

Client
Melbourne Water

Date
3 October 2022

Planning

Transport

Urban Design

Waste Management

Town Planning Expert Evidence Planning Scheme Amendment C384melb

Report Prepared by: Colleen Peterson

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Instructed By: Allens

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Project
Amendment C384melb

Prepared for
Melbourne Water

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1. Introduction

1.1. Introduction

1. I was engaged by Allens in August 2022 on behalf of Melbourne Water to review Planning Scheme Amendment C384melb which seeks to make various updates the Melbourne Planning Scheme with relation to flood risk management for riverine and drainage flooding.
2. The draft Amendment proposes to update the mapped area of the Land Subject to Inundation Overlay (LSIO) and the Special Building Overlay (SBO) in several catchments within the municipality. It will also introduce flood management objectives, statements of risk, permit triggers, application requirements and decision guidelines into the new LSIO and SBO schedules.
3. The Amendment will also introduce a new background document, the *Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macauley* (Good Design Guide). The documents will be included in an amended Schedule to Clause 72.08 'Schedule to Background Documents' along with *Guidelines for Development in Flood Affected Areas*, *Planning for Sea Level Rise Guidelines*, and the technical reports.
4. The Amendment will update flood mapping within the Arden, Macauley and Moonee Ponds Creek Catchment, and the Elizabeth Street, Fishermans Bend, Hobsons Road, Lower Yarra River and Southbank catchments.
5. The draft Amendment has been the subject of public consultation in October and November 2021. A total of 43 submissions in response to consultation and the Amendment have been referred to a Planning Panel.
6. I have specifically been requested to review the briefing material and provide my expert opinion in relation to the following points:
 - The planning merits of the proposed amendment and exhibited controls, considering the relevant provisions of Ministerial Direction No. 11, Planning Practice Note: Strategic Assessment Guidelines for Preparing and Evaluating Planning Scheme Amendments, and Planning Practice Note 12: Applying the Flood Provisions in Planning Schemes.
 - The planning merits of Melbourne Water's proposed amendments to the exhibited controls.
 - The planning merits of the Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay (City of Melbourne, Melbourne Water, City of Port Phillip, 2021) and its appropriate status within the overlay schedules.
 - The material aspects of submissions made in relation to proposed Amendment C384.
7. Having reviewed the material and being satisfied with the merit of the draft Amendment, I have prepared this statement of evidence summarising my findings.
8. I have read and accept the Planning Panels Victoria Guide to Expert Evidence, and I understand my duties to the Advisory Committee.

1.2. Name and Address

9. My name is Colleen Yvonne Peterson and I am CEO at Ratio Consultants Pty Ltd, which conducts its business at 8 Gwynne Street, Cremorne.

1.3. Qualifications and Expertise

10. I am a qualified Town Planner and have practiced town planning since 1992. My experience includes 6 years in local government, culminating as Planning Approvals Coordinator at the City of Stonnington in 1998. I have been practicing as a consultant town planner for the past 19 years and was formerly an Associate at SJB Planning. I joined Ratio Consultants as an Associate Director in September 2004 and was made a Director in July 2005. In 2014 I was made Managing Director and in 2017 I was appointed Chief Executive Officer.
11. I hold a Bachelor of Planning and Design (Hons) from the University of Melbourne.

1.4. Relevant Expertise

12. During the past 30 years, I have gained extensive experience in a range of town planning matters, including medium and higher density housing, commercial land use such as regional shopping centres, liquor licensing matters and industrial developments throughout Victoria. I have experience in advising a variety of public sector and private clients on a wide range of planning and development issues, including social and economic impact analysis in the gaming industry and the preparation of cumulative impact assessments and compulsory acquisition matters.
13. I am a board member of the Victorian Planning and Environmental Law Association (VPELA) and sit on the executive of that board. I am a member of the Planning Institute of Australia (PIA). I am also the Chair of the University of Melbourne Urban Planning Advisory Committee.
14. I sat on the VPELA/PIA joint committee for the organisation of the 2010 State Planning Conference and in 2012 was selected as an Expert Community Panel Member for PIA's Clean Energy Future Project. I regularly present at VPELA/PIA events, including the 2018 PIA National Congress, the 2018 Internal Urban Design Conference in Sydney and the 2018 Green Buildings Conference.
15. I have been a guest lecturer at the University of Melbourne and RMIT in matters pertaining to planning and heritage on numerous occasions.
16. From 2010 to 2014 I was elected to the Architectural Registration Board of Victoria (ARBV), being Deputy Chair of the Board from 2013 to 2014.
17. In 2018 I was awarded PIA's Female Achiever of the Year, in recognition of my contribution to planning and support for women in the industry.
18. I was selected to speak at the AIA national conference in Perth in 2020 and the APA national conference in Houston in 2020. Both conferences were cancelled due to COVID. I did present at the PIA national congress in May 2022.
19. I regularly provide planning expert evidence at Planning Panel and Advisory Committee hearings for Planning Scheme Amendment and Environmental Effect Statement proceedings.
20. I was recently engaged by the Victorian Planning Authority for Amendment C407melb to the Melbourne Planning Scheme related to the Arden Precinct Structure Plan and Maroondah Planning Scheme Amendment C130maro related to the Ringwood Metropolitan Planning Scheme.

1.5. Investigations, Research and Assumptions

21. In forming my opinions about this matter and preparing this report, I have reviewed:
- The draft Amendment documentation, including Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay (City of Melbourne, Melbourne Water, and City of Port Phillip, 2021) and Guidelines for Development in Flood Affected Areas (DELWP, 2019).
 - Proposed changes to the provisions prepared by Melbourne Water.
 - Provisions of the Melbourne Planning Scheme.
 - Submissions entered during the public exhibition of the amendment.
 - All relevant Ministerial Directions and Practice Notes, which I have detailed at Section 6.
 - A Practitioners Guide to Victorian Planning Schemes (Version 1.5, April 2022).
 - Local Government Climate Changes Adaptation Roles and Responsibilities under Victorian Legislation: Guidance for local government decision-makers, DELWP, 2020.
22. I have not specifically inspected the submitter properties for the purposes of this hearing. As a practising planner I am familiar with the City of Melbourne municipality and the broader planning policy matters under consideration in this matter. My instructions relate to the implications of the policy matter rather than the effect of flooding mapping on individual properties, which is more in the purview of the technical experts. Accordingly, I consider that have made sufficient inquiries to inform my opinion.
23. I have read and accept the Planning Panels Victoria Guide to Expert Evidence and I understand my duties to the Advisory Committee.
24. I was assisted by Mr Dean Savage (Associate Planner), of my office, in the preparation of this report.

1.6. Relationship with Party for Whom Report has been Prepared

25. I have no relationship with the Melbourne Water other than a business agreement for the preparation of my independent expert opinion regarding this matter.

1.7. Summary and Opinion

26. A summary of my opinion is contained at Section 12 of this Statement of Evidence.

1.8. Declaration

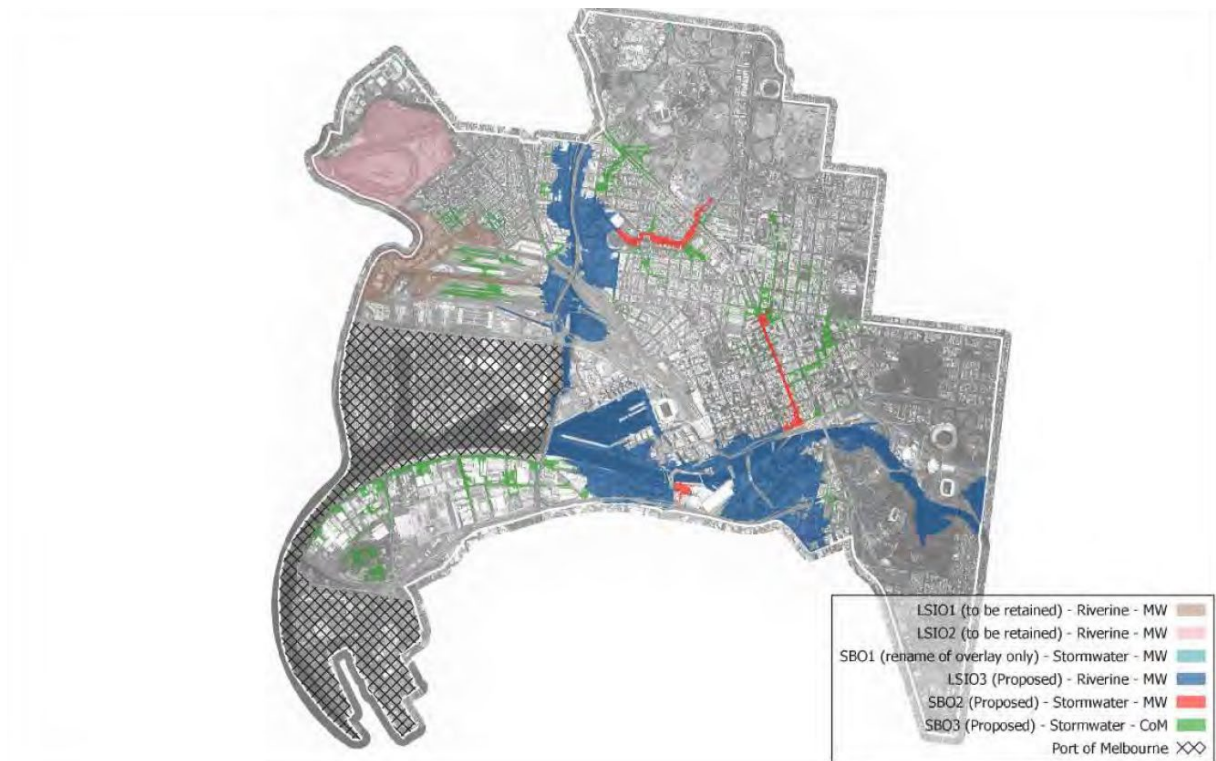
27. I have made all the enquiries that I believe are desirable and appropriate and no matters of significance that I regard as relevant have, to my knowledge, been withheld from the Panel.
28. I confirm I:
- Will be alone in the room from which I am giving evidence and will not make or receive any communication with another person while giving my evidence except with the express leave of the Panel;
 - I will inform the Panel immediately should another person enter the room from which I am giving evidence;
 - During breaks in evidence, when under cross-examination, I will not discuss my evidence with any other person, except with the leave of the Panel;

- I will not have before me any document, other than my expert witness statement and documents referred to therein, or any other document which the Panel expressly permits me to view.

2. The Subject Land

29. The land affected by the amendment includes areas with the Arden, Macauley and Moonee Ponds Creek, Elizabeth Street, Fishermans Bend, Hobsons Road and Southbank catchments.
30. The mapping of the existing LSIO1 (affecting along the Maribyrnong River, Childers Street and Dynon Road) and LSIO2 (Flemington Racecourse) is not proposed to be amended as modelling for the catchments has not been updated.
31. The catchments are broadly identified through the application of the proposed and existing control in Figure 2-1 below. The proposed new LSIO3 is mapped in blue, the proposed new SBO2 is mapped in Red and proposed SBO3 is mapped in green.

Figure 2-1: The application of the proposed and existing extents of the Land Subject to Inundation and Special Building Overlays.



Source: Amendment C384 Explanatory Report.

32. These present effects to areas including alongside the Yarra River and Moonee Ponds Creek through the north-west and along the south of the municipality, Fishermans Bend to the south east and through the north of the city and central business district, concentrated on Elizabeth Street.

33. Through the north-west of the municipality, proposed LSIO3 will apply to land on the eastern and western side of the Moonee Ponds Creek. This includes the Arden and Macaulay urban renewal areas. To the west of the creek, proposed SBO3 will affect residential land in Kensington.

