

The Reality Versus the Legality of the Demarcation District Sheets

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ABSTRACT

By references to the Hong Kong government records in the period of the Demarcation District Survey (1898 – 1905), this article summarizes the background of the creation of the Old Schedule Lots from both the views of the law professionals, the Land Court, and the survey professionals, the Survey Department. Illumination of the nature and accuracy of the DD Sheets leads to discussion on the current uses of the legal land grant plan of the Old Schedule Lots.

KEYWORDS

Demarcation District Sheets
Cadastral Survey
Land Court
Contractual spirit

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INTRODUCTION

Much has been published on the Demarcation District (DD) Sheets, but this paper attempts further discussion by referring to more historical documents so as to confirm their nature as the product of an occupation survey. Their reliability is analysed and then followed by a review of the wisdom of treating them as an exact boundary record. The legality of the DD Sheets is viewed in the light of their real nature.

THE BACKGROUND

Soon after the British assumed complete control of the New Territories in 1898, the Hong Kong colonial government found that the tenure used under the Ching Dynasty was inadequate and that this newly acquired territory was in danger of becoming a white elephant for the administration. There was an urgent need to establish a sustainable land tax system. The Secretary of State for the Colonies, Sir Joseph Chamberlain, in his confidential communication with Sir Arthur Henry Blake, Governor of Hong Kong, dated 6 January 1899, agreed with Sir J.H. Stewart Lockhart, the Colonial Secretary of Hong Kong, that the questions of titles to land in the New Territories should be settled as early as possible. Chamberlain opined that *'Security for all reasonable rights in regard to land will be a great inducement to content and loyalty, and to the popularising of British rule'*. (Colonial Office, 1900, p.115)

Chamberlain also stated that *'the Land question, however, by no means ends*

here, and there will be much left to consider after the preliminary survey is complete'. (Colonial Office, 1900, p. 115) The Hong Kong Government later performed a successful land reform in the New Territories where the land tenure problem was duly tackled by the Land Court with the information from the Cadastral Survey. Chamberlain's statement unfortunately foreshadowed that there was no follow-up on the initial land grant survey. Problems surfaced when the grant plans, i.e. the DD Sheets, were used beyond the built-in accuracy to determine boundaries, not to mention meeting present-day development standards.

Several ordinances were enacted between 1900 and 1904 to deal with land matters in the New Territories by the formation of the Land Court. Land claims were made to the Land Court which had set up procedures for demarcation. The procedures were reported by the Hon. H.H.J. Gompertz, Member of the Land Court (1900-1902), and later the Chairman of Land Court (1902-1904) in the *Government Gazette* of 1901 and listed as follows:

The initial step is to select and mark out the boundaries of a District and a notification from His Excellency in the Gazette then fixes a date after which the Court will receive no claims in respect of that District. Notices are published directing claimants to attend the Court where the proper forms are filled in for them by the clerical staffs. A demarcation party is sent out and persons are invited to attend and give particulars of

ownership pointing out their land, the outlines of which are then put in on the Cadastral Map with an appropriate lot number. (Hong Kong Government, 1901, p.916)

The Land Court processed the claims with the DD Sheets outlined with lot boundaries from the claimants, the area calculated in acres to two decimal points, the forms signed by claimants and the Demarcation Books prepared by the Land Court staff. The Land Court treated the DD Sheets as showing the ‘exact position’ of the lots, the demarcation procedure being laid down as follows.

Finally if we suppose that the last day of receiving claims in ‘X District’ is the 31st July, on the 1st August the Court will be in possession of the following documents:-

(a) Cadastral Maps showing the exact position of every claim.

(b) A statement prepared by the Survey Department giving the areas of every claim in acres to two decimal points.

(c) The claim forms signed by the claimants themselves.

(d) The Demarcation books giving particulars as to ownership, nature of cultivation, &c., collected on the ground.

(Hong Kong Government, 1905a, p.40)

The Survey Department used the plane tabling method and provided the Cadastral Maps (DD Survey Sheets at 1:1980 scale and 1:3960 scale). The cadastral survey covered the whole of the New Territories and, as reported in the famous Newland report, 328,639 lots in 477 Demarcation Districts were surveyed (Newland, 1904), plus the 20,000 house lots not shown in the 1:3960 scale Demarcation District Sheets also demarcated by the Land Court (*Hong Kong Government, 1905b, p.407*), with a total number of lots around 350,000 lots.

