Pirates and Their Treasures of the Cadastre

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ABSTRACT

The Surveying and Spatial Information Regulation, Surveyor-General's Directions, Registrar General's Guidelines, historical precedence and plan registration procedures exist to ensure the integrity of the cadastre. But despite these documents and ensuring protocols, mistakes do happen. Searching through registered plans will reveal a significant number that, when examined closely, should not exist because they have gross errors that have escaped scrutiny. Those errors can even be a result of the survey not complying with the Regulation. The result is a cadastre that has many hidden treasures where an unentitled benefit has been gained. But where and how did these treasures come about and who are the pirates that plundered the protocols to ensure the treasures became hidden within the cadastre. This paper explores some of the survey plans that should not be, showing the treasures and how they came about. And the pirates…?

KEYWORDS: *Cadastre, integrity, errors, survey plans, pirates, treasures.*

1 INTRODUCTION

The production of the cadastre, i.e. the physical property boundaries out in the real world, and the mapped record of that reality require many components to bring it into existence. Educators, surveyors, map producers, record keepers, verifiers, legislators, legal practitioners, rules, regulations and directions all have their input. Some more than others and probably including more that have not been listed here.

Mostly things run smoothly as there are components in place that exist supposedly to protect the integrity of the cadastre. But sometimes things do not go according to theory as rules or directions are either ignored for the sake of convenience or practices have evolved that cause a bending of the rules (Songberg, 2020). The results are errors that create unintended and often undisclosed consequences, sometimes creating treasures buried within the cadastre. Even the rules themselves are not what the writers intended and have consequences that were not envisaged (Songberg, 2021). When things do not run smoothly, pirates (not to be confused with Murphy) magically appear, casting their treacherous fingers into the works and creating ripples in the cadastral sea, which allow treasures to be buried that might never be discovered.

Step up onto the deck, hoist the sails and cast off as we set sail across the seemingly calm cadastral sea in search of pirates and hidden treasure. Where are the treasures, how were they plundered, where are they buried, who are the pirates and just how bumpy is the supposedly calm cadastre? This paper aims to answer these questions by presenting several examples.

2 EXAMPLE A (2017)

In Figure 1, an approval has been given to the tidal riparian boundary and so all seems to be correct and the survey plan is registered. However, if you dig a little below the surface and examine the previous plan (Figure 2), it is discovered that the boundary at the bottom of the image is 5.145 m shorter than on the new plan and there is a reclamation extending out from the tidal boundary to a sea wall. A good setting for hidden treasures…

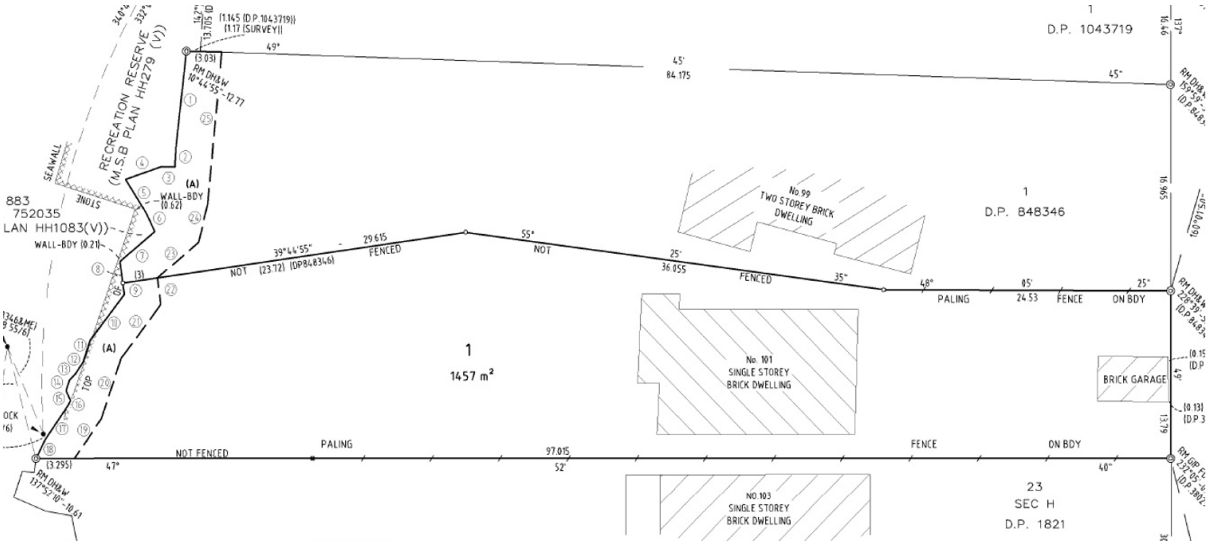

Figure 1: Plan A1.

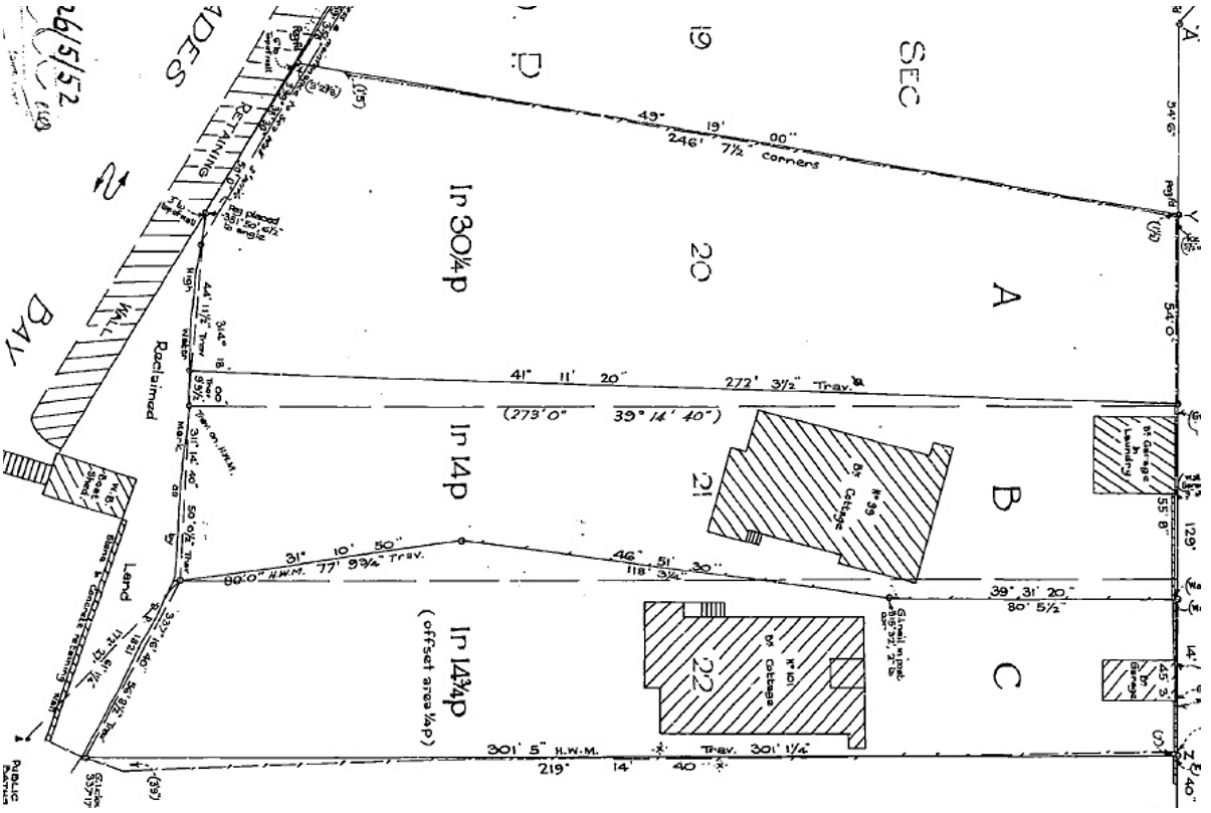

Figure 2: Plan A2, predating plan A1.

2.1 The Errors

The Surveying and Spatial Information Regulation 2017 (NSW Legislation, 2023), the current regulation at the time of writing, states at Clause 48(3): "If the change in the position of the mean high-water mark arose otherwise than from natural, gradual and imperceptible accretion or erosion, the position of the mean high-water mark, as defined by a survey plan, survey report or survey record filed or recorded by the Registrar-General or a public authority before the change, is to be adopted." A clause of the same wording existed in the regulation of the time of survey. This rule is an extension of the doctrine of accretion and erosion. Because the change, i.e. the reclamation, has not occurred gradually and imperceptibly, but rather deliberately, the riparian boundary does not change in subsequent plans and the reclamation remains part of the land below the old line of mean high water. Plan A1 (Figure 1) clearly shows the new boundary about the retaining wall around the line of the new boundary and not where it should be at the old line.

2.2 The Treasures

This example contains two treasures (Figure 3). The first is a gain of land shown hatched in Figure 3. This was all reclaimed land and according to the regulations should not have been included in the survey. The other treasure is the easement, which derives a benefit to two other lots. The easement allows two sets of landowners to pass along the foreshore across one lot to the foreshore facing a road.

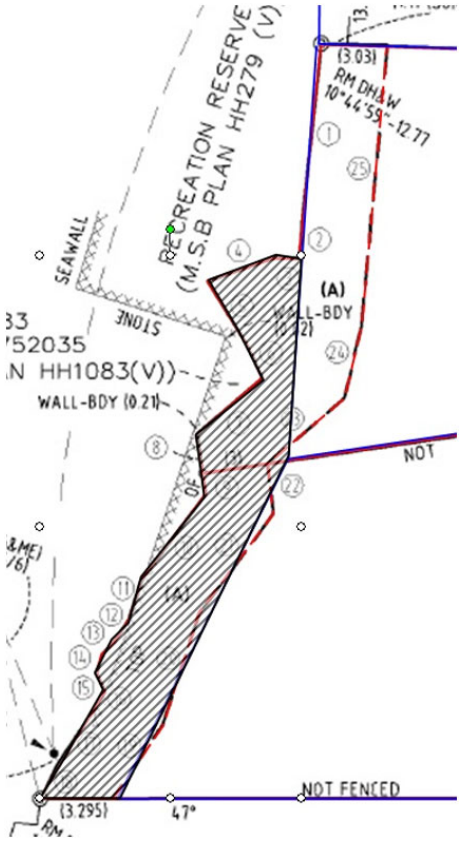

Figure 3: Plan A1 treasures – gain of hatched land and easement shown in brown.