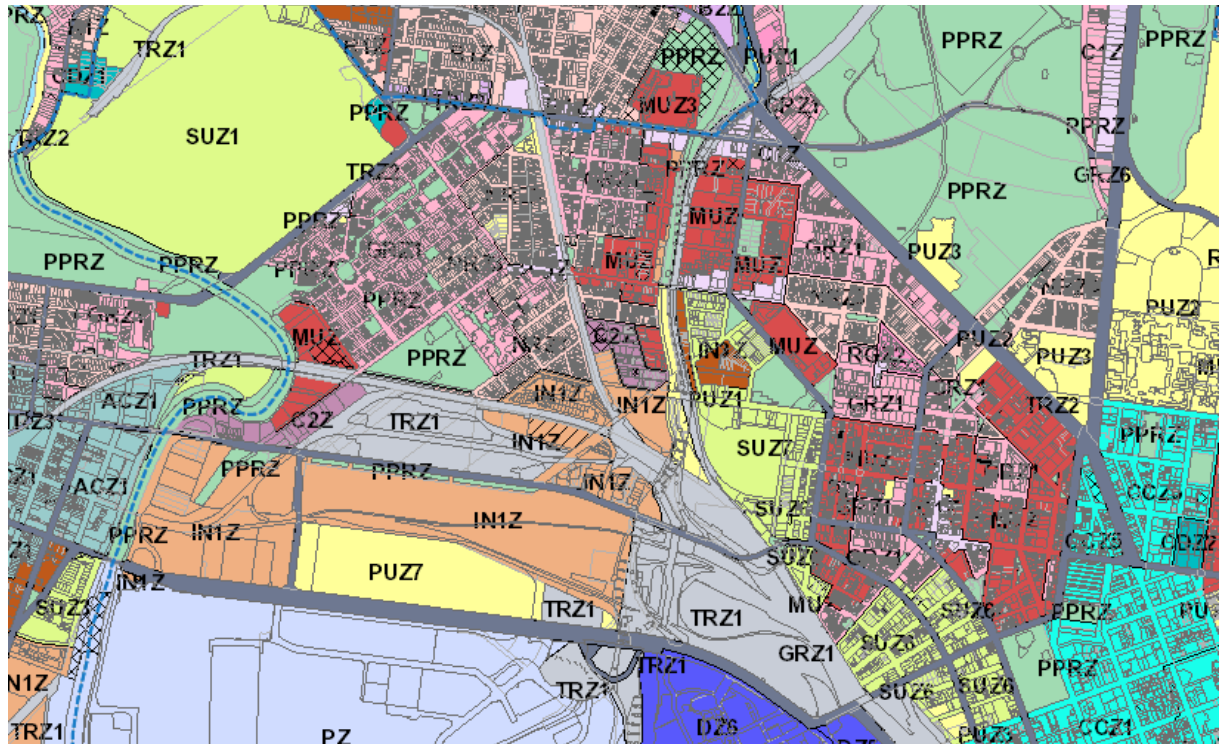
Figure 2-2: Application of proposed overlays to the Moonee Ponds Creek and surrounds.



Source: Technical Report 09 – Overlay Delineation Report, Engeny Water Management.

34. The affected land is in a broad spread of zones. These include the residential zones: Neighbourhood Residential Zone, Schedule 3, General Residential Zone, Schedule 1, Mixed Use Zone. Other affected zoned land includes Industrial 1 Zone, Industrial 3 Zone, Commercial 1 Zone, Commercial 2 Zone, Transport Zone 1, Special Use Zone, Schedules 6 and 7, and, Public Use Zone, Schedules 1 and 7.

Figure 2-3: Zoning of affected land of the Moonee Ponds Creek and surrounds.



Source: VicPlan <https://mapshare.vic.gov.au/vicplan/>.

35. Through the north of the municipality, the SBO2 and SBO3 affects land through North Melbourne, Parkville, Carlton and the Central Business District.

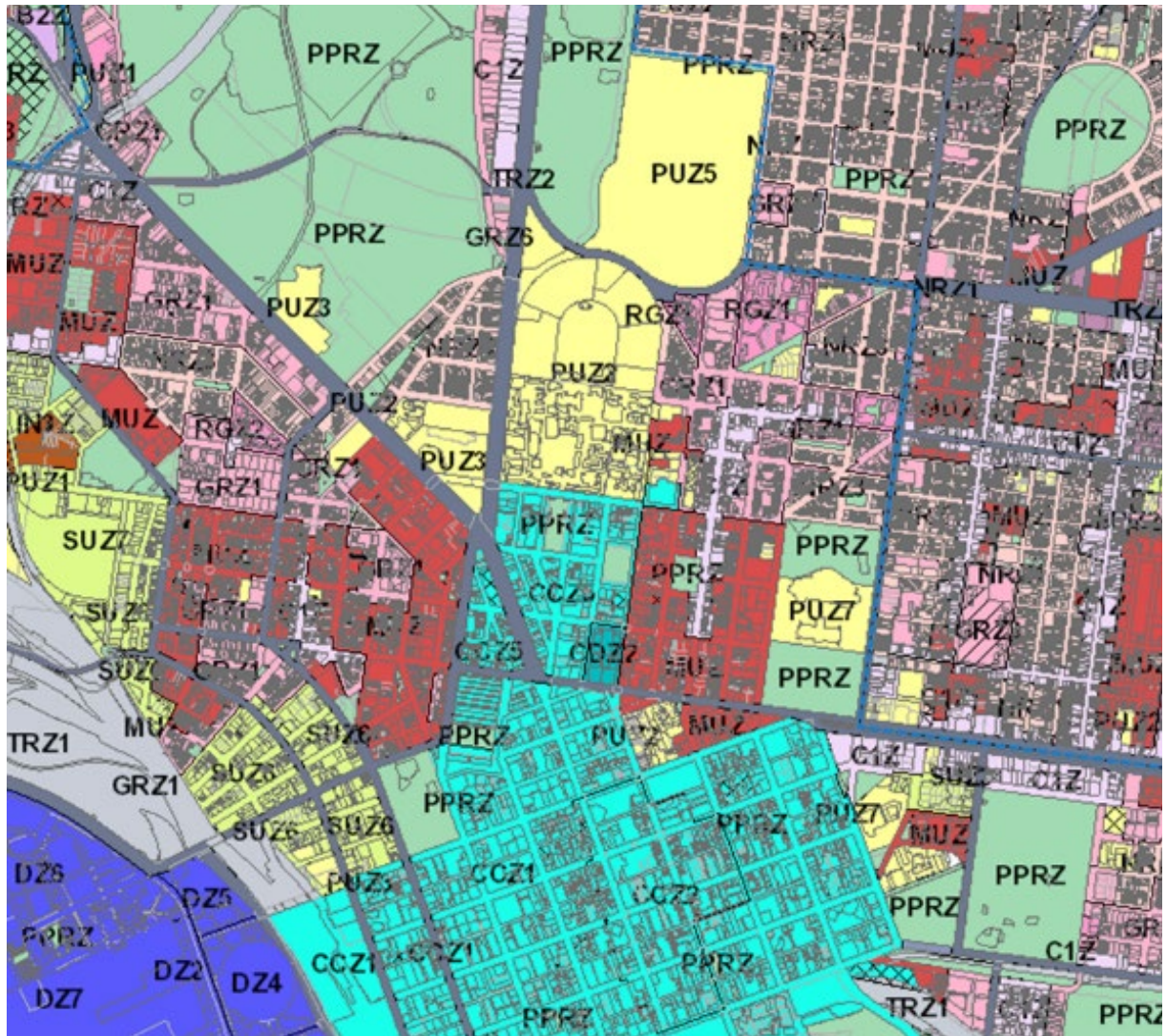
Figure 2-4: Application of proposed overlays to the north of the municipality and northern section of the CBD.



Source: Technical Report 09 – Overlay Delineation Report, Engeny Water Management.

36. The affected zoned land includes the residential zones of General Residential Zone, Schedule 1, Residential Growth Zone, Schedule 2, Neighbourhood Residential Zone, Schedules 1 and 3, and Mixed Use Zone.
37. Other zones include Commercial 1 Zone, Public Use Zone, Schedules 2, 3 and 7, Capital City Zone, Schedules 1, 2 and 5, and the Public Park and Recreation Zone.

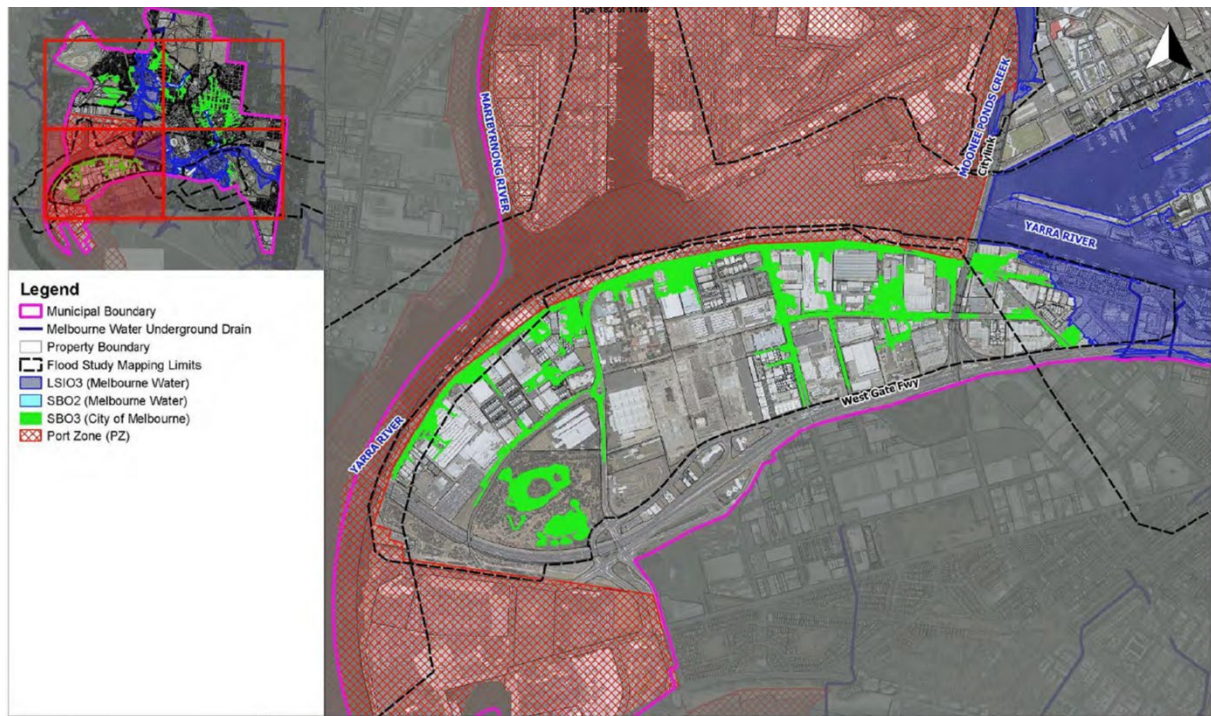
Figure 2-5: Zoning of the affected land in the north of the municipality.



Source: VicPlan <https://mapshare.vic.gov.au/vicplan/>.

38. Fishermans Bend is mostly affected by the SBO3 with the LSIO to be applied on its eastern extent. The precinct continues to predominantly consist of larger scale industrial and commercial enterprises ahead of the urban renewal transition to a more intensive form.

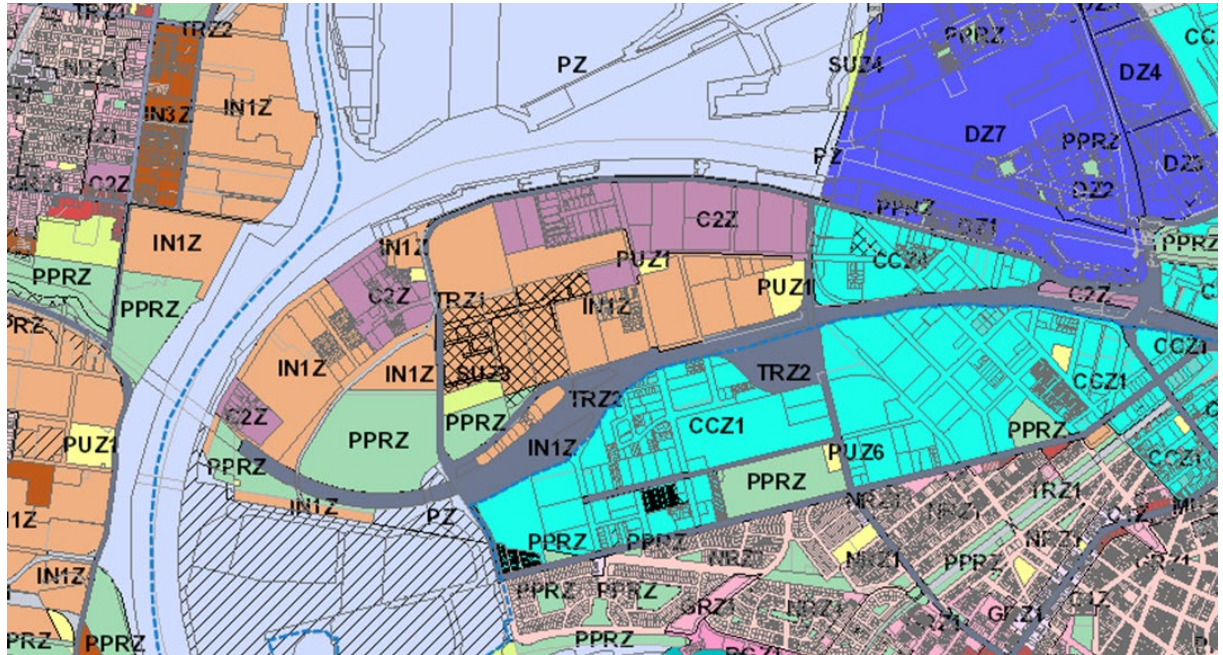
Figure 2-6: Application of the proposed overlays to Fishermans Bend and Docklands.



