

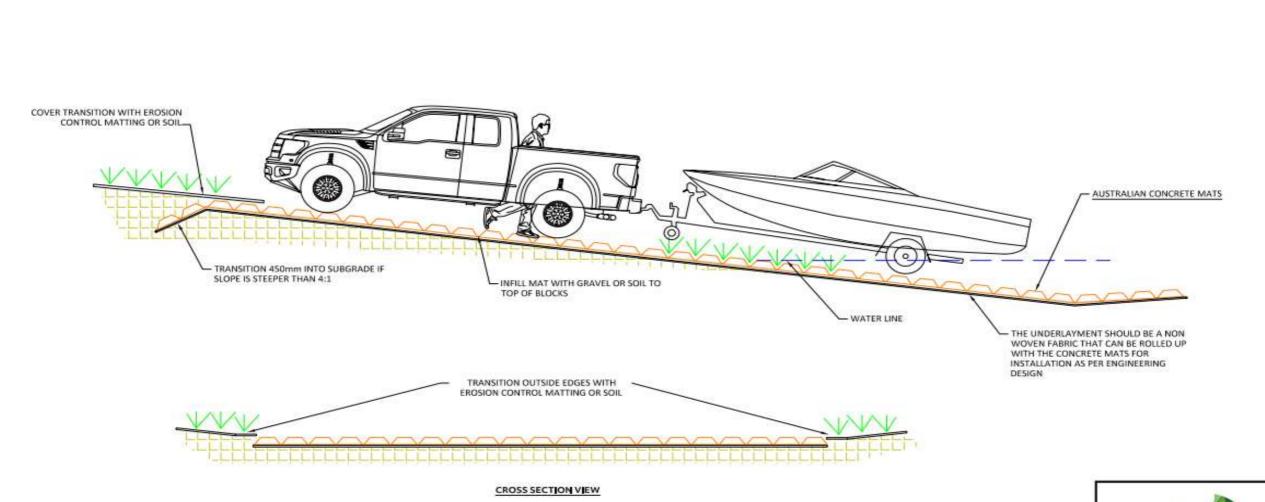
HILLSTON BOAT RAMP – CONSTRUCTION AND LOCATION PLANS – COVER PAGE

LOCATION – Lot 97 DP755189 (4.5Ha) Lachlan River Road – Reserve ownership Riverina Local Land Services





6MAPS close-up aerial photo of the boat ramp location. Area currently used as an informal launching, stabilized by concrete matting installation. GPS LOCATION Latitude -33.471026, Longitude 145.531763.



CONSTRUCTION NOTES:

- 1. AN ENGINEER MUST DESIGN AND/OR SIGN OFF ON THE DESIGN AND ONSITE INSTALLATION.
- GRADE THE SITES SO THAT WATER WILL NOT FLOW ABOVE, BELOW, OR AROUND THE OUTSIDE OF THE AREA PROTECTED WITH AUSTRALIAN CONCRETE MATS. ALL SUBGRADE SURFACES PREPARED FOR
 PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
- 3. APPLY SITE SPECIFIC SEED, INCLUDING NATIVE GRASSES DIRECTLY TO THE PREPARED SOIL PRIOR TO AUSTRALIAN CONCRETE MAT INSTALLATION.
- 4. AUSTRALIAN CONCRETE MAT ROLLS ARE AVAILABLE IN WIDTHS OF 2400mm WIDE.
 - (a) TO ACHIEVE WIDER WIDTHS, INSTALL CONCRETE MATS ADJACENT TO ONE ANOTHER. INSTALL ADDITIONAL UNDERLAYMENT GEOGRID UNDER ALL ADJOINING MATS. A MINIMUM OF 450mm OF UNDERLAYMENT SHALL EXTEND UNDER EACH SIDE OF THE MAT AND DIRECTLY AGAINST THE SUBGRADE.
 - (b) INSTALL 450mm REBAR U-ANCHORS OR STAINLESS-STEEL ZIP TIES IN 900mm INCREMENTS THE LENGTH OF THE LONGITUDINAL SEAM. (OR AS DESIGNED BY AN ENGINEER FOR THE CONDITIONS)
- AT THE BEGINNING OF THE AUSTRALIAN CONCRETE MATS, TRANSITION THE INITIAL LEADING EDGE PROPERLY WITH EROSION MATTING OR SOD. IF EXPOSED TO CONCENTRATED FLOWS EMBED 450mm
 VERTICALLY INTO THE SUB GRADE TO SERVE AS AN ANCHOR TRENCH. THE TRENCH SHALL BE FILLED AND COMPACTED WITH SUITABLE FILL OR OTHER (AS SPECIFIED BY EOR).
- 6. FOR ADDITIONAL SECTIONS OF MAT, OVERLAP THE DOWNSTREAM SECTION 450mm WITH UPSTREAM SECTION OF MAT. PRIOR TO INSTALLING OVERLAP, FLIP UPSTREAM MAT BACK 600mm. EXCAVATE 60mm OF SOIL 450mm FROM END OF UPSTREAM MAT. DOWNSTREAM SECTION IS LAID IN THE SHALLOW TRENCH. LIGHTLY SPREAD TOPSOIL, SEED AND FERTILIZER OVER INITIAL EDGE. FLIP END OF UPSTREAM MAT. OVER THE SOIL COVERED INITIAL LEADING EDGE OF DOWNSTREAM MAT.
- 7. INSTALL 450mm U-ANCHORS IN 900mm INCREMENTS ACROSS THE OVERLAP. INSTALL ANCHORS DIRECTLY BEHIND BLOCKS. "U" ANCHORS CONSIST OF 10mm REBAR "U" ANCHOR WITH 450mm LEGS.
- 8. AT THE END OF THE ARMORED CHANNEL, EMBED THE MAT 450mm IN A TERMINATION TRENCH. FILL AND COMPACT TERMINATION TRENCH WITH SOIL (DETERMINED BY ENGINEER).



