Stormwater Scheme Serviced Area

This document provides an explanation of the Stormwater Scheme Serviced Area (SSA), including guiding principles and how it is applied within the Mamre Road and Aerotropolis Initial Precincts.

- Sydney Water is the Regional Stormwater Authority for the Mamre Road and Aerotropolis Initial Precincts
- Sydney Water are to achieve the Wianamatta stormwater quality/flow targets of the relevant DCP's by implementing regional stormwater treatment and harvesting infrastructure
- Sydney Water has developed the SSA to fast track the delivery of regional infrastructure and minimise the need for temporary on-lot works.

Current on-lot approach to meet stormwater targets

Development that precedes the delivery of regional stormwater infrastructure must meet the DCP requirements within the development using interim infrastructure. This approach generates several issues:

- An additional cost to the developer through:
  - Designing, modelling, constructing, operating, and managing the interim solution
  - Sterilising developable land until the Sydney Water regional approach is operational (approximately 25-30% of each development would be allocated to meet the controls)
  - Decommissioning of interim infrastructure once the regional scheme is operational.
- a burden on both State Government and Councils for assessing, conditioning, approving and ensuring compliance of interim on-lot systems.

Proposed solution to reduce on-lot controls

To progress to the regional scheme assets, Sydney Water has developed an accounting approach with the following objectives:

1. Provide a robust solution that can be deployed in line with development and achieve the waterway health targets at all times
2. Optimisation of the overall integrated stormwater scheme cost (the "Development Service Plan" – DSP)
3. Incentivise construction of the regional stormwater basins by developers
4. Facilitate development and approvals of employment lands.
5. Be efficient and effective as possible by undertaking regular reviews and when required update the approach.

Principles of SSA accounting scheme

The following principles have been developed to achieve the above objectives and to ensure consistency and transparency.

Definition: The Stormwater Scheme Serviced Area is an area of land that can be developed without the need for interim/temporary on-lot stormwater quality/ quantity infrastructure, excluding those that are required specifically in the DCP, such as gross pollution traps, on-site detention, passively watered street trees, erosion and sediment control and sediment basins (refer 13).

Key principles of SSA

1. Stormwater management targets (including both the adopted water quality and water quantity targets) will be met at all times.
2. The targets will be assessed on a sub-catchment basis (as shown in Figure 1 for the Mamre Road Precinct). Sub-catchments have been determined to be consistent with discharge into the receiving waterway and align with more recent published Stormwater Scheme Music models. For further detail on the MUSIC models, please contact Sydney Water.

Generation of SSA

3. SSA will be generated at the practical completion of construction of stormwater basins (when 'practical completion' is awarded by Sydney Water).
4. The 'currency' will be net developable area (NDA) as per Sydney Water's net developable area factsheet
5. The amount of area available for development without requiring interim temporary on-lot infrastructure (generally a temporary bioretention or pond with a dedicated irrigation area) to meet the waterway health targets will be based on the following formula:

$$\text{SSA} = \left(\frac{\text{(Constructed basin footprint)}}{\text{(Total subcatchment basin footprint)}} \right) \text{X NDA of Subcatchment}$$

6. The formula used assumes the delivered basin will achieve the modelled flow reductions via harvesting/ re-use. If the proposed harvesting does not achieve the required flow reductions in the period until the regional recycled water network is operational additional measures will be required.
7. The basin footprints will be based on the values in the most recent published MUSIC models.
8. The above formula is not applicable for the Aerotropolis Initial Precincts as there is no finalised scheme plan at the time of writing. Sydney Water will negotiate with developers on a case-by-case basis until the scheme plan is complete.

