

HUNTER WATER

SECTION s170 REGISTER



ITEM NAME:

Chichester Dam Model (within Hydraulics Lab at Tomago)

Contents:



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Key Images

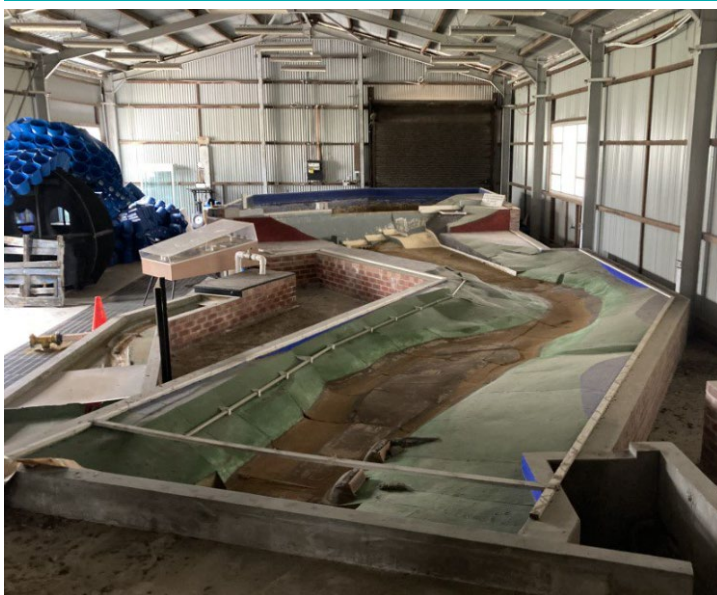


References

ITEM DETAILS



Item Name	Chichester Dam Model (within Hydraulics Lab at Tomago)
Other / Former Names	N/A
NSW SHI No.	3630108
Plant No.	N/A
Local Government Area	Port Stephens
Lot and DP	Lot 16 DP 1082486
Address	164 Tomago Road, Tomago NSW 2322
Curtilage	N/A



View of the Model



Asset location and curtilage (red boundary) (refer to [Figure 1](#) for additional detail)

HISTORICAL OVERVIEW



Current Use	Scale model
Former Use	N/A
Designer / Builder	Hunter District Water Board
Historical Notes	<p>During the year 1965-66 a hydraulic laboratory was constructed at Tomago to allow hydraulic model investigations to be undertaken. Construction commenced 21st October 1965, and was completed by the 30th June 1966.</p> <p>In 1967-68 construction of a 1:48 scale model of Chichester Dam and spillway, as well as 2,000 feet of river channel downstream of the dam, was completed at the Hydraulics Laboratory. The model was built in order to closely study the discharge characteristics of the spillway; obtaining a calibration for the weir and spillway throughout the range of anticipated flows, as well as observing the general flow patterns upstream and downstream of the structure.</p>

HERITAGE STATUS



Listing Details	<input checked="" type="checkbox"/> S170 Heritage and Conservation Register <input type="checkbox"/> Local heritage listing <input type="checkbox"/> State heritage listing
Conservation Management Plan	<input type="checkbox"/> N/A
Heritage Asset Action Plan	<input type="checkbox"/> N/A
Aboriginal Sites Registered within the Site	N/A
Historical Archaeological Potential	N/A

HERITAGE SIGNIFICANCE



Level of Significance	Local
Statement of Significance	<p>The Chichester Dam model is an important example of engineering practice and design development for a large dam from the early 20th century.</p> <p>The model demonstrates how, prior to the invention of computer modelling, engineers relied on physical models to test and refine the designs for large engineering projects.</p>
NSW SHR Criteria	<input checked="" type="checkbox"/> a) Historical <input type="checkbox"/> b) Associative <input checked="" type="checkbox"/> c) Aesthetic / Technical <input type="checkbox"/> d) Social <input checked="" type="checkbox"/> e) Research Potential (yield new information) <input type="checkbox"/> f) Rare <input type="checkbox"/> g) Representative
Significant Elements	<ul style="list-style-type: none">The form, scale and materiality of the Model.

DESCRIPTION



Setting	N/A
External Appearance	<p>The Chichester Dam Model consists of a 1:48 scale timber and plaster model of the dam wall and section of the upstream and downstream river valley built on a brick base and housed within the Hydraulics Lab at the Tomago Sand Beds Scheme.</p> <p>The Model is connected to pipework that allows water to flow through the model and allows the observation of water flow and the interaction with the dam and surrounding area.</p>
Internal Appearance	N/A
Overall Condition	Fair.
Moveable Heritage Objects	<ul style="list-style-type: none"> Removable elements of the model including the valve house and pump house.

