

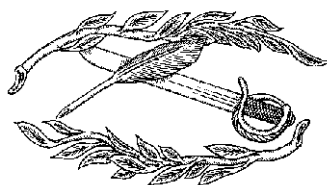


New South Wales Government

Surveyor General's Directions

No. 6

Water as a Boundary Procedures





Surveyor General's Directions



DOCUMENT CONTROL SHEET

Record of Document Issues

Version No	Issue Date	Nature of Amendment
1.0	November 1993	Initial Release
1.1	October 1994	Minor Revision
1.2	August 1997	Minor Revision
1.3	January 1999	Minor Revision
2.0	March 2000	Minor Revision – GDA94.
2.1	December 2009	Minor Revision – S&SI Reg 2006.
2.2	June 2016	Minor Revision - Departmental restructure

Document Approval:

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Date of Approval: 30 June 2016



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Preamble

This Surveyor General's Direction replaces the previous Direction issued in January 1999. It includes new procedures to obtain approval to determinations of water boundaries, including tidal or Mean High Water Mark (MHW) and non-tidal boundaries. There have been many changes to MHW procedures due to recent government departmental restructuring and amendments of the Coastal Protection Act 1979, which established the "Modified Doctrine of Accretion".

In summary, changes included within this Direction are:

- New procedures to address the Modified Doctrine of Accretion as defined in the Coastal Protection Act 1979 (Section 55N);
- New departmental procedures; and
- New surveying requirements under the Surveying and Spatial Information Act 2002.

A consequence of the Modified Doctrine of Accretion is that a MHW application may now be required to meet specific criteria prior to approval. In particular, where a definition that increases the area of land to the landward side of the water boundary **because of accretion**, the applicant will now have to demonstrate that the area, the subject of the accretion claim will:

- a) have a perceived trend of accretion that is likely to be indefinitely sustained by natural means; and
- b) as a consequence of making the claim, not likely restrict or deny public access to a beach, headland or waterway.

The approval procedure for boundaries of Crown Land (*i.e. Crown Land as defined under the Crown Lands Act 1989*) has been revised to accord with the amendments to Part 7 of the Surveying and Spatial Information Regulation and the formation of the Department of Lands. See section 7.

Where new determinations of MHW adjoin land managed by Roads & Maritime Services (such as Sydney Harbour), then approval from Roads & Maritime Services is required. See section 8.

1. Introduction

This Surveyor General's Direction outlines the procedures for:

1. Determining mean high water mark as a boundary, or
2. Determining the bank or banks of non-tidal streams, or
3. Determining the location of the landward boundary of roads or reservations of stipulated width adjacent MHW or non-tidal streams which have not previously been surveyed, or
4. Situations where there is doubt or confusion as to the location of natural feature boundaries.



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Except under special conditions, as prescribed by law, a boundary cannot extend below mean high water mark. Where the bank or MHW has eroded suddenly and the processes causing the change did not satisfy the doctrine (i.e. natural, gradual and imperceptible erosion), then the former position of the natural feature boundary will not change. In these cases the natural feature boundary may extend into the water. Some methods of determination of mean high water mark are contained in part 6, section 22 of the Manual of the New South Wales Integrated Survey Grid (1976). Current tidal plane statistical data should be obtained from NSW Public Works' Manly Hydraulics Laboratory.

2. Definitions

“**Mean High Water Mark**” – see Clause 5 of the Surveying and Spatial Information Regulation 2012.

The definition of features associated with lakes and rivers are defined in section 172(1) of the Crown Lands Act 1989 or the Surveying and Spatial Information Regulation 2012. The following terms are defined:

“**bank**” means the limit of the bed of a lake or river.

“**bed**” means the whole of the soil of a lake or river including that portion -

- (a) which is alternately covered and left bare with an increase or diminution in the supply of water; and
- (b) which is adequate to contain the lake or river at its average or mean stage without reference to extraordinary freshets in time of flood or to extreme drought;

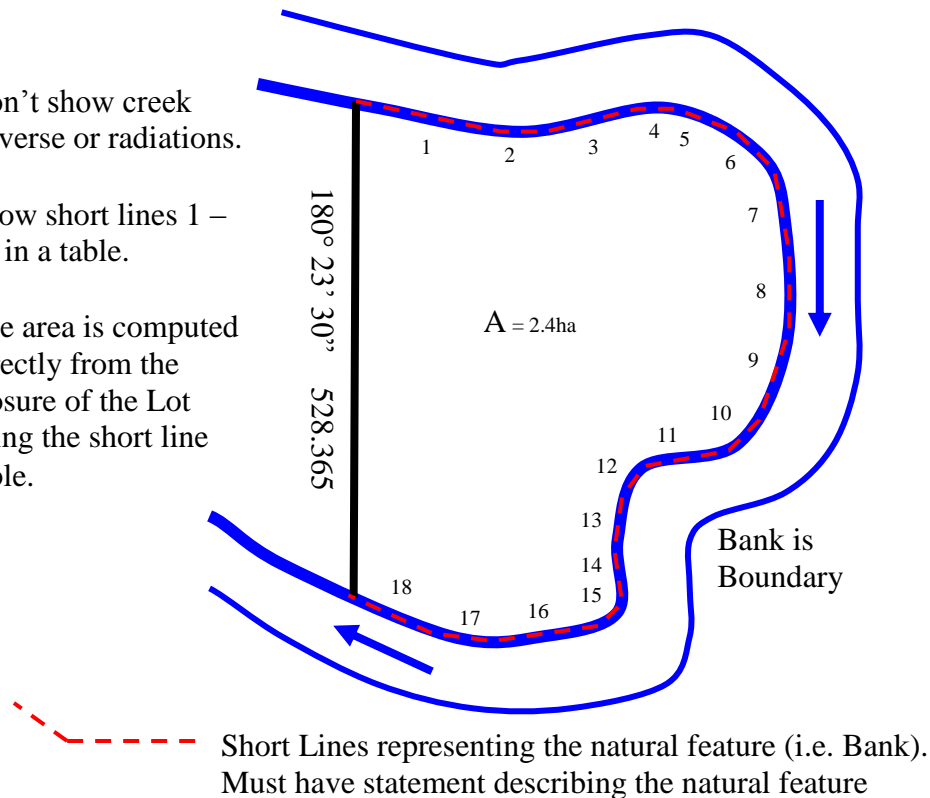
“**lake**” includes a permanent or temporary lagoon or similar collection of water not contained in an artificial work;

“**river**” includes any stream of water, whether perennial or intermittent, flowing in a natural channel, and any affluent, confluent, branch or other stream into or from which the river flows.

“**natural feature**” when forming a boundary of land, appropriate details describing the natural feature must be shown on the survey plan, eg. “Bank is Boundary” or “MWHM is boundary”. Regulations 47 and 65 of the Surveying and Spatial Information Regulation 2012 require the position of all natural features to be accurately located. Each change of course or direction of the natural feature must be defined by bearings and distances and shown on the survey plan. It is usual practice to show these short lines in a table that refers to the nature feature traverse. Regulation 64 of the Surveying and Spatial Information Regulation 2012 also requires that the description of any substantial structure and/or fence within 1 metre of the boundary to be shown on the survey plan (*see diagram*).



