



AERIAL VIEW OF STUDY AREA

THIS WORK MAKES USE OF THE FOLLOWING PRINCIPLES OF RAINWATER MANAGEMENT:

1. SLOW THE WATER DOWN TO REDUCE POTENTIAL FOR EROSION AND TO DROP OUT SEDIMENT.
2. SPREAD THE WATER ACROSS THE LANDSCAPE (EG IN SWALES) SO THAT THERE IS MORE SURFACE AREA TO ABSORB IT.
3. SINK THE WATER INTO THE SOIL AND STORE WHAT YOU CAN IN DAMS AND TANKS.

RAINWATER MANAGEMENT HAS THE FOLLOWING BENEFITS:

1. OVERLAND FLOW AND DOWNSTREAM FLOODING ARE MINIMISED. WHEN WATER CAN INFILTRATE THE SOIL, DOWNSTREAM AREAS DON'T HAVE TO DEAL WITH IT ALL AT ONCE.
2. EROSION IS PREVENTED.
3. THE WATER TABLE IS RECHARGED.

LANDSCAPE ARCHITECT

RAINA EMERSON
LANDSCAPE DESIGN

www.relandscapedesign.com.au

CLIENT

BOB PHILIPSON
SUSTAINABLE GOULBURN
MULWAREE

REV

ISSUE

DATE

A	FOR DISCUSSION	21/02/2024
B	FOR DISCUSSION	28/02/2024
C	FOR DISCUSSION	13/03/2024

GOULBURN, NEW SOUTH WALES

**STRATEGIES TO REDUCE FLOODING
AND IMPROVE BIODIVERSITY**

JOB NO.
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MAINTAIN AND ADD TO REGULAR PLANTING OF KURRAJONG TREES. THESE ARE A HARDY AUSTRALIAN NATIVE.

SHRUBS SUCH AS WESTRINGIA ADD INTEREST AND VARIATION IN THE HEIGHT STRUCTURE - IMPORTANT FOR BIODIVERSITY.

GRASSES PLANTED IN THE DRAINAGE CHANNEL WILL ASSIST WATER ABSORPTION. CAREFUL SPECIES SELECTION WILL ENSURE GOOD SIGHTLINES ARE MAINTAINED.



EXISTING STREETScape

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SK01

MAINTAIN AND EXTEND EXISTING PLANTING OF WHITE-FLOWERING CREPE MYRTLES. UNDERPLANT WITH SHRUBS OF SIMILAR COLOUR SCHEME.

MAINTAIN A WIDE GRASSY VERGE FOR PEDESTRIANS AND FOR GOOD VISIBILITY AT THE INTERSECTION.



EXISTING STREETSCAPE



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SK02

USE ROCKS TO STOP AND HOLD WATER AND ALLOW IT TO INFILTRATE THE SOIL.

PLANT HEAVILY AROUND THE DAM USING TREES, SHRUBS AND GRASSES. SEE SK05 FOR DETAILS.