2.3 The Pirates

In this instance, there is not one but several pirates. The first pirate that obviously comes to mind is the surveyor for ignoring the regulations and creating a plan clearly contrary to the

rules. The landowners could be considered another crew of pirates as they had sought to have this plan undertaken. Was there some agenda that facilitated this action?

Another pirate is protocol. Usually, for tidal boundary approvals, consent is needed from the minister administering the Crown Lands Act. However, in this instance, because the tidal waters form part of Sydney Harbour, the harbour authority needs to be consulted, as detailed in Surveyor-General's Direction No. 6: Water as a Boundary (DCS Spatial Services, 2016). The only problem is that the port authority has developed its own boundary of the harbour along lines that it considers to limit its interest. That line of interest, although labelled Mean High Water Mark (MHWM), is not always the same MHWM as determined by the land-based surveys. Sometimes there is a hiatus where the two determinations do not meet, and this is one such instance. Because protocol required approval by the harbour authority, which was duly gained, the authority governing the land within the hiatus, part of the reclamation, was ignored.

3 EXAMPLE B (2006)

This example consists of another plan with an approved MHWM, but this time combined with the landward boundary of a 100' reserve definition. Figure 4 shows a plan that has successfully gone through the approval process for the riparian boundary and subsequently been registered. Inspection of the plan and information pertaining to local conditions provides a slightly different perspective as to whether or not this plan hides a treasure.

The Crown grant that this plan is within did not display on the face of the plan any notation as to the existence of a 100' reservation from mean high water. The grant itself, however, has included in the exceptions and reservations "all land within 100 feet of High Water Mark." The land is on the edge of the flood plain for the very tidal Clarence River, and Sandy Creek is tidal (or at least is shown to be tidal) to the east of the road on the east side of the plan. Information on local conditions relevant to Sandy Creek reveals that there is a weir west of the road that prevents the tide from reaching its natural extent up the creek. Now the situation does not seem straight forward and perhaps there should have been a bit more to the plan.

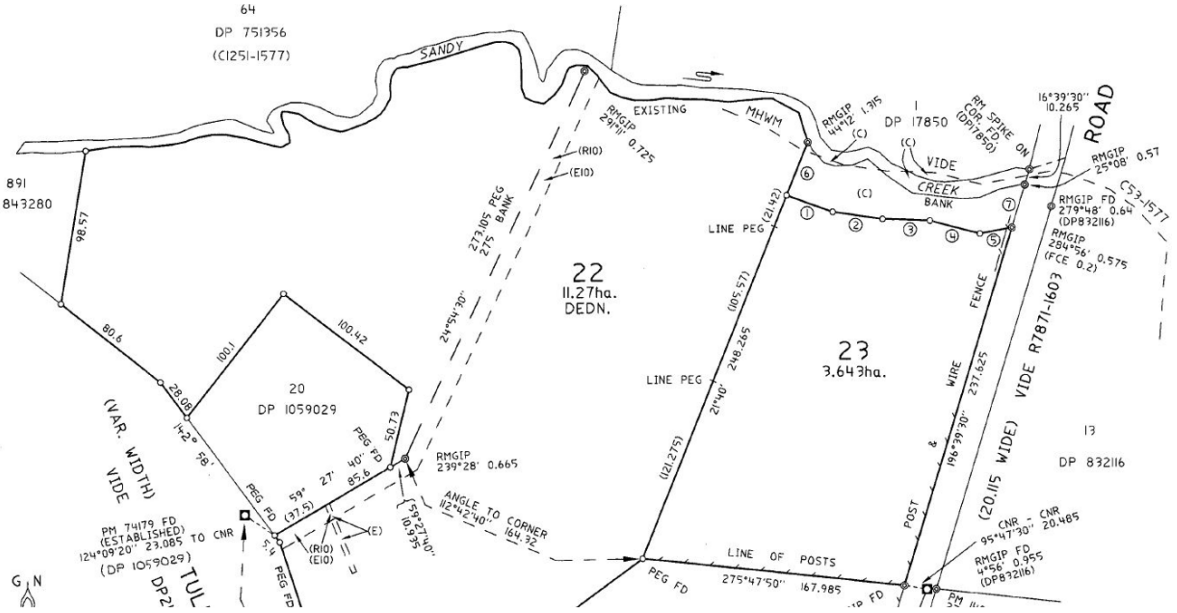

Figure 4: Plan B.

3.1 The Errors

The survey practice regulations, for quite a few incarnations, have required the surveyor to show any structure within 1 metre of a property boundary and provide offsets from that boundary. Riparian boundaries are not an exception from this requirement, and a weir would actually cross the MHWM and extend into the land a short distance. So where is the weir? It is not shown.

If the barrier is at the eastern edge of lot 22, the limit to which the reserve has been shown along the creek, then how much further up the creek would the tide naturally reach? Despite the weir, the creek is deemed tidal to its natural limit, yet that limit is not shown. The plan shows a half-completed tidal symbol on that part of the creek fronting lot 22 and also labels the riparian boundary as existing bank as opposed to the MHWM dashed from the grant plan. There is a lot to suggest that lot 22 should also show a 100’ reserve, even if it is not defined by the plan. Should the tidal limit, and thus the reserve, extend beyond the easements (E10 and R10), then there would be an impact on the terms and conditions of those easements. It seems that this plan is not as complete as it should be, and there could be hidden treasure.

3.2 The Treasures

The missing reserve information from the plan gives the impression that there is more land available to lot 22 than that indicated. This is not the only plan, starting with the grant plan, that does not show the 100’ reservation. There is even a plan in the sequence of subdivisions east of the road that does not show the reserve despite having an approval for MHWM. Lot 22 is not the only lot to have gained a treasure (Figure 5).

The non-disclosure of the weir does not produce as physical treasure but rather gives the treasure of greater simplicity to the land than what actually is. In some ways, the situation might even be considered as a hidden burden rather than a treasure.

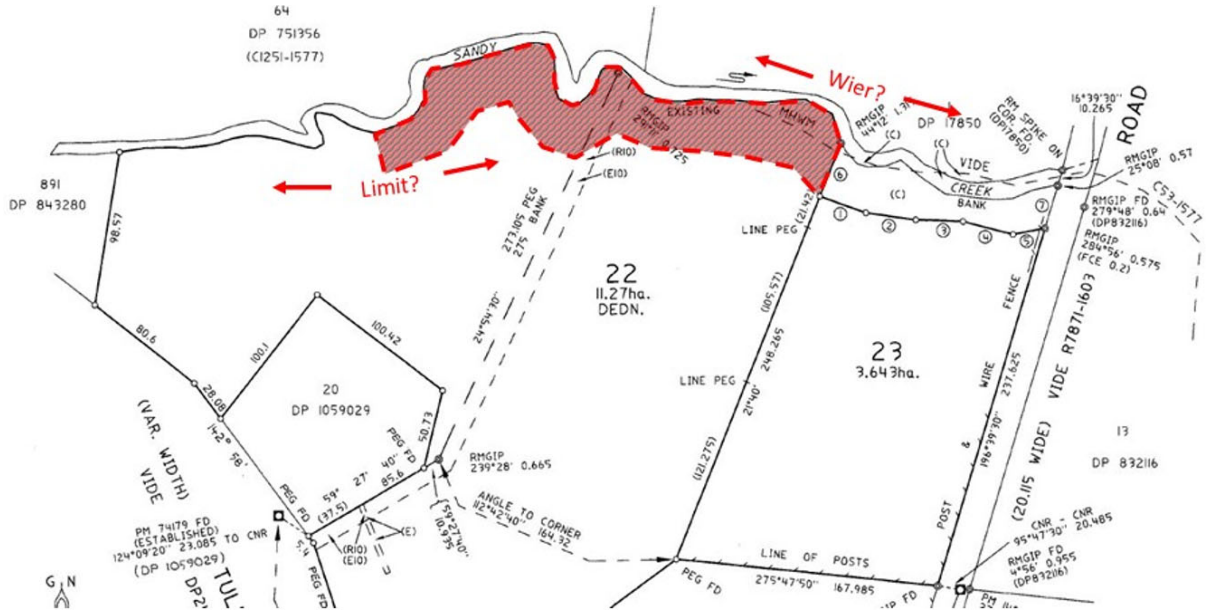

Figure 5: Plan B treasures.

3.3 The Pirates

The surveyor could be considered a pirate but not deliberately so. He was partially right but only showed part of the reserve. The fine print in a Crown grant creating the 100' reserve from high water is often overlooked. Plans rarely show it, and it has caught many surveyors unaware. The approver for the tidal riparian boundary must also be considered a pirate, for not only this plan but the subdivision plans that precede it. The existence of the reserve has not been picked up until now but then only partially.

4 EXAMPLE C (1987)

Figure 6 shows a section of a plan for the property along the river. At first appearance, it seems like a job well done, but this is another land where pirates (intentionally or mistakenly) roam. Thoughts of hidden treasure start to appear when the previous plan and charting map are examined (Figure 7). These indicate that the bank was much further inland than that shown in Figure 6, and in between is a wide shingle bed. The latest plan does indicate the location of that bank as the high bank but only refers to the shingle as being grassed. The plan also identifies a lower shingle inside a bend of the river in the northwest.

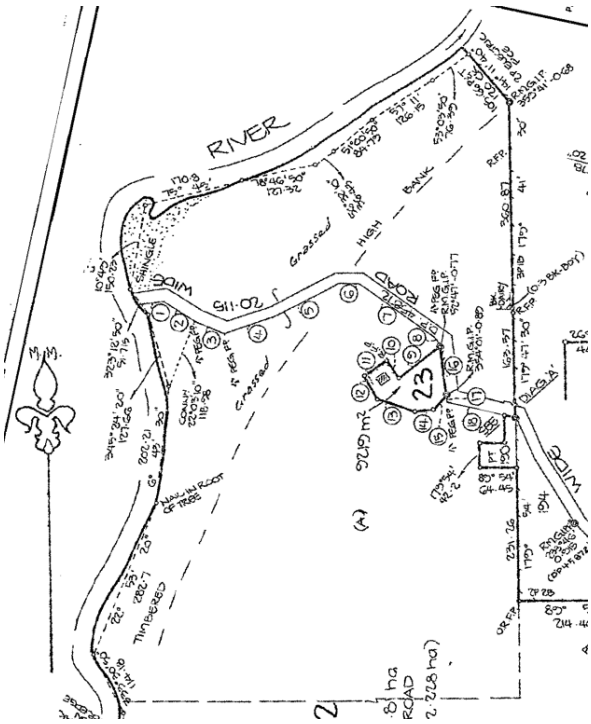

Figure 6: Plan C.