Source: Technical Report 09 – Overlay Delineation Report, Engeny Water Management.

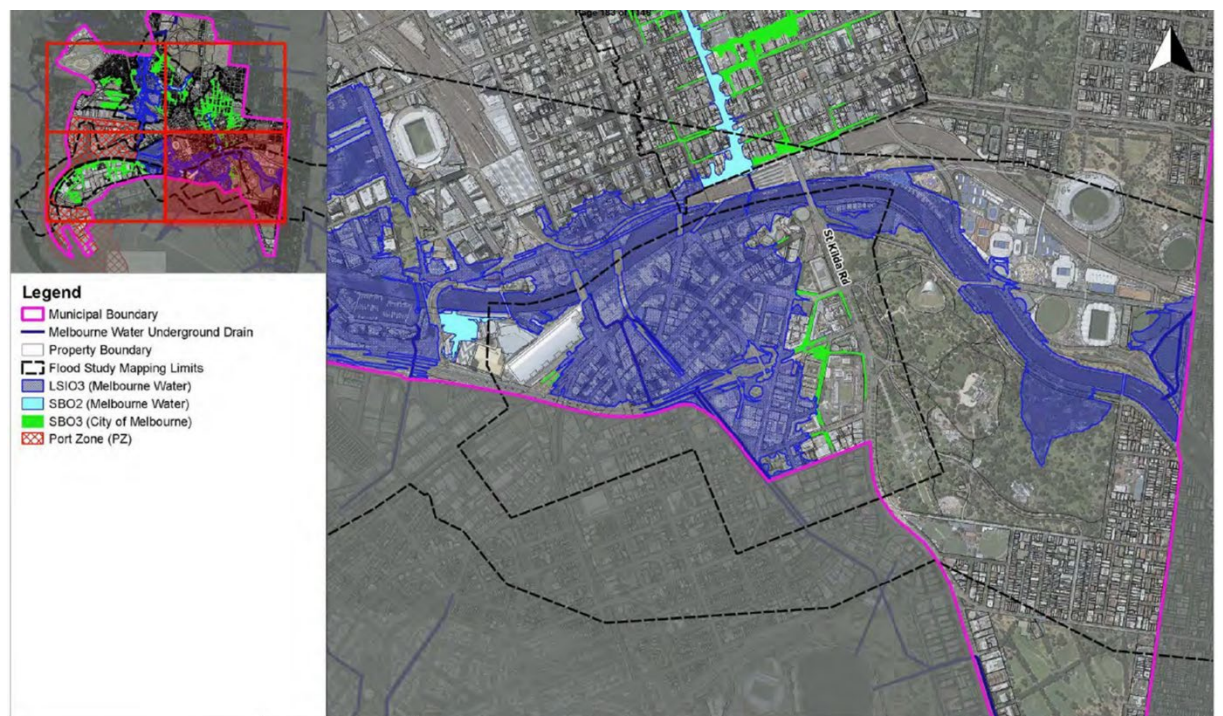
39. The affected land is within the Industrial 1 Zone, Commercial 2 Zone, Capital City Zone, Schedule 1, Transport Zone 2, and Public Park and Recreation Zone.

Figure 2-7: Zoning of the affected land in Fishermans Bend and Docklands.



Source: VicPlan <https://mapshare.vic.gov.au/vicplan/>.

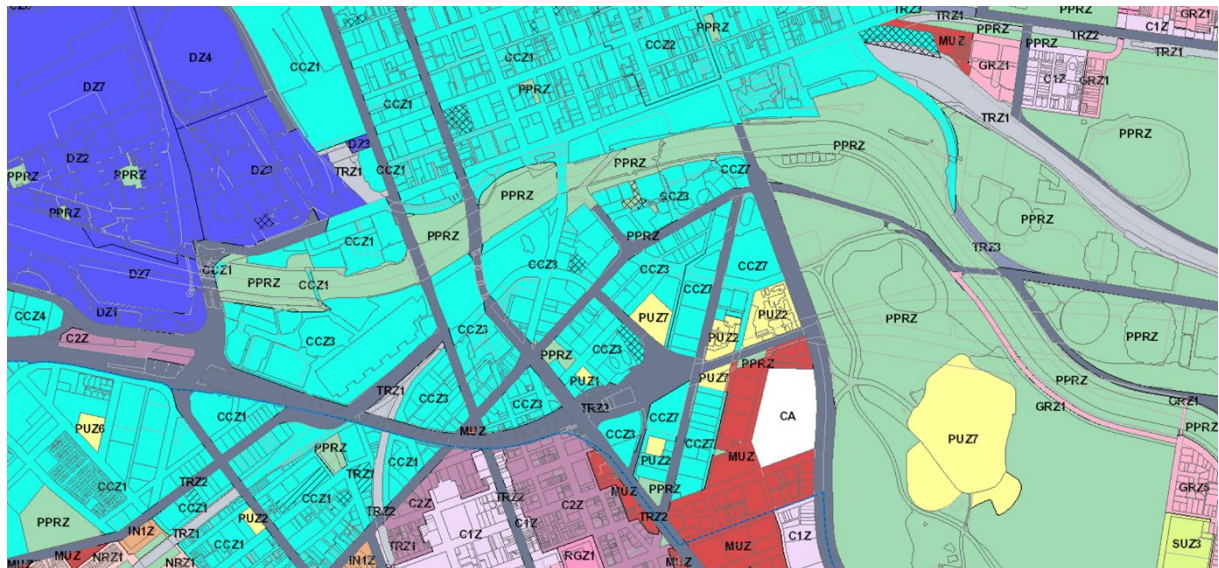
Figure 2-8: Proposed overlays in the CBD, Docklands and Southbank.



Source: Technical Report 09 – Overlay Delineation Report, Engeny Water Management.

40. Land alongside the Yarra River including Docklands, Southbank, section of the CBD, the Botanic Gardens and Goschs Paddock are proposed to be included in the LSIO3. SBO2 will affect parts of Elizabeth Street, Flinders Street and Southbank. SBO3 applies through adjoining streets in the CBD and Southbank.

Figure 2-9: Zoning for affected land in the CBD, Docklands and Southbank.



Source: VicPlan <https://mapshare.vic.gov.au/vicplan/>.

41. The affected land is within the Capital City Zone, Schedules 1, 2, 3, and 7, Commercial 2 Zone, Transport Zone 2, Public Use Zone, Schedules 1, 2 and 7, and Public Park and Recreation Zone.
42. A total of 3,448 land parcels, consisting of more than 81,000 properties, will be affected by the proposed overlays.
43. Of these, 47 parcels will be affected by more than one of the LSIO3, SBO2 or SBO3 and 42 parcels will require referral to both Melbourne Water and City of Melbourne as they are affected by the City of Melbourne overlay (SBO3) and at least one of those of Melbourne Water (LSIO3 and/or SBO2).

Figure 2-10: Breakdown of properties affected by the proposed overlays.

Planning Scheme Overlay	Number of Properties
Properties Impacted by LSIO3 (referral to Melbourne Water)	1731
Properties Impacted by SBO2 (referral to Melbourne Water)	295
Properties Impacted by SBO3 (referral to City of Melbourne)	1470
Total properties Impacted	3448
Properties with more than one overlay	47
Properties that would be referred to Melbourne Water and City of Melbourne (i.e. Impacted by SBO3 and either LSIO3 or SBO2)	42

Source: Technical Report 09 – Overlay Delineation Report, Engeny Water Management, p. 14.

3. Amendment C384

45. The amendment updates the LSIO and SBO extents in the Melbourne Planning Scheme to reflect the updated flooding modelling.
46. LSIO3 defines flooding associated with Melbourne Water's creeks and rivers, applying to the Moonee Ponds Creek and Lower Yarra River Waterways.
47. SBO2 defines overland flow paths associated with Melbourne Water's underground drainage system, applying to Melbourne Water Main Drains – Elizabeth Street, Arden, Macaulay and Moonee Ponds Creek, Fishermans Bend and Southbank Catchments.
48. SBO3 defines overland flow paths associated with City of Melbourne's underground drainage system, applying to Council Drains – Elizabeth Street, Arden, Macaulay and Moonee Ponds Creek, Hobsons Road, Fishermans Bend and Southbank Catchments.
49. The format of the existing LSIO1 and LSIO2 schedules are proposed to be amended to comply with the Ministerial Direction Form and Content of Planning Schemes. These amendments are correctional in nature and do not transform the controls. I agree that such amendments are appropriate to ensure consistency in drafting.
50. The Amendment proposes changes to the ordinance, including the following:
 - Amends Schedule 1 (Maribyrnong River Environs) and Schedule 2 (Flemington Racecourse) of Clause 44.04 to update the format to comply with the requirements set out in Ministerial Direction Form and Content of Planning Schemes which is an administrative change. The mapping of the existing LSIO1 in the planning scheme (generally along the Maribyrnong River, Childers Street and Dynon Road) and LSIO2 (Flemington Racecourse) is unchanged.
 - Introduces a new Schedule 3 'Moonee Ponds Creek and Lower Yarra River Waterways' to Clause 44.04 which includes land subject to inundation objectives to be achieved, a statement of risk, permit requirements, application requirements and decision guidelines.
 - Introduces a new Schedule 1 'Melbourne Water Main Drains' to Clause 44.05 to update the format to comply with the requirements set out in Ministerial Direction Form and Content of Planning Schemes which is an administrative change. The mapping extent of the existing SBO in the planning scheme (outside the catchments included in this Amendment) is unchanged. The existing SBO maps require deletion and identical maps have been prepared which are named SBO1 to comply with the new naming convention of the Schedule which is a form and content change.
 - Introduces a new Schedule 2 'Melbourne Water Main Drains - Elizabeth Street, Arden, Macaulay and Moonee Ponds Creek, Fishermans Bend and Southbank catchments' to Clause 44.05 which includes flood management objectives to be achieved, statement of risk, permit requirements, application requirements and decision guidelines.
 - Introduces a new Schedule 3 'Council Drains - Elizabeth Street, Arden, Macaulay and Moonee Ponds Creek, Hobsons Road, Fishermans Bend and Southbank catchments' to Clause 44.05 which includes flood management objectives to be achieved, statement of risk, permit requirements, application requirements and decision guidelines.

- Amends the Schedule to Clause 72.03 to update the list of maps that form part of the planning scheme.
- Amends the Schedule to Clause 72.08 (Schedule to Background Documents) to introduce new background documents as listed below:
 - Technical Report 01: Australian Rainfall Runoff Sensitivity Analysis (Engeny Water Management dated 22 July 2020)
 - Technical Report 02: Southbank Flood Modelling Update and Climate Change Scenarios (Water Modelling Solutions dated 21 April 2020)
 - Technical Report 03: Southbank Stormwater Infrastructure Assessment: Final Report (BMT WBM dated August 2015)
 - Technical Report 04: Elizabeth Street Melbourne Flood Modelling Report (Water Technology, dated August 2017) including the Memorandum's dated 9 April 2020 and 13 February 2020
 - Technical Report 05: Arden Macaulay Precinct & Moonee Ponds Creek Flood Modelling (Engeny Water Management dated August 2020)
 - Technical Report 06: Lower Yarra River Flood Mapping (GHD dated 24 September 2020)
 - Technical Report 07: Hobsons Road Catchment Flood Mapping Update (Venant Solutions dated 17 June 2020) including the review response dated 22 April 2020
 - Technical Report 08: Fishermans Bend Flood Mapping (GHD dated November 2020)
 - Technical Report 09: Overlay Delineation Report (Engeny Water Management dated 27 October 2020)
 - Guidelines for Development in Flood Affected Areas (Department of Environment, Land, Water and Planning, 2019)
 - Planning for Sea Level Rise Guidelines (Melbourne Water, 2017)
 - Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay (City of Melbourne, Melbourne Water and City of Port Phillip, 2021)
- Updates the LSIO and SBO mapping on the relevant planning scheme maps.