MANAGEMENT



Approval and Assessment Requirements	<p><u>Minor or inconsequential impacts:</u> Anything other than routine repair and maintenance must be discussed with the Environment Team to determine the level of heritage assessment required.</p> <p><u>More than minor or inconsequential impacts:</u> As above. Additionally, consultation with the relevant local council is required.</p> <p>Demolition or removal from the register requires consultation with Heritage NSW and archival recording.</p>
General / Ongoing Management	<ul style="list-style-type: none"> Changes to the Model should be preceded by the appropriate level of heritage assessment and approval. Advice and/or confirmation should be sought from the Environment Team prior to undertaking any works. Maintain overall form, shape and scale of the Model and continue to store safely. Changes to the Model may be supportable if they are associated with the use of the Model as originally intended (that is, for modelling purposes). In the event that changes are made to the Model for this purpose, this should be thoroughly documented. Any fabric changes must be sympathetic but clearly discernible as new upon close inspection. This can be achieved through the use of contrasting colours, different (but non-impactful) materials, the use of labels, etc. Replacement/removal of failing elements of the Model is acceptable if it will help to maintain the Model's overall integrity and facilitate its ongoing use as originally intended. Consider the amalgamation of all s170 listings associated with the Tomago Sand Beds Scheme and Chichester Dam into one single listing.
Priority Conservation Works	<ul style="list-style-type: none"> Check over and patch and repair the Model as needed to maintain/improve its condition. Repair and stabilise the brick base of the Model.



Image 1: View of the Model within the Hydraulics Lab building

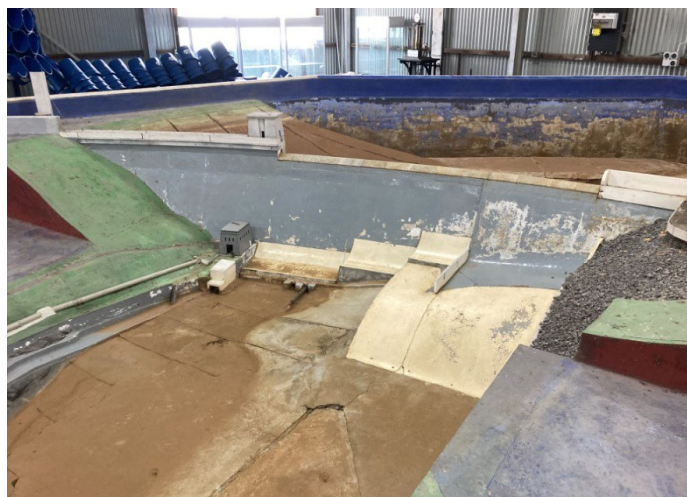


Image 2: Detail view of the Model showing the Dam

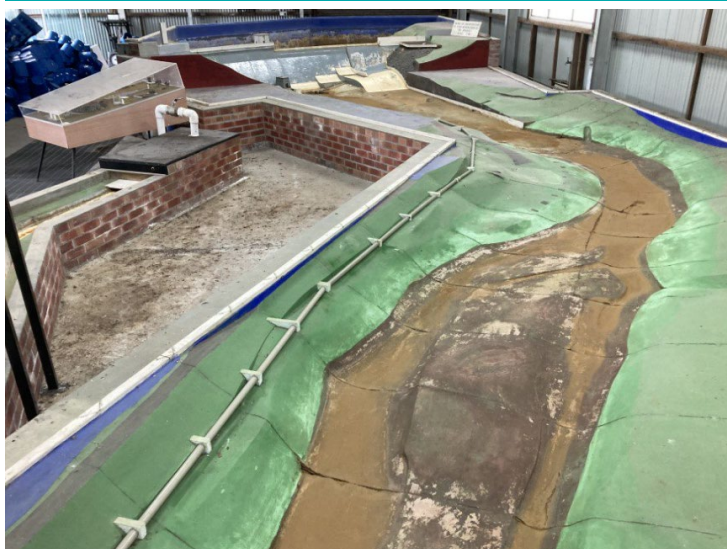


Image 3: River valley portion of the Model



Image 4: External view of the Hydraulics Lab where the Model is stored



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- Hunter District Water Supply and Sewerage Board, Annual Reports, 1897-98 to 1937-38.
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FIGURE 1

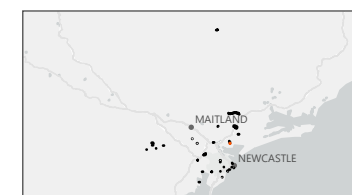
S170 Review - Heritage Curtilages

Legend

-  Road
-  Railway
-  Lot Boundary
-  Heritage Curtilages



Chichester Dam Model (within Hydraulics Lab at Tomago)



0 100
Metres

Scale 1:2,500 at A4
GDA 1994 MGA Zone 56

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