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Editorial

A Hong Kong Museum of World War II

Concerned parties are seeking the establishment of a government museum in Hong Kong to commemorate China's resistance against Japanese military invasion during the Second World War.

They are not satisfied with the mere addition of historical materials on the activities of the East River Column partisans to the Hong Kong Museum of Coastal Defence (HKMCD), which reopened after its latest renovation.

The HKSAR Government has announced to take up the idea in the Chief Executive's 2023 Policy Address to the Legislative Council.

The government's most likely response would be to anchor this new museum at the developed, southern Ah Kung Ngam part of the HKMCD to take advantage of its existing infrastructure.

However, as the new museum has a unique theme, it is better for operational and curatorial reasons to locate the new facility in the hitherto neglected northern portion of the HKMCD, within which the disused Pak Sha Wan Battery, which witnessed action during the Battle of Hong Kong, is located.

Presently, the HKMCD's used area consists of about half of the government's land allocation (GLA-HK-848) in the southern portion, opened to the public in July 2000. The northern portion has road access across the Island East Corridor (IEC) via Lei Yue Mun Holiday Village. Built when the IEC was constructed, this access road has never been open to the public.

Military enthusiasts often venture to the northern portion to inspect the war relics there. Close to the MTR station of Heng Fa

Tsuen, this underutilised space for a separate new museum would enhance the present HKMCD, to which the public would have access – largely via the Shau Kei Wan MTR Station.

This option would also avoid disrupting the existing HKMCD and should help harmonize the architectural designs of two separate, but connected, historical perspectives.

Lawrence W.C. Lai
27 October 2023

Individualism in the Post-industrial Society: Implications for Land Use Planning

David Emanuel Andersson¹

INTRODUCTION

Since the 1970s, Western Europe, North America and parts of Asia have been undergoing a structural transformation from an economy based on manufacturing towards one based on the production of knowledge-intensive services. But this change is only one manifestation of a broader change that also encompasses cultural and institutional changes. This restructuring alludes to two key questions as we face the future. First, which type of society is best equipped to deal with post-industrialism? Second, what type of policies are most likely to facilitate the transition?

These are the key questions that I address in my 2023 book entitled *The Future of Post-industrialism: Individualism, Creativity and Entrepreneurship* (Andersson 2023). In this book, Chapters 4 (pp. 69-106) and 5 (pp. 107-138), on cultural and political individualism, respectively, deal with the first of the two key questions.

Chapter 6 (pp. 139-156), which is the final chapter of the book, addresses some policies that are likely to speed up the transition to a society where human creativity is the most important source of competitiveness. The policies in question are political decentralization resulting in interjurisdictional competition (pp. 144-145), educational reform aiming at more entrepreneurial experiments (pp. 145-146), and a migration policy that facilitates the migration - ideally, the circulation - of creative and entrepreneurial individuals (pp. 147-148).

The key factor is what we may call “multidimensional individualism.” Individualism is a somewhat confusing term, because it refers to two distinct phenomena that are nevertheless empirically correlated.² One type is associated with anthropological and psychological approaches to human

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² Cultural individualism, as defined by Hofstede *et al.* (2010), Minkov *et al.* (2017), and Beugelsdijk and Welzel (2018), refers to a high valuation of “individual autonomy.” This is measured in different ways by different scholars, such as work autonomy (Hofstede *et al.*, 2010), a combination of “non-conformism” and “absence of in-group favouritism” (Minkov, 2017), or a large individual but small collective domain of decision-making (Beugelsdijk & Welzel, 2018). The term “collective” may in this context either refer to a small in-group such as an extended family or a larger one such as an ethno-linguistic group. Political individualism refers to legal and political individual rights, ranging from individual property rights to constitutional constraints on political power that protect individual rights such as freedom of expression. In practice, cultural individualism and the rule of law seem to suffice as cultivators of creativity, since countries that score in the top quartile on cultural individualism invariably also score high on civil liberties.

cultures. The other type has been a preoccupation of economists and political philosophers and focuses on how individual property rights support entrepreneurial market processes. In short, one type of individualism is mainly cultural while the other is mainly political. The two types overlap in the concept of informal institutions, which refer to the cultural rules of behaviour that support a society's legal and political institutions.

In the next section, I will provide a brief account of the emergence of individualism over the past millennium in Western Europe, focusing on the conclusions of anthropologists such as Joseph Henrich and economic historians such as Douglass North. This is followed by an overview of early 21st century conditions, drawing particular attention to how a combination of the rule of law and cultural individualism is associated with high science and innovation intensities, as well as more cross-border interactivity. The penultimate section discusses some urban planning aspects of cultural and political individualism, while the final section offers some tentative conclusions with planning implications.

INDIVIDUALISM: ORIGINS & DEVELOPMENT

The origins of individualism are associated with the West in the popular imagination, and there are good historical reasons for this. The Harvard anthropologist Joseph Henrich (2020) employs a variety of empirical tools to show that the rise of an individualistic mindset in the West was associated with the marriage and family policies of the medieval Western Church, which included prohibitions of polygyny and cousin marriage as well as the promotion of nuclear-family households (“neo-local residence”).

Over the course of centuries, this gave rise to a culture of what Henrich calls “individualistic pro-sociality,” favouring universal norms and impersonal markets over tight-knit autarkic villages of extended family members, which remained the norm in most of the rest of the world well into the 20th century.³

Among the consequences were the emergence of thousands of market towns in late medieval Europe, the creation of new financial instruments in 17th century Amsterdam, and - most spectacular of all - the Industrial Revolution from the late 18th century onwards in England before spreading to other parts of the West in the 19th century.