4. Background to the Amendment

- 52. The Amendment will update the extent of the LSIO and SBO within catchments within the Melbourne Planning Scheme to reflect revised modelling prepared on behalf of City of Melbourne, and Melbourne Water.
- 53. The modelling is to the Australian Rainfall and Runoff (ARR) 1987 standard updated to the ARR 2019 standards with respect to climate change.
- 54. This includes an 18.5 per cent increase in rainfall intensity due to the predicted impacts of climate change by the year 2100.
- 55. For Moonee Ponds Creek and the Lower Yarra River, the modelling has adopted a boundary condition inclusive of a starting water surface level of a 10 per cent Annual Exceedance Probability (AEP) tidal level plus a 0.8 metres sea level rise in 2100.
- 56. Inundation associated with sea level rise and coastal inundation is not included in modelling for the amendment. It is understood that this is being studied separately and potentially will be the subject of a planning scheme amendment at a later date.
- 57. The controls have not been revised for a number of years. The last update of the SBO was via Amendment C012 gazetted on 31 May 2001 while the LSIO was amended on 10 February 2011 via Amendment C153.

4.1. Other Relevant Amendments

Amendment C407

- 58. Amendment C407, which related to the Arden Structure Plan and resultant changes to planning controls and policy, was subject to a hearing of the VPA Projects Standing Advisory Committee in February and March 2022. I gave evidence on behalf of the VPA in that hearing.
- 59. Flood risk was identified as a substantial concern and the Arden Structure Plan and associated Flood Management Strategy referenced the updated modelling which has been prepared for Melbourne Water and the City of Melbourne for Amendment C384.
- 60. The drainage strategy for the Arden precinct was developed in collaboration with Melbourne Water, City of Melbourne, and the Victorian Planning Authority. It also sought to achieve the drainage outcome for more intensive development based on the expected climate conditions in 2100 and was based on the principle of managing and mitigating flooding and risk rather than seeking to eliminate the risk of flooding completely.
- 61. A conclave of drainage experts during the hearing of the matter by the VPA Projects Standing Advisory Committee disagreed on the assumptions on the modelling and storage for the precinct, particularly for the Moonee Ponds Creek catchment. The implications centred around the proposed location and size of the Integrated Stormwater Management Open Space (ISMOS).

- 62. The SAC report recommended that the Drainage Strategy for the precinct be reviewed, recognising that the drainage strategy proposed could deliver an appropriate planning outcome but that this may not be the optimal solution.
- 63. Amendment C407 was gazetted on 28 July 2022 with the ISMOS location nominated within the structure plan, which indicated that detailed design work is to follow to finalise the design of the spaces.

Revised Macaulay Structure Plan

- 64. The increased flooding risk due to climate change and mitigation works were also a critical aspect of the refreshed Macaulay Structure Plan which was endorsed by the Future Melbourne Committee in November 2021.

Amendment C308

- 65. The amendment, gazetted on 30 September 2021, introduced new urban design built form controls through a new Design and Development Overlay, Schedule 1 (DDO1) applied to the Hoddle Grid, Southbank, and North Wharf.
- 66. The Central Melbourne Design Guide, 2019 was included as a background document in the Schedule to Clause 72.08.

5. Planning Policy

5.1. Planning Policy Framework

68. I have prepared my assessment of the merit of the draft Amendment C384melb having regard to the following State policies which are relevant to the proposed changes to the scheme.
- Clause 11.01-1S ‘Settlement’ seeks to facilitate the sustainable growth and development of Victoria and deliver choice and opportunity for all Victorians through a network of settlements. Strategies include delivering a network of high-quality integrated settlements that have a strong identity and sense of place, are prosperous and are sustainable by minimising exposure to natural hazards, including increased risks due to climate change.
 - Clause 11.02-1S ‘Supply of urban land’ includes the strategy that planning for urban growth should consider, among others, the limits of land capability and natural hazards and environmental quality.
 - Clause 11.02-2S ‘Structure planning’ seeks to facilitate the orderly development of urban areas. Strategies include addressing the strategic and physical context of the location, including increased physical risks associated with climate change.
 - Clause 11.03-6L-01 ‘Arden Precinct’ includes the policy direction under Flood mitigation objectives, consisting of:
 - *Ensure the individual and combined impacts of sea level rise and flooding from storm events is managed through a combination of precinct wide and property specific management measures and physical infrastructure.*
 - *Safely manage the risk of flooding to future development of Arden through innovative and creative flood management solutions in the natural landscape and built environment.*The *Arden Precinct Flood Management Policy (Melbourne Water, June 2022)* is listed as a Background document within the clause.
 - Clause 11.03-6L-05 ‘Fishermans Bend Employment Precinct’ includes the economic development strategy of *‘discourage sensitive uses at ground floor in flood affected areas’*.
 - The clause also requires proposals for building and works in the precinct have regard for flood mitigation. Development is to integrate any level change required between street level and internal ground floor into the design of the building to maintain good physical and visual connection between the street and internal ground floor.
 - Clause 11.03-6L-06 ‘Fishermans Bend Urban Renewal Area’ includes policy guidelines for achieving a climate adept, water sensitive, low carbon, low waste community. These include:
 - *Applying design elements and materials that are resilient to flooding, including water proof doors and windows, elevated power outlets and the like.*
 - *Encouraging land uses at ground floor level that can easily recover from the impacts of temporary flooding.*

- *Integrating changes in floor levels between the street and internal ground floor into the design of the development.*
 - *Locating essential services, such as power connections, switchboards and other critical services to avoid disruption in potential flooding events.*
 - *Development and public realm layout and design should integrate best practice Water Sensitive Urban Design.*
- Clause 13.01-1S ‘Natural hazards and climate change’ seeks to minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning. Strategies include:
- *Respond to the risks associated with climate change in planning and management decision making processes.*
 - *Identify at risk areas using the best available data and climate change science.*
 - *Integrate strategic land use planning with emergency management decision making.*
 - *Direct population growth and development to low risk locations.*
 - *Develop adaptation response strategies for existing settlements in risk areas to accommodate change over time.*
 - *Ensure planning controls allow for risk mitigation and climate change adaptation strategies to be implemented.*
 - *Site and design development to minimise risk to life, health, property, the natural environment and community infrastructure from natural hazards.*
- Clause 13.03-1S ‘Floodplain management’ seeks to assist the protection of life, property and community infrastructure from flood hazard, including overland flows. Strategies include:
- *Identify land affected by flooding, including land inundated by the 1 in 100 year flood event (1 per cent Annual Exceedance Probability) or as determined by the floodplain management authority in planning schemes.*
 - *Avoid intensifying the impact of flooding through inappropriately located use and development.*
 - *Plan for the cumulative impacts of use and development on flood behaviour.*
 - *Locate emergency and community facilities (including hospitals, ambulance stations, police stations, fire stations, residential aged care facilities, communication facilities, transport facilities, community shelters, child care centres and schools) outside the 1 in 100-year (1 per cent Annual Exceedance Probability) floodplain and, where possible, at levels above the height of the probable maximum flood.*
 - *Locate use and development that involve the storage or disposal of environmentally hazardous industrial and agricultural chemicals or wastes and other dangerous goods (including intensive animal industries and sewage treatment plants) outside floodplains unless site design and management is such that potential contact between such substances and floodwaters is prevented, without affecting the flood carrying and flood storage functions of the floodplain.*
 - *Ensure land use on floodplains minimises the risk of waterway contamination occurring during floods and floodplains are able to function as temporary storage to moderate peak flows and minimise downstream impacts.*
- Clause 15.01-1S ‘Urban design’ seeks to create urban environments that are safe, healthy, functional and enjoyable and that contribute to a sense of place and cultural identity.

Strategies include ensuring the interface between the private and public realm protects and enhances personal safety.

- Clause 15.01-1R 'Urban design – Metropolitan Melbourne' seeks to create a distinctive and liveable city with quality design and amenity.
- Clause 15.01-1L-05 'Urban design outside the Capital City Zone' includes the objective '*to ensure that building design at the ground floor frontages creates and improves pedestrian interest and engagement*'.
- The strategies for Street level frontage activation include:
 - *Design street frontages to directly engage with the street and be visually evident, when located in a commercial or mixed use areas, or where the immediate potential for active use is limited, make provision for the ultimate conversion of ground floor frontages to active uses.*
 - *Avoid solid roller shutters on shopfronts and preference open mesh security or transparent grills.*
 - *Encourage development to give prominence to the principal street entrance and frontage of a building.*
 - *Encourage building design to respects local access patterns when locating front and rear entrances and associated activities.*
- Clause 15.01-2S 'Building design' seeks to achieve building design outcomes that contribute positively to the local context and enhance the public realm.
- Relevant policy documents include: *Urban Design Guidelines for Victoria* (DELWP 2017) and *Apartment Design Guidelines for Victoria* (DELWP 2017).
- Clause 19.03-3S 'Integrated water management' seeks to sustainably manage water supply, water resources, wastewater, drainage and stormwater through an integrated water management approach.
- Clause 19.03-3L 'Stormwater Management (Water Sensitive Urban Design)' applies to applications for new building, extensions to existing building which are 50 square metres in floor area or greater, and a subdivision in a commercial zone. The policy seeks to improve stormwater quality and reduce quantities through water sensitive urban design measures incorporated into developments.

5.2. Municipal Planning Strategy (MPS)

- 69. The following objectives of the Municipal Planning Strategy are relevant to my assessment:
- 70. Clause 02.03-1 'Settlement' establishes five types of settlement areas within the city, as identified on the Growth Area Framework Plan. These are: the Original city centre; Existing Urban renewal areas; Proposed urban renewal areas; Potential urban renewal areas; Stable residential areas; and, Other areas.
- 71. The direction for Fisherman's Bend includes: '*Create a benchmark for sustainable and resilient urban transformation that supports the creation of a climate adept, water sensitive, low carbon, low waste community, addresses potential flood impacts with measures which maintain activity at ground level, and is designed to provide best practice waste and resource recovery management*'.
- 72. Within the Hoddle Grid, the clause states there is a strong emphasis is place on a quality public realm and good pedestrian amenity and connectivity.

73. Clause 02.02-3 'Environmental risks and amenity' includes direction on climate change in which council will encourage development that is resilient to heatwaves, water shortages, extreme storm events and sea level rise.
74. Clause 02.03-2 'Built environment and heritage', under sustainable development, includes the policy of ensuring the built environment is resilient to heatwaves, water shortages, extreme storm event and sea level rise.

6. Relevant Ministerial Directions and Guidelines

75. The following Ministerial Directions and Planning Practice Notes are relevant to the assessment of the Amendment C384melb:
- Ministerial Direction ‘The Form and Content of Planning Schemes’.
 - Direction No. 9 ‘Metropolitan Planning Strategy’.
 - Direction No. 11 ‘Strategic Assessment of Amendments’.
 - Direction No. 15 ‘The Planning Scheme Amendment Process’.
 - Planning Practice Note No. 8 ‘Writing a Local Planning Policy’.
 - Planning Practice Note No. 12 ‘Applying the Flood Provisions in Planning Schemes’, June 2015.
 - Planning Practice Note No. 46 ‘Strategic Assessment Guidelines for Preparing and Evaluating Planning Scheme Amendments’.
 - Planning Practice Note No. 59 ‘The Role of Mandatory Provision in Planning Schemes’.
76. I have prepared my assessment of the merits of the draft amendment having regard to the above documents.