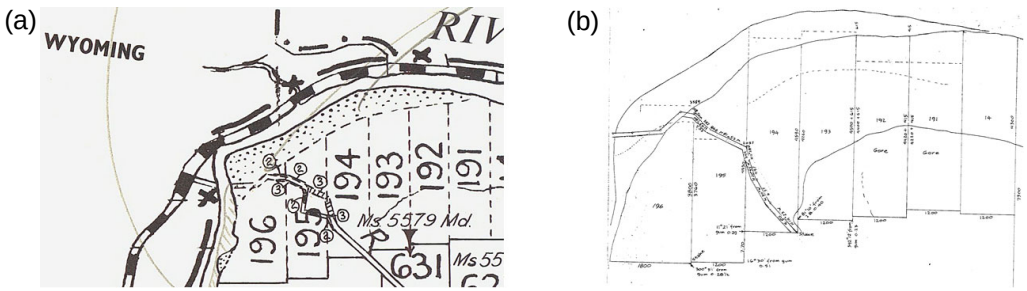

Figure 7: (a) Charting map, and (b) previous plan C.

4.1 The Errors

To determine the error(s) in plan C, an understanding of what constitutes the bank is required, particularly at the time of the surveys. In this example, there is no obvious error. It could also be suggested that there is no purposeful error but only a misguided judgement. Another consideration should be the changes that have occurred throughout time and their influence on where the riparian boundary should be located.

The modern definition of the bank, found originally within the Crown Lands Act, calls for the determination of the mean stage of the stream and the width it requires across the bed to be taken as the bank. This definition did not come into effect until 1931 with the introduction of section 235A of the Crown Lands Consolidation Act 1913. But this definition, for a long time, only pertained to Crown land surveys as the definition was incorporated into the Crown Lands survey directions. The mean stage definition of the bank did not make it into the Real Property survey regulations until much later and was not in the surveying regulations at the time of the survey of plan C. Prior to 1931, there was no clear definition of what constituted the bank. The 1914 NSW directions for licensed surveyors describe the boundary to be a fair limit of the channel, of the watercourse, excluding also shingle beds from the land. As the land below the high bank is river gravel and sand (shingle), albeit grassed, the boundary (if it had been carried out then) would have been the high bank. Prior to 1914, there was no clear direction so the boundary would have been left up to the interpretation of the surveyor at the time. Given the old plans, it is highly probable that the property boundary was at the high bank and not where the newest surveyor locates it.

So, did the bank move from the previous location to where the surveyor for plan C located it? Did the change occur gradually, as is required by the doctrine of accretion and erosion for the boundary to change? When you consider that the bank chosen by the surveyor was along the edge of the water, as it was during the time of survey, it is clear that the old bank had not changed and that the surveyor had chosen another entity to determine the boundary. The entity chosen by the surveyor for the riparian boundary did not conform to the modern definition of the bank as that was later found to be at the rear of the low shingle bed shown on plan C. Essentially, what the surveyor had chosen as the boundary was the edge of the low flow channel (Songberg, 2002, 2012) that existed at the time within the bed of the river.

4.2 The Treasures

The estimation of the amount of treasure depends on interpretations and opinions. If it is considered that the property boundary should remain as it was according to the original survey, then the high bank should have been retained as the boundary. The location of the high bank does not appear to have changed and so all the land in between the high bank and the water channel edge (the new boundary) would be considered as treasure (Figure 8).

The river forming the boundary can run at very high levels, which can change the nature of its banks and bed considerably. Conversely, the channel in which the river usually flows is smaller than the bed of the river and the flow rate not of sufficient force to change the alignment of the channel, or the bank. Only the higher irregular flow can achieve that. Moving the boundary in the manner that has been done in plan C would not have conformed to the doctrine of accretion and erosion. A consequence of moving the boundary would be the impingement of any possible ad medium filum rights of landowners on the other side of the river.

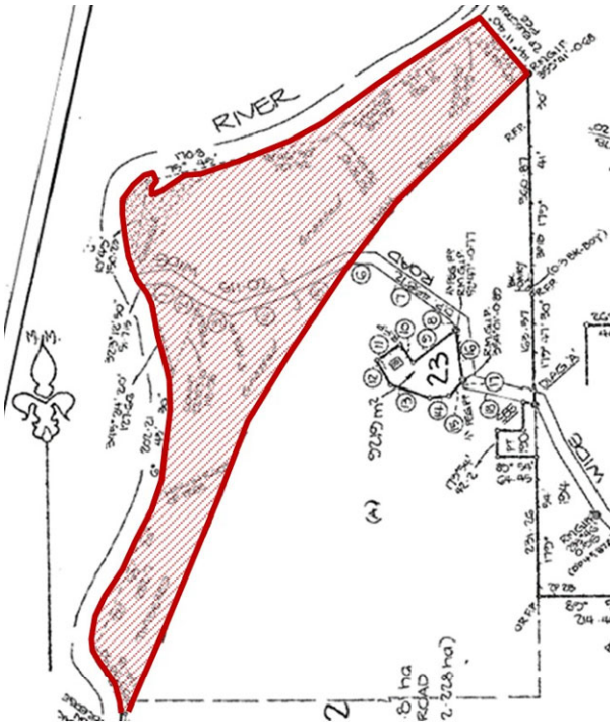

Figure 8: Plan C treasure – consideration 1.

Assuming that the more modern definition of the bank should have been the chosen location of the boundary in both the new and old plans, then only the smaller low level shingle bed would be considered as the treasure (Figure 9). The upstream limit of the low shingle bed is controlled by a concrete bridge structure, and the bank upstream is a few metres high and quite steep. There would be little lateral difference between the low flow water channel and the mean stage bank position. Downstream of the shingle bed, the bank is of similar condition, so the treasure only extends as far as depicted on plan C.

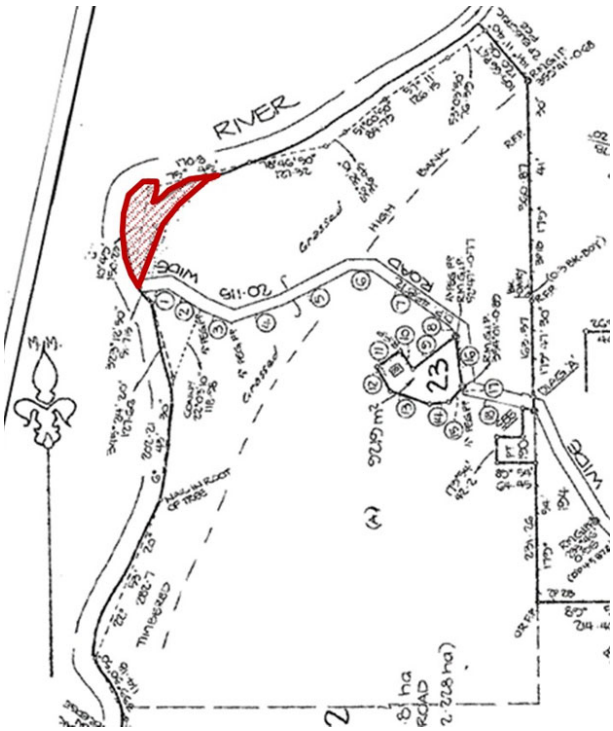

Figure 9: Plan C treasure – consideration 2.

4.3 The Pirates

Unfortunately for the surveying profession, it appears that the pirate in this example is the surveyor. The surveyor changed the boundary entity from the high bank to the low flow channel bank. Even if the surveyor was aiming for the mean stage bank, then their guess was not correct. Furthermore, it seems that compliance with the doctrine of accretion and erosion was also not followed.

Perhaps though, the pirate here could be the difference of opinion between surveyors as to what should be the bank or the riparian boundary of the land. This has been a fundamental issue for all time when it comes to determining the non-tidal riparian boundary. Everyone seems to have a different opinion as to what the bank should be. Introduction of the mean stage definition made no difference to the issue as finding the bank under this definition is impossible unless the surveyor has access to the data from a long-standing stream gauge that is nearby and can be used to determine the quantum of the mean stage.

Maybe the pirates are not the surveyors but rather the rules that govern what the surveyor should use as the boundary. Those rules have changed over time and essentially result in different entities being targeted as the boundary. It is no wonder that the surveyors have differences of opinion as to the location of the bank. Maybe the real pirate is the rules, including those current at the time of writing. Those rules force a surveyor to change the location of the non-tidal boundary from being a bank, of any description or position, to that determined by the mean flow limit of the bed, thus creating hidden treasures.

5 EXAMPLE D (1998)

Pirates and treasures seem to be appearing quite significantly in riparian boundaries. Here is yet another example. The relevant segment of plan D shows a strip of land along the bank of the river, which is identified as lot 141 (Figure 10). Investigating the previous plan, we find that the plan has been compiled from the original portion plan (Figure 11), and a notation on the plan states “the boundaries between lot 139 and lots 141 and 142 are intended to be 20 metres from the bank of the Manning River as at the date of survey of” the original portion plan.

From the portion plan, it is clear that the bank is well defined by a creek traverse, and at the time of survey there is a shingle bed plus a shingle island within the river. The modern surveyor in conducting plan D states on the face of the plan that the location of the riverbank is substantially the same as on the original portion plan. So, it looks like everything is fine and there are no treasures. However, when the banks of the old and new plans are compared, the story is a little different.

