Dora Street) is currently classified "community land".</p> <p>The land was compulsorily acquired on 31 March 2017 under the <i>Land Acquisition (Just Terms Compensation) Act, 1991</i>.</p> <p>Chapter 6, Part 2, Division 1, Section 31 of the <i>Local Government Act 1993</i> No 30 states:</p> <p>(2A) Any land acquired by a council that is not classified under subsection (2) is, at the end of the period of 3 months referred to in that subsection, taken to have been classified under a local environmental plan as community land.</p> <p>As the land was not classified prior to 31 March 2017, and Council did not resolve to classify the sites as "operational land" within 3 months of the acquisition date, the sites were classified as "community land".</p> <p>Council is seeking to reclassify the land to "operational land".</p>
<i>Whether the land is a 'public reserve' (defined in the LG Act).</i>	The land is not a public reserve.
<i>The strategic and site specific merits of the reclassification and evidence to</i>	The merits of reclassification are discussed in detail in Section 3 of the PP lodged by the proponent in that they

Matters for Consideration	Comments
<p><i>support this.</i></p>	<p>serve the purpose to facilitate the broader site vision, which will include a wide range of community-oriented uses.</p> <p>The existing buildings on the sites are no longer used for their original intended purpose and were subject to a now lapsed Development Consent (DA 2013/0143) approving their demolition. DA 2013/0143 lapsed on 16 October 2018.</p> <p>The vision set out in the PP is for a comprehensive redevelopment of the entire street block bounded by Dora Street, Queens Road, Park Road and MacMahon Street.</p> <p>This will enable the provision of new community facilities and public civic spaces. The PP will result in the creation of a new Civic Heart for Hurstville and reclassification of land to operational land will not diminish, and will in fact improve provision and accessibility to community-oriented uses in the locality.</p>
<p><i>Whether the planning proposal is the result of a strategic study or report.</i></p>	<p>The PP is underpinned by the Concept Design Report prepared for the Hurstville Civic Precinct by DWP. It demonstrates the need for and strategic merits of a whole of street block approach to redeveloping the precinct to achieve the public benefits and a range of community facilities intended to be facilitated by the PP.</p>
<p><i>Whether the planning proposal is consistent with council's Community Plan or other local strategic plan.</i></p>	<p>Consistency with Council's <i>Community Strategic Plan 2022-2032</i> is demonstrated in <b>Table 6</b> above. Specifically, the PP, which includes reclassification of 4-6 Dora Street, will directly facilitate the establishment of new plaza spaces, and community facilities inclusive of a library, community centre, museum and gallery. This is consistent with the aims of the strategic plan to increase access to passive and active recreation opportunities, create employment opportunities and strengthen the Hurstville City Centre as a strategic centre.</p>
<p><i>A summary of council's interests in the land, including:</i></p> <ul style="list-style-type: none"> <li><i>how and when the land was first acquired (e.g. was it dedicated, donated, provided as part of a subdivision for public open space or other purpose, or a developer contribution),</i></li> <li><i>if council does not own the land, the land owner's consent; and</i></li> <li><i>the nature of any trusts, dedications etc.</i></li> </ul>	<p>At the ordinary Council meeting on 19 November 2014, Council resolved to compulsorily acquire Lot 13 in DP 6510 and Lot 14 in DP 6510 for the purpose of developing the Hurstville Civic Precinct. An extract of this resolution is provided below:</p> <p><i>COW100-14 Property Matter - Strategic Acquisition – Civic Precinct Hurstville (13/1148)</i></p> <p><i>Minute No. 561</i></p> <p><i>RESOLVED THAT Council pursuant to its powers under Sections 186 and 187 of the Local Government Act, 1993 acquire the land including any minerals known as Nos. 4-6 Dora Street, Hurstville NSW 2220, known on title as Lots 13 and 14 in Deposited Plan 6510</i></p> <p><i>THAT Council make application to the Minister for Approval to give proposed acquisition notices under the Land Acquisition (Just Terms Compensation) Act, 1991 in respect of the said premises 4-6 Dora Street for purposes of civic precinct.</i></p> <p><i>FURTHER THAT the General Manager be authorised to sign all documentation associated with the compulsory acquisitions including the "Notice of Compulsory Acquisition of Land" and that the notice be published in the NSW</i></p>