7. Is the draft Amendment strategically justified?

7.1. Why is the draft amendment required?

77. The draft Amendment is required to apply planning controls to locations where there is an identified risk of inundation in the event of flood.
78. The tools for the management of flood risk hazard in the Victoria Planning Provisions (VPPs) are:
 - Urban Floodway Zone (UFZ) applies to mainstream flooding in urban areas where the primary function of the land is to convey flood flows.
 - Floodway Overlay (FO) applies to land in rural and urban areas which conveys active flows or stores floodwater.
 - Land Subject to Inundation (LSIO) relates to riverine flooding.
 - Special Building Overlay (SBO) relates to overland flows associated with the underground drainage system).
79. Amendment C384 will apply the LSIO and SBO as controls to guide new development to minimise the risk of flood effects to lives and property.
80. The application of the controls provides clarity for landowners, developers and prospective purchasers of the presence of the flooding hazard, which is required to be addressed through the planning permit process.
81. Planning for the effects of climate change, including the risk to life and property through increased rainfall events is a statutory obligation for City of Melbourne and Melbourne Water pursuant to the Planning and Environment Act 1987.
82. Section 6(2) (e) of the Act enables planning schemes to *‘regulate or prohibit any use or development in hazardous area, or areas likely to become hazardous’*.
83. This is reflected in the provisions of Clause 13 ‘Environmental Risks and Amenity’.
84. The updated modelling prepared for City of Melbourne and Melbourne Water for the Arden, Macaulay and Moonee Ponds Creek, Elizabeth Street, Fishermans Bend, Hobsons Road, Lower Yarra River and Southbank catchments has been justified through the technical modelling reports.
85. Planning for climate change requires decision makers to act on evolving information. However, in land use planning where the development outcome will be in place for decades, deferring in the face of uncertainty can ‘lock in’ a greater risk outcome.
86. To my mind, this is planning at its very essence: seeking to plan for the future and ensuring that decisions around the development of land are appropriately robust to allow for changing environmental conditions.

87. Clause 13 'Environmental Risks and Amenity' includes the objective that planning should prepare for and respond to the impacts of climate change. The strategies reflect the shifting nature of projections regarding the effects of climate change and quantifying the potential effects.
88. The strategies include *'identify at risk areas using the best available data and climate change science'* and *'develop adaptation response strategies for existing settlements in risk areas to accommodate change over time'*.
89. In this context, planning is a practical application of the precautionary principle, where the risk of climate change, including increased flooding, has been identified. The modelling assists in identifying where the potential for risk exists and applies controls to require a planning assessment to determine an acceptable response.
90. The policy direction is that action should be taken on the best available information. It does not necessarily mean that this process is a 'single shot' that will be fixed into the future. There is capacity for mapping to be updated and revised as the available information changes.
91. In this instance, it is taking the first step to broaden the LSIO and SBO to new locations establishes a practical signposting of the future risk of flooding within the intensively developed urban areas of the City of Melbourne.
92. I do not consider that this Amendment will be the final step in responding to climate change from a planning perspective. There are many factors in play, ranging from the rate at which our planet warms, changes in technology and improved science as we better understand the physical consequences of a warming earth. However, I do not consider that we should wait for the 'definitive answer' as we must take steps now to plan for an inevitable future where flooding becomes an increasing reality.
93. Further refinements and adjustments are inevitable but it is appropriate that, based on the modelling and data available to date, the LSIO and SBOs reflect this information.

7.2. How does the draft amendment implement the objectives of planning in Victoria?

94. The objectives of planning for Victoria are set out section 4(1) of the Planning and Environment Act 1987.
95. These include:
'(a) to provide for the fair, orderly, economic and suitable use, and development of the land.'
96. The draft Amendment identifies a risk of increased flooding and introduces controls to allow for the orderly use and development of land in a form which accommodates measures to mitigate the potential effects.
'(c) to ensure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria.'
97. Safety and the protection of property and life is central to the application of the LSIO and SBO to ensure that planning duly considers the risk in the assessment of use and development at the planning permit stage.
'(e) to protect public utilities and other assets and enable the orderly provision and co-ordination of public utilities and other facilities for the benefit of the community.'
98. The identification of the potential flooding risk through the application of the LSIO and/or SBO to affected land allows for the considered placement and design of public utilities to minimise the potential effects of flooding.

'(f) to facilitate development in accordance with the objectives of planning in Victoria.'

99. The draft Amendment will provide for the proper and orderly development of land with due consideration of the potential for increased flooding risk.

'(g) Balancing the present and future interests of all Victorians.'

100. The use of modelling projecting to 2100, based on the ARR 2019 standards for climate change, is sound planning as it introduces provisions which will apply this future scenario to development applications to ensure the design includes adaptation for this future scenario.

7.3. How does the draft amendment address any environmental, social and economic effects?

Environment

101. I am satisfied that the draft Amendment will positively address environmental outcomes as the proposed controls are to maintain and improve the environmental health of Melbourne's rivers, wetlands and waterways.

Social

102. The potential for increased flooding in the absence of appropriate mitigation presents a risk to community disruption. The widespread effects of flooding can range from substantial damage to public and private property, personal hardship, and potential loss of life.

Economic

103. In ensuring that new building and works incorporate design measures to minimise flood damage and respond to the effects of climate, the amendment will deliver positive economic effects. The precautionary approach will require flood risk and a responsive design to be coordinated through the development feasibility and planning assessment stages.
104. The amendment potentially requires development proponents to incorporate flood protection measures where previously the requirement did not apply. However, the application of the controls based on new modelling properly reflects the prospect of flooding in those locations into the future.
105. The incorporation of flood protection into developments at this stage will provide greater resilience to flooding risks and spare the costs of flood damage that will be otherwise borne by future occupants where resilient design measures are not incorporated.

7.4. How does the draft amendment support or implement the Planning Policy Framework and any adopted State policy?

106. The draft Amendment supports and implements the Planning Policy Framework as follows:

Settlement

107. In planning for growth, it is identifying limits to land capability and natural hazards and environmental quality (Clause 11.02-1S).
108. Orderly development of the land is encouraged through the structure plan (Clause 11.02-2S).
109. The risk of flooding to future development within the Arden precinct, including that created by sea level rise and storm events, is to be managed through a combination of precinct wide and property specific management measures and physical infrastructure (Clause 11.03-6L-01).

110. Building and works in the Fishermans Bend Employment Precinct are to have regard for flood mitigation. Development is to integrate any level change required between street level and internal ground floor into the design of the building to maintain good physical and visual connection between the street and internal ground floor (Clause 11.03-6L-05).
111. The Fishermans Bend Urban Renewal Area is to achieve a climate adept, water sensitive, low Carbon, low waste community which applies design elements and materials that are resilient to flooding and encouraging land uses at ground floor level that can easily recover from the impacts of temporary flooding. Building design is to also integrate changes in floor levels between the street and internal ground floor into the development design (Clause 11.03-6L-06)

Environmental Risks and Amenity

112. The Amendment is a risk-based planning response to the impacts of natural hazards and adaptation to the impacts of climate change (Clause 13.01-1S).
113. The measures of the Amendment have been developed to apply planning and management decision-making processes to identified risk (Clause 13.01-1S).
114. The extents of the proposed LSIO and SBO mapped areas have been determined through up-to-date data analysis based on climate change science (Clause 13.01-1S).
115. The application of the proposed controls provides a means to allow for future development to incorporate risk mitigation and adaptation strategies to be implemented (Clause 13.01-1S)
116. The instruments of the LSIO and SBO, including the referral requirement, and the guidance of the Good Design Guide provides direction on how to site and design development to respond to the identified risk (Clause 13.01-1S).
117. It assists in the protection of life, property and community infrastructure from flood hazard including riverine and overland flows (Clause 13.03-1S).
118. Land affect by flooding, including land inundated by the 1 in 100 year flood event (1 per cent Annual Exceedance Probability) is to be identified in the planning scheme (Clause 13.03-1S).
119. Intensification of the impacts of flooding through inappropriately located use and development is to be avoided (Clause 13.03-1S).
120. The clear identification of the flood risk in the planning scheme through applied controls allows for planning to position emergency and community facilities (including hospitals, ambulance stations, police station, fire station, residential aged care facilities, communication facilities, transport facilitation, community shelters and schools) outside of the 1-in-100-year floodplain (Clause 13.03-1S).

Built Environment and Heritage

121. The controls and design guidance are measures to deliver urban environments that provide safety in the event of flooding but remain healthy, functional and enjoyable (Clauses 15.01-1S).
122. The Amendment will include direction for building design to achieve the balance between flood protection while still ensuring the form, scale and appearance enhances the function and amenity of the public realm (Clause 15.01-2S).
123. Building design at the ground floor frontages creates and improves pedestrian interest and engagement (Clause 15.01-1L-5).

Infrastructure

124. An integrated water management approach is proposed (Clause 19.03-3S).

125. Stormwater quality and quantities are to be addressed through water sensitive urban design (Clause 19.03-3L).

7.5. How does the draft amendment support or implement the Municipal Planning Strategy?

126. The draft Amendment is consistent with relevant objectives and strategies within Clause 02.03-1 'Settlement' as it:
- Aligns with the direction for Fisherman's Bend in creating a 'climate adept, water sensitive, low carbon, low waste community' through addressing the flood impacts.
 - The direction also includes maintaining activity at ground level in the precinct.
127. The draft amendment is consistent with Clause 02.02-3 'Environmental risks and amenity' as it encourages development to be resilient to extreme storm events and sea level rise.
128. The draft amendment is consistent with Clause 02.03-2 'Built environment and heritage' in that it seeks to establish resilience against extreme storm events and sea level rise.

7.6. Does the draft amendment make proper use of the Victoria Planning Provisions?

129. I consider that the draft Amendment has chosen an appropriate combination of Victoria Planning Provisions (VPP) to address the flooding risk identified through the updated modelling.
130. The Land Subject to Inundation Overlay and Special Building Overlay are the appropriate tool to identify flood risk, applied by the type of flooding forecast.
131. I observe that regards to flooding VPP, with the focus on types of flooding that affects land (i.e mainstream or stormwater), does not apply nuance to the levels of risk in locations.

7.7. Does the draft amendment address the requirements of the Transport Integration Act 2010?

132. The amendment will not affect the transport system as defined by the Transport Integration Act 2010.

8. Are the overlays appropriate?

- 133. I am satisfied that the choice of the LSIO and SBO are the appropriate controls from the VPP to manage the identified flood risk.
- 134. The suite of four controls within the VPPs also includes the Urban Floodway Zone (UFZ) and Foodway Overlay (FO) which identify where the risks are greater and greater control on use and development is required to address the risk of mainstream flooding.
- 135. The LSIO is used to identify areas flood risks associated with waterways within urban and rural areas.
- 136. The SBO is the relevant control to address stormwater flooding where land in urban areas can be affected by overland flows.
- 137. Flooding in these events is where rainfall run-off exceeds the capacity of the drainage system and there is no provision for overland flows.
- 138. The purpose of these controls is confined to the flooding risk management and waterway protection. It does not include built form and urban design considerations.
- 139. Practice Note 12 'Applying the Flood Provisions in Planning Schemes' (June 2015) provides guidance on applying the flood provision in the planning scheme.
- 140. I am satisfied that the LSIO and the SBO are the correct ordinance of the VPPs to be applied based on the type of flooding predicted and the level of risk it presents.
- 141. The controls have been applied to areas based on the type of flooding determined through the modelling (i.e mainstream or stormwater flooding).

Form and content assessment

- 142. The proposed LSIO3, SBO2 and SBO3 are consistent with the *Ministerial Direction on the Form and Content of Planning Schemes*.
- 143. The format of Schedule 2 to the LSIO, although not changing its extent in this amendment, has been updated to align with the Ministerial Direction.
- 144. I discuss the form and context further below. This includes changes to the provisions recommended by Melbourne Water.