- Don't show creek traverse or radiations.
- Show short lines 1 – 18 in a table.
- The area is computed directly from the closure of the Lot using the short line table.



Similar surveying requirements apply to non-tidal and MHWB boundaries.

3. Administration of Mean High Water Mark Boundaries

Titles to the beds of all tidal waters, unless specifically vested in another authority or the subject of a Crown Grant, are under common law deemed to be vested in the Crown (*see Hallman 13.39*). The Minister administering the Crown Lands Act 1989 (or his delegate) is responsible for the management of these lands and is the approval authority for Mean High Water Mark re-determination.

Roads & Maritime Services is responsible for administering all land below Mean High Water Mark in Sydney Harbour, Botany Bay, Port Hunter and Port Kembla Harbour.

This direction will deal with the responsibility of Roads & Maritime Services separately. Each organisation has different procedures for approving Mean High Water Mark definitions.



4. Non-Tidal Waters

4.1 Lakes and Lagoons

Where a survey plan includes a boundary along a non-tidal lake or lagoon, the surveyor will be required to adopt the original position of the bank at the time of alienation. The following summary of section 172 of the Crown Lands Act 1989 applies to non-tidal lakes and lagoons.

Section 172(2) states that the boundary of any land which is alienated by the Crown and which is described as being bounded by the margin or bank of a non-tidal lake shall be taken to be the bank of the lake at the time of the Crown survey for the purpose of alienation.

Section 172(3) states that if the title of alienated land is described as being bounded by a non-tidal lake, then that title does not and never has extended to include any part of the bed of the lake. No person who is the owner of adjoining land so alienated is entitled to any rights of access over, or to the use of any part of the bed.

Section 172(4) states "The doctrine of accretion does **not** apply, and never **has** applied, to a non-tidal lake".

To assist surveyors prepare applications for redefinition, the following water bodies have been judged to be non-tidal:

- Narrabeen Lagoon (Attorney General (NSW) v Wheeler (1944) 45 SR (NSW) 321)
- Dee Why (Williams v Booth (1910) 10 CLR 341)
- Glenrock Lagoon (Attorney General (NSW) v Merewether (1905) 5 SR (NSW) 157)
- Lake Illawarra (Attorney General v Swan (1921) 21 SR (NSW) 408)

Therefore, the doctrine of accretion and erosion does not apply to land adjoining those water bodies. There may be other non-tidal water bodies within New South Wales that by virtue of their character may be deemed non-tidal.

In any case where the original position of the bank cannot be reproduced with certainty, the approval of the Minister administering the Crown Lands Act 1989 or his delegate to a proposed definition of the bank is required. The procedure to obtain this consent is similar to that for a determination of mean high water mark.

In any case where the bank of a non-tidal lake or lagoon is to be used as a natural feature boundary to define a new land grant or title, then the bank shall be the limit of the bed as described in the Crown Lands Act 1989. No new boundary of a lot shall be an ill-defined natural feature (e.g. cliffs, lakes, and swamps). In those situations, the boundary must be defined and marked by a series of straight lines



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that do not represent or approximate the ill-defined natural feature. The ill-defined natural feature will **not** be the boundary.

4.2 Rivers and Streams

Rivers and streams are subject to the doctrine of accretion and erosion. Where a survey includes a boundary along a non-tidal river or stream, the surveyor will adopt the presently existing bank or centre line, **ONLY**

- i) if it agrees with the original position, or
- ii) if it can be proven that the change from the original position to the present position has been caused by natural, gradual and imperceptible means. In most Australian riverine situations this occurrence will be rare and must be substantiated with evidence and facts to support the case, or
- iii) if it can be proven that the previous definition of the bank was incorrect. In most cases this will be very difficult to prove.

If the position of the bank has changed suddenly, or by artificial means (i.e. flood, reclamation etc.), then the definition of the bank before the sudden change or changes occurred must be adopted.

The existing position of the bank in addition to the original position of the bank must also be shown on the survey plan with appropriate details noted as to what constitutes the boundary.

The Surveying and Spatial Information Regulation 2012 states:

47(3) If (a) the middle line of a stream is the boundary of land and has not previously been defined by survey, or (b) the middle line of a stream is otherwise required to be determined, both banks of the stream must be surveyed and shown on the survey plan together with the determination of the middle line.

47(4) The middle line of a stream need not be marked unless the purpose for which the survey is made so requires.

Therefore, if a title extends to the centre of the stream, then the surveyor must determine the position of both banks as the means of defining the centre line of the bed. All three features are to be noted on the survey plan with the appropriate details as to what constitutes the boundary.



5. Landward Boundaries of Roads or Reservations of Stipulated Width Adjacent to Water Bodies

The surveyor must obtain the approval of the Minister administering the Crown Lands Act 1989 when the survey abuts the landward boundary of any road or reservation fronting a river, stream or tidal waters and that landward boundary has not previously been defined by survey, (see Division 5 “Boundaries formed by tidal and non-tidal waters and other natural features” of the Surveying and Spatial Information Regulation 2012).

The Surveying and Spatial Information Regulation requires the traverse lines of the survey to be positioned so that each change of course or direction of the boundary can be determined. It also requires the natural feature to be described by bearings and distances with appropriate details describing the natural feature be shown on the survey plan.

5.1 Landward Boundaries of Reservation Fronting Tidal Waters

Regulation 45(1) of the Surveying and Spatial Information Regulation 2012 states *“In any survey for the redefinition or subdivision of land adjoining an existing Crown reserve of stipulated width fronting tidal waters where the boundary between the land being surveyed and the Crown reserve has not previously been defined by survey, the boundary must be defined by straight lines approximately parallel to the position of the mean high-water mark as originally defined.”*

The landward boundary of the reserve **fronting tidal waters** must be marked in accordance with Regulations 28, 29 and 30 and Schedules 2 and 3 of the Surveying and Spatial Information Regulation 2012.

The position of the existing MHWL must be shown by a series of short lines positioned so that each change of course or direction of the present natural feature can be determined. Appropriate details describing the natural feature must be shown on the survey plan.

If a surveyor determines the landward boundary of a reservation or road that has not been previously approved, then Regulation 45(3) of the Surveying and Spatial Information Regulation 2012 requires the approval of the Minister administering the Crown Lands Act 1989 to the landward boundary. See Section 5.3 for details.

5.2 Landward Boundaries of Reservation or Crown Road of Stipulated Width Fronting Non-Tidal Waters

Regulation 45(2) of the Surveying and Spatial Information Regulation states; *‘In any survey for the redefinition or subdivision of land adjoining an existing Crown reserve or Crown road of stipulated width fronting a lake, stream or natural*



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feature where the boundary between the land being surveyed and the Crown reserve or Crown road has not previously been defined by survey:

- (a) the boundary must be defined by straight lines approximately parallel to the position of the bank of the lake or stream, or of the natural feature, as originally defined, and*
- (b) the position of the bank or natural feature, as originally defined, must be shown on the survey plan, and*
- (c) the position of any existing road formation or fencing must be shown on the survey plan, and*
- (d) the boundary need not be marked in accordance with clause 28 but, if it is not marked in accordance with that clause, a reference mark must be placed at the terminals of the boundary and at intervals of not more than 1,000 metres along the boundary.*

Therefore, the normal marking of each corner or angle of the landward boundary is **not** required.