The DD Sheet was registered under the Block Crown Lease¹ as a grant plan where the boundary clause in each Block Government Lease states that “which said piece or parcel of ground is more particularly delineated and described on the plan or plans of Survey District No...”. DD Sheets showed the relative positions of padi-fields using field-bunds as boundaries. Limited by scale, the 1:3960 DD showed consecutive houses as shaded blocks, which were individually shown on 1:1980 DD (see extracts in Figures 1 and 2 below). No coordinate framework was recorded on DD Sheets. The Lot Index Plan, as a work of correlation of current features with coordinates onto the DD Sheets, which is obviously not direct legal evidence of boundary delineation on the ground, is of popular use today.

¹ Block Crown Lease has been renamed as Block Government Lease after 1997.

Figure 1: A 1:3960 DD Sheet

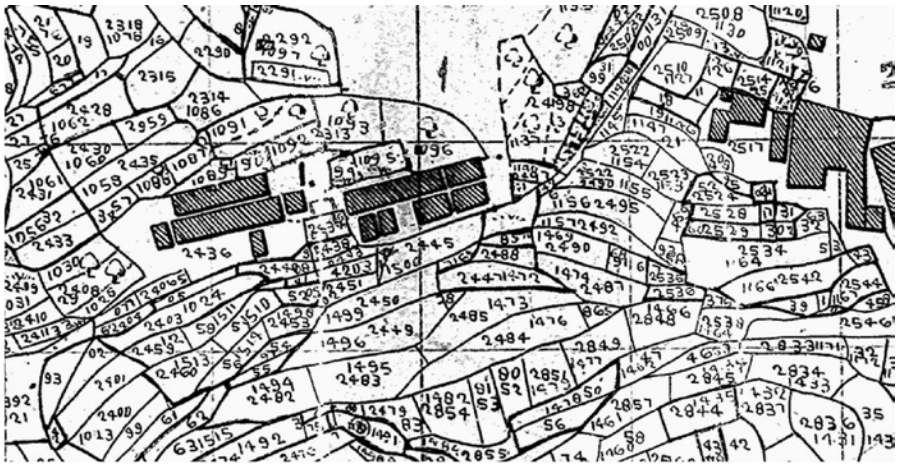
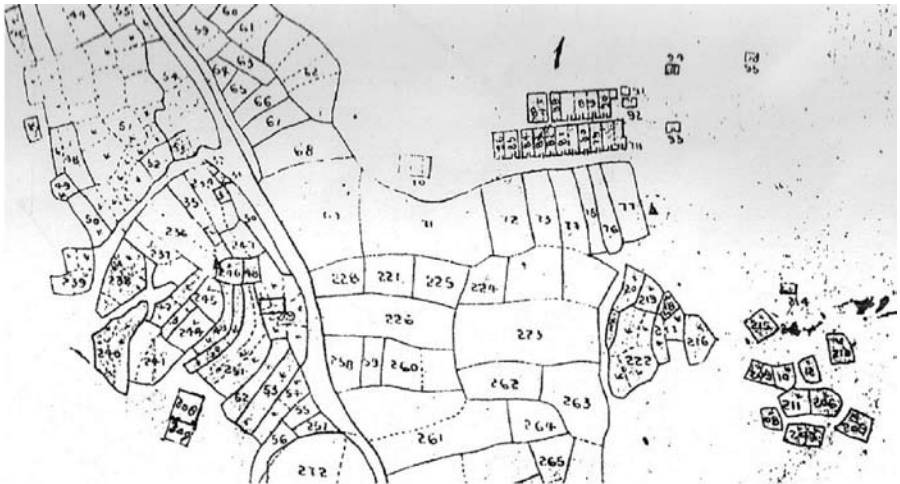


Figure 2: A 1:1980 DD Sheet



THE NATURE OF THE DEMARCATION DISTRICT SHEETS

There appears to be a popular misunderstanding by legal practitioners that as a matter of law the Block Crown Lease was granted as set out in the DD Sheets and not based on the actual occupation of the lot. This misunderstanding is most unfortunate, destructive and must be fully addressed. The facts are actually that while the former part of this belief is true the latter part is not. The DD Sheets were indeed used as the grant plans in Block Government Leases, yet the delineation and description in the DD Sheets was based on actual occupation.

