Our ref: DOC20/955172

Ms Melissa Rassack
Manager, Western Sydney Employment Area
Department of Planning, Industry and Environment
Locked Bay 5022
Parramatta NSW 2124

Dear Ms Rassack

Exhibition of the draft Mamre Road Development Control Plan

Thank you for your letter of 10 November 2020 notifying Environment, Energy and Science (EES) in the Department of Planning, Industry and Environment of the release of the draft Mamre Road Precinct Development Control Plan (DCP) November 2020 for public exhibition and comment.

EES has reviewed the draft Mamre Road Precinct DCP and provides comments on the following matters at Attachment A:

- biodiversity
- waterway health
- floodplain risk management.

Should you have any queries regarding this matter, please contact Marnie Stewart, Senior Project Officer Planning on 8837 6304 or Marnie.Stewart@environment.nsw.gov.au.

Yours sincerely

S. Harrison

15/12/20

Susan Harrison
Senior Team Leader Planning
Greater Sydney Branch
Biodiversity and Conservation

Attachment A – EES comments on draft Mamre Road Precinct DCP (November 2020)

Biodiversity

EES understands that the urban development footprint for the Precinct has been informed by the draft Cumberland Plain Conservation Plan (CPCP). At this stage EES has not reviewed the draft CPCP so is unable to comment on its adequacy.

Waterway health

EES's comments below have a focus on the draft DCP controls for Riparian Lands, Integrated Water Cycle Management and Salinity. Please note that the same comments apply to relevant sections of the Integrated Water Cycle Management Strategy.

- Page 23, Section 2.5 Riparian Land: There are 19 objectives, some of which have very similar (or the same) intent and could therefore be merged e.g. objective c) and k); objectives a) and l).

- Page 23, Section 2.5 Riparian Land, Objective a): replace the word maintained to improve or restore to be consistent with other objectives. Note that water quality in the area is not of a condition that should be maintained, but rather improved.

- Page 23, Section 2.5 Riparian Land, Objective j): replace 'waterway health targets' with 'water quality and flow related objectives'.

- Page 26, Section 2.6 Integrated Water Cycle Management: Following description of flow components add and refer to new Table (see below). Delete 'and baseflow requirements' in the last/following sentence.

Table Ambient stream flows and requirements of waterways and water dependent ecosystems in the Mamre Rd Precinct

Flow Related Objectives		
	1-2 Order Streams	3rd Order Streams or greater
Median Daily Flow Volume (L/ha)	71.8 ± 22.0	1095.0 ± 157.3
Mean Daily Flow Volume (L/ha)	2351.1 ± 604.6	5542.2 ± 320.9
High Spell (L/ha) ≥ 90th Percentile Daily Flow Volume	2048.4 ± 739.2	10091.7 ± 769.7
High Spell - Frequency (number/y) High Spell - Average Duration (days/y)	6.9 ± 0.4 6.1 ± 0.4	19.2 ± 1.0 2.2 ± 0.2
Freshes (L/ha) ≥ 75th and ≤ 90th Percentile Daily Flow Volume	327.1 to 2048.4	2642.9 to 10091.7
Freshes - Frequency (number/y) Freshes - Average Duration (days/y)	4.0 ± 0.9 38.2 ± 5.8	24.6 ± 0.7 2.5 ± 0.1
Cease to Flow (proportion of time/y)	0.34 ± 0.04	0.03 ± 0.007
Cease to Flow – Duration (days/y)	36.8 ± 6	6 ± 1.1

- Page 26, Section 2.6.1 Stormwater Management, first paragraph: remove the term ‘interim’, and replace ‘which prescribe a stormwater runoff objective of 1.9 megalitres (ML) per hectare per annum, measured at any discharge point to the waterway system’ with ‘which have been simplified to a stormwater discharge target of 2 ML per hectare per annum, measured at any discharge point to streams that are categorised as ≥ 3 Strahler Order’.

- Page 26, Section 2.6.1 Stormwater Management, Objectives a): replace 1.9 ML/ha/y with 2 ML/ha/y.

- Page 27 Controls Waterway health and WSUD, control 1: replace ‘interim NSW Government stormwater catchment flow objectives’ with ‘NSW Government water quality and flow related objectives’. Replace 1.9 ML/ha/y with 2 ML/ha/y.