The position of the existing bank must be shown by a series of short lines positioned so that each change of course or direction of the present natural feature can be determined. Appropriate details describing the natural feature must be shown on the survey plan.

In addition, the position of the legal or original bank must be shown by a series of lines positioned so that each change of course or direction of the boundary can be determined. Appropriate details describing the boundary must be shown on the survey plan.

If a surveyor determines the landward boundary of a reservation or road that has not been previously approved, then Clause 45(3) of the Surveying and Spatial Information Regulation 2012 requires the approval of the Minister administering the Crown Lands Act 1989 to the landward boundary.

Note: Where the landward boundary of a road is involved, applicants should be aware that procedures under Section 18 – 21 of the Roads Act 1993 may apply.

5.3 Approval to Landward Boundary of Reservation or Crown Road Fronting a Natural Feature

To obtain the consent of the Minister administering the Crown Lands Act 1989, the application should be forwarded in the first instance to the Department of Primary Industries – Lands, at the address shown in Appendix B.

The consent from District Offices of the Department of Primary Industries – Lands



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is not required when no Crown land is involved.

Approval to the new definition of the landward boundary of the reservation or crown road fronting a natural feature should be sought prior to lodgement of the survey plan at Titling & Registry Services – Department of Finance, Services & Innovation, Queens Square, Sydney. It is recommended that surveyors carrying out the new definition liaise with officers of the Department of Primary Industries – Lands (see Appendices B and C) prior to lodgement of the plan, particularly where there is a marked variation or any other unusual circumstances. A consultation fee as outlined in Appendix B may apply

When making the submission, the surveyor must lodge an application for a Landward Boundary approval at the Department of Primary Industries – Lands (Crown Lands Service, Newcastle) and include the following items:

- (a) Three copies of a survey plan signed and dated by a registered surveyor; clearly defining both the position of the former or current Mean High Water Mark or stream bank title boundary and the proposed new position of the natural feature; and
- (b) In accordance with the Surveying and Spatial Information Regulation, a comprehensive report on the definition of the Mean High Water Mark or bank. The report must:
 - Provide the basis and method of determining the location of the Mean High Water Mark or bank and the location of the landward boundary. The Mean High Water Mark should be referenced to the Australian Height Datum (AHD) and accord with relevant tidal plane statistical data (where available) which can be obtained from NSW Public Works' Manly Hydraulics Laboratory (see Appendix E for contact details). If AHD is used as the basis of the definition or to support any part of the justification for the definition, then the datum must be based upon and verified by a closed level traverse between Permanent Marks that have accurate heights (i.e. Accuracy Class "LD" or "B" or better).
 - Provide photographs of the area, particularly when there are improvements near the foreshore or landward boundary of the reserve or road.
 - Provide a report on any improvements adjoining the landward boundary of the reserve or road.
 - Provide a full copy of all survey plans used to define the MHW or bank and all adjoining survey plans. (These plans will be returned to the applicant upon request after the completion of the Department's investigation).
- (c) Provide a completed checklist; and



(d) A fee for the investigation of the definition (see Appendix B).

A Department of Primary Industries – Lands file will be created for each application.

Surveyors of the Department of Primary Industries – Lands in each region will analyse the method and basis of the determination, conduct a site investigation where appropriate and may consider responses from any other authority.

The applicant will be advised in writing whether their application has been approved or the basis upon which the application was refused. If approved, one (1) endorsed copy of the plan will be returned to the applicant. The surveyor must retain the endorsed copy.

Subsequent amendments to the plan will require two further copies of the plan to be submitted for approval.

Before registration of the final survey plan at **Titling & Registry Services**, Queens Square, Sydney, the following statement will be inserted in the "Signature and Seals Only" panel of the plan form:

*“The Minister for Lands and Water in accordance with Division 5 of the Surveying & Spatial Information Regulation 2012 approves the determination of the landward boundary of as shown hereon.
Department of Primary Industries – Lands file on
...../...../.....”*

The inclusion of this statement will inform subsequent users of the plan that the position of the landward boundary of the reserve or reservation had the approval of the Department of Primary Industries – Lands.

6. Modified Doctrine of Erosion And Accretion

On 7 February 2003, amendments to the Coastal Protection Act 1979 came into effect modifying the doctrine of erosion and accretion. Section 55N of this Act modifies the doctrine of erosion and accretion with respect to land:

- i). which is within the coastal zone, or which adjoins the tidal waters of Sydney Harbour or Botany Bay, or their tributaries, and
- ii). a boundary ("the water boundary") of which is defined or otherwise determined by reference to a mean high water mark.

Maps outlining the Coastal Zone are available for inspection during normal office hours at the principal office of the relevant local government authority or at each of the relevant regional offices of the Department of Infrastructure, Planning and



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Natural Resources.

Section 55N does not apply to the amendment of titles that were previously based upon poor, erroneous or inaccurate surveys. See Appendix A for a complete background to this opinion.

Under Section 55N of the Coastal Protection Act 1979, the doctrine of accretion has been modified to include additional provisions whereby an accretion claim **cannot** be granted if:

- (a) a perceived trend by way of accretion is not likely to be indefinitely sustained by natural means, or
- (b) as a consequence of making such a grant, public access to a beach, headland or waterway will, or is likely to be, restricted or denied.

These legislative changes have been brought about to provide a more sustainable assessment methodology aimed at preventing the undue loss or inadvertent further alienation of public foreshore lands. In addition to the existing requirement that accretion is caused by natural, gradual and imperceptible means, the modified doctrine of accretion requires that a more rigorous understanding of the physical shoreline processes will form the basis of the determination.

Firstly, in order for an applicant to demonstrate that *“a perceived trend by way of accretion is likely to be indefinitely sustained by natural means”*, it will be necessary to obtain the professional opinion of practitioners with a demonstrated level of professional experience in the interpretation and quantification of hydrodynamic processes and shoreline movements. In particular, professional assessments would need to be based upon a detailed understanding and assessment of observations (where available) regarding relevant coastal or estuarine hydrodynamics, shoreline positions and sediment transport processes. More specifically, professional assessments would need to cover the following:

- History of the subject accretion and determination of quantifiable trends.

It is essential that accurate, quantifiable measures of accretion are readily substantiated by data analysis. In this respect, photogrammetric analysis of vertical aerial photography is likely to provide the most accurate data upon which to conclude trends in the movement of the shoreline and associated features including the MHWL.

- Physical processes impacting upon and governing the stretch of foreshore in question.

An understanding of the physical processes is essential to demonstrate that any perceived trend of accretion is likely to be indefinitely sustained by natural means.



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- Implication of climate change (in particular, postulated rise in Mean Sea Level).

The weight of scientific evidence available predicts accelerated Sea Level Rise (SLR) over the course of this century. The extent of SLR is not definitive and predictions rely on a range of global atmospheric models driven by various greenhouse gas emission scenarios.