To discuss the subject of the DD survey fully, the starting point should be the nature of the DD Sheet content. What are the lines therein representing? According to the history of the DD survey, the lines were intended to represent physical features actually existing on the ground at the time. Documentary evidence includes:

(a) Proclamation to NT Villagers, 1899. The Chinese proclamation, issued by His Excellency Sir Henry Arthur Blake on 12 July 1899 to the NT villagers, declared the intention of the DD survey. This proclamation was contained in the *Supplement to the Hong Kong Government Gazette* No. 26 of 28 April 1900. The English version of this is as follows:

All you owners of land must report all the land in your possession.

Should it be found at any time that land owned by any person had not been reported, it will be treated as Government land. A survey will shortly be made of the whole of the Leased Territory, so that the boundaries of the various holdings may be clearly known. (Hong Kong Government, 1900, p.383)

The proclamation indicated that the DD survey objects were the physical features representing the then existing land holdings in possession of the owners.

(b) Land Court Report, 1901.

Hon. H.H.J. Gompertz as a member of the Land Court signed the report of the Land Court on 4 March 1901. This report contained the relevant survey information: *'A demarcation party is sent out and persons are invited to attend and give particulars of ownership pointing out their land, the outlines of which are then put in on the Cadastral Map with an appropriate lot number'* (Hong Kong Government, 1901. p.916). This document revealed the same message that the lot boundaries were recorded according to occupation features as pointed out on the land.

(c) Land Court Report, 1902.

The report on the New Territory, for the year 1901 published on 1 May 1902 in *The Hong Kong Government Gazette* also by Hon. H.H.J. Gompertz but this time as President of the Land Court. As part of this report, Hon. H.H.J. Gompertz mentioned about his instruction to the Demarcators that, in

order to save time of revisiting a site, *'all ground under actual or recent cultivation is to be mapped and given a lot number, whether an owner is immediately forthcoming or not'* (Hong Kong Government, 1902a, pp. 700-701). The message to note is that the mapped features must be in actual cultivation.

(d) The Demarcation Rules, Land Court, 1902.

In the opening paragraph of appendix A to the report (c) above, it is stated that *'The objective of Demarcation is to ascertain on the spot the exact position and area of each individual holding'* (Hong Kong Government, 1902b, p.704). Its rule number 4 reads that, *'...mark out the limit of the lot carefully with bamboos, one at every angle and give it a lot number'* (Hong Kong Government, 1902c, p.705). This document may further strengthen the understanding that lines on the DD Sheet must be the physical limits of land holdings.

(e) Newland's Survey Report, 1904.

This was the general report on the survey of the New Territory from November 1899 to April 1904, written by Mr W. J. Newland, the surveyor in-charge, on 11 May 1904. In this report, it is mentioned that: *'they (the surveyors) marked the various holdings as pointed out by the tenant ..'* (Newland, 1904). This report confirmed all that had been quoted above.

(f) The Schedule of the Block Government Lease, 1905.

The Schedule recorded in its remark column *'padi fields, house, latrine,*

etc'. These textual descriptions of physical features corresponded with the DD Sheets descriptions which represented the physical features, not just lines created out of any design or authoritative rulings.

(g) The Symbols in the DD Sheet, 1905.

On the DD Sheet, there are various symbols which can be proved to represent embankments, building lines and field bunds. This form of depiction in the sheet must indicate that the sheet contents were reflecting what the surveyors actually saw otherwise just single lines would have represented all boundaries. Furthermore, the lot boundary lines on DD Sheets were later compared with the old aerial photo details. They tallied and thus indicated the occupational nature of the lines on DD Sheets.

With the above evidence, the fact that the DD Sheets contents did represent ground features at the time of the survey period (circa 1899 – 1904) should be well established.

What needs to be discussed next is whether the DD Sheets are good representatives of the ground features or not and, if not, should a blind faith be attached to their face value as the boundary record?

THE QUALITY OF THE DD SHEETS

The second point for discussion is therefore the quality of the DD Sheets – whether or not it is really poor.

Given the situation and the assigned purpose, the DD Sheets were not too bad for achieving their function one hundred years ago. However, in fact, some DD Sheets did contain large errors. Definitely, the DD Sheets can no longer serve the need of present day developments. Evidence of their poor quality includes the following.

(a) Survey Report of Mr Geo. P. Tate, 1901.

Mr Geo. P. Tate, surveyor in charge of the Kowloon Survey Department, made the survey report of the New Territory, at the close of the field season of 1900-1901, on 15 July 1901 (*Hong Kong Government*, 1902d, p.708). The report stated that *'the nature of the country is broken and mountainous, and the greater part is some of the most difficult country that I have ever seen'* (ibid) .