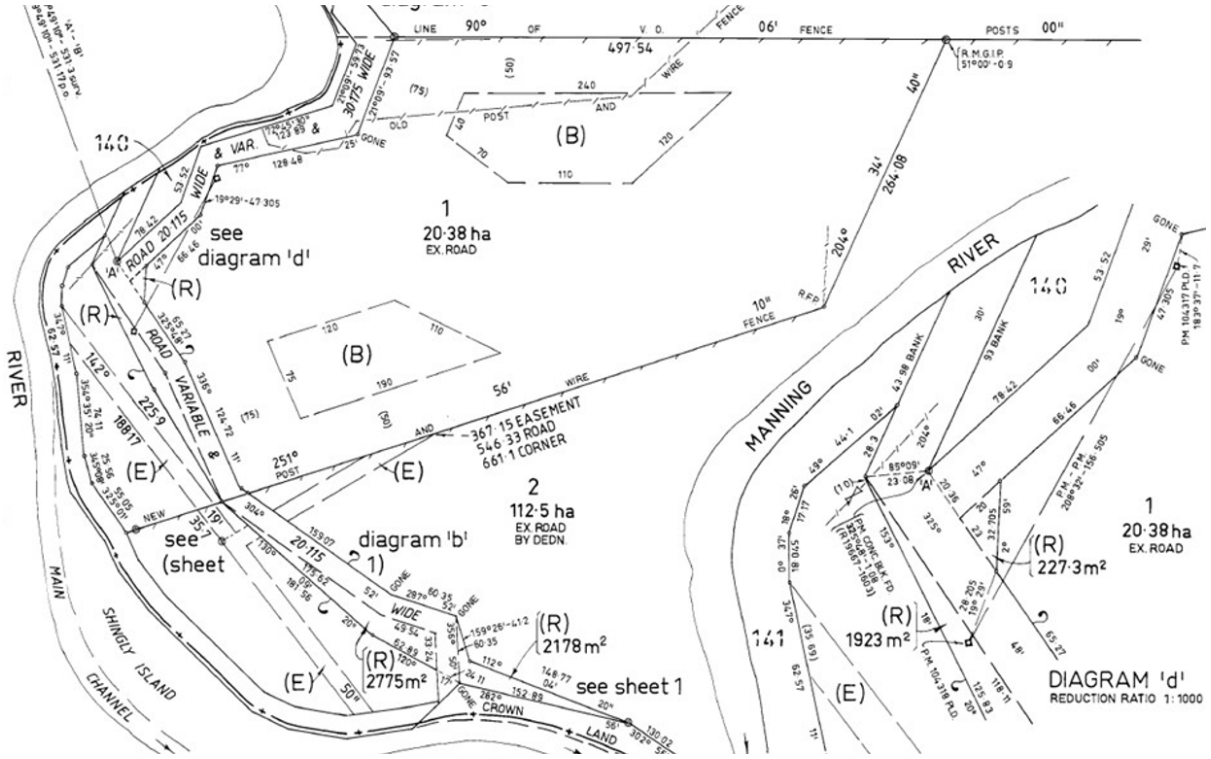

Figure 10: Plan D.

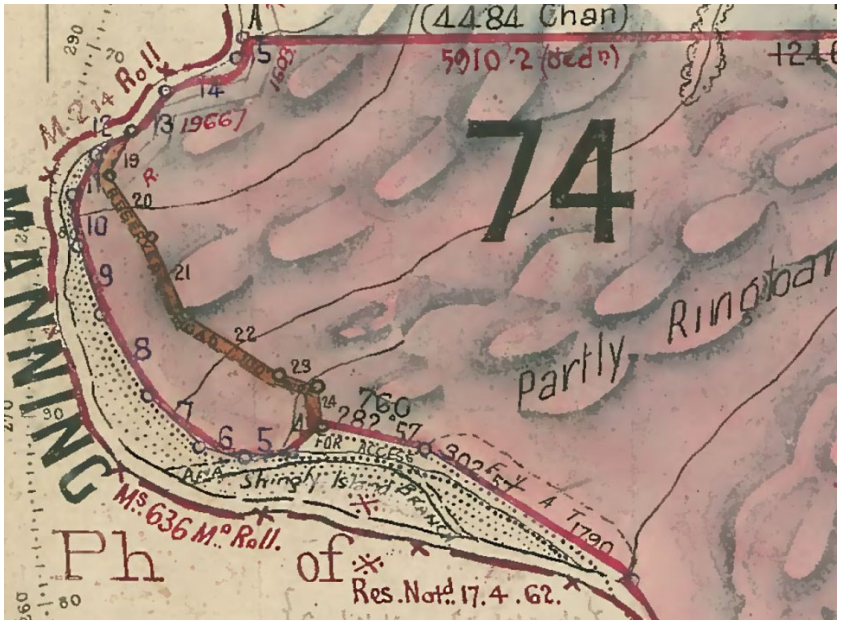

Figure 11: Original portion survey plan D.

With a graphic overlay of the portion plan over plan D (Figure 12), it becomes evident that the landward boundary of the river front strip of land is different between the two plans. There is also a difference between the two bank determinations of the river. Furthermore, the shingle bed evident on the portion plan has disappeared off plan D. On-site examination found that the riverbank chosen by the surveyor was the water's edge of the stream channel evident at the time of survey. The old bank as defined by the portion plan was still in its original location at the back of the shingle bed.

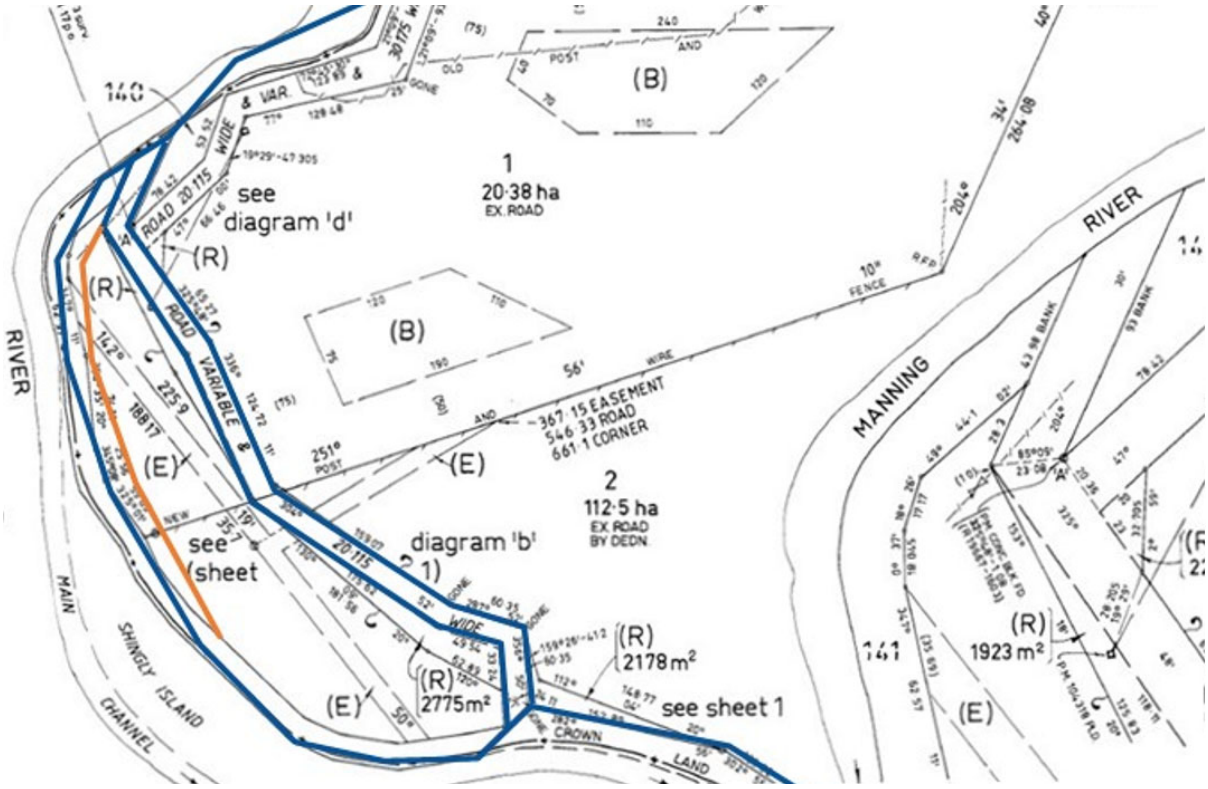

Figure 12: Plan D and portion plan overlay in blue, with the reserve boundary shown in orange.

5.1 The Errors

The error immediately evident is that the surveyor did not comply with the requirements of the landward boundary and did not locate the bank as was defined by the portion plan. Instead, the surveyor chose a different interpretation of that requirement and determined their own bank at the edge of the water.

Consideration of the doctrine of accretion and erosion is not required in this instance because, according to the preceding plan, the boundary was to be fixed from data as at a particular point in time, i.e. the date of the portion survey. The modern mean stage definition of the bank was also not up for consideration, even though the bank was a definition pertaining to Crown land, the strip of land being lot 141.

The judgement of the surveyor as to what constitutes the bank of a non-tidal stream could also be considered as being in error. In this example, as in the previous one, the opinion of the surveyors was that the edge of the water was judged to be the bank of the stream or river. If this is a growing trend, it is no wonder that there are significant differences occurring between old and new definitions of the bank. There has not been a change in the location of the bank but rather a different location, and entity, chosen by the surveyors for the bank.

5.2 The Treasures

Because of the shift in location of the bank, and subsequently a shift in the location of the landward boundary of lot 141, the treasure is the land gained by moving the bank out into the bed of the river (Figure 13).

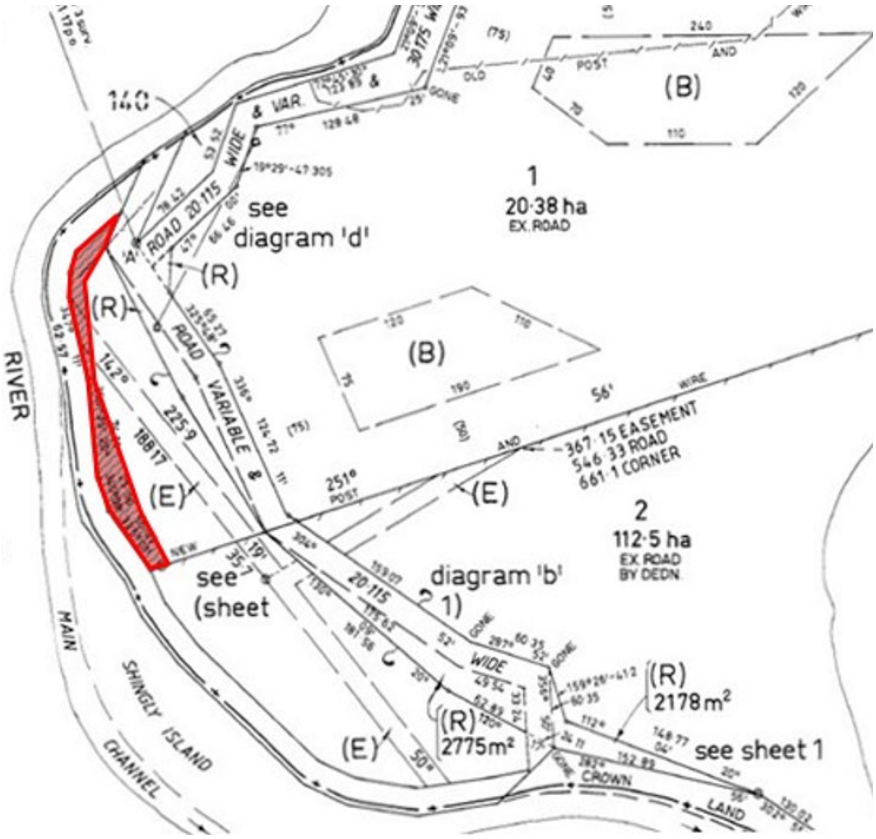

Figure 13: Plan D treasure.