The Intergovernmental Panel on Climate Change (IPCC), which was jointly established by the World Meteorological Organisation and the United Nations Environment Program in 1988, remains the most authoritative source on global climate change predictions. The 2001 publication by the IPCC indicated a broad range of possible predictions of SLR over the period from 1990 to 2100 ranging from a low of 9 centimetres to a high of 88 centimetres. The average of all these possible scenarios indicates a rise in MSL of approximately 50 centimetres over this timeframe.

In effect, the result of an increase in MSL is that the active nearshore profile (and by consequence, ambulatory boundaries such as those defined by reference to the MHWM), will readjust to a higher and more landward position over time.

In order to consider the impact of SLR, it will be necessary to assess what impact a rise in MSL of 50 centimetres would have on the position of the MHWM. This assessment will provide a fundamental guide to establishing whether or not any trend of accretion that is evident will likely be “indefinitely sustainable by natural means” over the longer term, in a position seaward of the existing ambulatory boundary.

Secondly, in order to meet the provisions of the modified doctrine of accretion, an applicant must also demonstrate that to grant such a claim would not result in “*public access to a beach, headland or waterway either being, or likely to be, restricted or denied*”. In this respect it would be necessary for the applicant to provide details of the site in question and document the extent of associated customary public access. The professional assessment indicated in the aforementioned, will also have to consider the impact of climate change at the site in respect of denying or restricting public access.

The Local Council will be referenced by the relevant approval authority to provide information regarding public access issues.

6.1 “Land not Satisfying Section 55N of the Coastal Protection Act 1979”.

If there has been accretion to the foreshore and that accretion cannot satisfy the conditions of the Modified Doctrine of Accretion, then the original MHWM must be adopted. New Deposited Plans should show the current title limit (i.e. the original Mean High Water Mark - described by a series of short lines). The

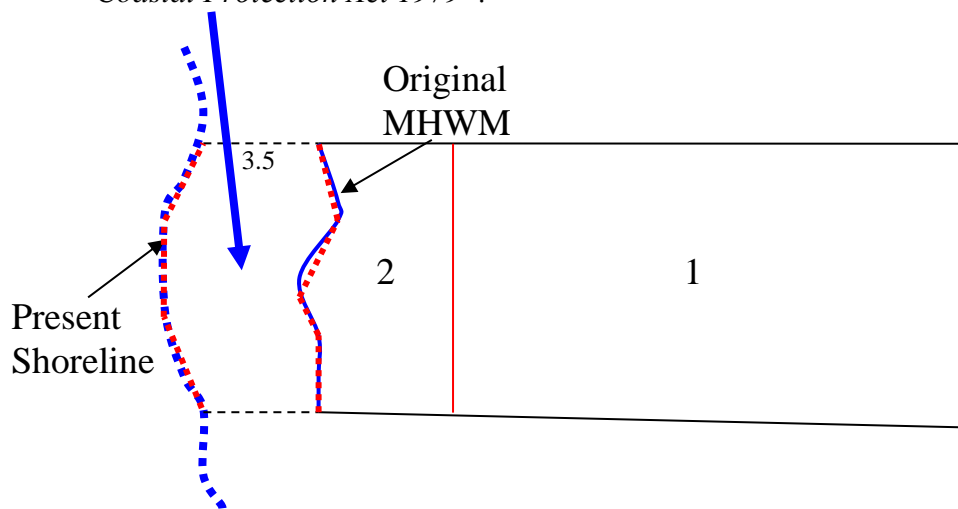


present **shoreline** should also be shown on the Deposited Plan (also, described by a series of short lines). The present **shoreline** is the intersection line of the MHW tidal plane with the adjoining land along the foreshore.

The present **shoreline** must **not** be described as a variation of MHW. Legally MHW is the term to describe the title limit, that being the natural feature, which is the mean of all the high tides including the spring and neap high tides taken over a sufficiently long period.

The accreted land must be clearly described in the survey plan with the following notation;

“Land not satisfying Section 55N of the Coastal Protection Act 1979”.



7. Department of Primary Industries – Lands

Consent Requirements for New Water Boundary Definitions (Including Non-Tidal and Mean High Water Mark Definitions)

This section applies only where the bed of the water body is Crown Land as defined under the Crown Lands Act 1989. If another authority owns the bed, then approval from that authority must be obtained. The submission for their approval will be similar to the requirements of this section.

There are two categories for obtaining the consent from the **Department of Primary Industries – Lands** to new natural feature boundaries - one for non-tidal river & stream bank boundaries and the other for Mean High Water Mark boundaries. To obtain the consent of the Minister administering the Crown Lands Act 1989, the application should be forwarded in the first instance to the Department of Primary Industries – Lands, at the address shown in Appendix B.

The consent from District Offices of the Department of Primary Industries – Lands is not required when no crown land is involved.



7.1 Consent to Non-Tidal River & Stream Boundaries

7.1.1 Consent to Unchanged Bank Boundaries

The surveyor may dispense with the need for a specific approval of the **Department of Primary Industries – Lands** in cases where the plan, when lodged at **Titling & Registry Services**, bears a certification. That certification must state that the position of bank on the ground, as depicted on the plan, is substantially the same as that shown on a **previous plan that had an approval to the bank definition**.

The certification should be in the following terms:

"The location of the existing bank boundary as shown hereon is substantially the same as that shown on plan ..."

A surveyors' report must accompany the survey plan. That report must describe the basis and method of determining the location of the bank, photographs and a detailed plot of the bank shown in the previous plan and the present bank. The report must support the certification shown on the survey plan. **Titling & Registry Services** on the basis of the certification may accept the definition of the bank. However, if normal investigations of the plan find the certification to be inconsistent with the facts, a requisition will be raised.

In the event that consent was not obtained to the previous plan, an approval for the determination of the bank must be obtained. See Section 7.1.2 for the approval process.

7.1.2 Consent to Changed Bank Boundaries or Bank Boundaries that do Not Have a Current Consent

Where a survey reveals a substantial variation in the position of the bank to that determined by an earlier survey or the position of the bank does not have a current consent, the approval of the Minister administering the Crown Lands Act 1989 is required. Usually this is achieved by the surveyor submitting a comprehensive report with the survey plan at lodgement to the Surveyor General at Spatial Services – Department of Finance, Services & Innovation, Queens Square, Sydney.

If the natural feature has not changed and the variation is due to a poor, erroneous or inaccurate survey of the original bank, then the facts must be disclosed in the comprehensive report. The report must accompany the survey plan and include the following:

- Describe the basis and method of determining the location of the bank, and
- Photographs and evidence relevant to the location of the bank, and
- A detailed plot of the bank shown in the previous plan and the present bank, and
- Provide the location and details of any improvements adjoining the bank, and



- A completed checklist.

In complex or difficult bank redefinition situations, the application will be forwarded to the Department of Primary Industries – Lands for field inspection and assessment of the facts.