Matters for Consideration	Comments
	<p><i>Government Gazette.</i></p> <p>The site was compulsorily acquired on 31 March 2017 pursuant to the above resolution. There is no evidence of any trusts, estates, interests, dedications, conditions, restrictions or covenants over the site.</p> <p>Note: The Proponent has provided the current land titles.</p>
<p><i>Whether an interest in land is proposed to be discharged, and if so, an explanation of the reasons why.</i></p>	<p>There is no evidence of any trusts, estates, interests, dedications, conditions, restrictions or covenants over the site. Therefore, no interests are proposed to be discharged.</p>
<p><i>The effect of the reclassification (including, the loss of public open space, the land ceases to be a public reserve or particular interests will be discharged).</i></p>	<p>The reclassification will not result in a loss of community oriented uses and will in fact directly facilitate the establishment of new plaza spaces, and a community facility inclusive of a library, community centre, museum and gallery, which is consistent with the aims of the strategic plan to increase access to passive and active recreation opportunities, create employment opportunities and strengthening of Hurstville City Centre as a strategic centre.</p>
<p><i>Evidence of public reserve status or relevant interests, or lack thereof applying to the land (e.g. electronic title searches, notice in a Government Gazette, trust documents).</i></p>	<p>There is no evidence of any trusts, estates, interests, dedications, conditions, restrictions or covenants over the site. Therefore, no interests are proposed to be discharged.</p>
<p><i>Current use(s) of the land, and whether uses are authorised or unauthorised.</i></p>	<p>The current use of 4 Dora Street is for temporary accommodation.</p> <p>The current use of 6 Dora Street is for youth community services.</p>
<p><i>Current or proposed lease or agreements applying to the land, together with their duration, terms and controls.</i></p>	<p>4 and 6 Dora Street are currently under lease arrangements.</p>
<p><i>Current or proposed business dealings (e.g. agreement for the sale or lease of the land, the basic details of any such agreement and if relevant, when council intends to realise its asset, either immediately after rezoning/reclassification or at a later time).</i></p>	<p>The sites are subject to commercial leases to accommodate interim community-oriented uses until such time that the site is redeveloped in accordance with the vision set out in the PP.</p> <p>No further business dealings have been considered in relation to the potential future use of the site (based on existing improvements contained within the site) under an "operational land" classification.</p> <p>No further business dealings have been considered in relation to the intended future development and use of the site for the purposes set out in the PP.</p>
<p><i>Any rezoning associated with the reclassification (if yes, need to demonstrate consistency with an endorsed Plan of Management or strategy).</i></p>	<p>This PP aims to set a new vision for Council endorsement.</p> <p>The PP demonstrates that the vision is consistent with the strategic direction of Council.</p> <p>The PP does not propose to rezone the sites, which are currently zoned MU1 Mixed Use. The PP will not result in a change to FSR on the sites, which is currently limited to 3:1. The PP proposes to increase the building height from 15m to maximum (part) 48m and (part) 17m to enable the scale of buildings envisaged by the PP to be realised.</p>

Matters for Consideration	Comments
	Rezoning and introduction of building height and FSR controls for the wider Hurstville Civic Precinct are proposed. The PP demonstrates the strategic merits of the proposed LEP.  No Plan of Management applies to the sites.
<i>How council may or will benefit financially, and how these funds will be used.</i>	The reclassification would permit a wider range of uses to be undertaken on the site.  The uses undertaken on the site are interim and potential financial gains associated with greater land use diversity would not be significant in relation to the current improvements on the site. The reclassification is part of facilitating a broader vision on the site which aims to use financial gains associated with increased height and FSR to provide community and civic facilities and infrastructure that will facilitate a wider community benefit across the Georges River LGA.
<i>How council will ensure funds remain available to fund proposed open space sites or improvements referred to in justifying the reclassification, if relevant to the proposal.</i>	The increase in height and FSR for the subject site will create achievable and sustainable economic circumstances by assisting to offset cost imposts of providing high quality facilities catering for the growing community and entertainment needs of the Hurstville City Centre and Georges River LGA. Management of funds by Council will be facilitated through standard and transparent operational policies, procedures and practices.
<i>A Land Reclassification (part lots) Map, in accordance with any standard technical requirements for spatial datasets and maps, if land to be reclassified does not apply to the whole lot.</i>	Not required as the existing land boundaries will define land the land reclassification boundary upon registration.
<i>Preliminary comments by a relevant government agency, including an agency that dedicated the land to council, if applicable.</i>	Council is the freehold landowner of the site, comment from other government agencies not required.