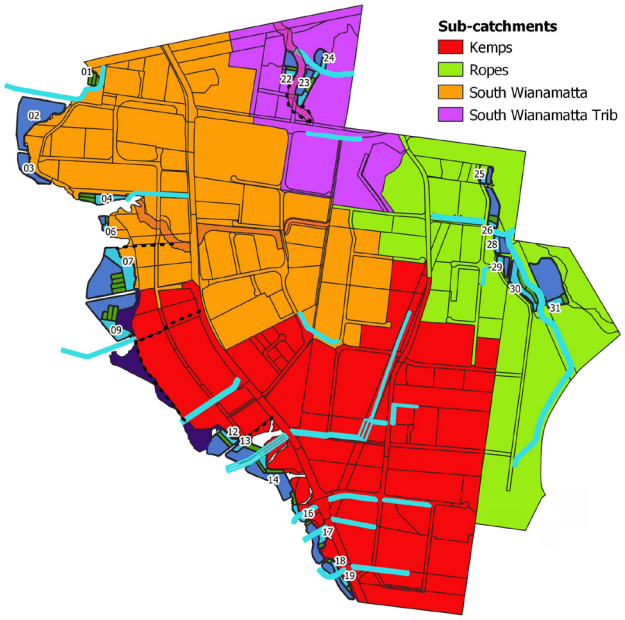


Figure 1 – Mamre Road Precinct sub-catchment for SSA allocation. Note for the sub-catchment and basins per sub-catchments is as follows:

- Wianamatta is basins 1 to 7,
- Kemps is basins 9 to 19,
- Wianamatta Trib. is basins 22 to 24, and
- Ropes is basins 25 to 31.

Allocation of Scheme Serviced Area

9. SSA will be allocated by Sydney Water via a SSA Allocation Letter that can be included in the DA/ SSDA documentation. The letter will outline:
   a. the amount of SSA being awarded to the developer
   b. the developments/land where the developer can use the SSA which will be based on the land that the developer currently owns within the sub-catchment
   c. processes/requirements/timeframes for the developer to implement ensuring SSA will be appropriately used
10. SSA can **only** be used in the sub-catchment in which they are generated and cannot be transferred between sub-catchments (see point 2)
11. SSA cannot be traded as a commodity in any form.
12. SSA will be allocated by Sydney Water in the following order as a guide but is at Sydney Waters discretion:
    a. Firstly, to the specific land parcel on which the basin sits, regardless of ownership, provided this land sits within the same sub-catchment to which the basin services

b. Secondly, to enable development in the landholding/s, within the same sub-catchment and at the time of agreement, of the proponent who has entered into an agreement and constructed the basin. If multiple developers build one basin the allocation of SSA between the parties will need to be agreed prior to approval. If a proponent acquires land in the sub-catchment after the agreement is formed, it will not be eligible to add to this SSA allocation.

c. Any SSA remaining after allocations from a and b above, will be allocated to the developments in that sub-catchment that have already paid the Infrastructure Contribution.

d. Sydney Water will need to determine the removal of any on-lot interim works as part of this allocation.

e. Once point c above is exhausted, Sydney Water will look to allocate any residual SSA to developments at the SSD/DA submission stage on a first case basis.

13. It should be noted that sub-arterial, arterial and collector roads and other infrastructure have already been accounted for as part of the MUSIC modelling and therefore do not require any additional allocation.

SSA recipient requirements:

14. Recipients of SSA will be required to meet the construction phase IWCM controls (i.e. stormwater targets) in the relevant DCP for their site. Unless otherwise advised by Sydney Water, sediment basins are to be provided and operated by the developer within the development with a minimum storage volume of 250 m³/hectare. Consistent with the Technical Guidelines, these sediment basins are to remain active until the regional basin becomes operational or until notified by Sydney Water that they can be removed.

    a. This can generally be achieved by a combined sediment basin and on-site detention system at the lowest area of the development. The staging of development must ensure the sediment basin can stay active until notified by Sydney Water.

15. Recipients of SSA must meet any on-site stormwater detention requirements of Council as outlined in the DCP or as required for floodplain management within the development.