7.2 Mean High Water Mark Boundaries

7.2.1 Consent to Unchanged Boundary

The need for a specific approval of the **Department of Primary Industries – Lands** may be dispensed with in cases where the plan, when lodged at **Titling & Registry Services** bears a certification by the surveyor. That certification must state that the position of Mean High Water Mark on the ground, as depicted on the plan, is substantially the same as that shown on a **previous plan that had an approval to the MHWM definition**.

Titling & Registry Services will field audit a sample of survey plans that claim MHWM to be substantially the same as a previous definition.

The certification should be in the following terms:

"The location of the existing Mean High Water Mark boundary as shown hereon is substantially the same as that shown on plan ..."

The definition of Mean High Water Mark may be accepted by **Titling & Registry Services** on the basis of the certification. However, if normal investigations of the plan find the certification to be inconsistent with the facts, a requisition will be raised.

In the event that consent was not obtained to the previous plan, an approval for the determination of Mean High Water Mark must be sought from the Minister administering the Crown Lands Act 1989.

An administration fee plus GST will be charged to the surveyor.

When approved, one (1) endorsed copy of the plan will be returned to the surveyor as a record of the Crown Lands' consent. That endorsed plan must be submitted with the final survey plan to **Titling & Registry Services**.

Before lodging the plan at the **Titling & Registry Services**, the following statement should be inserted in the "Signature and Seals Only" panel of the plan form:

*"The Minister for Lands & Water, in accordance with Division 5 of the Surveying and Spatial Information Regulation 2012 approves the determination of the MHWM, as shown hereon.
Dept of Primary Industries – Lands file _____ on __ / __ / __."*



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The inclusion of this statement will inform subsequent users of the plan that the position of the MHWL had the approval of the Department of Primary Industries – Lands.

7.2.2 Consent to Changed Boundary

Where a survey reveals a substantial variation in the position of Mean High Water Mark to that determined by an earlier survey, the approval of the Minister administering the Crown Lands Act 1989 is required. The cause of the variation is critical.

Should the cause of the variation be erosion, then there are no further requirements of the applicant apart from those under the Surveying and Spatial Information Regulation 2012. The location of the present shoreline and former MHWL must be described on the survey plan by a series of short lines. The present shoreline is the intersection line of the MHW tidal plane with the adjoining land along the foreshore.

However, if the cause of the variation is by **accretion** to the land and within the Coastal Zone or Sydney Harbour or Botany Bay and their tributaries, then the provisions of Section 55N of the Coastal Protection Act 1979 “Modified Doctrine of Accretion” apply. See Section 6 “Modified Doctrine of Erosion and Accretion” of this Direction. If the natural feature has not changed and the variation is due to a poor, erroneous or inaccurate survey of the original MHWL feature, then the approval of the Minister administering the Crown Lands Act 1989 is still required, but without the need to prove the Modified Doctrine.

Approval to the new definition of Mean High Water Mark should be sought **prior** to lodgement of the survey plan at Titling & Registry Services, Queens Square, Sydney. It is recommended that surveyors carrying out Mean High Water Mark definitions, liaise with officers of the Department of Primary Industries – Lands (see Appendices B and C) prior to lodgement of the plan, particularly where there is a marked variation or other unusual circumstances. A consultation fee as outlined in Appendix B may apply.

When making the submission, the surveyor must lodge an application for MHWL approval at the Department of Primary Industries – Lands and include the following items:

- (a) Three copies of a survey plan signed and dated by a registered surveyor; clearly defining both the position of the former or current title Mean High Water Mark boundary position and the proposed new position of this boundary feature; and
- (b) In accordance with the Surveying and Spatial Information Regulation, a comprehensive report on the definition of Mean High Water Mark. The report must:



Surveyor General's Directions



- Provide the basis and method of determining the location of the Mean High Water Mark. (The Mean High Water Mark should be referenced to the Australian Height Datum (AHD) and accord with relevant tidal plane statistical data (where available) which can be obtained from NSW Public Works' Manly Hydraulics Laboratory (see Appendix E for contact details). If AHD is used as the basis of the definition or to support any part of the justification for the definition, then the datum must be based upon and verified by a closed level traverse between Permanent Marks that have accurate heights (i.e. Accuracy Class "LD" or "B" or better).
 - If applicable, satisfy the requirements of the Modified Doctrine of Accretion under the Coastal Protection Act 1979 in accordance with the procedures outlined in Section 6.
 - Provide photographs of the area, particularly when there are improvements near the foreshore.
 - Provide a report on any improvements adjoining the foreshore.
 - Provide a full copy of all survey plans used to define the MHW and all adjoining survey plans. (These plans will be returned to the applicant upon request after the completion of the Department's investigation).
- (c) Provide a completed checklist; and
- (d) A fee for the investigation of the definition (see Appendix B).

A Department of Primary Industries – Lands file will be created for each application.

Surveyors of the Department of Primary Industries – Lands in each region will analyse the method and basis of the determination, conduct a site investigation where appropriate and may consider responses from any other authority.

The applicant will be advised in writing whether their application has been approved or the basis upon which the application was refused. If approved, one (1) endorsed copy of the plan will be returned to the applicant. The surveyor must retain the endorsed copy.

Subsequent amendments to the plan will require two further copies of the plan to be submitted for approval.

Before registration of the final survey plan at **Titling & Registry Services**, Queens Square, Sydney, the following statement will be inserted in the "Signature and Seals Only" panel of the plan form:



Surveyor General's Directions



*“The Minister for Lands and Water, in accordance with Division 5 of the Surveying and Spatial Information Regulation 2012, approves the determination of the MHWB Boundary of lots, as shown hereon.
Dept of Primary Industries – Lands file _____ on ___/___/___.*

If the variation was caused by accretion to the adjoining land, then the “Modified Doctrine” must be satisfied. In that case relevant documents will be forwarded to the local council and the Office of Environment & Heritage to comment on the applicant’s submission in regard to the issues of public access and indefinite sustainability (see Section 6).

If the application satisfies all criteria of the Modified Doctrine then the following statement will be inserted in the "Signature and Seals Only" panel of the plan form:

*“The Minister for Lands and Water in accordance with Division 5 of the Surveying and Spatial Information Regulation 2012 and Section 55N of the Coastal Protection Act 1979 as amended, approves the determination of the MHWB Boundary of lots, as shown hereon.
Dept of Primary Industries – Lands file _____ on ___/___/___.*

The inclusion of these statements will inform subsequent users of the plan that the position of Mean High Water Mark had the approval of the Minister administering the Crown Lands Act 1989 without the need to undertake extensive searching.

7.3 Identification Surveys of Waterfront Properties

When undertaking your search prior to an identification survey of a waterfront property, the latest information from the District Office of the Department of Primary Industries – Lands and tidal analysis data from the Manly Hydraulic Laboratory should be included. The office locations for this search are outlined in Appendices B & D.

This information should include the details of structures and occupations contained within leases, licences or permissive occupancies and tidal analysis data from the Manly Hydraulics Laboratory.

The surveyor has a professional obligation to identify and comment on the location of all structures and occupations that relate to the client’s property. In this regard, Mean High Water Mark is a title boundary no different to any other. Therefore, differences in the location of Mean High Water Mark or the encroachment of improvements should be identified and reported.