In view of the difficult surveying environment, coupled with the smallness of the mapping scale, the poor hygienic situation and the inadequate supply of trained staff, this primitive plane-table survey had already produced location and area reference for the Land Court in the preparation of the Rent Roll. The following historical description by Mr Tate may be of interest: -

4. ...*Indian experience does not help one very much, as the conditions are so very different in the New Territory, and it is better and safer, in the absence of all previous information such as a summary settlement would provide, to work slowly, establishing every step taken*

in the preparation of the Rent Roll, with the map of individual holdings at hand for purposes of reference (ibid, p.708).

(b) Report on the New Territory, 1901. The Colonial Secretary, Sir J.H. Stewart Lockhart, made the report on the New Territory, for the year 1901, on 22 March 1902. The survey part of this report mentioned the reason for changing the survey scale from 16-inch to the mile to 32-inch to the mile by saying that: *'it was impossible to represent the small terraced fields or the survey in detail of the villages on the scale of 16-inch to the mile'* (*Hong Kong Government*, 1902e, p.696). This was in support of the above showing that the difficulty of the survey was real.

(c) Survey Errors discovered in 1901. In changing the survey scale from 16-inch to the mile to 32-inch to the mile, some areas were resurveyed. Even after a lapse of just a few years, the resurveyed boundaries were often found not to agree with those in the earlier survey. This is evidenced from the said Newland's report. The relevant contents are now quoted as follows:

'No. 4 District was originally surveyed on the 16-inch scale in January, 1900, and, after an interval of nearly 3.5 years, a resurvey was made on the 32-inch scale. In this interval a great many changes had taken place. ... Consequently the areas of claims as derived from the two surveys will not in all cases agree.'
'... The boundaries of these claims

in the original survey were so vaguely given, that they could not be pointed out again exactly, for the resurvey, even by the claimants themselves. Hence a margin of difference must always be allowed, even where the face of the ground has not undergone alteration. ...'

'The larger scale of the second survey allows more detail to be shown; hence a margin of difference must be allowed in the smaller cultivated lots even where the boundaries are unchanged'.

'I might add that in all big Cadastral Surveys, it is found impossible to make a resurvey tally exactly with the original, ... the difference between two surveys when put in figure form in the area column, lot for lot, though they seem alarming to the non-professional eye, have regularly to be discounted as absolutely unavoidable.'

W. J. Newland said it all, and convincingly, that a boundary survey could never be exact particularly when mapped in a small scale. Yet, he was resurveying only at double the scale and an interval of 3.5 years. What can we expect nowadays when we are to resurvey one hundred years later and at a true scale, i.e. in coordinates of mm precision, being 2000 or 4000 times the scale of the DD Sheets. W. J. Newland must be respected as the author of the DD Sheets and his remarks on the achievable reliability cannot be ignored.

(d) Newland's Survey Report, 1904.
Newland, 1904 basically repeated

what Sir J. H. Stewart Lockhart had said, that *'As the cultivation in the hilly Districts remaining to be surveyed, consisted of small terraced fields running up hillsides and narrow valleys, the average size of the field was so small that it was found impossible to represent such minute detail on the 16-inch scale with any degree of utility.....'*

The impact of the survey difficulty on the quality of the DD Sheets can be imagined.

(e) The advice on the updating of the DD Sheets by invited eminent surveyors.

This advice included that made by the British Surveyor General, Mr Winterbothem in 1929 and Brigadier Eartine Hotime in 1959 who both expressed the same view that the DD Sheets needed revision and up-dating before they might serve as the proper boundary record. (Leung, 1986)

(f) Examples of some poor DD Sheet content.

There is no lack of examples that the DD Sheets contained blunders, such as that a row of village houses in Tap Mun is found to fall partly in the sea area whereas the authentic village houses are lying parallel to the shoreline at about 70 degrees difference in orientation. Somewhere near Sha Tau Kok, a village of 10 houses in a row is shown in the DD Sheet as only 5 in number. A portion of a DD Sheet at Ma On Kong is found to be noticeably different from the Double Lot Sheet which should be more original than the DD Sheet. Many lots along the edge of a DD Sheet conflicted with the lots along the matching edge of the adjoining DD

Sheet whereas these two groups of lots should share common boundaries. Some buildings in Cheung Chau contain lines joining the diagonally opposite wall corners as the lot boundaries. It is common knowledge to surveyors that a DD Sheet can be full of survey, plotting, and tracing errors.