OBJECTIVES

- 145. These include the five land subject to management objectives common to all three overlays.
- 146. The objectives of the exhibited Schedule were:
 - *To identify land in areas that may be inundated by the combined effects of the 1% Annual Exceedance Probability (AEP) flood event incorporating an 18.5% increase in rainfall intensity due to climate change by the year 2100.*
 - *To protect life, property, public health, assets and the environment from flood hazard.*

- *To minimise the impact of development on flood extent, depth and the flow velocity.*
 - *To ensure new development is suitably designed to be compatible with local drainage characteristics and identified flood hazard.*
 - *To ensure development simultaneously achieves safe access and egress, good urban design and equitable access.*
147. Melbourne Water, in consultation with the City of Melbourne, has proposed revised wording to the objectives for the LSIO3, SBO2 and SBO3, as follows:
- *To identify land in areas that may be inundated by the combined effects of the 1% Annual Exceedance Probability (AEP) flood event incorporating an 18.5% increase in rainfall intensity due to climate change by the year 2100.*
 - *To ensure that the development prioritises the protection of human life, including emergency services personnel.*
 - *To ensure development can be permitted where the risk to life and property from flooding can be reduced to an acceptable level.*
 - *To ensure development does not increase flood levels and/or velocities to the detriment of surrounding properties.*
 - *To ensure property and infrastructure are protected from flood damage.*
 - *To ensure that any new development is suitably designed to be compatible with the identified flood hazard and local drainage characteristics*
148. I agree that the revised wording is more consistent with the purpose of both the LSIO and SBO which include *‘to ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, responds to the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity’* and *‘To protect water quality and waterways as natural resources by managing urban stormwater, protecting water supply catchment areas, and managing saline discharges to minimise the risks to the environmental quality of water and groundwater’*.
149. The wording more closely aligns the connection between the need to manage development to achieve an outcome, variously including prioritising the protection of human life, property and infrastructure and managing risks to an acceptable level, while also not resulting in an increase in flood levels or velocities.
150. I consider it appropriate to delete/replace the fifth of the objectives of the exhibited overlays – *‘To ensure development simultaneously achieves safe access and egress, good urban design and equitable access’* – as the wording was focussed on urban design considerations without the connection to the flooding land management.
151. Urban design will remain a consideration in permit applications for new development where increased flood levels will present design requirements to be resolved, but my view is that it is not appropriate to reference these in the LSIO or SBO as these are primarily concerned with flood management.
152. Decision making will include urban design consideration through the guidelines of Clause 65, other policies of the Melbourne Planning Scheme, and the Capital City Zone and Design and Development Overlay.

STATEMENT OF RISK

153. Each of the LSIO3, SBO2 and SBO3 includes a statement of risk in Clause 2.0. These highlight the significant risks of flooding and potential effects. It reiterates the control is based on the revised modelling up until the year 2100.

154. I am satisfied that the risk is properly articulated and linked back to the technical background documents to be referenced in the Schedule to Clause 72.08.

PERMIT REQUIREMENT

155. The permit requirement in Clause 3.0 properly lists which building and works do not require a permit consistent and refers to the provision Clause 44.04-2, for the LSIO, and Clause 44.05-2, for the SBO, which is consistent with the form and content direction.
156. The exclusion to the permit requirements in the provision, in adopting the same text, each are limited to a minimal list of prospective works including:
- *An elevated boardwalk provided that the boardwalk is constructed above the applicable levels set by the relevant floodplain management authority.*
 - *Earthworks that do not change the rate of flow or the discharge point of water across a property boundary.*
 - *A sign on a single support pole, or structure that is at least 50 per cent permeable up to the applicable flood level.*
 - *Bollards, bus and tram shelters.*
157. I consider it is the correct approach for an overlay to seek to manage development where there is a potential destructive environmental effect such as flooding identified.
158. The permit requirement creates a mechanism for the risk to be assessed with referral consideration by the relevant flood authority.
159. I favour the approach of a broad requirement in controls associated with environmental risks to ensure that the protection of life, property and community infrastructure is prioritised in line with the objectives and strategies of Clause 13.03-1S 'Floodplain management'.
160. Attempting to 'finetune' the permit requirement to schedule out the permit requirement for particular uses in certain circumstances can dilute the clarity and effectiveness of the control to achieve the risk management purpose.

APPLICATION REQUIREMENTS

161. The application requirements of Clause 4.0 set out the basis of information to allow for assessment of a proposal by the Responsible Authority and the relevant referral authority (Melbourne Water or City of Melbourne) under the LSIO and SBO.
162. Melbourne Water has recommended a redrafting of the requirements as exhibited to refine the requirements for development plans and cross section elevations.
163. The wording around the requirement for the written Flood Risk Statement has been refined to be focused on the likely flooding effect and how the design of the proposed development responds to those characteristics.
164. The exhibited version was drafted as follows:
- A written Flood Risk and Design Statement that must include but not be limited to:*
- *A comprehensive description of the proposed plans, elevations and drawings stating the design of the lower levels of the building including entries, shop front design, the current Flood Level, the proposed Finished Floor Level(s) and Nominated Flood Protection Level (NFPL) as nominated by the relevant floodplain management authority, flood proofing and use of flood-resistant materials, flood storage, stairs, ramps and access/egress points and possible refuge spaces within the development (if applicable).*

- A description of proposed actions, flood mitigation strategies or measures required, if any, to the siting and design of the buildings or works, or in association with the use and occupation of all aspects of the proposal in order to reduce the risk to individuals, property, infrastructure and the environment. These actions may include the consideration of adaptation options such as planned retreat, setbacks, accommodation of changes through floor heights, site and land forming and proposed drainage works.

165. The Melbourne Water amendments propose a rewording to:

A written Flood Risk Statement which must include the following:

- A flood assessment of the site which includes reference to the Design Flood Event (1% AEP) and other flood characteristics, including velocities and depths of flooding on the site and access routes, overland flood paths and the duration of flooding; and

- A written description of the design response which demonstrates how the proposed development responds to the flood characteristics which affect the site and surrounds, including an assessment against the four objectives as defined in the *Guidelines for Development in Flood Affected Areas* (the Department of Environment, Land, Water and Planning, 2019).

166. The proposed Melbourne Water amendments establish a more defined assessment of the flood risk and an assessment that draws on the proposed background document of *Guidelines for Development in Flood Affected Areas* (DELWP, 2019). The four objectives of which are:

- Safety
- Flood damage
- Off-site impacts
- Waterway and floodplain protection

167. Again, this is more closely aligned to the flood management objectives of the provision and provide the technical information for both the responsible authority and the referral authority to assess a permit application.

DECISION GUIDELINES

168. I have reviewed both the exhibited and amended version of decision guidelines in Clause 5.0 of the LSIO and SBO, addressing these jointly as they share wording.

169. *A Practitioners Guide to Victorian Planning Schemes (Version 1.5, April 2022)* provides that decision guidelines should only refer to a document that is incorporated into the scheme and not a background document.

170. The exhibited documents include *Guidelines for Development in Flood Affected Areas* (the Department of Environment, Land, Water and Planning, 2019) and *Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay* (City of Melbourne, Melbourne Water and City of Port Phillip, 2021).

171. Both documents are proposed by the amendment to be included as Background documents in the Schedule to Clause 72.08.

172. The proposed Melbourne Water amendments propose deleting the reference to the Good Design Guide but retaining Guidelines for Development in Flood Affected Areas within the decision guidelines.

173. While the Guidelines for Development in Flood Affected Areas is more relevant to the consideration of flooding and drainage matters, its status as a background document affords it lessened weight in determining application.

174. Accordingly, I consider that references to the Good Design Guide and Guidelines for Development in Flood Affected Areas should be deleted from the decision guidelines, remaining as background documents only.
175. I discuss the merits of the Good Design Guide as a background document further in Section 9 of this report.
176. The Melbourne Water amendments also removes decision guidelines that are related to urban design including:
- *Development achieves good urban design and equitable access.*
 - *Ground floor design of the building maintains good physical and visual connection between the street and internal ground floor.*
 - *Development activates the street edge and frontage.*
 - *Materials and finishes are resilient to damage in flood events.*
177. I consider these deletions are appropriate as the decision guidelines should relate to the schedule objectives and the statement of risk, which for the LSIO and SBO are primarily focussed on flooding and not urban design matters.
178. Where a specific urban design outcome is sought, it is my view that a local policy response would provide the required layer of guidance of discretion for decision-makers.
179. The intended merits of closer aligning urban design outcomes with the flooding response of higher floor levels are appreciated, but the decision guidelines of the LSIO and SBO are not intended for that purpose.
180. The proposed revised decision guidelines include:
- *The practicality and reliability, over the likely lifetime of a development, of any proposed strategies to minimise or mitigate risks of flood damage or safety hazards.*
 - *Whether the development will likely result in persons and property being exposed to unsafe flood depths and velocities.*
 - *Whether the proposed development maintains existing flood storage capacity and flow paths.*
 - *The likely or modelled extent of any likely or modelled impact development on floodwaters, including the specific and cumulative nature and extent of impact on surrounding properties.*
 - *The individual and cumulative cost to the community of the likely tangible and intangible flood damages, over time.*
181. I am satisfied that the proposed decision guidelines are sufficiently neutral in terminology and provide an assessable test for a decision.

9. Is the policy direction, including background documents, appropriate?

9.1. Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay

- 182. The policy tension of the draft Amendment is to address the increased flooding risk due to climate change at the same time as ensuring the built form outcome of the mitigation achieves a high-quality public realm.
- 183. The nature of the flooding controls, through the setting of required floor levels, presents a design challenge in achieving an interface that acts not only as a barrier to water, but also public access.
- 184. Without due consideration of the design of this treatment, the response can bias too much to the engineering considerations, resulting in a utilitarian outcome where buildings do not foster activation and interaction to the street as well as creating barriers for equitable access.
- 185. The Melbourne Planning Scheme includes policy direction which prioritises urban design generally in the objectives of Clause 02.03-4.
- 186. The policy direction of the Fishermans Bend Urban Renewal Area Policy of Clause 11.03-6L-06 is more definitive in its desire for urban design in the precinct not be a secondary consideration to flooding protection. The strategies under 'Achieving a climate adept, water sensitive, low carbon, low waste community' favours raising internal floor levels above the street as a last resort, except where the implementation of other measures couple with an evidence-based approach to risk management reasonably necessitates raising internal floor levels above street level.
- 187. This intent needs to be balanced with the policy direction of 13.03-1S where the objective is to assist in the protection of life, property and community infrastructure from flood hazard and Clause 02.03-3 where development is encouraged to be resilient to the effects of extreme storm events and sea level rise.
- 188. Clause 11.03-6L-01 'Arden Precinct' also seeks to ensure the individual and combined impacts of sea level rise and flooding from storm events is managed through a combination of precinct wide and property specific management measures and physical infrastructure.

Implementation

- 189. The Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay was developed several years ago in partnership with Melbourne Water, City of Melbourne and City of Port Phillip.

190. The intention of the Guide is to assist the development industry, permit applicants and decision makers with achieving flood responsive design while achieving places which are people-centred, activated, equitable and resilient.
191. The Good Design Guide includes guidance which builds on the objectives of publications, *Guidelines for Development in Flood Affected Areas (DELWP, February 2019)* and *Planning for Sea Level Rise Guidelines (Melbourne Water, February 2017)*.
192. The Good Design Guide has been endorsed by the Future Melbourne Committee for inclusion within the Melbourne Planning Scheme as a background document.
193. The disclaimer on page 2 signals this intent but also clarifies that the Guide does not:
 - *Supersede any requirement of the Victorian Flood Guidelines and Sea Level Rise Guidelines or the relevant planning schemes.*
 - *Perform the role of a decision guide for the determination of applications by the relevant Floodplain Manager. This not an Incorporated Document, or a replacement for any existing performance standard. This document does not prescribe any type of planning decision or approval from any decision making authority.*
194. Direction with regards to the status afforded background in planning scheme is provided within *A Practitioners Guide to Victorian Planning Schemes (Version 1.5, April 2022)*.
195. Background documents are intended to provide additional detail on the context in which policy position within the scheme has been developed. Background documents do not form part of the planning scheme and where elements such as built form guidance is intended, these should be included in the planning scheme either in a policy or schedule.
196. As a background document, it needs to be clear for applicants and decision makers that the Good Design Guide does not have statutory weight in decision making.
197. As I discussed in my review of the proposed overlays in Section 8 of this statement, it is not appropriate to reference it in decision guidelines or to raise it to a level of prominence where it could be afforded too great a consideration in determining permit applications.
198. This includes whether it is appropriate to include it as a listed policy document with the LSI03, SBO2 and SBO3.
199. The Practitioner's Guide (p. 123) provides direction on where it is appropriate to reference a background document within a provision:

'Where a background document has directly informed the creation of a provision, then it may be referenced directly by that provision as well as being listed in the Clause 72.08 schedule.'
200. In this respect, I don't believe the Good Design Guide has necessarily been a document that has informed the development of the applied controls to warrant its listing within the LSI0 and SBO schedules. Rather, it is a document that seeks to guide stakeholders as to the design possibilities in responding to the control itself.
201. It is dissimilar to the situation where a structure plan would provide the basis of a schedule to the Activity Centre Zone or a built form analysis gives rise to a Design and Development Overlay.
202. The Guidelines for Development in Flood Affected Areas (DELWP, February 2019), in comparison, more broadly addresses flooding matters, providing additional detail to explain controls and policy within the planning scheme.
203. It is to be included within the Schedule to Clause 72.08 but not with the proposed schedules for the LSI0 and SBO.