Surveyors should also refer to the guide for conducting Identification Surveys prepared by the Institution of Surveyors NSW.



8. Roads & Maritime Services (former NSW Maritime)

Roads & Maritime Services includes the former NSW Maritime. Applications within Sydney Harbour, Botany Bay, Newcastle Harbour & Port Kembla must be lodged through Roads & Maritime Services in Sydney (see Appendix D).

Roads & Maritime Services has the responsibility for administering the title to all land below Mean High Water Mark (MHW) in the following geographical areas:

- **Sydney Harbour** including its estuaries to their tidal limit.
- **Botany Bay** to a line east of the Captain Cook Bridge extending between Taren Point and Rocky Point.
- **Newcastle Harbour** from the eastern end of the breakwalls to the downstream side of the following bridges:
 - Stockton Bridge (Hunter River, North Channel)
 - Tourle Street Bridge (Hunter River, South Channel)
 - Hannell Street Bridge (Throsby Creek)
- **Port Kembla Harbour**, including the Inner & Outer Harbours and their adjoining foreshores.

Roads & Maritime Services' consent to the definition of MHW in these geographical areas is a pre-requisite to the lodgement of a survey plan at **Titling & Registry Services**.

Surveyors should include in their search the latest definition of MHW provided by Roads & Maritime Services. It is likely that Roads & Maritime Services' definition of MHW will supercede that shown on the "current plan".

8.1 Consent to Unchanged Boundary

To obtain Roads & Maritime Services' consent to an unchanged boundary the surveyor should submit three (3) copies of the plan together with a covering letter stating that:

"The location of the existing MHW boundary as shown on the attached plan is substantially the same as that shown in Roads & Maritime Services' Field Book _____ or Roads & Maritime Services' Standard Plan Reference No. _____."

An administration fee plus GST will be charged to the surveyor.

When approved, one (1) endorsed copy of the plan will be returned to the surveyor as a record of Roads & Maritime Services' consent.

Before lodging the plan at **Titling & Registry Services**, the following statement should be inserted in the "Signature and Seals Only" panel of the plan form:



Surveyor General's Directions



*“Roads & Maritime Services, in accordance with Division 5 of the Surveying and Spatial Information Regulation 2012, approves the determination of the MHWM Boundary, as shown hereon.
Roads & Maritime Services file _____ on ___/___/___.”*

The inclusion of this statement will inform subsequent users of the plan that the position of the MHWM had the approval of Roads & Maritime Services.

8.2 Consent to Changed Boundary

Where a survey reveals a substantial variation in the position of Mean High Water Mark (MHWM) to that provided by Roads & Maritime Services in a preliminary search, Roads & Maritime Services' approval is to be sought to the proposed definition **prior** to plan lodgement at Titling & Registry Services.

When making the submission for approval, the surveyor must forward the following items to Roads & Maritime Services for investigation:

- (a) Three copies of the final plan signed and dated by a registered surveyor showing the definition of the MHWM boundary as supplied by Roads & Maritime Services in a preliminary search and the proposed definition of MHWM as determined by the surveyor; and
- (b) In accordance with the Surveying and Spatial Information Regulation 2012, a comprehensive report on the definition of Mean High Water Mark. The report must:
 - Provide the basis and method of determining the location of the Mean High Water Mark. (The Mean High Water Mark should be referenced to the Australian Height Datum (AHD) and accord with relevant tidal plane statistical analysis (where available) which can be obtained from NSW Public Works' Manly Hydraulics Laboratory (see Appendix E for contact details). If AHD is used as the basis of the definition or to support any part of the justification for the definition, then the datum must be based upon and verified by a closed level traverse between Permanent Marks that have accurate heights (i.e. Accuracy Class “LD” or “B” or better).
 - If applicable, satisfy the requirements of the Modified Doctrine of Accretion under the Coastal Protection Act 1979 in accordance with the procedures outlined in Section 6.
 - Photographs of the area, particularly when there are improvements near the foreshore.
 - A report on any improvements adjoining the foreshore.



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- (c) A fee plus GST for the investigation of the definition.

A file will be created for each application.

The Survey Manager will analyse the method and basis of the determination, and conduct a site investigation where appropriate.

The applicant will be advised in writing whether their application has been approved or the basis upon which the application was refused. If approved, one (1) endorsed copy of the plan will be returned to the applicant.

Subsequent amendments to the plan will require two further copies of the plan to be submitted for approval.

Before lodgement of the final survey plan at **Titling & Registry Services**, the following statement will be inserted in the "Signature and Seals Only" panel of the plan form:

*"Roads & Maritime Services, in accordance with Division 5 of the Surveying and Spatial Information Regulation 2012, approves the determination of the MHWB Boundary, as shown hereon.
Roads & Maritime Services file. _____ on __/__/__.*

If the variation was caused by accretion to the adjoining land, then the "Modified Doctrine" must be satisfied. In that case relevant documents will be forwarded to the local council and the Office of Environment & Heritage to comment on the applicant's submission in regard to the issues of public access and indefinite sustainability (see Section 6).

If the application satisfies all criteria of the Modified Doctrine then the following statement will be inserted in the "Signature and Seals Only" panel of the plan form:

*"Roads & Maritime Services, in accordance with Division 5 of the Surveying and Spatial Information Regulation 2012 and Section 55N of the Coastal Protection Act 1979 as amended, approves the determination of the MHWB Boundary, as shown hereon.
Roads & Maritime Services file _____ on __/__/__.*

The inclusion of this statement will inform subsequent users of the plan that the position of the MHWB had the approval of Roads & Maritime Services without the need to undertake extensive searching.



8.3 Identification Surveys of Waterfront Properties

When undertaking your search for an identification survey of a waterfront property, information from Roads & Maritime Services and the Manly Hydraulics Laboratory should be included. The office locations for this search are outlined in Appendices D & E.

This information should include details of the relevant foreshore structures and occupations held under lease from Roads & Maritime Services and tidal analysis data from the Manly Hydraulics Laboratory.

The surveyor has a professional obligation to identify and comment on title dimensions, the location of all structures and occupations that relate to the client's property. In this regard, Mean High Water Mark is a title boundary no different to any other. Therefore, differences in the location of Mean High Water Mark or the encroachment of improvements should be identified and reported.

In order to provide this professional service, it is imperative that the search include details of foreshore occupations from Roads & Maritime Services and tidal analysis data from the Manly Hydraulics Laboratory.

The use of Roads & Maritime Services records, plans and field notes may be extremely useful in providing a solution to what may otherwise be a difficult fixation in respect to certain side boundaries. It is therefore recommended that you include Roads & Maritime Services and Manly Hydraulics Laboratory on your standard search list for waterfront properties.



Appendix A – Legal Opinion on the Application of the
Coastal Protection Amendment Act 2002

COASTAL PROTECTION AMENDMENT ACT 2002

1. When the Bill for this Act was introduced into Parliament its stated objects were:

- “(a) to amend the *Coastal Protection Act 1979*:
- (i) to redefine the land that comprises the coastal zone, and
 - (ii) to require local government councils within the coastal zone to prepare coastal management plans if directed to do so by the Minister, and
 - (iii) to modify the doctrine of erosion and accretion, and
- (b) to amend the *Crown Lands Act 1989* with respect to easements for public access over foreshore land within the coastal zone.”