Yet, history is not destiny. A culture that places the individual at the centre of its worldview is conducive to economic development, but in itself it is insufficient. An individualistic culture requires formal institutional backup for the economy to take off.

Economic historians such as Eric Jones (1981) and Douglass North (1990) have highlighted these factors, particularly the roles of interjurisdictional competition among the city states of late medieval Europe and the emergence of an impersonal rule of law, as exemplified in medieval *Lex Mercatoria* and English common law. Unlike the autocratic rule by law of ancient Chinese, Indian, and Islamic civilizations, Europe was the first continent to develop autonomous legal authorities that enforced individual property rights in an impartial manner.

Fortunately for the rest of the world, there is such a thing as institutional benchmarking. Catch-up is possible. On the other hand, societies with higher kinship intensities than the West are more prone to corruption problems, owing to

³ Henrich (2020) makes use of empirical estimates of the effects of ancestral exposure to the marriage and family policy of the medieval Western Church from 500 to 1500 AD on more than 20 indicators of individualism (including measures of individual creativity). The effects are measured at national and subnational levels, as well as at the level of individual second-generation immigrants (for a detailed exposition of the empirical methods, see Schulz *et al.*, 2019).

the larger size and greater connectivity of the typical extended-family in-group. Thus, while catch-up is possible, it is a challenging process. Still, examples of successful society-wide legal changes in societies with non-Western cultural roots exist. They include Japan and the four original tiger economies of Singapore, Hong Kong, South Korea, and Taiwan. Successful institutional catch-up has also spread within the (big-tent) West from North's prime institutional role models (Britain and the Netherlands; cf. North 1990) to some of his Western "laggards," first Spain and Portugal in southern Europe, and then Chile and Uruguay in South America.

INDIVIDUALISM IN THE POST-INDUSTRIAL SOCIETY

While cultural and political individualism are good for economic development at all development stages, it becomes even more important in the emerging post-industrial society than during preceding stages.

The reason for this is that creativity and innovation play a more central role in the economic performance of post-industrial economies. Many of the most rapidly expanding occupations involve the creation of new products or production processes.

Conversely, occupations that emphasize traits such as discipline and obedience - for example, assembly-line workers and farmhands - are becoming less common in post-industrializing economies. Psychological studies of human creativity show that child-rearing practices that emphasize the unique individual identity of each child contribute to creative performance in adulthood (Amabile 1983). In addition, workplaces tend to generate more creative breakthroughs and successful innovations when employees have a great deal of decision-making autonomy but face little employee surveillance (ibid.).

Not all cultures value individual autonomy in children and employees equally. Already in the late 1960s, Hofstede's pioneering studies of IBM employees showed that respondents

in the Anglosphere and Western Europe favoured individual autonomy as a desirable job characteristic to a greater extent than respondents in other parts of the world (Hofstede *et al.* 2010).

Similarly, later studies of cultural individualism show that what is considered to be the domain of individual rather than in-group or governmental decision-making is more extensive in some parts of the world than in others.

According to Beugelsdijk & Welzel (2018), northwestern Europe is the most culturally individualistic part of the world, while the world's most culturally collectivist region is the MENA region (the Middle East and North Africa). Thus, we should expect the inhabitants of countries such as Denmark or Switzerland to be better – on average – at handling the transition to a creativity-based post-industrial society than the average inhabitant of, say, Egypt or Jordan.

An explorative study of the association between cultural and political individualism, on the one hand, and post-industrial performance, on the other, shows substantial and statistically significant associations between two measures of individualism and various performance measures.

First, Beugelsdijk-Welzel individualism exhibits strong statistical associations with per capita science output, per capita scientific citations, Florida's "three Ts" of talent, technology, and tolerance (see Florida 2002), and a multi-dimensional measure of globalization. Second, a measure of the rule of law (i.e., protection and enforcement of physical and intellectual property rights, judicial independence, and relative absence of corruption; c.f. Property Rights Alliance 2023) exhibits similarly strong associations with the same four indicators of post-industrialization.

OBSERVATIONS REGARDING LAND USE PLANNING

The nodes in the global post-industrial economy that shape future development are for the most part major metropolitan areas in Europe and

North America and, to a lesser extent, Asia. London, New York, and the San Francisco Bay Area are obvious examples.

As a rule, these creative centres have dynamic and well-functioning labour and capital markets, at least by global standards. It is thus relatively straightforward for specialists in cutting-edge industries to pick and choose among a multitude of job opportunities in such cities.

In contrast, the housing markets of these cities are more often than not unusually unaffordable. In 2022, the ratio between median house prices and median household incomes were as high as 18.8 in Hong Kong, 13.3 in Sydney, and 12.0 in Vancouver, which were three post-industrial cities with particularly unattractive ratios for prospective inbound employees (Cox 2023). More often than not, unaffordable real estate have more to do with strict land-use regulations such as urban growth boundaries and restrictive floor area ratios than a shortage of developable land.

In the United States of America, studies show that some of the early post-industrial success stories - particularly Los Angeles and San Francisco - have been losing residents to more affordable metropolitan areas with more elastic supplies of housing and other real estate. Austin, Dallas-Fort Worth, and Houston have been the main beneficiaries of a migration trend benefiting more affordable high-tech cities. From an institutional perspective, we can link this to the principle of political individualism: in California, there has been more socialization of physical property rights over land than in Texas. According to one study, the average time it takes to obtain permission and then build a new single-family home is more than four years in San Francisco, as opposed to three months in Houston (O'Toole, 2014).