204. Accordingly, it is my view that the reference to Good Design Guide should be deleted from the provisions of the LSIO3, SBO2 and SBO3 and should be listed in the Schedule to 72.08 only.
205. If it is to be referenced separately within the Melbourne Planning Scheme, I consider that it could be referenced within the PPF in Clauses 15.01-1L-04 'Urban design' and 15.01-1L-05 'Urban design outside the Capital City Zone' with relevant policy direction on how development proposal subject to the LSIO and/or the SBO should incorporate urban design measures.

Content

206. The focus of the Good Design Guide is to provide guidance on the on achieving good design and equitable access in flood affected areas alongside the mitigation of hazards and property damage from flooding.
207. I understand that the exhibited version of the Good Design Guide is the final version which has been adopted by Melbourne and Port Phillip Councils.
208. As detailed in the discussion above, I regard the Good Design Guide as a useful source of information on how building design may response to the Nominal Flood Protection Level (NFPL) in a LSIO and SBO area but not to inform decision making.
209. I observe submissions to advertising of the amendment that there were concerns that the Good Design Guide was not broad enough in its focus on the effects of the NFPL on overall building heights, or podium and streetwall heights, and how suggested design measures are viewed in the context of a Floor Area Ratio assessment.
210. It is my view that the Good Design Guide, as a background document, does not need to provide a solution to every circumstance as it has limited weight in decision making.
211. Instead, its focus is narrower, seeking to provide guidance on the street interface where a NFPL is to be adopted.
212. In reviewing the document, I do consider that there are some opportunities for improvement, particularly around disabled access. I am advised that the Guide is likely to be reviewed in the near future. Given that this document has background status only and other regulations, such as Disability Discrimination Act, require consideration of equitable access, I consider that this update can wait until this broader review.

9.2. Technical Reports

213. I consider it is appropriate to reference the modelling documentation in Section 72.08 of the Scheme, referencing Clauses 44.04 and 44.05 as the related ordinance.
214. The technical reports provide the basis for the mapping of the LSIO and SBO and accordingly they are appropriate background documents as they provide additional information to explain how a control and associated policy was formulated.

10. Specific Issues

10.1. Transitional Arrangements

215. The provisions do not propose any transitional arrangements for applications that are in the process of being determined at the time of gazettal of the amendment. There may also be developments that have previously been granted planning permits but are yet to commence construction, or are currently being developed in stages.
216. The implications are that architectural designs may need to be redesigned to align the approvals with the revised floor levels. This presents an additional cost burden to proponents in the redesign and delays in projects progressing and will also reduce confidence in the planning approval process if buildings are required to be further modified post planning approval.
217. In such instances, the transitional arrangements are included within new provisions to ensure those who have commenced on the design of their development are not unduly affected through the changes. This is particularly pertinent where the change will result in a proposal becoming otherwise prohibited through the change.
218. The challenge in considering transitional arrangements for the proposed LSI03, SBO2 and SBO3 is that the control is not being applied in isolation.
219. It is understood that from 29 July 2021, Melbourne Water has adopted the updated flood information subject to this process as 'the best available' information, as required by the *Water Act 1989*, the *Planning and Environment Act 1987*, and the *Building Act 1993*.
220. Likewise the City of Melbourne Municipal Building Surveyor has resolved to use the updated flood information and the Victorian Building Authority has been notified under the *Building Act 1993*.
221. In that respect, the proposed amendment is not introducing a new development control, it aligning the application of flood controls under other legislation. In the absence of a planning control, the Building Regulations 2018 require a report and consent process at the building permit stage pursuant to Regulations 153 and 154.
222. Regulation 153 'Report and consent for buildings in areas liable to flooding' requires the consent of council for a building permit where the land is subject to inundation. This includes establishing a minimum floor level in consultation with the relevant flood plan manager and assessing the flood risk, with a permit not to issue where there is a likely danger to the life and health of occupants in the event of flood.
223. Regulation 154 'Report and consent for construction on designated land or designed works' requires consent for a building on designated land or designated works, as defined in the *Water Act*.
224. To this end, applications already in the planning system but not yet approved should, to the best of my understanding, already be being assessed against the new modelling. Accordingly, I am satisfied that there is no need to provide transitional provisions for applications lodged but not yet determined.

225. There are also the considerations of broader implications for allowing development to continue where the changed flood requirements are not included within the approved design.
226. The circumstance is unlike a situation where a new Design and Development Overlay coming into effect may require a building to adopt a lower height or varied built form. The result will be a building resolved to different form controls to those that may follow. The net outcome is a visual effect that may be indiscernible to the community at large.
227. Where a control is related to the management of an environmental risk, the implications of a non-compliant design are greater, where loss of life or damage to property are prime considerations.
228. The long timeframes of the proposed control, projected out to 2100, seeks to assess a building's adaptability to a changing environment over its lifespan.
229. To my mind, the greater issue is where planning permits have been obtained. Certainly, from a planning perspective no further approval is required even when the flooding levels change, not requiring specific provisions to be incorporated into C384.
230. Whilst some submitters have raised the issue of transitional provisions for existing permit holders these submissions do not detail how the permits in question are compromised by the change in planning control.
231. Where a flood level has been determined but a LSIO and/or SBO is in not in place, the flood considerations are to be addressed through a report and consent process pursuant to the *Building Regulations 2018* to allow a building permit to issue.
232. Any transitional arrangement introduced in this process will be effectively redundant as the building regulation requirement will ultimately apply. The inclusion of the LSIO and SBO provides clarity for landowners and proponents early in the process that the flooding matters need to be addressed.
233. It is my view that, in principle, once planning approval has been obtained this should provide certainty for landholders that they can commence construction within the timeline of their permit, which is typically two years.
234. However, the given the overriding considerations of Building Regulations and the importance placed in the building and planning systems on the management of flood risk, the potential for seeking further approval in a limited number of case is, on balance, acceptable.
235. I do consider that the inclusion of a site into an LSIO or SBO or change in flood modelling would also need to be given due consideration with any extension of time request as a material change in the planning context.

10.2. Effect on Height and Form Controls in the Zone Provisions

236. Submissions during the public notification period raised concerns regarding the interaction between the increase in floor levels required under the proposed LSIO and SBO schedules and existing height restrictions in the Melbourne Planning Scheme.
237. This instance is recognised within the provisions of the residential zones which includes the following within the Neighbourhood Residential Zone (Clause 32.09-10), General Residential Zone (Clause 32.08-10), Residential Growth Zone (Clause 32.07-9), Mixed Use Zone (Clause 32.04-11):

'Building height if land is subject to inundation

If the land is in a Special Building Overlay, Land Subject to Inundation Overlay or is land liable to inundation the maximum building height specified in the zone or schedule to the zone is

the vertical distance from the minimum floor level determined by the relevant drainage authority or floodplain management authority to the roof or parapet at any point.'

238. Accordingly, I am satisfied that land within one of the residential zones is not prejudiced by the increased floor levels required by C384.
239. The provisions of other zones covering land affected by the new overlay extent do not include mandatory height controls which would result in a conflict. This includes the commercial, industrial and Special Use Zones.
240. Likewise, the proposed overlays do not create a conflict with mandatory requirements.

10.3. Consistency with Amendment C407 – Arden Precinct Structure Plan

241. Submissions during the public submission process raised concerns that Amendment C384 should be resolved concurrently with that related to the Arden Precinct Structure Plan, Amendment C407.
242. This was relevant at the timing of the exhibition period in November 2021 but Amendment C407 has subsequently been through a Standing Advisory Committee hearing and was gazetted into the Melbourne Planning Scheme on 28 July 2022.
243. I am satisfied that the modelling subject to this amendment was considered as part of Amendment C407 and while there was disagreement among the experts regarding the drainage treatment and the positioning of the ISMOS, it was not a matter that prevented amendment from approval and gazettal.

10.4. Relationship with DDOs

244. I have reviewed the suite of DDOs that affect the City more broadly, including the changes introduced by C308. On balance I am satisfied that C384 does not compromise the effectiveness of these controls, for the following reasons:
- Where appropriate, the DDOs encourage built form outcomes that have a strong relationship with the public realm and have public spaces that are accessible for all people (e.g. DDO1).
 - The mandatory nature of DDO2 (Special Character Areas – Built Form Hoddle Grid) does not affect the areas proposed by C384.
 - The vast majority of the DDOs have discretionary height controls, such as DDO8, DDO9, DDO10 and DDO28 – noting that many of these areas are unaffected C384. The majority of DDOs contain discretionary height controls for both maximum building height and street wall heights.
245. DDO60, which applies to the 'Special Character Areas – Built Form (Southbank)', includes mandatory controls for precincts within the overlay. These include:
- Area 4B – Dodds Street 14 metres
 - Area 5B – Wells Street Precinct 70 metres to Australian Height Datum
 - Area 6 – Southbank Village 14 metres
 - Area 7 – Arts Centre 24 metres
246. Clause 2.3 of the Schedule directs that a permit cannot be issued to vary the requirement.
247. Of these precincts, the proposed LSIO extent affects most of Area 4B, the southern section of Area 6, and the western extent of Area 7.
248. These areas are mapped in Figure 10-1 below.

Legend

- DDO - Design and Development Overlay
- LSIO - Land Subject to Inundation Overlay - Schedule 3
- Municipal Boundary

Note:
DDO map information taken from the Melbourne Planning Scheme - Local Provision / Maps No 80DOPT3 and 110DOPT3
LSIO map information taken from the Melbourne Planning Scheme - Local Provision / Amendment C384melb / Map No 8LSIO
Aerial photo taken from Landchecker on September the 6th 2022

Drawing Title:
LSIO and DDO Map Overlay

Amendment C384
Client:
Melbourne Water

Project No: 17735U
Date: 06.09.22
Drawn: AUW
Scale: -
Version: V1
Board: 1 of 1

0 20 60 100 200 300m

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249. The respective built form outcomes for these areas are:

Area 4B	The maintenance of the dominance of the Arts Centre Spire silhouetted against the sky from the south along Sturt Street.
	The protection of the low scale residential development on the east side of Dodds Street.
	To enhance the sense of openness, maintains access to expansive sky views and maximises solar access from the low scale residential development on the east side of Dodds Street.
Area 6	Low scale development that enhances the sense of openness, maintains access to expansive sky views and maximises solar access.
	Development that respects and complements the adjoining Victoria Barracks heritage buildings.
	Development that maintains the existing street scale proportions.
Area 7	The protection of the stature of heritage and civic buildings along St Kilda Road.
	The maintenance of the importance of St Kilda Road as a grand entrance to the City.

257. DDO60 does not include any provision for varying the heights to accommodate increased floor levels to manage flooding. In fact, the provision is silent on flooding management matters. The current LSIO only has a small crossover in the southern section of the DDO60 extent.
258. Although the mandatory heights set in DDO60 are to protect view lines and to respect the scale of adjoining built form, I consider there to be merit in allowing the height to be taken from the NFPL rather than natural ground, similar to the approach applied in the residential zones.
259. This is particularly relevant where the height limit expressed in metres is relatively low as is the case for Area 45b, which sits at 14 metres.
260. I appreciate that there may be broader urban design considerations in such a change through this amendment, such as view lines and the effect on solar access to spaces, but it is an approach that should be advanced considering the long timeframe of these proposed controls.

11. Are there any changes to the draft Amendment that I consider necessary?

261. My review of the amendment material is supportive of the proposed changes of Melbourne Water, which replace the urban design focussed decision guidelines and reference to the Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay as not being consistent with the objectives of the provisions and instead places this Guide as a background document.
262. My recommendation is that the Good Design Guide is not listed as a background document within the LSIO2, SBO2 and SBO3 and only be referenced within the Schedule to Clause 72.08 only.
263. I also recommend deleting the reference to the Guidelines for Development in Flood Affected Areas with the decision guidelines of Clause 5.0 of the LSIO, SBO2 and SBO3.
264. The only additional suggested change I would recommend, as discussed in my review of the interaction with other controls above, is to:
- Change the wording of DDO60 to allow mandatory heights to be measured from the NFPL rather than natural ground, similar to the approach applied in the residential zones.
265. I believe this approach is warranted where there is a mandatory control to ensure the development potential of sites is not unduly constrained. This is particularly the case for sites located within Area 4B, which has a mandatory 14 metres height control.
266. I appreciate that there may be other urban design considerations, such as viewlines, providing height to be measured from NFPL will enable a balanced consideration of these competing objectives through the planning permit stage.