In the Legislative Council object (b) was deleted from the Bill and object (a)(i) was modified.

However, the provisions giving effect to objects (a)(ii) and (iii) remained in the Bill unaltered.

The doctrine referred to in object (a)(iii) is a product of the common law. It provides that where a littoral or riparian boundary changes gradually and imperceptibly due to normal physical forces, the boundary of the abutting land changes with it. The possibility of a loss or gain of land is an incident of the ownership of such land.

2. The provision of the *Coastal Protection Act* which modified the doctrine of erosion and accretion is section 55N. This appears in the Act as follows:

“Part 4B

55N Modification of doctrine of erosion and accretion

- (1) This section applies to land:
- (a) which is within the coastal zone, or which adjoins the tidal waters of Sydney Harbour or Botany Bay, or their tributaries, and
 - (b) a boundary (**the water boundary**) of which is defined or otherwise determined by reference to a mean high water mark.
- (2) A court has no jurisdiction to make a declaration concerning a water boundary that would increase the area of land to the landward side of the water boundary if:
- (a) a perceived trend by way of accretion is not likely to be indefinitely sustained by natural means, or
 - (b) as a consequence of making such a declaration, public access to a beach, headland or waterway will, or is likely to be, restricted or denied.



Surveyor General's Directions



(3) The Registrar-General has no power under Part 14A of the *Real Property Act 1900* to make a determination concerning a water boundary that would increase the area of land to the landward side of the water boundary.

(4) The Minister administering the *Crown Lands Act 1989* (or a person authorised by that Minister) has no power under Part 7 of the *Surveying Regulation 2001* (or any regulation made by way of replacement, or in substitution, for that Regulation) to approve a determination concerning a water boundary that would increase the area of land to the landward side of the water boundary if:

- (a) a perceived trend by way of accretion is not likely to be indefinitely sustained by natural means, or
- (b) as a consequence of making such a determination, public access to a beach, headland or waterway will, or is likely to be, restricted or denied.”

Subsections (2) and (4) of section 55N modify the doctrine of erosion and accretion by removing the power of any court or the Minister administering the *Crown Land Act 1989* to make a declaration, or approve a determination, concerning a water boundary that would increase the area of land to the landward side of the water boundary if:

- (a) a perceived trend by way of accretion is not likely to be indefinitely sustained by natural means, or
- (b) as a consequence of making such a declaration, public access to a beach, headland or waterway will, or is likely to be, restricted or denied.”

Obviously, what brings (a) and (b) into consideration is the existence of accretion (i.e. an increase in the area of land to the landward side of a water boundary).

In support of this conclusion it is legitimate to look to the Minister’s Second Reading Speech in Parliament: section 34(2) (e) of the *Interpretation Act 1987*.

The purpose of (a) and (b) was explained in the Minister’s Speech on the *Coastal Protection Amendment Bill 2002* (Hansard of 20 March 2002). The Minister said of the proposed section 55N: “No longer will property owners be able to have a boundary title adjusted simply by showing that any accretion has been slow and imperceptible. Now a property owner must show that the process is irreversible and that customary public access to the foreshore will not be lost.”

Elsewhere in his speech the Minister explained how the doctrine of accretion can adversely affect public access to foreshore areas. He said: “Under this doctrine landowners can apply to have their property title redefined through an administrative process or through the courts. Processes of shoreline accretion and erosion along the New South Wales coast almost inevitably create situations where the accretion takes place gradually and imperceptibly, but erosion occurs rapidly as a result of dramatic storm events. As a result, property owners have time to claim title to the newly accreted land under the doctrine of accretion but do not lose this land under the doctrine of erosion as the loss is usually sudden and



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dramatic and is readily observed and documented. In New South Wales the doctrine of accretion and erosion has become a one-way activity with owners readily increasing their landholding and never surrendering it. The net effect is that application of the doctrine favours the private landowner at the expense of the public domain. If the issue remains unaddressed we will see a continued loss of public access along the foreshores of our estuaries, in particular as property owners continue the cycle of protecting their properties from erosion and laying claim to any accretion beyond those protected boundaries.”

A further aspect of the amending legislation is section 55N(3). This section prohibits the Registrar-General from making a determination under section 14A of the *Real Property Act* concerning a water boundary that would increase the area of land to the landward side of the water boundary. This also only applies in the case of accretion.

3. The point of all this is that it is wrong to apply the limitations imposed by section 55N in any context other than accretion.

Thus, where accretion is not involved there is nothing to stop a person from registering a redefinition plan which includes land that the person owns below a cliff face, even though the assertion of ownership may result in a loss of customary access to the foreshore.

Likewise, where accretion is not an issue, there is nothing to prevent a statutory body, such as the NSW Maritime, from approving a mean high-water mark definition, so that the adjoining owner may register a redefinition plan in respect of his or her property.



REDEFINITION PLANS

1. It is the statutory duty of the Registrar-General to register redefinition plans that are in registrable form. These are plans of survey that are lodged with the Registrar-General to obtain legal recognition of boundaries which are, or may reasonably be regarded as, the true boundaries of a parcel of land.
2. Conversely, it is the statutory duty of the Registrar-General to refuse to register a redefinition plan which is not in registrable form, for example where it does not comply with section 55N of the *Coastal Protection Act*.
3. The dimensions shown in a redefinition plan differ from those of the original plan, for various reasons:
 - (a) There may have been survey or boundary errors in the original plan.
 - (b) Early surveyors often left a little more land than necessary to satisfy deed dimensions.
 - (c) Where a shortage of land exists, a surveyor may leave sufficient land to satisfy adjoining title dimensions and accept the resultant loss in the client's title, or vice versa.
 - (d) While modern surveying equipment enables measurements to be made with a high degree of accuracy, in the past lesser standards were acceptable and recognised in the earlier *Survey Practice Regulations*.
 - (e) To keep survey costs down for landowners, provision has always been made for the lodgment of plans in the Registrar-General's Office showing "compiled" measurements and "deducted" areas for residue parcels; as a consequence, there may be differences between the stated dimensions and areas of such parcels and what is actually available on the ground.
 - (f) A redefinition plan may be lodged in the case of lost boundaries. A "lost" boundary is one lacking in evidence on the ground. In the case of an artificial boundary, it would be one where none of the original survey marks or monuments is to be found, so that there is no reliable starting point or datum line from which to measure. In the case of a natural boundary, it would be one where the requisite evidence of the natural feature has been obliterated, as for example, where reclamation work has been carried out along the foreshore or where a stream has been replaced by an artificial channel or an underground conduit and the bed of the inlet or stream covered over.
 - (g) Confused boundaries make up another category which requires a redefinition plan. These boundaries are ones that cannot accurately be determined because the evidence of their whereabouts, as indicated by the relevant plans and description, is ambiguous or confused. They may also be boundaries which, from the evidence on the ground (usually old occupations), cannot be reconciled with the title dimensions or description.