**Table 9 - Reclassification of Public Land Practice Note (PN 16-001) considerations**

### Public Hearing

128. Under Section 29 of the LG Act 1993, if a PP seeks to reclassify community land to operational land a public hearing is required to be held. A Public Hearing relating to the proposed reclassification from community land to operational land of the lots comprising 4-6 Dora Street was held on Thursday, 30 March 2023.
129. The Public Hearing was chaired by James Lidis of Design Collaborative Pty Ltd, as an independent facilitator (as required by section 47G of the LG Act). In addition to the Independent Chairperson, Council staff and consultants acting for Council as the applicant and independent assessor of the PP were also in attendance. Only one group of community members attended comprising three related individuals.
130. A Power Point presentation was provided on the PP for the Hurstville Civic Precinct, including the proposed reclassification and the purpose of the Public Hearing to contextualise the matter for those present.



131. At the end of the presentation, community members were invited to speak. Only one attendee provided a verbal submission and no written submissions to be considered at the Public Hearing were submitted.
132. One of the community members spoke and addressed the Public Hearing with respect to a request to preserve the existing plaque stone on the Baptist Church which relates to relatives of his family.
133. The Independent Chairperson stated in response that whilst this issue is not within the scope of matters required to be considered as part of this planning process, Council can consider the request when a specific DA is considered for the site.
134. It is also noted that the existing buildings on the subject land of the proposed change in classification are not identified as items of heritage significance and are no longer used for their original intended purpose and were subject to a now lapsed development consent (DA 2013/0143) approving their demolition.
135. Following the Public Hearing, the Independent Chairperson issued Council with an Independent Public Hearing Report (refer to **Attachment 2**). The Report concludes that Council has demonstrated that there is strategic and site-specific merit with respect to the proposed change in classification of the subject land and there are no reasons to not grant that component of the Planning Proposal.

#### **AMENDMENT TO THE GRDCP 2021**

136. In accordance with Council's resolution dated 25 May 2020, a site specific draft DCP amendment was prepared and exhibited with the PP to provide built form and design provisions to guide the future redevelopment of the subject site.
137. The draft DCP seeks to amend Part 10 (Precincts) of the GRDCP 2021 and would involve the insertion of a sub-part called "Section 10.3 Hurstville Civic Precinct".
138. The draft DCP amendment addresses site specific controls relating to the following elements:
  - a. Concept Master Plan – to provide general guidance on the overall form of development within the Precinct.
  - b. Surveyor's Certificate – to require a surveyor's certificate that indicates the break-up of the residential, non-residential and community uses floor areas for the purpose of calculating the gross floor area.
  - c. Competitive Design Process – to facilitate design excellence in the creation of new public places, public buildings, commercial buildings and residential development through architectural design competitions, or the preparation of design alternatives on a competitive basis.
  - d. Built Form – to provide objectives and controls for each building component proposed for the Precinct to ensure adequate transition in scale and building separation for amenity and to establish the desired spatial proportions of the street with respect to the human scale.
  - e. Public Domain – to provide high quality public domain elements, including a Civic Plaza, park and through-site links for public use.
  - f. Vehicle Access and Car Parking – to integrate adequate car parking and servicing access without compromising street character, landscape or pedestrian amenity and safety.
  - g. Waste Minimisation – to ensure compliance with Council's practices and service functions in respect of waste management.

- h. Environmentally Sustainable Development – to ensure the highest standards in environmentally sustainable design and construction.
- i. Heritage – Hurstville Museum and Gallery – 14 MacMahon Street – to ensure development appropriately addresses the significance of the existing heritage item and facilitate its conservation, management and adaptive reuse.
- j. Community Facilities – to provide a flexible framework to deliver high quality and sustainable community facilities that are reflective of the needs of the local community.
- k. Car Parking Study and Traffic Impact Assessment – to require a detailed Car Parking Study and Traffic Impact Assessment to be submitted with any DA for the Precinct to ensure sufficient car parking and traffic management is implemented.