5.3 The Pirates

The first pirate springing to mind is the surveyor. In some respect that identification would be correct as the surveyor did not follow the directions of the previous plan and reinstate the bank as per the original portion plan and then offset the 20 metres to locate the landward boundary of the reserve. Another pirate could be the regulations themselves as at the time there was no requirement for approvals of a non-tidal stream bank. If there were, then the error would have been discovered.

There is also the matter of what surveyors identify or choose as the bank of a non-tidal stream. Similarities between this example and the previous suggest that surveyors may be a little misguided as to what is the bank and how to find it. If the older surveyor chooses the high bank and the newer surveyor chooses the water edge of the usual flow channel, then of course there is going to be a difference in location. This difference of opinion may be the cause of many disagreements as to the location of non-tidal boundaries. As previously mentioned, even the introduction of the mean stage derivation of the bank did not change this difference-of-opinion problem. It seems that every determination of the bank has been and continues to be a guess (Songberg, 2020). It is easy to see that if surveyors have different ideas as to what is and how to locate the bank, then their education may have been different. The idea that the edge of the water of the usual flow channel could be the bank has never been the case, and mathematical analysis suggests that this feature is the edge of the low flow channel found somewhere within the bed of the stream (Songberg, 2002, 2012). So where did surveyors get the opinion that it was the non-tidal boundary? Thus, it is plausible to consider that the educators, not only of surveyors but the law makers as well, could also be considered pirates.

6 EXAMPLE E (2001)

Plan E (Figure 14) covers part of the Crown estate and was created during the development of the Digital Cadastral Database (DCDB), identifying Crown lands for inclusion into the Torrens register. The process did not make Crown land become Torrens title but simply enabled it to be recorded into the register for the developing digital identification of all land parcels. There are many of these parcel identifiers throughout the state.

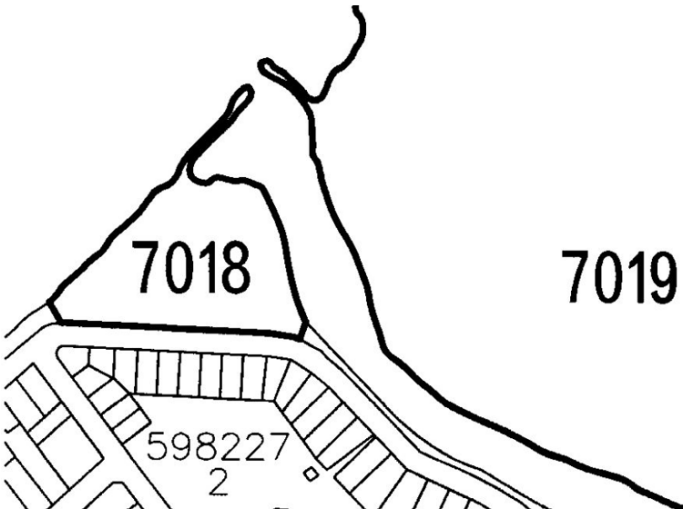

Figure 14: Plan E.

A base assumption is that these plans are correct. Unfortunately in reality, they are too often erroneous. It takes a fair bit of not so in-depth research to show that this plan, i.e. that part pertaining to lot 7018, is erroneous. The plan shows a road between lot 7018 and the land parcels to the south. The road in the location as shown does not exist, although a road does exist in the area but not in this location.

There is an older plan, showing in depth the status of this peninsular of land (Figure 15). This plan shows the changing circumstances of the reservations on the point. Noted on the plan is that the public road is not included in the new reserve and that it is shown to be located within reserve 170 and not against the parcels of land to the south. Checking the gazette for the public road verifies that it should be within the reserve and not against the southern land.

A check of the subdivision plan (Figure 16) creating the lots depicted in plan E shows that, in this instance, the surveyor got it right and identifies the land immediately north of the subdivision as a reserve and not as a road as shown by plan E.

A bitumen road surface around the point within the reserve formerly identified as R170 does exist. But unfortunately, there is also a physical road surface, which is currently used as the through road, located against the northern boundaries of the subdivision lots as shown by plan E. This, however, does not make it a road. In addition, there is the tail pointing north and east out from the top of the point. This point was never part of the land but rather a constructed rock wall that was built during 1901 for the reconstruction of the river entrance.

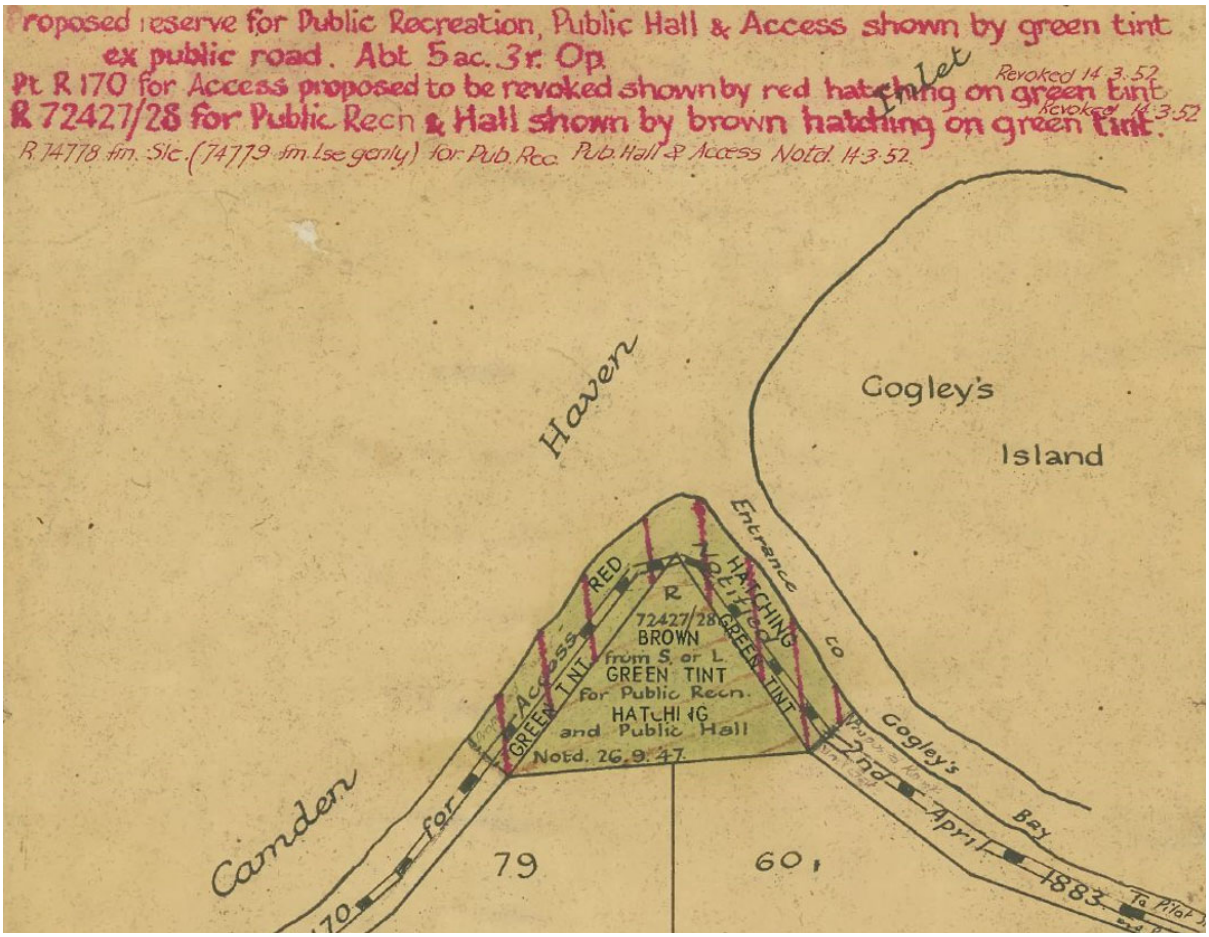

Figure 15: Prior plan to plan E.

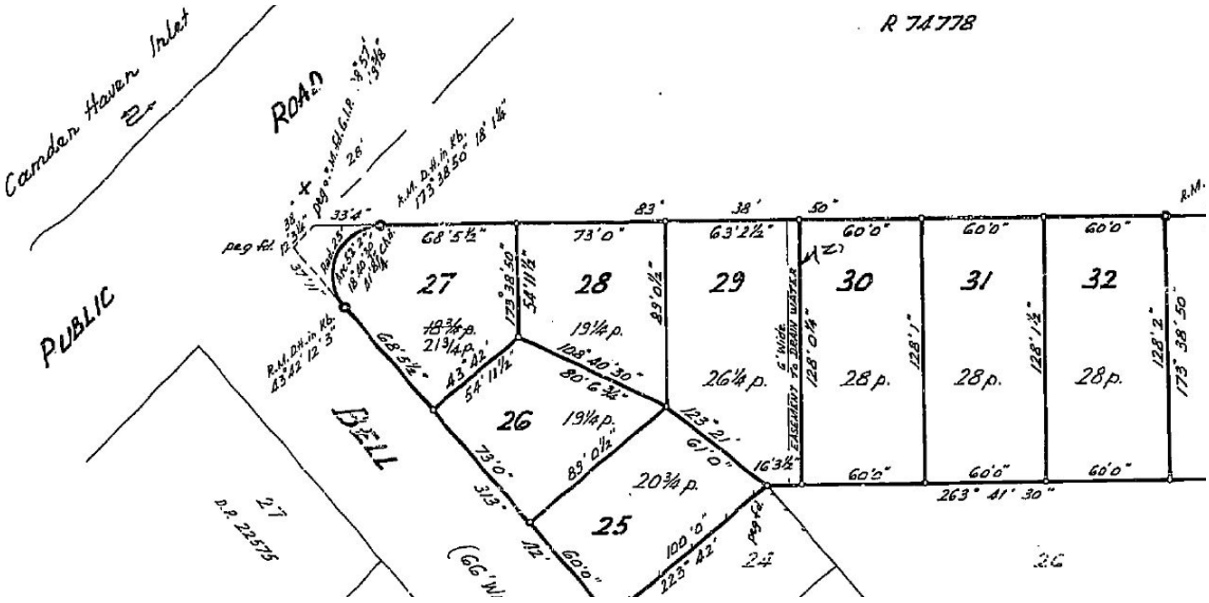

Figure 16: Subdivision plan south of plan E.