In Europe, there is a similar contrast between the overregulated British land market and the less restrictive Belgian one, with similarly large effects on real estate affordability. In a study of European office markets from 1990 to 2005, Cheshire and Hilber (2008) estimated the mean implicit tax rate in the West End of London to be

more than ten times the corresponding implicit tax rate in downtown Brussels (800 versus 68 per cent). Thus, increasing the competitiveness of dynamic post-industrializing societies is arguably best pursued by introducing regulatory reforms that make the supply of developable land and real estate more elastic.

Planning regulations not only create artificial scarcities; they are often also too detailed. Many planners have operated with a "human need" framework, whereby the built environment is supposed to provide for those alleged needs. But in an individualistic society, it is clear that people differ in their values and preferences, and there are few objective basic needs beyond the food and shelter associated with economically sustainable subsistence agriculture.

Other planners have taken the abstract conclusions of neoclassical urban economic theory as their starting point, and then attempted to remould cities according to that image. An example is the neoclassical reformulation of von Thünen's (1826) concentric-ring model of agricultural land use. This influential model has become known as the monocentric model, and its main characteristic is the strict separation of land uses (Alonso, 1964).

Whether planners operate with a "need model" or a more sophisticated monocentric model as the explicit or implicit starting point, the end result has been similar: neighbourhoods specializing in different activities, each of which is subject to a homogenizing aesthetic. This has been almost as true of planners operating in market economies as in centrally planned ones. Indeed, it has even been true of most large-scale private developers, including financially successful ones such as the Irvine Company (the original planning agency of Irvine, California) or the theme parks of the Walt Disney Company in America, Europe, and Asia.

The problem with the monocentric model is that it is a static equilibrium model where the ends and means of the economic system are supposedly known to all market participants. There is no room for entrepreneurial innovation. In addition, households are assumed to be representative

(i.e. "average") rather than heterogeneous in their housing preferences. These assumptions produce an attractive abstract model, but they do not produce a good representation of the city in its role of hosting creative and innovative activities.

A living city that cultivates creativity is a great deal messier in practice than either planned utopias such as the "garden city" or more "efficient" monocentric plans. A real city hosts multiple discovery processes that jointly give rise to land use patterns that reflect spatial aspects of the spontaneous market order. As Sanford Ikeda observes, [t]hat a living city is a spontaneous order and not a deliberate work of art means that there is a trade-off between the scale and the designed complexity of a project and the spontaneous complexity of the social orders that can emerge within it, and that the passage of real time may soften the severity of that trade-off. ... [t]hat trade-off arises because increasing the scale and design of planned construction impinges on spaces where creative, informal contact among strangers can happen. Design can complement those things to a point, but beyond that it begins to crowd them out." (Ikeda, 2024, pp. 82-83)

Thus land-use planning that cultivates creativity and innovation requires more modest ambitions than are common among urban planners. There is neither a necessity for the state to provide for alleged "human needs," nor is there a demand for imposing comprehensive governmental master plans. In a city of creative and entrepreneurial individuals with diverse skills, values, and preferences, the best that a government planner can do is to provide the basic infrastructure that may facilitate the realization of a multitude of plans of private landowners, in other words, smaller-scale private planners. In the non-spatial domain, freedom of contract and association under the rule of law does just that.

In the spatial domain, we have - on the one hand - the spatial manifestation of the property law, which allocates, defines, and enforces property rights over land. On the other hand, a single agency with public power is often the lowest-cost supplier of the infrastructure of transport

and utility networks. This is particularly true of large established cities in which high market transaction costs are typically associated with private infrastructure provision that involves acquisition of land.

CONCLUSION

The most creative post-industrial societies rest on a foundation of cultural and political individualism. Cultural individualism first arose in Europe as the result of lower kinship intensities than elsewhere. It was complemented by the emergence of individual property rights in the legal system, which was a preoccupation of many of Europe's medieval universities. The strengthening of legal systems was also the unintended consequence of Europe's political fragmentation and some rulers' attempts to attract mobile capital by introducing more impersonal and reliable enforcement of property rights.

In other parts of the world, individualism did not build on an indigenous cultural foundation, but instead gradually increased as literacy spread, cities grew, and legal systems were imported - with varying degrees of success - from elsewhere. By the early 21st century, Western Europe, North America, and Australia still offered the best cultural and political underpinnings for creative and innovative endeavours, but some other parts of the world were catching up, according to popular indices of culture and legal institutions (pp. 90-93). The most significant of these "late individualizers" were Japan, the four tiger economies of East Asia, and the post-socialist economies in the European Union (pp. 160).

Most centres of creativity and innovation coincide with large cities, mainly due to the knowledge externalities that arise when a multitude of creative people locate in close proximity to one another (pp. 11-13; pp. 151). There is ample evidence that large cities disproportionately attract the most creative and innovative individuals. In the case of the greatest cities of them all - London and New York - this "pull factor" has operated for centuries. Cultural individualism, the rule of law, massive agglomeration economies, and dynamic labour

markets have acted in concert to produce an enduring and resilient virtuous circle.

But even in the greatest of cities, all is not well. Agglomeration economies provide above-average opportunities for rent-seeking, since there is a greater location-specific surplus that is available for extraction than elsewhere. It is no coincidence that New York ranks last among American states in terms of overall economic freedom (pp. 123-125). The New York metropolitan area provides rich pickings for rent-seekers. In many cities, an unholy alliance of large property developers - who are better able to absorb high regulatory costs than entrepreneurial start-ups - and economically illiterate ideologues have instituted land-use policies that have made real estate increasingly unaffordable over time. Great cities generally have great labour markets. They are much less likely to have great housing markets for first-time buyers or renters.