## **PUBLIC EXHIBITION OF THE PP AND AMENDMENT TO THE GRDCP 2021**

139. The PP (with supporting documentation) and draft DCP amendment for the Hurstville Civic Precinct were publicly exhibited for a period exceeding 28 days from 18 January 2023 to 17 February 2023.
140. The methods of exhibition included the following:
- a. Council's Your Say webpage;
  - b. Notification letters to surrounding property owners;
  - c. Newspaper advertisements;
  - d. Printed hard copies of the PP (with supporting documentation) and draft DCP amendment available at the Georges River Civic Centre and Hurstville and Clive James (Kogarah) Libraries.
141. Submissions were accepted via:
- a. Online feedback form on Council's Your Say webpage;
  - b. Hard copy submission (in-person or mail);
  - c. Email; and
  - d. Verbal submissions as part of the Public Hearing only.
142. A total of 17 written submissions were received, including 12 community submissions, four (4) State government agency submissions and one (1) local government agency submission.
143. One verbal community submission was also received at the Public Hearing.
144. A breakdown of submissions is provided in **Table 10** while the position of submissions is provided in **Table 11** below.
145. It is noted that most of the submissions indicated support, but also raised objections or concerns with elements of the PP, suggesting amendments.

Submission Author	Number of Submissions Received
Community	12
State Agency / Authority	4

Submission Author	Number of Submissions Received
Local Government Agency / Authority	1
Total	17
Public Hearing	1 (Verbal community submission)

**Table 10 - Number of Submissions**

Position on Proposal	Number of Submissions	Percentage of Submissions
Supports with amendments	6	35%
Neutral / Neutral with amendments	4	24%
Objects	7	41%

**Table 11 – Position of Community and Public Agency Submission Authors**

146. Acknowledgement letters were sent to all submission authors advising them of the date of this report to be considered by the Environment and Planning Committee.

### ***Details of the Written Community and Public Agency Submissions***

147. **Attachment 3** to this report details the issues raised in the community and public agency submissions, provides a Council assessment response and identifies any recommendations.

#### **Community Submissions**

148. Of the 12 community submissions, there was support for aspects of the PP for the increased housing supply, increased public open space and new community facilities.
149. The community submissions also raised objections to aspects of the PP. A summary of the main issues raised, responses and recommendations is provided in **Table 12** below:

Issues Raised	Council Response and Recommendation
Objects to the demolition of the heritage significant former Baptist Church at 4-6 Dora Street and requests that at least the façade be retained and incorporated into the design of a new building.	<p>The PP does not prescribe the demolition or retention of the Baptist Church. The Church is not a heritage item and is not within a heritage conservation area. The Church has also previously been approved through a DA for demolition.</p> <p>The future retention or demolition of the existing buildings on-site, including the Church will be a matter for consideration at the DA stage.</p> <p><u>Recommendation</u></p> <p>Section 3.5.1 of the draft DCP be amended to include a provision for the relocation of a remembrance plaque in the</p>

Issues Raised	Council Response and Recommendation
	<p>Baptist Church to within the future redevelopment.</p> <p>Amend the exhibited draft DCP amendment to the GRDCP 2021 being “Part 10 Precincts, Section 10.3 Hurstville Civic Precinct” by inserting Control iii. n. in Section 3.5.1 Public Domain Strategy, as follows:</p> <p><i>“n. The protection of the remembrance plaque on the northern wall of the former Hurstville Baptist Church building located at 4-6 Dora Street which is to be removed prior to any demolition of that building and installed in a publicly visible and appropriate location as part of the future redevelopment of the site.”</i></p>
<p>Objects to the closure of a portion of MacMahon Street restricting vehicular access to the Baptist Church property.</p>	<p>The PP appears to have been misinterpreted and does not seek to close MacMahon Street.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
<p>Objects to the planting of trees in front of the Church and Old Fire Station as it will interfere with the amenity of the Precinct.</p>	<p>Potential future public domain works for the Precinct, including street tree planting, have been the subject of considerable design effort and considerations which are detailed in a comprehensive Public Domain Strategy prepared to support the PP and the draft DCP amendment and will inform the future redevelopment of the Precinct. The Public Domain Strategy illustrates the desired outcomes for the public domain of the future Hurstville Civic Precinct and provides design guidance ensuring different parts of the Precinct will be coherent and complementary to each other. In general, increased street tree planting and increased urban canopy cover is supported as a desired outcome for the Precinct and LGA.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
<p>Adverse impacts on traffic and parking.</p>	<p>The PP is supported by a Transport Impact Assessment which considered the impact of the potential future development achievable at the site as a result of the PP. Overall, the study intersections would continue to operate satisfactorily in 2028 (10 year design horizon) with and without development traffic.</p> <p>The exact quantum of parking (public and otherwise) is subject to a future Car Parking Study which will accompany any future DA, as required by the proposed Additional Local Provision in the GRLEP 2021.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>