6.1 The Errors

The first error that occurred is the drafting of the linework creating lot 7018 by the builders of the mapping component of the DCDB. They were simply wrong. Lines were drawn around anything that was observed despite whether or not it should have been included. Sometimes

not even similar features were included. Lot 7019 in plan E included mangrove swamps, constructed rock walls of the new entrance, open water and a small island (Songberg, 2019). The next error is that the linework was not checked for validity. The final error, which is not discernible by just looking at the plan, is that the designation of what the lot entails (i.e. the status of the land) was not verified, and if queried with Crown Lands, the resulting data would be incorrect.

6.2 The Treasures

In this example there are three treasures (Figure 17):

- In red, the apparent road fronting the house lots, which is not a road but part of the reserve. The situation gives the owners of the house lots the belief that they have access to their land from a public road. This belief could be considered a treasure. The reality is that they do not. Their access is through a reserve for public hall, recreation and access.
- In green, the part of lot 7018 that really is the public road and not part of the reserve. The gazettal of the reserve excluded the road, so it is not part of the reserve but instead a public road.
- In blue, the constructed revetment wall built around 1901 for the river entrance reconstruction that is not part of the reserve. The wall should be part of the riverbed if you consider the true status of that feature.

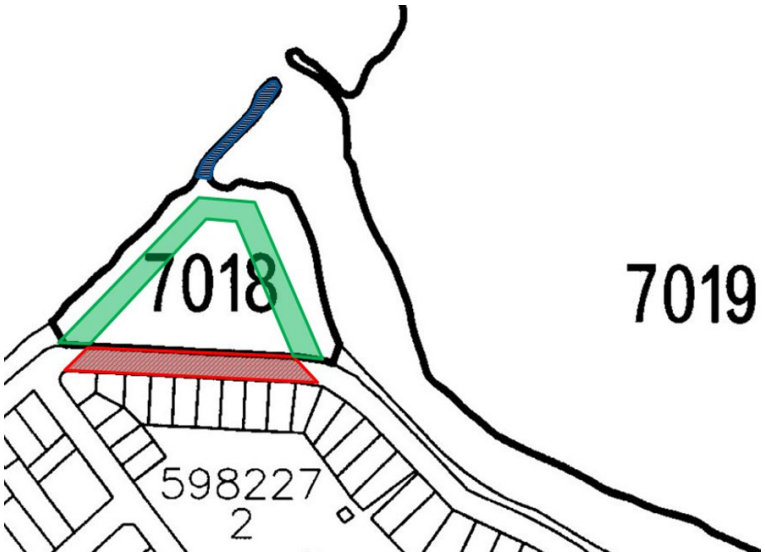

Figure 17: Plan E treasures.

6.3 The Pirates

For once, the surveyor is not one of the pirates. If you consider the surveyor of the subdivision in Figure 16, then it could be said that the surveyor was a purveyor of the truth.

The real pirate in this case is the organisation that constructed the road fronting the houses. The presumption is that it was the local council who built the road, which was on an alignment easier than the one around the point and also removed the physical traffic route away from the recreational components of the reserve. The hall fronts the old road surface and next to it is a trailer parking area for a boat ramp on the other side of the old surface. Despite this being Crown land, local council is the manager of the reserve and most likely within its management rights to realign the through traffic road. However, they did not provide the

roadway with the status of a road – it is still part of the reserve.

The other possible pirate could be the verifiers of the Crown estate for not getting the mapping status correct. The creators of the linework in building the digital mapping for the DCDB could also be grouped here as a pirate. Lines were drawn around features without giving due thought as to what should be and what should not be in a lot.

7 EXAMPLE F (2007)

The survey undertaken for plan F (Figures 18 & 19) is quite comprehensive and within itself very good work. However, there is one fundamental problem the surveyor did not foresee, which eventually brought the project unstuck. The land on which the survey was conducted is Crown land, managed through various reserve designations and purposes. Over time, the graphic records of the reserves and their extents became corrupted with the introduction of the DCDB graphics, pushing that corruption into the realm of nothing was right, including the public road depicted in the south to which the survey connects the survey (Songberg, 2019).

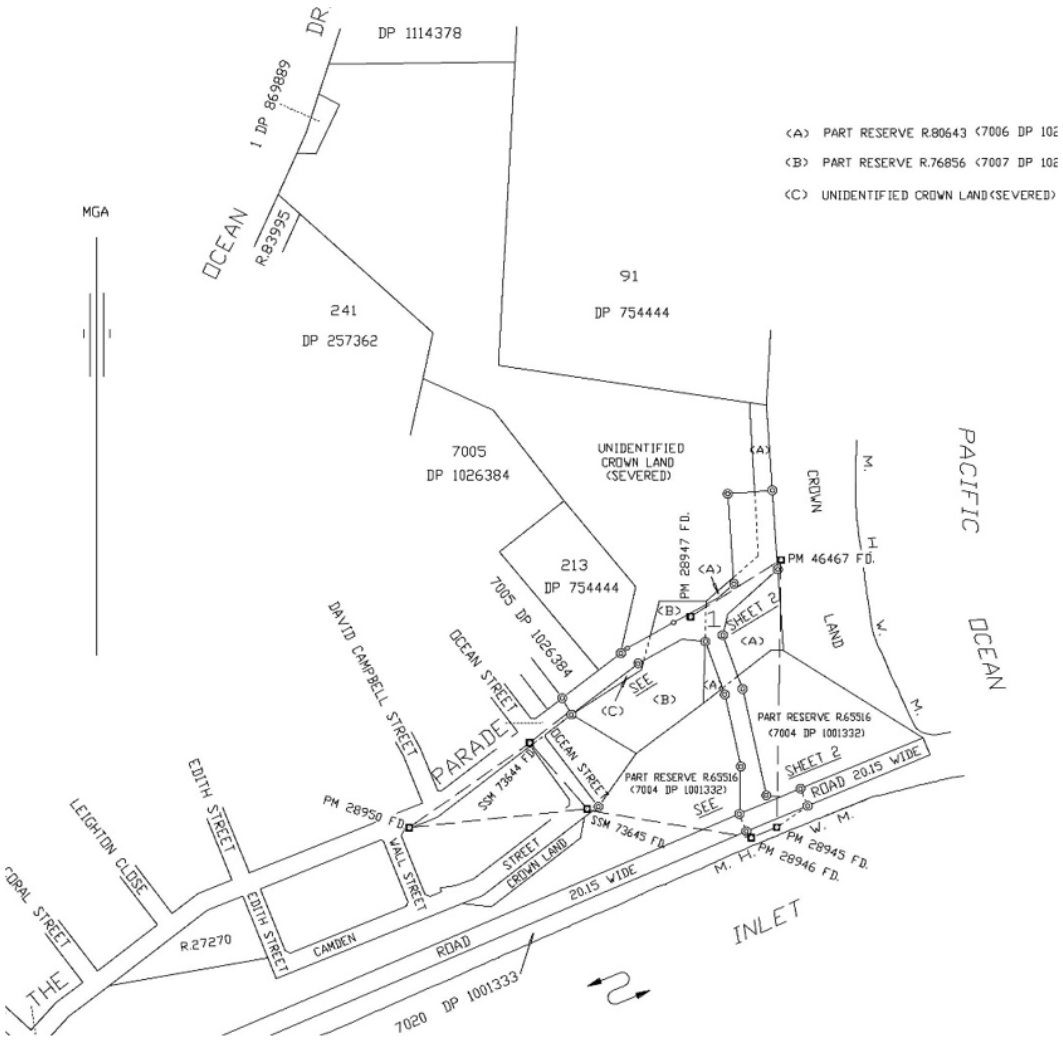

Figure 18: Plan F1.

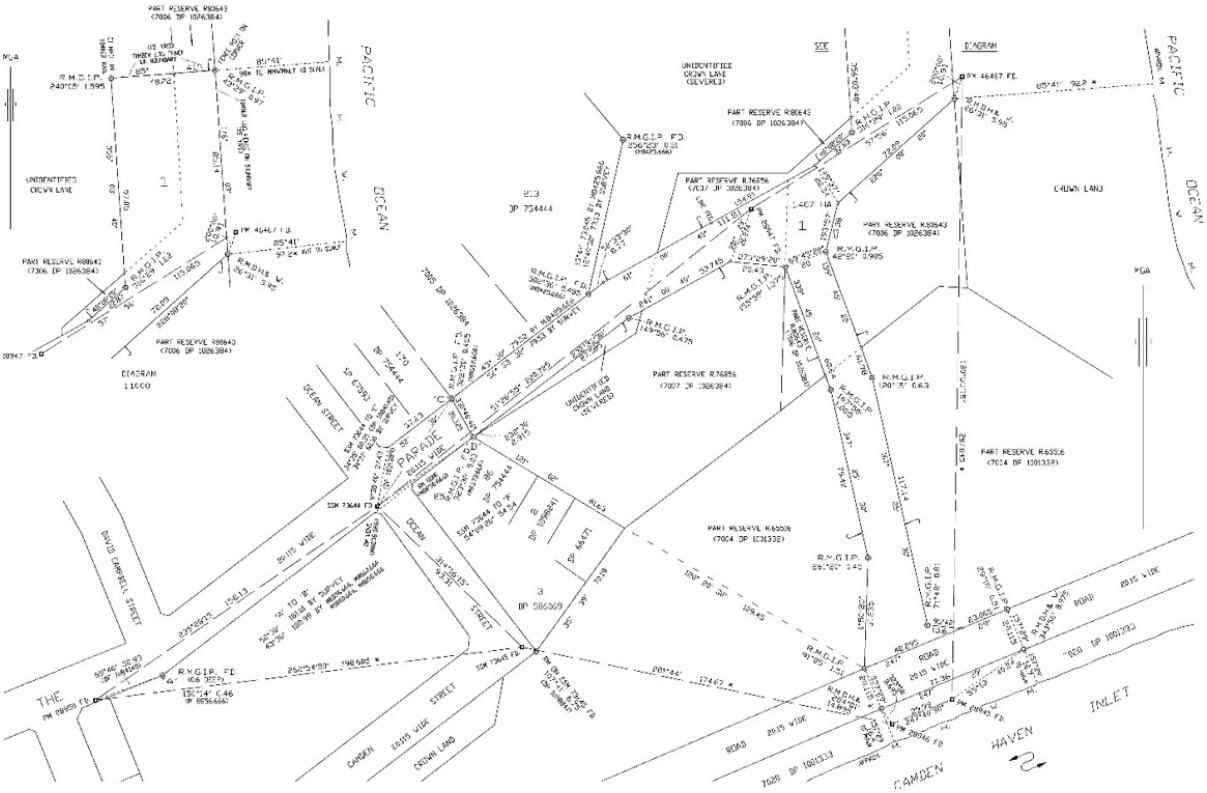

Figure 19: Plan F2.