At the national level, the recipe is simple: the rule of law and cultural individualism provide good conditions for post-industrial development. At lower levels of aggregation, details matter more. At the level of the functional urban region - defined as a region with integrated labour and land markets - the actions of planners become vitally important. Resisting the twin temptations of reducing the supply of land for housing and separating land uses from one another may be the keys to success at the city level.

REFERENCES

- Alonso, William. Location and Land Use: Toward a General Theory of Land Rent, Harvard University Press, Cambridge, MA, 1964.
- Amabile, Teresa M. "The social psychology of creativity: a componential conceptualization." Journal of Personality and Social Psychology 45, no.2 (1983): 357-365.
- Andersson, David Emanuel. The Future of the Post-industrial Society: Individualism, Creativity and Entrepreneurship, Palgrave Macmillan, Chur, 2023.
- Beugelsdijk, Sjoerd & Chris Welzel. "Dimensions and dynamics of national culture: Synthesizing Hofstede with Inglehart." Journal of Cross-cultural Management 49, no. 10 (2018): 1469-1505.
- Cheshire, Paul C. & Christian A. L. Hilber. "Office supply restrictions in Britain: the political economy of market revenge." Economic Journal 118, no. 529 (2008): F185-F221.
- Cox, Wendell. Demographia International Housing Affordability. Frontier Centre for Public Policy, 2023.
- Florida, Richard. The Rise of the Creative Class, Basic Books, New York, 2002.
- Henrich, Joseph. The WEIRD People in the World: How the West Became Psychologically Peculiar and Particularly Prosperous, Farrar, New York, 2020.
- Hofstede, Geert, Gert Jan Hofstede & Michael Minkov. Culture and Organizations: Software of the Mind, 3rd ed., McGraw Hill, New York, 2010.
- Ikeda, Sanford. A City Cannot Be a Work of Art: Learning Economics and Social Theory from Jane Jacobs, Palgrave Macmillan, Singapore, 2024.
- Jones, Eric. The European Miracle, Cambridge University Press, Cambridge, 1981.
- Minkov, Michael, Pinaki Dutt, Michael Schachner, Oswaldo Morales, Carlos Sanchez, Janar Jandosova, Yerlan Khassenbekov & Ben Mudd. "A revision of Hofstede's individualism-collectivism dimension: A new national index from a 56-country study." Cross Cultural & Strategic Management 24, no. 3 (2017): 386-404.
- North, Douglass C. Institutions, Institutional Change, and Economic Performance, Cambridge University Press, Cambridge, 1990.
- O'Toole, Randal. "Houston's land-use regime: A model for the nation." In David E. Andersson,

& Stefano Moroni eds. Cities and Private Planning: Property Rights, Entrepreneurship and Transaction Costs, pp. 174-198. Edward Elgar, Cheltenham, 2014.

Property Rights Alliance. "International Property Rights Index 2022." Property Rights Alliance, 2023.

Schulz, Jonathan F., Duman Bahrami-Rad, Jonathan P. Beauchamps & Joseph Henrich. "The Church, intensive kinship, and global psychological variation." Science 366, no. 707 (2019): 1-12.

Thünen, Johann Heinrich von. Der isolirte Staat in Beziehung auf Landwirtschaft und Nationalökonomie, oder Untersuchungen über den Einfluß, den die Getreidepreise, der Reichtum des Bodens und die Abgaben auf den Ackerbau ausüben, Friedrich Perthes, 1826.

EXPERT REPORT

An Observation Post (OP) on a Private Land Parcel on Red Hill

Ken S.T. Ching¹
Circle K.Y. Yuen²

ABSTRACT

Supplemented by a professional land surveyor's observations of land boundary issues in Hong Kong, this report provides findings on a fixed observation post (OP) identified from an old (1963 Hunting Surveys Limited) aerial photo, which indicated that it was located within a former private land parcel, viz. Rural Building Lot 777 (RBL777). Unlike the common practice of a land boundary survey for private properties, in which a direct on-site survey is necessary to determine its surviving/existing boundary features, the physical traces of the OP should have been expunged by property development on RBL777. Thus, the study relied on a desktop analysis using a geographical information system (GIS) platform.

KEYWORDS

Fixed observation post (OP), Red Hill OP, property boundary

HISTORY OF RURAL BUILDING LOT 777

The history of the site, originally delineated as RBL777, is as follows.

The Former RBL777

According to the authors' land record research at the Land Registry, RBL777 was re-designated RBL1120 by way of an "in-situ surrender and re-grant" in 1996.

To ascertain the background of RBL777, the authors obtained and examined the relevant land records kept in the Land Registry – a lot index plan¹ produced and aerial photos supplied by the Survey and

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Mapping Office's (SMO) online map depository, Hong Kong Map Service 2.0 (HKMS 2.0). A list of these documents is shown in Table.