Issues Raised	Council Response and Recommendation
Further loss of amenity resulting from the increased height and FSR.	<p>Urban design analysis, including detailed shadowing analysis, was undertaken as part of the assessment of the PP and the height and density proposed is considered appropriate for the site having regard to potential amenity impacts on properties in the vicinity. The visual massing of potential future development (as described within the Master Plan), transition and building separation to adjacent development and the relationship of the site to adjacent land use zones were all considered.</p> <p>Having regard to this analysis and within the context of the site's position within the CBD of Hurstville and close proximity to public transport, the impacts associated with the proposed increases in height and FSR as manifest in the built form layout envisaged in the Master Plan are considered acceptable and reasonable.</p> <p>Importantly, the redevelopment of the site will be subject to the DA process and impacts upon the amenity of adjacent properties will be considered in the assessment undertaken by the consent authority.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
Existing inadequacies of disability access and access to community rooms (including the cost and size of library meeting rooms).	<p>The specific design details relating to disability access, size and design of rooms and community facilities are matters for consideration at the DA stage.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
Inadequate public space, too much pollution and inadequate greenery (vegetation) to de-pollute.	<p>As required by the proposed Additional Local Provision in the GRLEP 2021, a minimum of 50% of the total site area is to be public open space at ground level. The quantum of the public open space to be provided has been considered by Council as adequate and acceptable for the site.</p> <p>The final design of the open space and landscaped areas will be considered during the DA process and is outside the scope of the PP. Nonetheless, the PP is supported by a Public Domain Strategy and the draft DCP amendment calls up the requirement for a detailed Public Domain Plan as part of the DA process.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
The already poor pedestrian experience from the wind tunnel effects would worsen and requests that studies be undertaken before extra heights are allowed.	<p>The draft DCP amendment contains objectives to mitigate the effect of adverse wind conditions for pedestrians at street level and requires the submission of a wind impact assessment with the DA.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>

Issues Raised	Council Response and Recommendation
The number and over-complicated nature of the proposal documents.	<p>The content of the PP is in accordance with the Department of Planning and Environment's <i>Local Environmental Plan Making Guideline</i> (September 2022). The supporting documents have been provided in accordance with the Gateway Determination conditions to assess the impacts of the proposal.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
The Council office should be large enough to accommodate future employees with further room to expand within the same building.	<p>The PP allows for a future Council office of an area that will accommodate the expected future employee /staffing requirements of Council.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
Questioned the absence of a bike transport plan.	<p>A bicycle plan for Hurstville could be considered by Council, but is outside of the scope of this PP. However, the Public Domain Strategy that supports the PP indicates the location of existing and proposed on-street cycleways.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>

**Table 12 - Summary of Reasons for Objecting from the Community with Responses and Recommendations**

### Public Authority Submissions

150. Of the 5 public authority submissions, they either expressed support or were neutral to the PP with many providing suggestions.
151. A summary of the main issues raised, responses and recommendations is provided in **Table 13** below:

Public Authority	Issues Raised	Council Response and Recommendation
Transport for NSW (TfNSW)	<p>Generally supports the PP.</p> <p>Requests that Sydney Trains and TfNSW be consulted early in the design process (pre-DA) to ensure all relevant matters of consideration are taken into account and are incorporated into the future design of the development.</p> <p>Requests acoustic reports to account for and mitigate vibration and noise from the rail corridor and a Traffic Management Plan for the construction phase and future operation phase be provided with any future DA.</p> <p>Requests references to applicable statutory provisions, technical directions and transport guidelines related to future DA requirements</p>	<p>It is considered unnecessary to insert provisions within the DCP that reference other already applicable statutory requirements and/ or TfNSW guidelines.</p> <p>Part 3 of the GRDCP 2021 which will apply to the site already includes a requirement for Green Travel Plans.</p> <p>Council has previously considered reducing car parking requirements and no action is required in this instance to the PP or DCP. The relevant DCP car parking requirements will apply to</p>