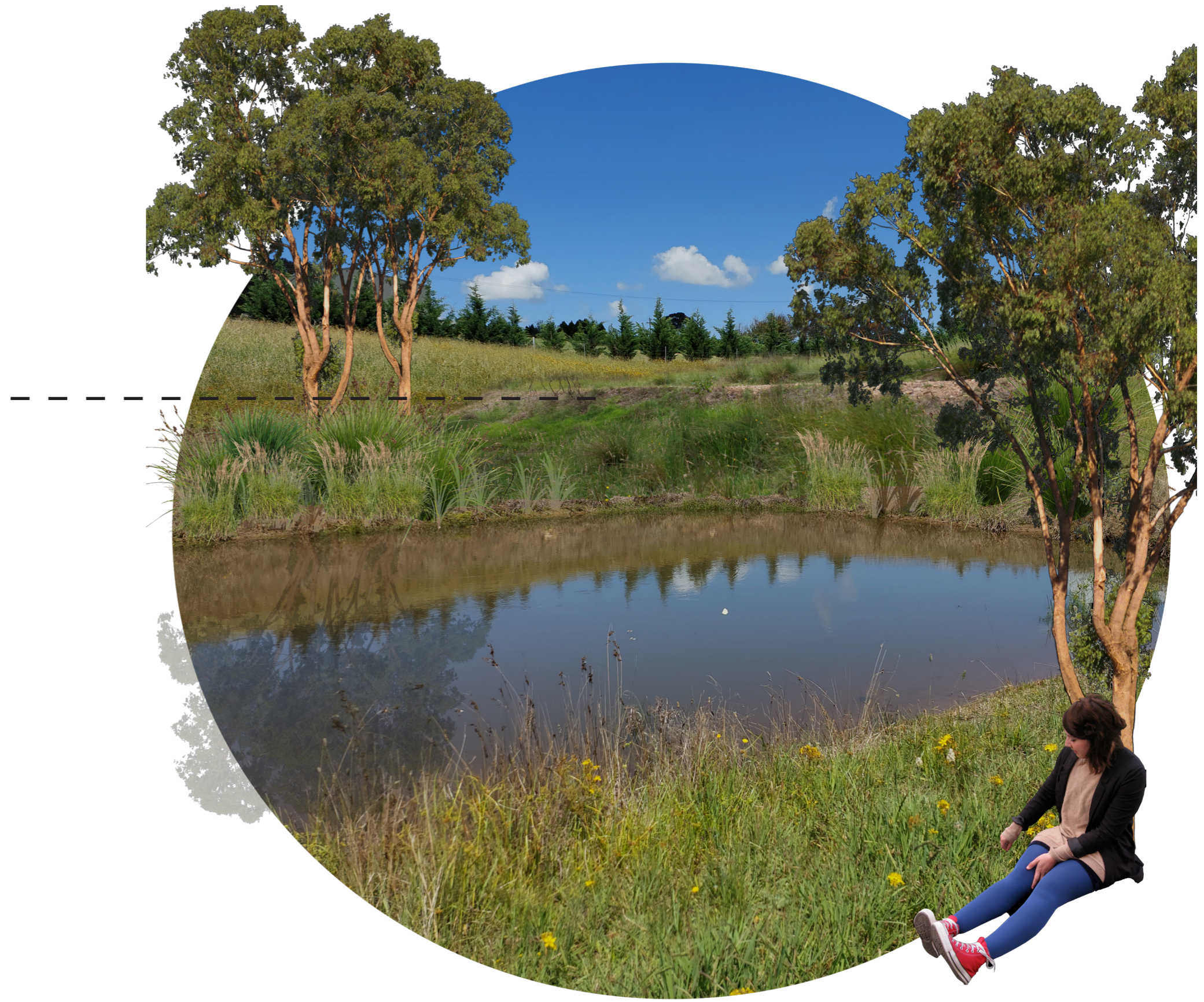


EXISTING POND IN VACANT BLOCK - SOUTH EAST CORNER.

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USE SWALES ON SLOPING GROUND TO STOP AND HOLD WATER AND ALLOW IT TO INFILTRATE THE SOIL.



EXISTING POND IN VACANT BLOCK - SOUTH WEST CORNER.

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VEGETATION ZONES IN A HEALTHY POND

SURROUNDING VEGETATION

THE ROOTS AND CANOPY OF VEGETATION ON THE EDGE OF PONDS ASSIST WITH WATER INFILTRATION. VEGETATION ALSO HELPS TO SLOW WIND SPEEDS AND REDUCE EVAPORATION. TALL TREES SET BACK FROM THE POND EDGE CAST SHADE OVER THE POND, AND PROVIDE GOOD CONDITIONS FOR WILDLIFE.

HABITAT ELEMENTS

PLANTS, LOGS AND ROCKS CREATE HABITATS FOR AQUATIC LIFE UNDER THE WATER AND SAFE PLACES FOR TURTLES AND WATER BIRDS TO REST ABOVE THE WATER

POND MARGINS

PLANTS THAT TOLERATE ALTERNATING PERIODS OF INUNDATION AND DRY HELP REDUCE SOIL EROSION, FILTER WATER POLLUTANTS AND REDUCE EVAPORATION. THEY CAN HELP TO RETAIN WATER IN TIMES OF DROUGHT.

SHALLOW AND DEEP WATER ZONES

AQUATIC PLANTS CREATE SHADE AND HELP KEEP WATER TEMPERATURES LOWER.

INFLOW ZONE

GROUND COVER PLANTS SLOW WATER, REDUCING EROSION AND SILTING OF THE POND. THEY ALSO FILTER NUTRIENTS AND OTHER POLLUTANTS BEFORE THEY REACH THE POND.



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SK05



THIS SECTION SHOWS THE FUNCTION OF A SWALE ON A SLOPING SITE.

SWALES STOP AND ABSORB OVERLAND WATER FLOW. THEY ARE BUILT ON CONTOUR. WATER IN SWALES DOES NOT FLOW BUT RATHER IS HELD AND SEEPS INTO THE SOIL.

SWALE POSITION IS INDICATIVE ONLY.

VEGETATION PROMOTES WATER ABSORPTION

SWALE PROMOTES WATER ABSORPTION

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