Land records & aerial photos	Document date	Appendix
Land Register of RBL777	2 August 2023	A1
Land Register of RBL1120	2 August 2023	A2
Government Lease of RBL777 and Condition of Extension	22 January 1971 20 September 1975	A3
Deed of Surrender for RBL777 & Ext. (Memorial No.UB6539350)	28 February 1996	A4
Conditions of Exchange for No.12376 of RBL1120	28 February 1996	A5
Lot Index Plan	23 August 2023	A6
Boundary Stone Record for RBL777	11 April 1969	A7
Extract from Computation Folder No.L2143	--	A8
Extract from Computation Folder No.HK4835	--	A9

Plan No.HK5145-D for RBL1120	12 December 1995	A10
Enlarged Aerial Photo No.6779	1 February 1963	A11
Enlarged Aerial Photo No.6781	1 February 1963	A12
Enlarged Aerial Photo No.2496	13 December 1964	A13
Enlarged Aerial Photo No.A37855	7 April 1994	A14
Old Survey Sheet No.C-231-SE	1955	A15

Table 1: Relevant land records and aerial photos of RBL777.

In 1971, RBL777 was granted by way of a Government Lease that commenced on 23 January 1962 with a term of 75 years that was renewable for 75 years and attracted \$1,150 annual rent. The Lease for RBL777 was properly registered at the Land Registry (Appendix A3).

The registered area of RBL777 is 62,600 feet². Its leased dimensions were controlled by a total of five boundary points (i.e., A-E in an anti-clockwise direction), each of which was physically fixed by a BS (boundary stone)² coloured pink on the annexed Lease Plan (Appendix A3.18).

As the Lease Plan shows, RBL777 was situated about 300 meters west of Tai Tam Harbour at the southern end of Red Hill Road. The lot was surrounded by government land on all sides

¹ A lot index plan shows the graphical boundaries of different land holdings, be they permanent or temporary, which are compiled by correlating the land boundaries from various boundary records that contain survey sheets' topographical features. The primary objective of a lot index plan is to identify a lot's approximate boundaries with respect to the contemporary ground situation. Since it is for identification purposes only, its accuracy and reliability are limited and should be supplemented by advice from a professional land surveyor.

² There were four boundary stone types to suit different boundary corners. Before 1980, when a lease was granted by the then-colonial government, boundary stones were fixed at the boundary corners of a land parcel in a lease survey and the Lease Plan was the original grant. Following the enactment of the *Conveyancing and Property Ordinance* (Cap.219) in 1984, boundary stones were seldom placed on the land because a Government Lease was deemed to be granted once the government issued a Certificate of Compliance, which converted equitable interest to a legal estate.

near the southernmost summit of Red Hill (now annotated as Pak Pat Shan or 白筆山 on maps).

At the time of the grant, RBL777 was occupied by a total of eight independent residential houses along its unique right of way Red Hill Road (Appendix A3.18, coloured brown in the Lease Plan as a free and uninterrupted right of access, ingress and egress from Tai Tam Road).

Extension to RBL777

In September 1975, a plot of land adjoining the northern boundary of RBL777 with an area of 9,098 feet² was granted by way of an extension to RBL777 upon the payment of an additional premium to the government. The relevant extension area was delineated and shown coloured pink and pink hatched black on the plan (Appendix A3.19).

The total leased area of RBL777 and its extension is worked out in Table 2:

Lot No.	Leased area
RBL777	62,600 feet ²
Extension to RBL777	9,098 feet ²
Total Area	71,698 feet² (approx. 6,661m²)

Table 2: Computation of RBL777’s total leased area.

Recent RBL1120

On 28 February 1996, RBL777 and its extension thereto, which comprised a total area of 6,661m², was surrendered to the government under an in-situ exchange for a renamed lot, RBL1120.

The related Deed of Surrender with a plan was registered with the Land Registry under Memorial No.UB6539350 (Appendix A4).

The lease terms and Lease Plan of the newly-granted RBL1120 were properly recorded under the Conditions of Exchange No.12376 and registered at the Land Registry under Memorial No.UB12376 (Appendix A5). The new lease term commenced from 28 February 1996 until 30 June 2047. The re-grant area was the same as the surrendered area, i.e. 6,661m², and the relevant leased dimensions of the new lot were shown in the annexed Lease Plan (Appendix A5.35).

Land boundary records

All land boundary records prepared by the government from 1969 to 1995 for RBL777, Extension to RBL777, and RBL1120 could be obtained from the HKMS 2.0 website.

According to the Boundary Stone Register (Hong Kong Volume 5), the boundary stones for RBL777 were fixed on 11 April 1969. The dimensions and coordinates³ of the boundary stones, which were in new imperial values,⁴ were properly recorded (Appendix 7). Full computations for the preparation of the subsequent Lease Plan for RBL777 were also recorded in Computation Folder No.L2143 (Appendix 8.4). Upon further examination, the boundary stone record was found to match the information in RBL777’s Lease Plan (Appendix A3.18).

In 1975, the government conducted a dimension survey for the Extension to RBL777 and the relevant survey information was recorded in Computation Folder No.L2143. During the

³ Land parcel boundaries granted by the government have been gradually defined by coordinates and shown on the respective grant plans since the 1950s. This is the “Fix Boundary” concept and the authors shall elaborate on this later.

⁴ Coordinate systems in Hong Kong are chronologically tied to the development of surveying methods and accuracy achieved. The old imperial system was used from the 1930s to 1960s, the new imperial system from the 1960s to 1970s, the metric system since the mid-1970s, and the Hong Kong 1980 Grid since the 1980s.

survey, the government defined the boundary coordinates in both new imperial and old metric values (Appendix 8.1-8.2). In addition, it converted the boundary coordinates of the original RBL777 from "New Imperial" to "Old Metric" values. Then it recorded the details of the computational information in the same computation folder (Appendices 8.3 & 8.4).