Public Authority	Issues Raised	Council Response and Recommendation
	<p>be provided in the draft DCP amendment.</p> <p>Requests a reduction in the car parking requirement be considered.</p> <p>Requests the draft DCP amendment require Green Travel Plans.</p> <p>Requests a funding mechanism be identified and implemented prior to finalisation of amendments to the LEP for sites in the city centre to ensure that infrastructure to support future growth can be delivered.</p> <p>Requests a multi-modal Transport Impact Assessment be undertaken as part of the traffic impact assessment and car parking study required by the LEP and DCP amendments.</p>	<p>a future development at the site.</p> <p>It is recommended that Section 3.11 of the draft DCP be amended to include a provision for the required traffic impact assessment and car parking study to address multi-modal transport impact assessment.</p> <p>The consideration and implementation of a funding mechanism to address infrastructure relating to growth within the wider city centre is outside the scope of this PP.</p> <p><u>Recommendation</u></p> <p>Amend the exhibited draft DCP amendment to the GRDCP 2021 being "Part 10 Precincts, section 10.3 Hurstville Civic Precinct" by inserting in Control ii. i. and Control iii. a. in Section 3.11 Car Parking Study and Traffic Impact Assessment as follows:</p> <p><i>"A multimodal transport impact assessment."</i></p>
Heritage NSW (HNSW)	<p>Recommends that heritage assessments be undertaken and impacts sufficiently addressed, including but not limited to assessment against the State Heritage Inventory and Aboriginal Heritage Information Management System (AHIMS).</p> <p>Notes that they do not have a legislative role in the assessment of impacts to local heritage and that further referral or consultation on the PP is not required.</p>	<p>The exhibited PP includes the retention of the heritage listed Hurstville Museum and Gallery and seeks to include it as a Heritage Item in Schedule 5 (Environmental Heritage) of the GRLEP 2021.</p> <p>The heritage aspects of the PP have been considered and assessed in detail and have been reviewed by Council's independent heritage consultant.</p> <p>An AHIMS search has been conducted for the site which revealed that no Aboriginal sites or places are recorded in or near the site.</p> <p>The draft DCP amendment (under section 3.9) includes specific heritage provisions relating to the development and treatment of the Hurstville Museum and Gallery as part of any future DAs for the site to address the significance of the heritage item and facilitate its conservation, management and</p>

Public Authority	Issues Raised	Council Response and Recommendation
		<p>adaptive reuse.</p> <p>Further, a Conservation Management Plan (CMP) has been prepared for the Hurstville Museum and Gallery to guide the future conservation, management and interpretation of the significance of the site. This CMP was placed on exhibition with the PP and draft DCP amendment.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>
<p>Gyde Consulting (on behalf of the Georges River Council Property Team - applicant)</p>	<p>Generally supportive of the PP but requests some amendments:</p> <p>The wording of proposed clause 6.18 (3)(a), (3)(b) and (3)(c) risks being misinterpreted in relation to any reference to the maximum and minimum GFA for certain land uses. In order to clarify how the minimum and maximum provisions are calculated, it is suggested that clause 6.18 be updated to include the following subclauses:</p> <p>(6) For the purposes of this clause, the total permissible GFA and the total site area are calculated relative to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.</p> <p>(7) For the purposes of this clause, the total site area refers to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.</p> <p>Proposed clause 6.18 (4)(b) appears to be based on the underlying assumption that public car parking and traffic mitigation measures will be required, which may not be the case. Accordingly, it is requested that clause 6.18 (4)(b) be amended to read:</p> <p>(4) In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must be satisfied that the development –</p> <p>...</p> <p>(b) includes, if required as a result of subclause (4)(a), the provision of public car parking and traffic mitigation measures identified by the car parking study and traffic impact assessment.</p>	<p>It is considered reasonable that in order to clarify how the minimum and maximum provisions are calculated under clause 6.18 (3)(a), (3)(b) and (3)(c) that clause 6.18 be updated to include the following subclauses (or similar):</p> <p><i>“(6) For the purposes of this clause, the total permissible GFA and the total site area are calculated relative to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.</i></p> <p><i>(7) For the purposes of this clause, the total site area refers to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.”</i></p> <p>In regards to clause 6.18(4)(b), it is not considered necessary to amend the provision as public car parking and traffic mitigation measures would only be required in accordance with the car parking study and traffic impact assessment. The suggested amendment in the submission is considered superfluous in this instance.</p> <p>It is not agreed that there is no need for the inclusion of subclause 6.18(4). The PP as lodged, exhibited and assessed refers to the provision or potential provision of up to 500 public car</p>