7.1 The Errors

The fundamental error in this example is the DCDB. It could not be more wrong if it tried. Admittedly, the source of the errors does not fully land on the shoulders of the builders and verifiers of the DCDB across the Crown estate. In this area, the errors have crept in over time and been compounded upon. Mapping of the cadastre, particularly in this area, has been problematic. Unfortunately, errors such as those seen here and in the previous example are quite common when it comes to the Crown lands component of the DCDB. Users of this part of the cadastre, including surveyors, often do not realise that it is prone to errors. A golden rule that should be applied when navigating this part of the cadastral sea is to firstly assume it is wrong. This should be followed by doing the research to prove it is either right or find out what is correct, and then use the end result.

The other error is that the surveyor did not realise that the cadastre was fundamentally corrupt. They scaled, straight from the cadastral mapping, the positioning of the various components and used this as the basis of definition. This made the survey and its impact on the land invalid. The plan thus could not proceed to registration.

7.2 The Treasures

Because this survey did not proceed to registration, there are no buried treasures. But if it had done so, then the treasures would be quite extensive.

7.3 The Pirates

Once again, the pirate tag seems to be gravitating towards the surveyor. Because the plan was never finalised and no treasures were buried in the cadastre, the surveyor could only be

considered a wannabe pirate. This was not by choice but by ignorance of the conditions of the cadastre and not validating what they were surveying. Perhaps the real pirates here are the builders, managers, verifiers and validators of the cadastre, particularly the cadastre within the Crown estate.

8 EXAMPLE G (1871)

This example seems to be too old for buried treasure to still exist (Figure 20). After 152 years one would think that any treasure would have eroded into the background or dug up many years ago and dispersed. But that is not the case.

Figure 20: Plan G, the original portion plan.

To understand how a treasure still exists after so much time, a bit of survey plan history that occurred following this plan needs to be understood. On plan G, corners A, B, C and D are marked with reference trees. In 1880, another crown plan is conducted encompassing land to the south and east in a single large portion. That plan locates corners B, C and D but does not investigate corner A. After another 8 years, in 1888, two plans are finalised, covering the village to the northeast of plan G. Both plans are signed by the same surveyor on the same day. Both plans locate corner A but do not investigate any other corner. One of the plans also locates the northern corners of portion 4 to the west of plan G.

The next plan of interest is not until 1913 (Figure 21). This plan locates a peg at corner A and another at corner 1. The surveyor then uses the bearings and distances off plan G and extrapolates eastward the length of line 1-2 and creates a lot. No other marks are found, and no reference marks are placed.

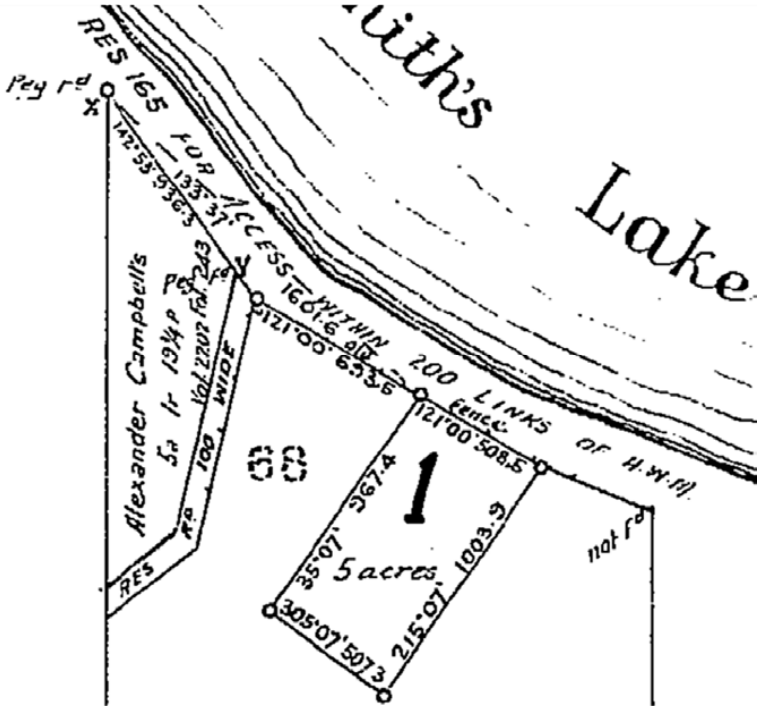

Figure 21: Survey using only plan G for azimuth.

Jump forward another 56 years to 1969, and a new survey subdivides the land to the south and east of plan G. No marks are found from plan G and the location is established from the previous plan dimensions measured up from the south. Reference marks are placed on the alleged B, C and D corners of plan G. An old round fence post, east of corner D, is assumed to be on the northern boundary alignment of the land. But at the same time a fence line is shown a considerable distance, graphically about 20 m, north of the southern boundary of plan G.

Three years later, in 1972, another survey cuts off the top of the north-western part of plan G. This plan finds no marks within plan G and so uses marks found to the northeast within the village plan to establish azimuth and leaves reference marks on each end of the cut-off line. Apparently, the northwest part of plan G is too close to the lake and imposes upon reserve 165 that was created 40 m wide, 13 years after the inception of plan G. That part cut off is incorporated into the reserve.

Another plan in 2013 is produced around the north-eastern corner of portion G, locating the reference marks from the 1972 plan and extending south as far as the north boundary of portion 4. Enough reference marks are found to re-establish the original 1800s relationships between plan G, the village plans and portion 4. Additional reference marks are placed.

The 1972 and 2013 plans have not investigated south and east across plan G, nor have they been connected to the 1969 plan. No one knows that there is a hidden treasure. The newest surveyor to work in the area has not yet registered the intended plan as there is a problem that has been uncovered. After measuring north-south across plan G between reference marks placed by the previous plans, there is an extra 20 m in the western boundary of plan G that should not be there. It appears that a treasure has been uncovered.

8.1 The Errors

The newest surveyor not only finds all the reference marks placed by the 1969 plan but also locates the old fence post noted on that plan east of corner D. The fence shown on the 1969 plan was measured as being 20 m north of the south boundary of plan G and parallel to it.

The connections across plan G to the 1972 and 2013 plans reveal that there is an extra 20 m between the south boundary of plan G and the internal road. The eastern boundary does not have that extra length. The eastern boundary of plan G is found to be essentially confirmed in its length and location as per plan G. The whole of the northeast corner, the village plans, the 1913, 1972 and 2013 plans appear to be too far north by about 20 m when compared to the south boundary of plan G (Figure 22).

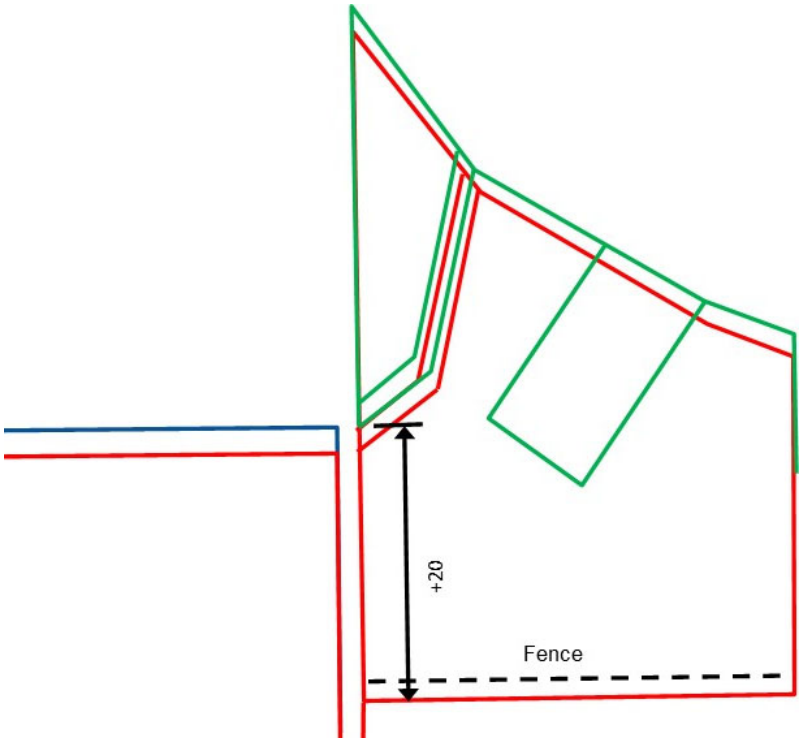

Figure 22: Overlay of (red) plan G with relation to portion 4, (green) 1913 plan tied to shifted NE corner, and (blue) north boundary of portion 4 tied to village plans and NE corner.

8.2 The Treasures

At first glance you would think that there is only a treasure associated with plan G. But wait, there is more…

Perusal of plans associated with portion 4 reveal that there is also an additional 20 m north-south across that parcel. Similar to plan G, portion 4 has been surveyed, in part only, as early as 1947 with pieces taken out. Only the pieces have been surveyed and the residue given as a deduction. Such was repeatedly occurring as late as 2002. But only 5 years later, in 2007, one surveyor does survey the eastern part of the residue, but the east boundary dimension is about 20 m longer than the residue deduction. It is apparent that a 20 m wide hiatus or treasure within plan G extends westward into and possibly through portion 4 (Figure 23).

Figure 23: Hiatus treasure within plan G extended west into portion 4.

How far the treasure extends westward is unknown. Whether it passes north or south of the internal parcel is also unknown. It could be that finding the extent is not possible.

Internally within plan G, the 20 m strip does not fully extend to the eastern boundary, which has been established to be the correct dimension north-south and in the correct location to the south boundary of plan G. This would mean that there is no treasure on the east side, unless the fence post found by the 1969 plan was not on the boundary as assumed but too far south by 20 m.

8.3 The Pirates

Unfortunately for our profession, the only pirate is the surveyor or surveyors. Somewhere a 20-metre, or 1-chain, error was made and a hiatus created. It may have been made in the survey of the western boundary of plan G in 1871 but why did it also appear in the portion 4 land? Supposedly the two parcels were connected through the village plans. Was the error made in the south and the 1969 plan, which found no marks around plan G, measured incorrectly when translating dimension up from the south? It would take a lot more investigating to find out.