In 1993, the government performed another dimension survey for RBL777 and its extension. It recorded the relevant survey computations in Computation Folder No.HK4835 (Appendix A9). The government also surveyed the old boundary stones to derive the conversion constants, so as to convert the boundary coordinates into the contemporary HK1980 grid values.⁵ It was noted that minor adjustments to the two boundary points were made to fit the leased area for the original lot RBL777 and its extensions.

In 1995, the government prepared a Dimension Plan, No.HK5145-D, for the new grant, RBL1120 (Appendix 10). Its boundary coordinates and dimensions in the HK1980 Grid were shown in the plan. They concurred with the survey records in Computation Folder No.HK4835 (Appendix A9). Upon checking the boundary coordinates, the authors noted that the lot position of RBL1120 was identical to that of Lot RBL777.

The latest site situation and graphical boundaries of RBL1120 could be identified on the lot index plan dated 23 August 2023 (Appendix A6). Compared to RBL777's Lease Plan, RBL1120 had already been re-developed into luxury housing called Villa Rosa (玫瑰園). The authors' graphical checks of the physical positions, dimensions, and the area shown on the lot index plan confirmed that the lot area tallied with RBL1120's registered area, which was 6,661m². In other words, the Lot Index Plan could be used as a reliable reference for subsequent analysis.

THE POSITION OF THE OBSERVATION POST

An examination and analysis of old aerial photos and topographic survey maps is essential to trace any previous civilian and military uses and the associated topology in the vicinity of the OP. The old aerial photos and survey maps are factual records of the ground's surface at the moment the photos were taken, so they offer a more comprehensive perspective of the site's situation at a single moment in time.

The accuracy of photogrammetric mapping depends on many variables such as flying heights, object heights, variations in the heights of ground topography, tilting angles of the air freight, etc. The most important factor is the flying height above ground level.

In this case, the old aerial photos used for interpretation were black-and-white photos produced during a photogrammetric survey performed in 1963 by Hunting Surveys Limited at various heights below 5,000 feet. The flying height in this survey was 2,700 feet, the average approximate terrain elevation near the OP was about 380 feet with focal lengths of 152mm and 230mm in standard format, so the average scale of the old photo near the OP was:

$$\text{Average Scale} = 0.152\text{mm}/(2,700 - 380) \text{ feet.} \\ \doteq 1: 4,652, \text{ or about } \mathbf{1:4,600}$$

That is, if a ground feature shown on the photo is 1mm in width, the actual width of that feature on the ground is about 4.6 meters.

From the two Hunting Surveys Limited aerial photos taken on 1 February 1963 (Nos. 63_6779 and 63_6781), it appeared that the weather on the date of the photography was fine. The area being captured was free of clouds, haze, and smog and the cloud shadows cast on the ground were minimal. Besides, it was noted that the area around the possible OP was grassy and few

⁵ The Hong Kong 1980 Grid (HK1980 Grid) is a local rectangular grid system based on the HK80 Datum and Transverse Mercator Projection. It is used in land boundary and engineering surveys, as well as large-scale mapping in Hong Kong.

trees were present nearby. Therefore, physical features such as an OP and footpath (one subsequently developed into Red Hill Road) could clearly and easily be identified.

By interpreting the old aerial photographs and survey sheets, the authors could locate the OP site in a large, remote hilly area on the highest summit of Red Hill that was about 115 meters above the HKPD⁶ in 1963. Apparently, it had to be an ideal and reasonable location for siting an OP, as the site allowed its military features to enjoy the widest possible open views of the surrounding coastal areas.

LIMITATIONS IN THE INTERPRETATION OF AERIAL PHOTOS AND SURVEY SHEETS

The SMO periodically undertakes aerial photography at different altitudes in Hong Kong. The oldest photographs that could be obtained from the Lands Department were taken in 1924. They were taken by the Royal Air Force at a maximum flying height of about 20,000 feet. By today's standards, photo resolution, quality, and area coverage were not always satisfactory.

Benefiting from advancements in aerial photography from 1963 onwards, the government has been able to produce better quality and more comprehensive aerial photos annually and these are also available at the SMO. They were taken with high-resolution film at relatively low flying heights of about 2,000-10,000 feet.

Despite these photographs faithfully recording the ground features, they were still subjected to various distortions including the tilting of the photo angles, variations in flying heights, undulations in terrain heights, and adverse weather conditions. Furthermore, some physical features were concealed by vegetation and/or other objects on the ground.

Despite these technical and geographical limitations, these photos serve as the most objective records of the ground's occupational history.

Official survey sheets are topographical record sheets produced by the SMO through its interpretation of aerial photos assisted by ground surveys to record the details of existing features on the ground during different periods. Survey sheets provide concise information on ground features with symbols and annotations that could be easily understood by general map users.

Although survey sheets are generally reliable in depicting ground features, in particular prominent and conspicuous ones that are large enough to be shown to scale, they may not be comprehensive enough to show minor, transient, and/or flimsy features in accordance with the mapping specifications and decisions of field surveyors. Hence, features that are considered less important or too small to be shown to scale by field surveyors are either omitted or presented only as symbols or abbreviations.

Besides, while the revision of survey sheets is a continuous process, there is a time lag in map production, so discrepancies between aerial photos and survey sheets are not uncommon. Therefore, a rule of thumb for interpretation is that any feature shown on a survey sheet should be assumed to exist or had once existed. Features that do not appear on a survey sheet may or may not exist in reality. Since survey sheet information is mainly derived from aerial photos, the best approach to ascertain the existence of an object or a feature is to refer to an aerial photo taken on the same date or as close to it as possible.