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(h) A redefinition plan may be lodged to define the alteration of boundaries arising from accretion or erosion in circumstances where section 55N of the *Coastal Protection Act* does not apply.

(i) A redefinition plan showing land together with accretion that was slow and gradual and that is irreversible and would not lead to a loss of customary access to the foreshore could be lodged, if it has Ministerial consent or a court approval.

(j) Another kind of redefinition plan is a “primary application plan” for bringing old system title land (based on documentary ownership and/or adverse possession) under the *Real Property Act*.

(k) A further such plan is a “delimitation plan” which accurately defines the boundaries of land that has been converted to Torrens title under Part 4B of the *Real Property Act*.

4. Upon lodgment with the Registrar-General a redefinition plan may be accompanied by:

(a) a written report by the surveyor, stating the reasons for defining the boundaries in the manner indicated in the plan

(b) such other evidence as is necessary to support the redefinition

(c) the consent of the Minister for Lands (or other relevant authority) as an owner of adjoining land; and

(d) the name and address of any other adjoining owners so that notice may be served on them.

When a redefinition plan is registered a new certificate of title is issued in terms of the new plan.

Frank Ticehurst
MANAGER LEGISLATION BRANCH
Legal Services
Department of Lands



**Schedule of Fees
for
Applications to redefine
Mean High Water Mark, or
Landward boundaries or roads or reservations**

Submissions for approval of new definitions should be sent to:

General Manager
Department of Primary Industries – Lands
PO Box 2185
DANGAR NSW 2309

Phone: 1300 886 235
Fax: (02) 4925 3517
E-mail: enquiries@crowmland.nsw.gov.au

The Investigation fee:

Type of approval	Fee
1. Consent to unchanged simple boundaries that do not currently have evidence of prior approval, or	\$??? including GST
2. Consent to changed complex boundaries	\$??? including GST + Additional field cost if required (See below).

If office investigations detect discrepancies, anomalies or unsubstantiated claims, the lodging party will have two alternatives:

1. Provide additional information, or
2. Give a commitment to pay the consultation fee to the District Office of the Department of Primary Industries – Lands (or other relevant authority) to investigate and carry out a field inspection.

The fee charged by the District Office will be based on the rate of \$??? per hour for a maximum of 10 hours (minimum fee \$???).

The discretion of the Minister for the Crown Lands Act 1989 or his delegate will be used to evaluate whether sufficient information has been supplied for each case.



Surveyor General's Directions



Appendix C – Department of Primary Industries – Lands - Office Locations

Department of Primary Industries – Lands

Website: www.crownland.nsw.gov.au

Department of Primary Industries - Lands

General Manager

P O Box 2185

DANGAR NSW 2309

Phone: 1300 886 235

Fax: (02) 4960 3517

E-mail: enquiries@crowland.nsw.gov.au

District Offices

The following offices are open to the public 9:00am to 12:00pm Monday to Friday (excluding public holidays). Visits outside these hours are by appointment only. Please contact us by phone on 1300 886 235 or by email to make an appointment.

DUBBO	35 Wingewarra Street
GRAFTON	49-51 Victoria Street
MAITLAND	Corner Newcastle Road & Banks Street, East Maitland
NOWRA	Ground Floor, 5 O'Keefe Avenue
TAMWORTH	25-27 Fitzroy Street
TAREE	98 Victoria Street
WAGGA WAGGA	Corner Johnston & Tarcutta Streets

Visits to the following offices are by appointment only. Please contact us by phone on 1300 886 235 or by email to make an appointment.

ARMIDALE	K Block, TAFE New England, Allingham Street
GOULBURN	2 nd Floor, Government Office Block, 159 Auburn Street
GRIFFITH	120-130 Banna Avenue
HAY	126 Lachlan Street
MOREE	Corner Frome & Heber Streets
ORANGE	92 Kite Street
PARRAMATTA	Level 12, 10 Valentine Avenue



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Appendix D – Roads & Maritime Services (NSW Maritime) Office Location

WATERWAY

ADDRESS

Website: www.rms.nsw.gov.au/maritime

Sydney Harbour
Botany Bay

To: Survey Manager
Survey & Spatial Information Branch
Roads & Maritime Services
Locked Bag 5100
Camperdown NSW 1450
Phone: (02) 9563 8511
Fax: (02) 9563 8522

Newcastle Harbour

As above

Port Kembla

As above



Appendix E – Manly Hydraulics Laboratory

ADDRESS

Manly Hydraulics Laboratory
110B King Street
Manly Vale NSW 2093

Phone: (02) 9949 0200
Website: www.mhl.nsw.gov.au



Department of Primary Industries – Lands

CHECK LIST

FOR

WATER BOUNDARY CONSENT, INCLUDING MEAN HIGH WATER MARK

Details of the following items should be included in the application as appropriate.

ITEM	PROCEDURE	Y	N	N/A
1	Lot identifier and street address (check with Geographical Names Board, see http://www.gnb.nsw.gov.au/).			
1.1	Topographical map reference and details – for Rural Surveys.			
2	Name of waterway (check with Geographical Names Board).			
2.1	Is the water body tidal?			
2.2	Is the correct tidal / non-tidal symbol shown?			
3	Search Information			
3.1	Copy of original grant/title – to establish extent of title.			
3.2	Copy of the current title.			
3.3	Complete historical set of plans including full copies of DP's used in the boundary definition and adjoining DP's (these can be returned if requested).			
3.4	Copies of any unregistered plans and/or other documents which support or assist the definition.			
3.5	Public authority search			
3.5.1	SCIMS Search (Level data).			
3.5.2	AHD Level of MHW (Manly Hydraulics Laboratory) (Tidal Analysis & Tidal Gradients).			
3.5.3	Local Council (Public Access).			
3.5.4	Other.			
4	Report describing the method used to determine the boundary. The report should include, if appropriate:			
4.1	Basis and method of determining the location of the MHW or bank.			
4.2	Details of any differences between the observed location of the present MHW or bank and previous definition/s. Give considered, qualified reasons for the difference (e.g. erosion / accretion / error in prior survey, flood or reclamation).			
4.3	Position of all improvements relative to boundary shown on plan.			
4.4	Information and / or statutory declarations from eye witnesses (e.g. long term residents).			
4.5	Professional Advice or evidence (e.g. land / estuary studies, geotechnical evidence, soil/bore hole samples, etc).			
4.6	Description of the land and land use (e.g. whether natural, developed or affected by man).			
4.7	Provide photographs – current, and historical. Terrestrial and aerial if appropriate with boundary superimposed.			



Surveyor General's Directions



5	Modified Doctrine of Accretion			
5.1	Is the new MHW definition indefinitely sustainable by natural means?			
5.2	Is Public Access likely to be restricted or denied?			
6	Copy of Fieldnotes (relating to the measurement of the MHW).			
7	Observed a MHW tide to confirm definition?			
8	Fee.			
9	Three (3) signed and dated copies of plan.			

Name of Surveyor: _____

Date: _____

Signed by Surveyor: _____



Surveyor General's Directions



Flow chart of Procedures within Department of Primary Industries – Lands