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Project Title:

BOAT RAMP

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INSTALLATION OF AUSTRALIAN CONCRETE MATS

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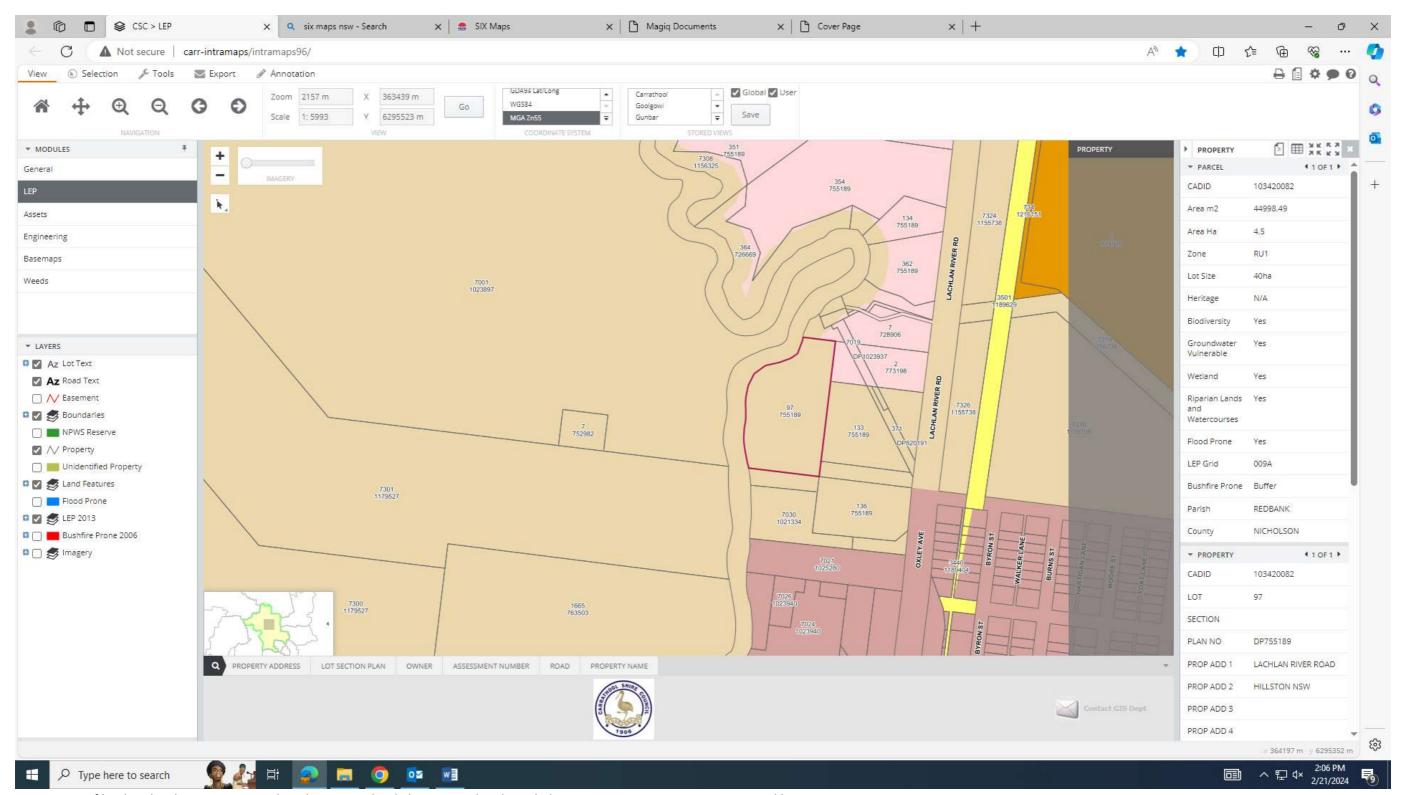
Typical manufacturers installation for boat ramps, similar for Carrathool Shire Council at this location.



CARRATHOOL SHIRE COUNCIL – HILLSTON BOAT RAMP INSTALLATION

- SIMMILAR CONCEPT PHOTOGRAPHS
- Planned installation north of Hillston on the Lachlan River
- Photographs from Lower Portland, NSW installation.





RU1 zoning of land under the LEP, Lot in Red Outline. Carrathool Shire Council Cadastral Plan – Lot 97 DP755189 Reserve owned by Riverina LLS



Photo 1. Boat Ramp Location well clear of established trees, in a prior disturbed area.



Photo 2. Locally used spot a lesser grade.



Photo 3. Lachlan River informal Boat ramp Area, Hillston North TSR



Photo 4. Riverbank section of the ramp location.



Photo 5. Vehicular approach to informal boat ramp.



Photo 6. Grade currently at >20%, steeper than standard (12.5%) for constructed boat launching facilities.