Public Authority	Issues Raised	Council Response and Recommendation
	<p>The preparation of a precinct specific Car Parking Strategy in addition to the <i>Georges River Car Parking Strategy</i> to confirm the need for public car parking in Hurstville is unnecessary. States that subclause 6.18(4)(a) and (b) of the draft LEP and section 3.11 (Car Parking Study and Traffic Impact Assessment) of the draft DCP is not required and requests they be deleted.</p>	<p>parking spaces at the site, which is to be informed by a future car parking strategy.</p> <p>While noting the <i>Georges River Car Parking Strategy</i> (and supplementary Position Paper) was tabled in 2020, it is considered that a specific car parking strategy should be undertaken to determine whether the Hurstville Civic Precinct, as one of the largest Council holdings in the Hurstville CBD, and which currently supports public car parking, should (and is able to) support public car parking upon its redevelopment, given the opportunity will be lost at this site once redeveloped.</p> <p><u>Recommendation</u></p> <p>Amend the exhibited proposed clause 6.18 of GRLEP 2021 to include the following subclauses (or similar):</p> <p><i>“(6) For the purposes of this clause, the total permissible_GFA and the total site area are calculated relative to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.</i></p> <p><i>(7) For the purposes of this clause, the total site area refers to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.”</i></p>
School Infrastructure NSW (SINSW)	<p>Notes that the site falls within the Penshurst Public School and Georges River College intake areas which is likely to accommodate the number of students projected to be generated by the proposal.</p> <p>Raises concerns that the Transport Impact Assessment does not consider the surrounding schools and requests that this report considers the proposal's cumulative impact on the surrounding transport network and identifies active transport links to existing school travel paths.</p>	<p>The impacts of the proposed LEP amendments have been considered on a cumulative basis and a wider strategic planning basis within the Transport Impact Assessment which supports the PP. The Transport Impact Assessment considers the impact of the potential future development achievable at the site as a result of the PP. The Assessment considers a broader area than just the immediate site, such that considerations extend to the wider local road network.</p>

Public Authority	Issues Raised	Council Response and Recommendation
		<p>The Transport Impact Assessment concludes that the traffic generation of the PP would not be expected to compromise the safety or function of the surrounding road network.</p> <p>Furthermore, the proposed Additional Local Provision under the GRLEP 2021 includes a requirement for any future DA for the site to be accompanied by a car parking study and traffic impact assessment which includes the provision of public car parking and traffic mitigation measures.</p> <p>It is recommended that Section 3.11 of the draft DCP be amended to include a provision for the required traffic impact assessment to identify active transport links to existing school travel paths.</p> <p><u>Recommendation</u></p> <p>Amend the exhibited draft DCP amendment to the GRDCP 2021 being "Part 10 Precincts, section 10.3 Hurstville Civic Precinct" by inserting an additional dot point in Control iii. a. in Section 3.11 Car Parking Study and Traffic Impact Assessment as follows:</p> <p><i>"The identification of active transport links to existing school travel paths."</i></p>
Sydney Water	<p>Provided comments to assist in planning the servicing needs of the proposed development with regards to water and wastewater servicing, and asset protection.</p> <p>Requested that the proponent note that the DN225 SGW wastewater main located on the northeast corner running alongside Queens Road cannot be removed.</p> <p>Where proposed works are in close proximity to a Sydney Water asset, the developer may be required to carry out additional works to facilitate their development and protect the wastewater mains.</p> <p>The DA is required to be referred to Sydney Water for a Section 73 application to certify that there is adequate access to water and wastewater services for the new development.</p>	<p>An extract from the Dial Before You Dig map sourced from Sydney Water has been reviewed. It shows the DN225 SGW wastewater main located to the north-east corner running alongside Queens Road. From the map it is apparent that the issued raised (protection of the wastewater main) is a matter to be addressed by a future DA.</p> <p><u>Recommendation</u></p> <p>No action required to the PP or draft DCP amendment.</p>