(g) The Sampling Survey of the Area Discrepancy.

Land surveyors have a good understanding of the quality of the DD Sheets as the boundary record. If DD Sheets are used at their face value, i.e. accurate to the registered units of 0.01 acre, Tang, Lam & Cheng,(2003) pointed out that 35% of the lots (sampling size - 15 DD Sheets) in 1:1980 scale, the DD Sheets mismatched with the graphic area on the DD and 62% of the lots (sampling size - 6 DD Sheets) in 1:3960 scale mismatched with the graphic area. The research result indicated that one-third and two-thirds of the 1:1980 scale DD Sheets and 1:3960 scale DD Sheets respectively have area discrepancies. In area discrepancies, 10% of them exceeded one-third of the registered area.

According to the above, the DD surveyors as the authors of the DD Sheets, the Survey General/Brigadier as the advisors and the contemporary land surveyors as the expert users all pointed out the unsatisfactory quality of the DD Sheets. The inadequacy must be established beyond the least possible doubt.

THE USE OF DD SHEETS AS A LEGAL BOUNDARY RECORD

Unfortunately, the DD Sheets were regarded as gospel by many people. Administrators referred to them for land grants and various boundary enforcement, landowners referred to them for transactions and boundary disputes, judges referred to them for court rulings and surveyors might also refer to them for boundary re-establishment. Even when the inadequacy of the DD Sheets is established, people still dare not challenge their legal status for fear of exposing more problems.

Regarding the DD Sheets as the only legal document for re-establishing the boundaries appeared to be based on the spirit of contract and the declaration in Indenture of the Block Government Lease that the boundaries are 'as particularly and described in the plan'. Are these two aspects really indisputable? We take them as our third point for discussion.

(a) The Contractual Spirit.

According to the history as revealed above, the DD Sheets were only an ad hoc product not submitted to any stringent quality control. If a sheet was foreseen as the perpetual boundary record, a better checking mechanism should have been devised to scrutinise the accuracy of its content. Although this one-sided contract has been continuously used by people for nearly a century, the Block Government Lease still lacked the signatures of

the grantees. Needless to say, the grantees had never been represented by any surveying experts at the time of registration. For a responsible Government as the initiating party, such an ill prepared contract must be treated with care. If not, the Government may in fact be facing a possible risk of misrepresentation.

(b) The Boundary Clause in the Indenture.

The phrase '*particularly delineated and described*' should indicate the relative hierarchy of the lease content and the DD Sheet. Naturally, the plan as the better medium to describe the boundary must dominate. However, it should not preclude the referral to the ground monument which is the subject of description by means of DD Sheets, Schedule as well as the derived registered area, as the superior boundary evidence. Taking the identity card as an analogy, the lease content corresponds to the printed name on the identity card and the DD Sheet to the photo. While the photo must be more representative than the printed name in identifying a person, none of these two should prevail over the person himself as the best identity. This way of identifying the boundary should have no violation of the spirit of contract.

(c) The Need for Plan Interpretation.

Every line in the DD Sheets can therefore be regarded as conveying two messages, viz. the graphical position of a boundary and the representative nature of a physical feature. The line position should not be accepted on its face value but must be subject to a professional interpretation to identify

what is the feature it represented. In case a physical feature is discovered in close proximity to a line on the DD Sheet and proved to be the authentic boundary, this feature must be accepted as overriding the plan position. If the representative nature of the DD content is ignored, only half of the value of the contract document is considered and should not be the correct approach.

(d) Critical Wordings in the Original Land Grant Exercise.

To complete this part of discussion, two more points must be addressed. Firstly, the use of the term 'exact position' in the Land Court Report on work from 1900 to 1905 and secondly, the adoption of acre (expressed to the hundredth of it) as the area unit in the Schedule.

The statement '*Cadastral Maps showing the exact position of every claim*' appeared in the Land Court Report of 1902 as has already been quoted in the Background section above. Apparently, this document seems to be the very source of misunderstanding prompting legal practitioners to treat the grant plan as 'exact' from the outset. If the word 'exact' is interpreted in its correct context and against the historical background, it must refer to the true possession of individual claims of land such that an owner must not over claim or dishonestly claim. The term could only be taken in a literal sense but never to connote any scientific significance. In no way should this term be dictating our interpretation of the DD Sheets content as above discussed.