What is clear is that a mistake was made in the early set-out of the land. A surveyor measured wrong. But the more recent surveyors cannot be totally let off the hook. Until now, no surveyor went that little bit further and measured across plan G. It is as though surveyors only did as little as necessary to get a definition and did not do a little bit extra to fully justify their work. Was the extra 20 m reported from the survey of 2007 of portion 4, or did the surveyor simply make it disappear into the land? There is no notation on the plan to give any indication. The segment west of the road through the portion is left as the residue, so we will never know if the 20 m extended out to the west.

8.4 The Treasure Dispersal

What is unusual about this treasure hunt is the plan carried out in 1913. Because of the shift in the northeast corner 20 m northward, that plan, by the manner in which it was defined, is now hanging out in space (green in Figure 22). Essentially, it is too far north if you consider the relation to the northeast corner of plan G as defined by the 1969 plan. How will the problem be resolved? How will the treasure through plan G be dispersed? That has yet to happen. Maybe the next plan will solve everything with the surveyor sailing to the far horizons, doing that little bit extra, in search of that elusive treasure.

A hiatus can sometimes appear in the cadastre. If that hiatus is an excess of land and subsequently a treasure, then two issues arise. Is that hiatus still within the ownership of the Crown or the previous title beneath the surrounding parcels? Or can the hiatus be dispersed into the surrounding land? In this example, the extra land has been incorporated into the surround of portion 4. It is also likely to be absorbed to the residue of plan G. But if that hiatus is negative to the surrounding land, i.e. parcels overlap, then there is no treasure but a burden and the most likely scenario is that the adjacent parcels accept a loss in land area.

9 EXAMPLE H (2003)

The plan in this example (Figure 24) is not a plan of survey. It is a departmental plan that has been prepared solely for the identification of land and no boundaries have been investigated or surveyed. Anyone would assume that the titling authority would be able to get it right but that is not the case. There is a hidden treasure buried within.

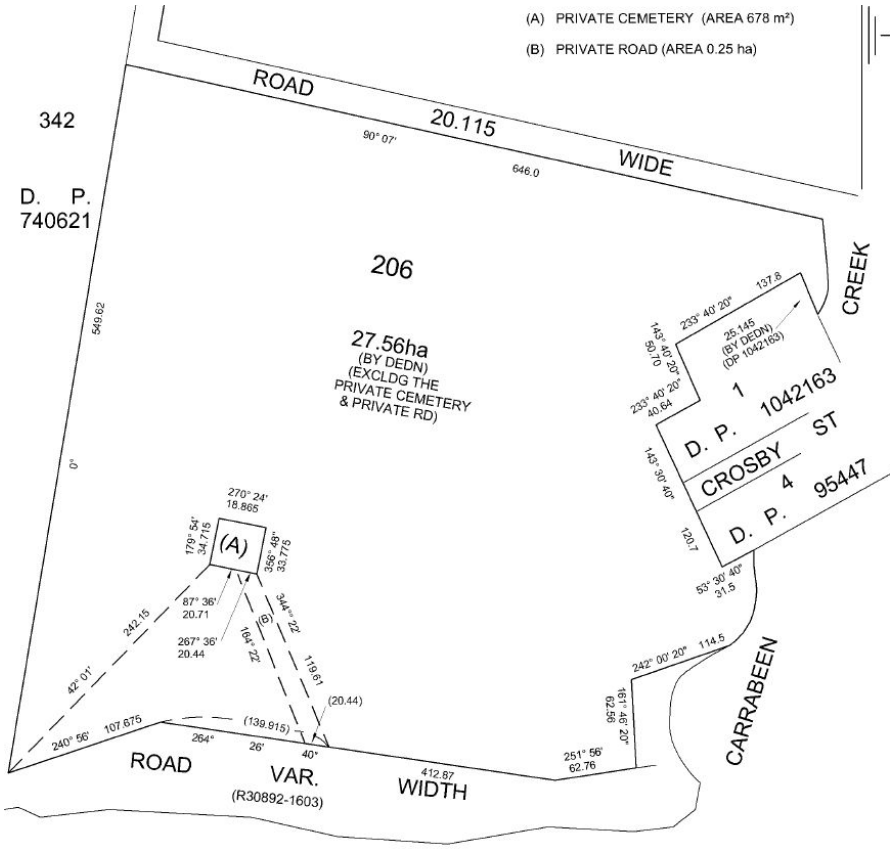

Figure 24: Plan H.

This example provides a very brief insight into the problems that can occur with road status. There have been volumes written on road status and the topic warrants more than a conference paper itself. This is just a snippet showing where hidden treasure lays.

A road is not just a road, as there is a layer of hierarchy that regularly confuses people, leading to all sorts of problems. The three most common road status identifiers that are easiest to understand are Crown, council and main (highways and motorways). All are public roads, but the road authority differs. Crown Lands administers Crown roads, council of course administers council roads, and the state roads authority administers the main roads. There are all sorts of additional status layers and issues within each of these three divisions.

Crown roads are generally simple in that they either exist or do not. Council roads can appear to exist as they are shown on the charting maps but the actions to create the road have not been completed, so in effect the road does not exist. Main roads can have controlled access limitations, so that even though motorists can use the road, property owners may not be able to access them across side boundaries. There may even be a toll on the road that has to be paid to use it.

A physical road might exist, but it does not have the status of road, as was seen in examples E and F. There are many instances throughout the state where trafficable ways are used frequently by the public or property owners but, in reality, have no status of road. The reverse also occurs, especially with Crown roads which have never been constructed. They are often referred to as paper roads.

Then there are private roads. Sometimes these are not roads but instead are rights of ways, which pass through private land giving access to another parcel or parcels. There is no public rights to these roads, only the parties identified in the instrument that created them have access to them. There are also roads that were created out of private subdivisions that have not been dedicated to council as a public road during the process of the subdivision. This issue does not arise in modern subdivisions, but in older ones the dedication of the byways to the public as road sometimes did not occur. That left the status of the thoroughfare, if it was being used, as being a private road. The term ‘private road’ might not even be correct as the real status could be ‘remnant of title’. The owner of the land, if they still exist, out of which the subdivision was created, would technically still own the thoroughfare.

9.1 The Errors

The error in plan H is the status of the road marked (B) private road. It is instead a council public road, and how to work this out is not simple as there is no plan that will provide the necessary information. The subdivision which created lot 206 is a very old private subdivision. The land was part of the Australian Agricultural Company (AACo) grant that ran from Port Stephens north to the Manning River. When the company divested itself of the land it was divided into parishes, similar to Crown parishes, and subdivided within each parish. Giving access to each parcel was a network of roads. Whether or not any particular road has the status of private road, public road or remnant of title will depend on the history of the road itself. Each case can only be determined on its own merits.

In this instance, the land was within what was the council boundaries of Stroud Shire. In 1908, the council, through a series of correspondence, sought from the AACo the roads within the boundaries of the shire to be given unto council as public roads. There exists, though not

well known or publicised, a list of parishes and roads within each parish that the AACo agreed with council to be given as public roads. The road marked (B) is one of the roads on that list.

9.2 The Treasures

Because of the status error, there would be a belief that the road belongs to a private owner. Someone, not necessarily the owner of lot 206, has a parcel of land or a hidden treasure. Council might even consider that it does not have any need to do any administrative activity on the road. A small bonus that would lessen, just a little, all the work that needs to be done. This is the treasure of not having to take an action.

9.3 The Pirates

In this instance, the surveyor cannot be considered as being one of the pirates. No surveyor had anything to do with this plan. A surveyor has instead done the required investigatory work and can be considered the purveyor of the truth. They found out the road is not a hidden treasure and that the plan has to be rectified to disperse the treasure where it should be, i.e. in the hands of council as a public road.

The pirates in this case are, in the first instance, the departmental authority who prepared the plan without the full set of information to ensure it was correct. The second pirate could be the recorders of such historical information for not ensuring that it was appropriately transferred to the cadastre. Missing or erroneous cadastral information is not a common problem, but it does happen (examples E and F). Just because something is recorded in a certain manner does not necessarily mean that it is correct. This example just happened to be about a road.

10 CONCLUDING REMARKS

Using just a few examples, this paper has uncovered many treasures that were hidden in the cadastre. Unless you have the appropriate experience, these treasures are not easy to find and can lay hidden for a long time or may be buried forever. The reasons why these treasures exist in the cadastre are not related to the pirate activities of individuals as the theme of the conference and the title of this paper may suggest. Instead, the term pirates refers to the circumstances that have brought about errors of not having a complete understanding of the situation or the variables that are involved in the mapping and creation of the cadastre.

When re-examining the examples presented, it is clear that these errors have mostly occurred inadvertently through misguided beliefs or misunderstanding by all parties involved in the cadastral process rather than through deliberate acts of piracy. So, the term pirates can be loosely cast towards everyone from the educators of surveyors to the individual surveyor right through to the regulators and managers of the cadastral processes. Even the survey practice regulations themselves can loosely be considered one of the pirates, as trying to satisfy their directions can lead to unintended consequences (Songberg, 2021) and even create buried treasure. Perhaps the real pirate is the practice of accepting what is presented as being correct without first verifying the validity of that information.

These examples and their associated buried treasures are just a few of the many that do exist within the seemingly calm cadastral sea. Just how much buried treasure there is and how rough this makes the cadastre is unknown. Unfortunately, the pirates are still roaming blissfully unaware of what they are leaving behind and sometimes compounding the errors that have been created. Every surveyor should be conversant with the principle of adopting an azimuth from two points, but it needs to be validated to a third. The minefield of cadastral information is no different. Perhaps, with due diligence and the required skills, the treasures can be unearthed, the cadastre calmed, and the pirates sent sailing for home port and retirement, never to bury another treasure.

11 FOOTNOTE

In putting this paper together, real examples were used. To create fictional situations would have been pointless as a particular scenario might never have occurred. At the least, the reader is now aware that these occurrences do exist in the cadastre. The author has tried to limit the identification of individuals as much as possible and apologises to anyone who believes that a finger was pointed at them to declare fault. This paper is not intended to lay blame or accuse anyone of wrongdoing. We all make mistakes, such is life. The primary purpose of this paper is education. In seeing the results of what can happen when these and similar mistakes occur, perhaps it will stop them from happening again. If that is an outcome of this paper, then the objective has been achieved. Individual cases just happen to have drawn the short straw to 'volunteer' as an educational aid.

ACKNOWLEDGEMENT

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