⁶ The Hong Kong Principal Datum (HKPD) is the reference datum for all heights and levels on land in Hong Kong. The heights and levels are represented as "mPD" and is about 1.23 metre below Mean Sea Level.

DIRECT GEO-REFERENCING AND CORRELATION WITH AERIAL PHOTOS AND OLD SURVEY SHEETS

Surveying professionals and GIS experts will geo-reference (i.e., a process of "ground registrations") their raster datasets using existing spatial data with a prevailing known ground coordinates system. This technique involves processing a digital image so that the columns and rows of the resulting product are aligned with the north and east directions in the ground coordinates system. The process involves identifying a series of ground control points of known x and y coordinates (in Hong Kong, they are, respectively, Easting and Northing coordinates) that link positions on the raster dataset with positions in the spatially referenced data.

Control points are locations that can be accurately and simultaneously identified in the raster dataset and the real world with contemporary coordinates. Many conspicuous physical features can be used as identifiable positions including house corners, road junctions, stream confluences and openings, hill summits, corners of an established field or street, and the intersection of two hedgerows.

The control points are then used to build a polynomial transformation, which will then shift the raster dataset from its existing position to the spatially-correct one. The connection between one control point on the raster dataset (the "from point") and the corresponding point on the aligned target data (the "to point") is called a "link".

During the authors' GIS analysis, they adopted the above geo-referencing method and used ArcMap. The control points they adopted for geo-referencing in this exercise are shown in Appendices B1.

Eight overlay plans were produced for analysis:

1. One for Aerial Photo No.6779, dated 1 February 1963, on contemporary topographic and land boundary maps (Appendix B2)
2. One for Aerial Photo No.6781, dated 1 February 1963, on contemporary topographic and land boundary maps (Appendix B3)
3. One for Aerial Photo No.6779, dated 1 February 1963, on Survey Sheet No.C-231-SE, dated 1955, which is the earliest survey sheet (Appendix B4)
4. One for Aerial Photo No.6781, dated 1 February 1963, also on Survey Sheet No.C-231-SE (Appendix B5)
5. One for Aerial Photo No.6779, dated 1 February 1963, on the original Grant Plan for RBL777, dated 7 July 1969 (Appendix B6)
6. One for Aerial Photo No.6781, dated 1 February 1963, also on the original Grant Plan of RBL777 (Appendix B7)
7. One for Aerial Photo No.2496, dated 13 December 1964, on a boundary map of RBL777 (Appendix B8)
8. One for Aerial Photo No.A37855, dated 7 April 1994, also on a boundary map of RBL777 (Appendix B9)

CONCLUSION

An identification plan, shown in Appendix C, indicates the physical position of the OP with respect to the recent lot boundary of RBL1120. It was produced at a scale of 1:5,000 – almost the same scale as that for the aerial photo (1:4,600).

The authors performed a graphical check of its absolute position by measuring the perpendicular distances from the center of the OP to the nearest lot boundary. The check revealed that the OP was approximately 11.7 meters from the southeastern lot boundary, 21.0 meters from the southwestern lot boundary, and 25.6 meters from the eastern boundary. These exceeded the measurement accuracy of 4.6 meters in the aerial photo.

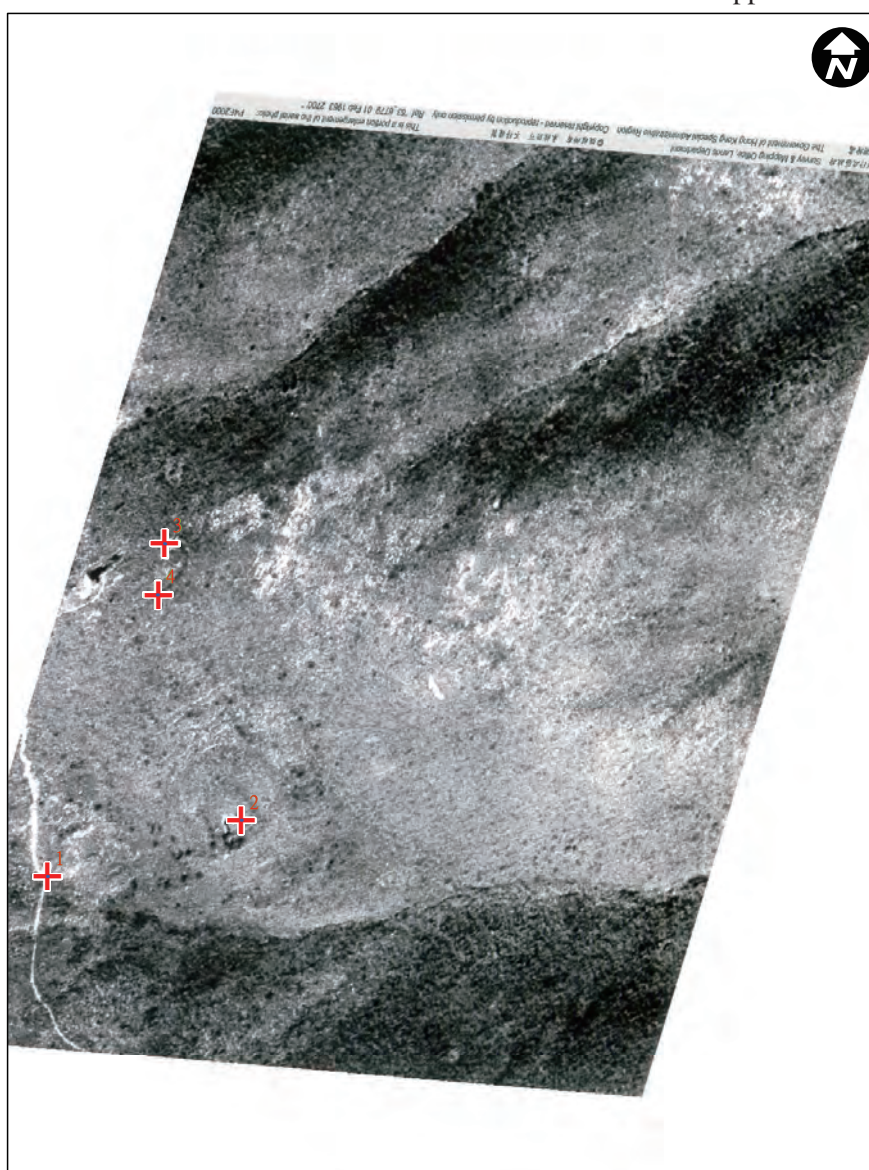
In other words, even if taking into account the 1mm measurement *error or map representation*,⁷ the OP, as identified in aerial photo Nos.6779 and 6781 from 1963, was likely situated at or near today’s Block 3 of the Villa Rosa estate.