Regarding the area measurement unit of one hundredth of an acre, the crudeness

of the survey is clear. The subsequent conversion of areas to square feet (then further to the tenth of a square metre) was only a paper exercise which was indeed illogical. It may be noted that in 1966 when the area conversion exercise was underway, a land surveyor, Roy Davey, in his report [paragraph 7 of folio 1 of Government file no. NT 5/196/66] specifically warned of the inadvisability of the conversion concept.

If the Government is to consider the registered area as a committed grant condition, the converted figure in footage should be discounted. Only the area in acreage should constitute the committed item. To interpret the DD Sheets intelligently and the registered area as the content of a contract should be conducive with the spirit of contract. This interpretation exercise is distinct from ‘changing’ the boundary or the area and no alarm should be caused.

CONCLUSION

To recapitulate the foregoing, we have established the few points that:

Firstly, the DD Sheets were to depict actual occupation features for owners to claim their land holdings. All past survey and administration documents may serve as the strong evidence to support this assertion.

Secondly, the DD Sheets though not too bad for their original fiscal purpose, were inadequate to serve as a conclusive boundary record. The crudeness of the DD Sheets is readily

evidenced. Hence, the DD Sheets must be subject to interpretation particularly by referring to ground monuments if available.

Thirdly, even if the contractual spirit is considered, the DD Sheets should not be accepted solely on face value. Their legal status must be viewed in the correct perspective of how they were produced and what they had attained. Their role can be likened to the sketch of an artist who never claimed it as final, but the sketch was snatched off the drawing board and used for actual construction. The role of the sketch must not be confused with the final drawing yet to be produced.

We must recognize the historical truth and treat the DD sheets according to their real value.

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REFERENCES

Colonial Office (1900), *Correspondence (June 20, 1898, To August 20, 1900) respecting the Extension of the Boundaries of the Colony, Eastern No.66, Colonial Office, Hong Kong, November 1900, 466 pages.*

Hong Kong Government (1900), Government Notification No.201, Appendix IV, “English version of Chinese Proclamation” by Sir Henry Arthur Blake GCMG, Governor, & c., Page xx, Supplement to Government

Gazette No.26, *The Hong Kong Government Gazette*, 1900.

Hong Kong Government (1901), Government Notification No.274, Report on the Land Court, for the year 1900, *The Hong Kong Government Gazette*, 11th May, 1901.

Hong Kong Government (1902a), Appendix No.1, Land Court Report by H.H.J. Gompertz, *The Hong Kong Government Gazette*, 2nd May, 1902.

Hong Kong Government (1902b), Appendix No.1, Land Court Report by H.H.J. Gompertz, *The Hong Kong Government Gazette*, 2nd May, 1902.

Hong Kong Government, (1902c), Appendix A, Demarcation Rules, *The Hong Kong Government Gazette*, 2nd May, 1902.

Hong Kong Government, (1902d), Appendix No.2, Report on the Survey of the New Territory, At the close of the Field Season of 1900-01-15th July, 1901 by Geo. P. Tate, *The Hong Kong Government Gazette*, 2nd May, 1902.

Hong Kong Government, (1902e), Government Notification No.264, Report on the New Territory, Survey Report by Mr Tate, For the Year 1901, *The Hong Kong Government Gazette*, 2nd May, 1902.

Hong Kong Government, (1905a), Government Notification No.200, New Territories: Land Court, Report on work from 1900 to 1905, Land Court, 7th March, 1905, *The Hong Kong Government Gazette*, 7th April, 1905.

Hong Kong Government, (1905b), Government Notification No.200, New Territories: Land Court, Report on Work from 1900 to 1905, Land Court, 7th March, 1905, *The Hong Kong Government Gazette*, 7th April, 1905.

Leung SC (1986), The ABC of Land Parcels, The Hong Kong Land Surveyor, *Hong Kong Institute of Surveyors*, 2:3, Serial 11, 23 – 28, August 1986.

Newland WJ (1904), A General Report of the Survey of the New Territories from November 1899 to April 1904, *Hong Kong Government Gazette*, 1904.

Tang C, Lam S and Cheng A (2003), Interim Results for Registered Area Defects in the New Territories, Surveyors Times, *Hong Kong Institute of Surveyors*, October 2003, Volume 12 Issue 10, p.9.