12. Conclusion

- 268. I am satisfied that the draft Amendment C384melb of the Melbourne Planning Scheme effectively translates the updated flooding into planning provisions and policy direction, subject to the changes recommended above.
- 269. The use of modelling with a timeframe out to 2100 is a practical acknowledgement of the increasing flooding risk the built environment will face due to climate change.
- 270. Overall, I am satisfied that draft Amendment C384melb has taken appropriate direction from the Planning Policy Framework, the Municipal Strategic Statement and relevant local policies of the Melbourne Planning Scheme.
- 271. The provisions are consistent with relevant Ministerial Directions, in particular The Form and Content of Planning Scheme, and Planning Practice Notes.
- 272. I am comfortable that the proposed amendment achieves a planning outcome with a net community benefit and is consistent with the objectives of planning for Victoria subject to the changes detailed in Section 11.



Colleen Peterson
Ratio Consultants Pty Ltd

Appendix A

Letter of Instruction

**IN THE MATTER OF
PLANNING AND ENVIRONMENT ACT 1987**

C384 CITY OF MELBOURNE

CITY OF MELBOURNE

Planning Authority

and

MELBOURNE WATER

Referral Authority

BRIEF TO EXPERT WITNESS

We act for Melbourne Water Corporation (**Melbourne Water**) in relation to proposed Amendment C384 (**Amendment**) to the Melbourne Planning Scheme. You are briefed to provide expert evidence to the Panel on planning issues relevant to the Amendment.

1 Instructions

We enclose an index of materials for review. Copies will be sent to you via download link.

You are instructed to:

- (a) review the enclosed materials for the Amendment;
- (b) in due course, prepare an expert witness statement for the Panel hearing on behalf of Melbourne Water; and
- (c) consider the Planning Panels Victoria Guide to Expert Evidence in preparing your statement for the Panel.

We will provide you with instructions on the questions to consider in your statement separately.

2 Background

2.1 Scope of Amendment

The Amendment will make various updates to the Planning Scheme in relation to flood risk management for riverine and drainage flooding. The changes described in the exhibited documents include:

- (a) updating the mapped extents of the Land Subject to Inundation Overlay (**LSIO**) and the Special Building Overlay (**SBO**) in several catchments of the municipality;

- (b) introducing flood management objectives, statements of risk, permit triggers, application requirements and decision guidelines into the new LSIO and SBO schedules; and
- (c) introducing a new background document entitled the *Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay* (**Good Design Guide**).

The Amendment will integrate updated flood modelling prepared on behalf of the City of Melbourne and Melbourne Water into the planning system. The updated flood mapping extents cover the Arden, Macaulay and Moonee Ponds Creek catchment, and the Elizabeth Street, Fishermans Bend, Hobsons Road, Lower Yarra River and Southbank catchments. The underlying technical reports will be introduced into the Planning Scheme as background documents.

The mapped extent of the existing LSIO1 (generally along the Maribyrnong River, Childers Street and Dynon Road), and LSIO2 (Flemington Racecourse) is not proposed to be amended, as the modelling for those catchments has not yet been updated. Similarly, the extent of the existing SBO in the Planning Scheme (outside the catchments specifically described in this Amendment) is not proposed to be amended as the associated modelling has not been updated. Existing SBO maps are being deleted and renamed SBO1 to comply with naming conventions.

A complete set of maps are at **Tab B3** of your brief.

2.2 Purpose of Amendment

The Amendment is required to provide contemporary flood risk information for the Lower Yarra and Southbank catchments. The updated overlays will trigger planning permit assessment requirements for additional areas in the municipality once gazetted. The SBO was last updated in May 2001 (C012), and the LSIO was last updated in February 2011 (C153).

The Amendment is also required to ensure precinct planning and development in urban renewal areas like Fishermans Bend, Arden and Macaulay appropriately consider and plan for flood risk. The structure plans and associated planning scheme amendments for these precincts have not been finalised. Amendment C407, which includes the Arden Structure Plan and associated changes to planning controls and policy, was assessed by the VPA Projects Standing Advisory Committee in February and March 2022. The Arden Structure Plan and the accompanying Flood Management Strategy acknowledge flood risk as a key challenge, and reference the updated modelling prepared by Melbourne Water and the City of Melbourne for C384. The Standing Advisory Committee's Report on Amendment C407 was published on 2 May 2022.

The refreshed Macaulay Structure Plan was endorsed by the Future Melbourne Committee in November 2021. It also acknowledges projected increases in flood risk to the area due to climate change, and the works proposed to mitigate those risks. The associated planning scheme amendment was endorsed to proceed to the Minister in June (see FMC agenda [here](#) for context only).

Melbourne Water is developing cost recovery schemes using its *Water Act 1989* (Vic) powers to recover costs associated with providing precinct-level flood mitigation works in these areas.

2.3 Flood Modelling

The new flood mapping extents reflect updated modelling to the Australian Rainfall and Runoff (**ARR**) 1987 Standard, with the inclusion of the following criteria from the ARR 2019 Standard to model for the effects of climate change:

- (a) an 18.5% increase in rainfall intensity by 2100; and
- (b) where there are influences from Port Phillip Bay, for Moonee Ponds Creek and the Lower Yarra River, a boundary condition inclusive of a starting water surface level of a 10% Annual Exceedance Probability (AEP) tidal level, plus a 0.8 metre sea level rise in 2100.

Inundation associated with sea level rise and coastal inundation is not included in the modelling for the Amendment. DELWP and CSIRO are undertaking a separate coastal hazard assessment of Port Phillip Bay, which may inform an overlay in future.

2.4 Good Design Guide

The Amendment includes the proposed introduction of the Good Design Guide into the Planning Scheme. The Good Design Guide has been prepared jointly by the City of Melbourne, City of Port Phillip and Melbourne Water. In the exhibited version of the Amendment, the Good Design Guide was proposed to form part of the new listed decision guidelines for permit applications under LSIO3, SBO2 and SBO3.

Submissions to the Amendment include concerns about the role of the Guide in the scheme and whether Council will treat it as a binding decision guideline. Following exhibition of the Amendment, Melbourne Water has proposed a number of amendments to the associated controls. These include removing the Good Design Guide from the listed decision guidelines for permit applications under LSIO3, SBO2 and SBO3 and instead including the Good Design Guide as a background document. We are instructed that the proposed controls may be amended further by Melbourne Water / Council before the Panel following feedback from Council.

3 Submissions

The Amendment was advertised from 13 October to 29 November 2021. 43 written submissions were received during the exhibition period, which are included in your brief (**Tab D1**).

4 Key dates

No formal timetable has been published at this stage. It is currently proposed that there will be a directions hearing on 29 August, and the Panel hearing will commence in the week of 17 October 2022 (and run for an estimated three weeks). We will be in touch to confirm the dates of the Panel hearing once the timetable is settled.

5 Next steps

Once you have had an opportunity to review the materials, we would like to arrange a short call with you to discuss the Amendment.

Please contact Jillian Button on (03) 9613 8557 or Jillian.Button@allens.com.au, or Emily Johnstone on (03) 9613 8162 or Emily.Johnstone@allens.com.au if you have any queries.

12 July 2022

ALLENS

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Tab	Document	Author	Date
A	Proposed Amendment C384 – Overview and consultation documents		
1	Report to the Future Melbourne Committee - Amendment C384 - Inundation Overlays and the Good Design Guide	City of Melbourne	3 August 2021
2	DELWP letter to Melbourne Water re State Floodplain Management Policy, Proposed Amendment C384	DELWP	29 April 2021
3	Melbourne Water letter to City of Melbourne re Amendment C384 to the Melbourne Planning Scheme	Melbourne Water	28 June 2021
4	Melbourne Water letter to City of Melbourne re Flood Information for City of Melbourne	Melbourne Water	29 July 2021
5	Melbourne Water letter to City of Melbourne enclosing Melbourne Water response to submissions (just those allocated to Melbourne Water)	Melbourne Water	20 June 2022
6	Melbourne Water additional amendments to exhibited controls (following discussion with City of Melbourne)	Melbourne Water	29 June 2022
B	Exhibited Controls and Maps – C384		
1	C384 - Explanatory Report	City of Melbourne	3 August 2021
2	C384 - Instruction Sheet	City of Melbourne	-
3	C384 Maps (Deletions and replacements)	DELWP	16-18 October 2020
4	Amendments to LSIO1 (formatting)	City of Melbourne	-
5	Amendments to LSIO2 (formatting)	City of Melbourne	-
6	New LSIO3	City of Melbourne	-
7	New SBO1 (formatting)	City of Melbourne	-
8	New SBO2	City of Melbourne	-
9	New SBO3	City of Melbourne	-
10	Amendments to Schedule to Clause 72.03 (What does this planning scheme consist of?)	City of Melbourne	-
11	Amendments Schedule to Clause 72.08 (Schedule to Background Documents)	City of Melbourne	-
C	Exhibited Background Documents to C384		
1	Technical Report 01: Australian Rainfall Runoff Sensitivity Analysis	Engeny Water Management	22 July 2020
2	Technical Report 02: Southbank Flood Modelling Update and Climate Change Scenarios	Water Modelling Solutions	21 April 2020
3	Technical Report 03: Southbank Stormwater Infrastructure Assessment: Final Report	BMT WBM	August 2015
4	Technical Report 04: Elizabeth Street Melbourne Flood Modelling Report including Memoranda dated 9 April 2020 and 13 February 2020	Water Technology	August 2017 (plus 2020 memoranda)
5	Technical Report 05: Arden Macaulay Precinct & Moonee Ponds Creek Flood Modelling	Engeny Water Management	August 2020
6	Technical Report 06: Lower Yarra River Flood Mapping	GHD	24 September 2020
7	Technical Report 07: Hobsons Road Catchment Flood Mapping Update including review response dated 22 April 2020	Venant Solutions	17 June 2020
8	Technical Report 08: Fishermans Bend Flood Mapping	GHD	November 2020

Tab	Document	Author	Date
9	Technical Report 09: Overlay Delineation Report	Engeny Water Management	27 October 2020
10	Guidelines for Development in Flood Affected Areas	DELWP	February 2019
11	Planning for Sea Level Rise Guidelines	Melbourne Water	February 2017
12	Good Design Guide for Buildings in Flood Affected Areas in Fishermans Bend, Arden and Macaulay	City of Melbourne, Melbourne Water and City of Port Phillip	June 2021
D	Submissions received for C384		
1	Complete set of combined submissions (PDF)	-	-
E	Other relevant amendments		
1	Amendment C407 (Arden): <ul style="list-style-type: none"> Explanatory Report (Public consultation version) Amendment C407 Special Advisory Committee Report 2 May 2022 	-	August 2021; May 2022
2	Amendment C417 (Macaulay): <ul style="list-style-type: none"> Future Melbourne Committee Report Explanatory Report 	-	14 June 2022
F	Existing flooding overlays		
1	Land Subject to Inundation Overlay (cl 44.04)	-	At 1 September 2021
2	LSIO1 (cl 44.04.01)	-	At 1 September 2021
3	LSIO2 (Overlay 44.04.02)	-	At 1 September 2021
4	Special Building Overlay (cl 44.05)	-	At 1 September 2021
G	Relevant amendments – Melbourne Planning Scheme		
1	C012 - Explanatory Report	-	23 January 2001
2	C012 - SBO (cl 44.05)	-	23 January 2001
3	C012 - Schedule to SBO	-	23 January 2001
4	C012 - Maps to SBO	-	23 January 2001
5	C153 - Explanatory Report	-	10 February 2011
6	C153 - Instruction	-	10 February 2011
7	C153 - LSIO1 (cl 44.04.01)	-	10 February 2011
8	C153 - LSIO2 (cl 44.04.02)	-	10 February 2011
9	C153 - Maps to LSIO	-	10 February 2011
10	Report to the Future Melbourne Committee - Amendment C376: Sustainable Building Design <i>Ensuring new buildings in the municipality respond to climate change</i>	City of Melbourne	15 September 2020
11	VC171 - Explanatory Report <i>Managing coastal hazards and coastal impacts of climate change</i>	-	6 September 2021