16. The SSA allocation letter will provide timeframes for expected milestones to be achieved to ensure timely delivery of the regional basin/s. If the developer can not meet these timeframes Sydney Water and the consent authority will need to be consulted. Sydney Water has the right to remove the SSA allocation from a developer if they are not able to achieve these timeframes, especially if there is another developer who can.

Accounting scheme manager

17. Sydney Water will manage the SSA accounting process and be responsible for and certify that the Stormwater targets are being achieved by Scheme Infrastructure at all times.

18. Sydney Water will provide quarterly reporting on the status of the accounting approach including for each sub-catchment:

    a. details of basin stage including functional design, detailed design, under construction, practical completion, establishment, and full operation

    b. total SSA generated

    c. total SSA allocated

    d. total net developed area to determine what SSA's have been used and remain

    e. total impervious and pervious areas

    f. certification/compliance with the stormwater targets based on MUSIC models.

19. As part of the quarterly reporting Sydney Water will provide details of active sediment basins within development sites.

20. Once a regional basin is built to practical completion, it is at Sydney Water's discretion as to when the components of the basin (i.e. sediment basin, wetland, bioretention, or pond) will become operational. As indicated in note 14 Sydney Water will ensure the waterway health targets are achieved at all times and this might require some infrastructure be operational at different times. Generally, the bioretention and wetland component can take up to 24 months to be fully operational, however the sediment basin and pond will likely be operational at practical completion.

Site works not covered by this SSA approach

21. Development sites must still meet the stormwater requirements identified by the relevant DCP not directly associated with the regional stormwater targets, including:

- On lot Gross Pollutant Traps
- On site detention
- Passively Irrigated Street Trees
- Naturalised Trunk Drainage Channels and existing waterways
- Other stormwater drainage outcomes.

Illustrative example 1 (hypothetical example only)

Basins 28 and 29 are within the Ropes Creek catchment. Developer A owns 66 ha land of which 36 ha draining to and including Basins 28 and 29, and the remaining 28 ha of NDA drains to Kemps Creek.

Developer A already has approval to develop stage 1 (11 ha) which includes interim on-lot stormwater measures and an irrigation area (pink area in map). However, the developer wants to develop stage 2 (16 ha) via constructing Basins 28 and 29 and has received an SSA Allocation Letter indicating 20 ha of NDA will be allocated and the requirements and timeframes for construction of the basins.

As the SSA (20 ha) is less than the total NDA required (36 ha) by the developer there is no excess SSA.

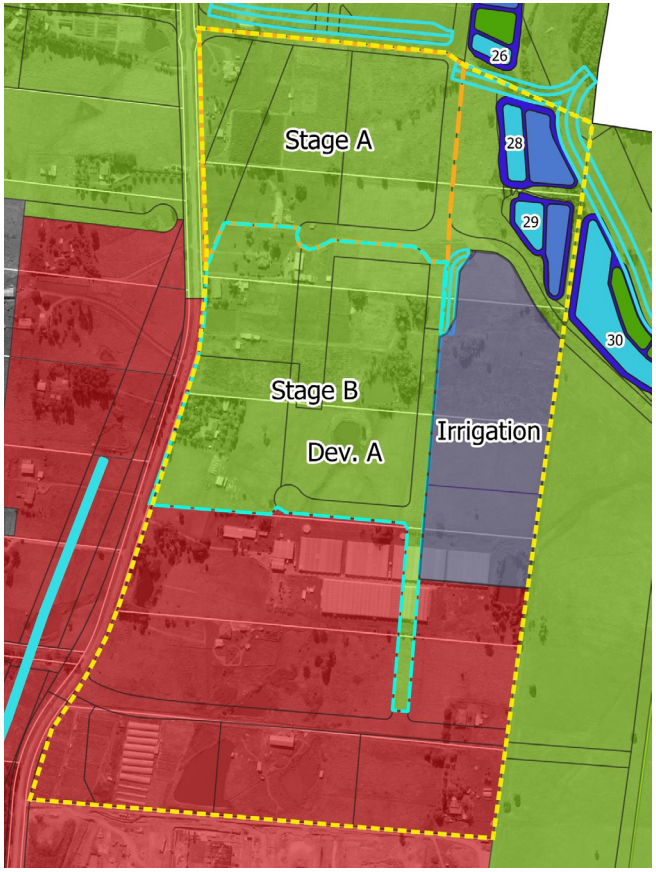
Developer A constructs Basins 28 and 29 and operates the harvesting components to meet the stormwater targets generating approximately 20 ha of SSA that can be used for the stage 2 works but still needs to keep the stage 1 interim measures (includes the irrigation area) to meet stage 1 requirements.