**Table 13 - Summary of Public Authority Submissions with Responses and Recommendations**Summary of Recommendations

152. In summary, one change is recommended to the PP as a result of the submissions received. That change relates to the provision of additional wording within the site specific Additional Local Provision to be inserted in the GRLEP 2021 for the Hurstville Civic Precinct. The proposed additional wording clarifies how the site area is calculated and how the minimum and maximum GFA requirements for the various components of the proposal are calculated under the clause.
153. The recommended additions to the proposed Clause 6.18 Hurstville Civic Precinct within the GRLEP 2021 are:
- (6) *For the purposes of this clause, the total permissible GFA and the total site area are calculated relative to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.*
  - (7) *For the purposes of this clause, the total site area refers to the total area of land in the Hurstville Civic Precinct bounded by Dora Street, Queens Road, Park Road and MacMahon Street.*
154. Further, there are three changes recommended to the site specific DCP amendment to the GRDCP 2021 in response to submissions.
155. One change is in response to written submissions and a verbal submission (at the Public Hearing) from the community objecting to the demolition of the Baptist Church located at 4-6 Dora Street, and requests to preserve the memorial plaque at the Church and incorporate it within the redevelopment of the site in the future.
156. The exhibited draft DCP amendment is recommended to be amended by inserting Control iii. n. in Section 3.5.1 Public Domain Strategy, as follows:
- “n. The protection of the remembrance plaque on the northern wall of the former Hurstville Baptist Church building located at 4-6 Dora Street which is to be removed prior to any demolition of that building and installed in a publicly visible and appropriate location as part of the future redevelopment of the site.”*
157. The second change to the site specific DCP amendment is in response to feedback received from TfNSW and relates to including a provision for the required traffic impact assessment and car parking study to address multi-modal transport impact assessment.
158. The exhibited draft DCP amendment is recommended to be amended by inserting in Control ii. i. and Control iii. a. in Section 3.11 Car Parking Study and Traffic Impact Assessment as follows:
- “A multimodal transport impact assessment.”*
159. The third change to the site specific DCP amendment in response to feedback received from SINSW is the inclusion of a provision for the required traffic impact assessment to identify active transport links to existing school travel paths.
160. A copy of the amended exhibited version of Amendment No. 2 to the GRDCP 2021 for Council adoption is provided in **Attachment 4**.

**CONCLUSION AND NEXT STEPS**

161. From 18 January 2023 to 17 February 2023 Council exhibited the PP, site specific DCP amendment and supporting documents for the Hurstville Civic Precinct.

162. Council received a total of 12 community submissions, four (4) State government agency submissions and one (1) local government agency submissions.
163. As a result of the submissions received, one change is recommended to the PP and three changes are recommended to the site specific DCP amendment.
164. It is recommended that Council adopt the proposed amendments to the GRLEP 2021 as exhibited in relation the Hurstville Civic Precinct subject to the recommended changes outlined above and discussed in **Attachment 3** of this report, and forward the amended PP for gazettal to the DPE in accordance with Section 3.36 of the *Environmental Planning and Assessment Act 1979*.
165. It is further recommended that Council adopt the draft amendment to the GRDCP 2021 (Part 10.3 Hurstville Civic Precinct) subject to the three proposed changes as per **Attachment 4**.

## INDICATIVE PROJECT TIMELINE

166. Subject to Council endorsement of the PP for forwarding to the DPE for finalisation, the anticipated next steps are included in **Table 14** below.

Task	Anticipated Timeframe
Report to Council on community consultation and finalisation of the PP and site specific DCP amendment to GRDCP 2021 – Part 10 – Hurstville Civic Precinct) - this Report	June 2023
Submission to the Department to finalise the LEP	July 2023
Anticipated date for notification/gazettal	July 2023
Amendment to the GRDCP 2021 will be effective when the PP is finalised	July 2023

**Table 14 - Anticipated Project Timeline for Completion of the Planning Proposal**

## FINANCIAL IMPLICATIONS

167. A significant amount of consultancy fees and staff time has been expended to prepare and assess the PP (which predates Council amalgamation). The assessment of this PP has been funded over the years from the Strategic Planning budget. No funds are allocated in the draft 2023/2024 budget to enable further consideration of the PP.

## RISK IMPLICATIONS

168. Council's considerable efforts, time and expense in preparing and assessing this complex PP, which includes substantial supporting information and studies, confirms its commitment and the ongoing impetus in progressing the PP, which has set a community expectation for the substantial public benefits it will deliver.
169. To not progress the PP will indefinitely leave a "deferred matter" within the GRLEP 2021, in place of what is otherwise proposed to provide the basis for Hurstville Civic Precinct's transformation into a cultural, community, business, entertainment and residential destination.

**COMMUNITY ENGAGEMENT**

170. The PP, draft DCP amendment to the GRDCP 2021 and supporting documentation were publicly exhibited from 18 January 2023 to 17 February 2023.
171. If the PP is endorsed by Council, it will be amended in accordance with the resolution and forwarded to the DPE for finalisation.
172. If the amendment to the GRDCP 2021 is adopted by Council, it will be placed on Council's website and will become effective when the PP is finalised by the DPE.
173. All persons who made a submission to the PP and draft DCP amendment will be advised of Council's decision.

**FILE REFERENCE**

PP2016/0002 & D23/128483

**ATTACHMENTS**