- Page 30, Section 2.6.2 Stormwater Quality: Replace Table 6 with the new Table below:

Table Ambient water quality of waterways and waterbodies in the Mamre Rd Precinct

Water Quality Objectives	
*Total Nitrogen (TN, mg/L)	1.72
Dissolved Inorganic Nitrogen (DIN, mg/L)	0.74
Ammonia (NH_3-N, mg/L)	0.08
Oxidised Nitrogen (NOx, mg/L)	0.66
*Total Phosphorus (TP, mg/L)	0.14
Dissolved Inorganic Phosphorus (DIP, mg/L)	0.04
Turbidity (NTU)	50
Total Suspended Solids (TSS, mg/L)	37
Conductivity (µS/cm)	1103
pH	6.20 - 7.60
Dissolved Oxygen (DO, %SAT)	43 - 75
Dissolved Oxygen (DO, mg/L)	8

***** when showing compliance towards TN and TP through industry models, the DIN and DIP performance criteria should be instead to recognise that stormwater discharges of nutrients are mostly in dissolved form

- Page 30 Controls – control 4 (bottom of page): replace with ‘All proposals must demonstrate how they comply to the water quality objectives’.

- Remove Table 7 – Pollution Load Reduction Targets.

- Page 36, Section 2.9 Salinity, Controls – control 5: need to add a caveat around balancing the need to minimise recharge with downstream groundwater dependent ecosystems (which make up the Cumberland Plain vegetation).

Floodplain risk management

EES flood risk management comments on the draft Mamre Rd DCP (November 2020) are set out below. As the Department is aware, EES previously provided comments on the Draft Mamre Road DCP on the 31 July 2020 and 3 August 2020 on the proposed consideration of flood risk management. Overall, these comments remain relevant and the comments provided below are in addition to those previously provided.

It is noted that the Mamre Road Flood and Riparian and Integrated Water Cycle Management Strategy prepared by Sydney Water has been included in the exhibition material. EES has previously provided comments on earlier versions of this report including on 7 July 2020 and 27 August 2020. EES has not reviewed this current exhibited version of the report for adequacy of flood assessment presumably provided to support the draft DCP. DPIE Greater Sydney Place and Infrastructure should satisfy itselve that this report adequately provides advice on the constraints flood places on land where this work is to be relied upon.

Draft Mamre Road Precinct DCP (November 2020) – flood risk management comments

As an overall comment, the DCP would benefit from a matrix approach that considers flooding systematically in different areas of the floodplain based on varying flood constraints and development types within those areas based on zoning and permissible development. This would avoid duplication and clearly identify controls based on constraints identified as areas within the floodplain for different development types. This type of approach is often used by local councils.

Specific comments:

Page 13, Section 2.2.3 Objective P
p) To maintain the function of the floodplain to convey and store floodwaters to limit adverse impacts of flooding on the development, its users and surrounding properties
Delete, and ensure inclusion in the Flood Prone Land Objectives - this is an objective for Floodplain Management not an objective for Biodiversity and conservation.

Page 32 and 33, Controls
~~*2) The levels on the survey are required to be verified during construction by a survey certificate. The study shall incorporate:*~~

- ~~*A survey of the main watercourse;*~~
- ~~*A survey of the site; and*~~
- ~~*A detailed flood and drainage investigation which establishes the estimated 20% AEP, 1% AEP (100 year ARI) 0.2% AEP and Probable Maximum Flood levels including overland flow paths.*~~

Comments: Delete this item.

Page 33, items under Control (3)
Point 3
If the development is to be located within the PMF, a flood evacuation plan will be required;
Comments: Is this control for each development? It is unrealistic to require every development to prepare an evacuation plan, perhaps an emergency response plan is more appropriate.

Point 4 and 5
The structure of the proposed building works shall be adequate to deal with the flood behaviour for a full range of floods identified in control 1;
The proposed building materials are flood compatible with a full range of floods identified in control 2.7(1);
Comments: This control set requirements for structural soundness and compatible materials for all types of development for the full range of floods. This indicates applying building controls up to the

PMF, which is not required given the flood behaviour therefore this should change to 1% AEP plus 0.5m.