Due to the shortfall of SSA, Developer A must either:

- construct additional basins within Ropes Creek sub-catchment or;
- wait until any available excess SSA can be provided from other future basin constructions by other developers or Sydney Water, or
- provide additional interim on-lot measures for any future development.

The SSA generated by Basin 28 and 29 cannot be used by Developer A for NDA draining to the Kemps Creek sub-catchment (areas in red on the southern portion of development) as it's in a separate sub-catchment.

Sydney Water to provide ongoing certification that stormwater targets are achieved.



Basins 28 and 29 are constructed by Dev A generating 20 ha of SSA to be allocated in accordance with note 12.

Illustrative example 2 (hypothetical example only)

Developer Z has developed within the Kemps Creek sub-catchment based on interim on-lot assets but now needs to remove those measures to free up space for a stage 2.

Developer Z approaches Sydney Water to deliver Basin 9 which will generate 99 ha of SSA within the sub-catchment. However, the proposed basin is located on privately owned land on a lot that also has 12 ha of developable IN1 land

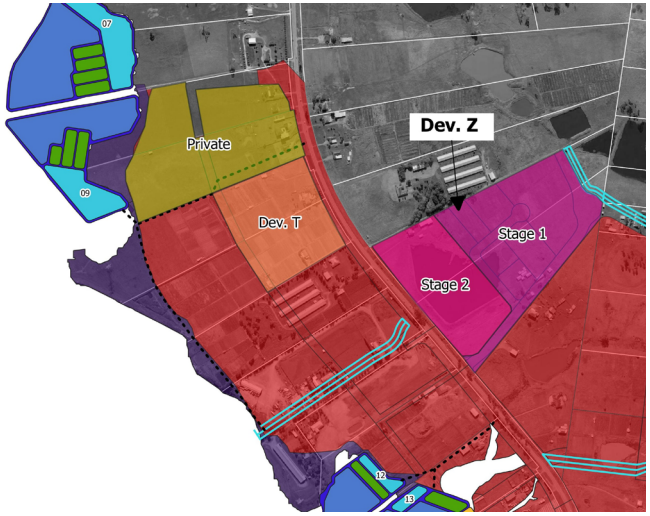
Sydney Water agrees to work with Developer Z to design, approve (via part 5), and deliver basin 9. Land acquisition must be resolved prior to any significant design/approval works occurring or proposed SSD/DA's being allocated via the letter of SSA allocation.

Once resolved, Developer Z can submit the letter as part of the SSD for stage 2 to remove any interim on-lot stormwater measures for their site.

Based on the prioritisation process, when the basin is delivered the allocation of SSA will be provided to allow:

- 12 ha of NDA on the lot which the basin is located if the land acquisition included this area and there was no subdivision.
- 18 ha to the developer Z that delivers the basin, 11 ha to stage 1 and 7 ha to stage 2.
- 69 ha is excess (99-12-18 ha) for Sydney Water to allocate. Developer T is the only other developer in that sub-catchment that has developed and paid an infrastructure charge on a 7 ha development.
- This then leaves 62 ha that can be allocated to future developments that will submit a DA/SSD within this sub-catchment.

Sydney Water to provide ongoing certification that stormwater targets are achieved.



Basin 9 is constructed by Developer Z generating 65 ha of SSA.