Point 6
The buildings and their access are sited in the optimum position to avoid flood waters and allow optimal vehicular flood access from the site for evacuation
Amend to: Ensure the siting and layout of development considers flood constraints maintaining personal safety during the full range of floods. The site layout and ultimate built form of the development should be compatible with the flood constraints and potential risk.

Point 8
The proposed redevelopment will not expose any persons to unacceptable levels of risk or any property to unreasonable damage
Comments: This requirement is impossible to demonstrate without being relative to a design standard – such as the flood planning level.
'unacceptable and unreasonable' should be replaced with terminology related to floodplain management industry standard.

Point 9
Compliance of any existing buildings with the Standard - Construction of Buildings in Flood Hazard Area and the accompanying handbook developed by the Australian Building Codes Board (2012);
Comments: Need careful consideration on how this requirement for existing buildings would be implemented and its time frame. It is likely impossible to meet this requirement through a retrofit without demolishing the 'existing building' nor is it likely necessary for all buildings and/or locations within the floodplain.

Point 10
The proposed development will limit impact on riparian corridors and be designed and maintained to allow for natural stream processes;
Comments: Delete this item. This is not a flood risk management requirement

Page 35, Flood Hazard Classifications
Flood Hazard Classifications
Comments: in the header, delete 'hazard classifications' and replace with the word **'constraints'**

Page 33, New Development
Point 6: Floor levels shall be at least 0.5m above the 1% AEP (100 year ARI) flood.
Comments: Floor levels and controls will likely need to be fit for purpose for different development types and locations within the floodplain. Consideration of what is likely to be permitted and the development standard to which the control will be required needs to be considered.

Point 7: Flood safe access and emergency egress shall be provided to all new and modified developments.
Comments: Identify access to where?
This need careful consideration if it is required for every individual development.

Page 33 and 34, Extensions and Infill Development
There is no consideration of

- the potential for the development to impact on flood behaviour
- typical maximum size for concessional development such as extensions or additions, garages, sheds etc and to avoid impacts on flooding, flooding on the development such as structural soundness considerations, or considerations such as buoyancy or debris.

These considerations should be considered and included.

Page 34, Point 16 Overland Flow Flooding
'All required flood detention is to be accommodated …..'
Comment: this is not *flood* detention to manage overland flow as stated. This is stormwater detention. Change from 'flood' to 'stormwater'.

Page 35, Filling of Land At or Below the Flood Planning Level
The proposed allowable impacts due the work below the flood planning level and within the floodway / storage areas of the 1% AEP extent need very careful consideration. If these are individual allowable impacts, cumulatively they may be significant and therefore possibly in conflict with the intent of other flood controls. It is not clear if that has been considered by supporting studies. Suggest that where figures are nominated and proposed on a site by site basis, that they are clarified as such and have a clear evidence base at this stage to support these figures for the entire development area to demonstrate that there is no cumulative impact as a result.

Page 90, Term
1 in 100 chance per year flood - a flood that has a 1% chance of occurring in any given year within a 100-year cycle
Change to: 1% AEP flood – a flood that may be referred to as a 1 in 100 chance per year flood - a flood that has a 1% chance of occurring in any given year within a 100-year cycle.

Page 105, Flood Impact Risk Assessment
Where relevant, a comprehensive Flood Impact Risk Assessment (FIRA) is to be submitted with any development application on land identified as fully or partially flood affected, in accordance with ***Section 0*** *of this DCP. The FIRA should utilise Council's existing data and is to provide an understanding of existing flooding condition and developed conditions consistent with the requirements of the NSW Flood Prone Land Policy and Floodplain Development Manual.*
Comment: Change:

- Section' 0' to the relevant section of Flood Risk Management 'Section 2.7'
- Include at the end of the sentence *and to support assessment of the requirements of this DCP*

Point 3: A detailed flood ~~and drainage~~ investigation which establishes the estimated 20% AEP, 1% AEP (100 year ARI) 0.2% AEP and Probable Maximum Flood levels including overland flow paths.
Comment: Delete *'and drainage'* as this should be separate and not necessarily completed by the same consultant

(END OF SUBMISSION)