Also, although it was hard, if not impossible, to establish if the former OP was demolished during an earlier land redevelopment, it was confirmed that it fell entirely within RBL777’s boundaries, which were originally established in 1971 and became RBL1120 under the Condition of Exchange in 1996.

By referring to the ground situation shown on the 13 December 1964 aerial photo (Appendix B8), the authors identified eight independent houses. Hence, it could be justified that the houses on RBL777 were built between 2 February 1963 and 12 December 1964. Also, as the ground situation shown on the 1994 Aerial Photo (Appendix B9) suggests, all structures within RBL777 were demolished and RBL777 became vacant.

APPENDICES B & C⁸

Appendix B1.



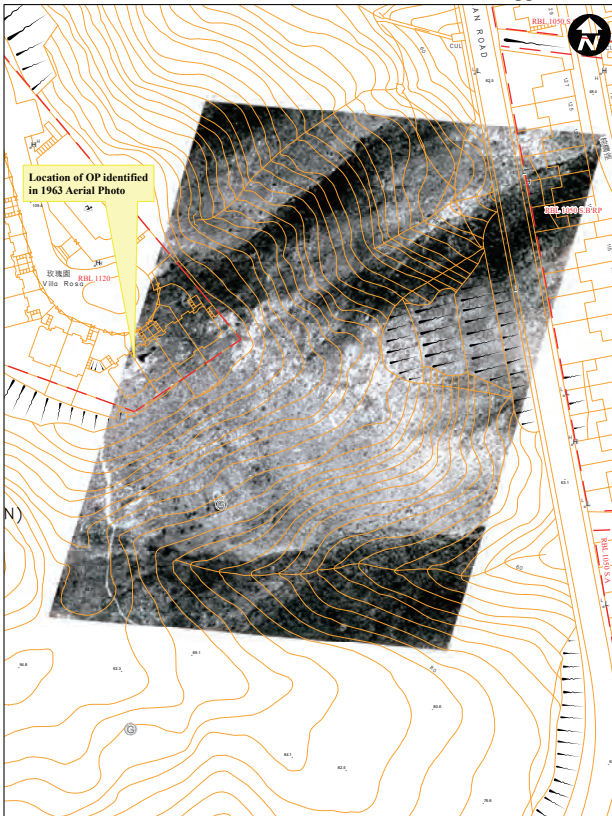
**Control Points for Geo-referencing in ArcMap
- Aerial Photo No. 6779 dated 1 February 1963**

1:800

⁷ The authors will explain the term, “map representation,” in a separate paper.

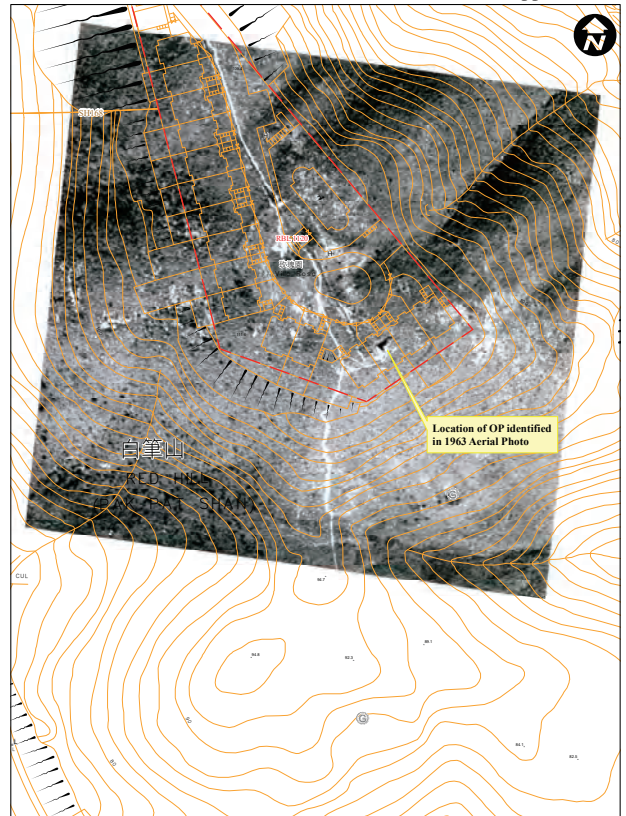
⁸ Due to space limitations, the documents for Appendix A are not reproduced.

Appendix B2



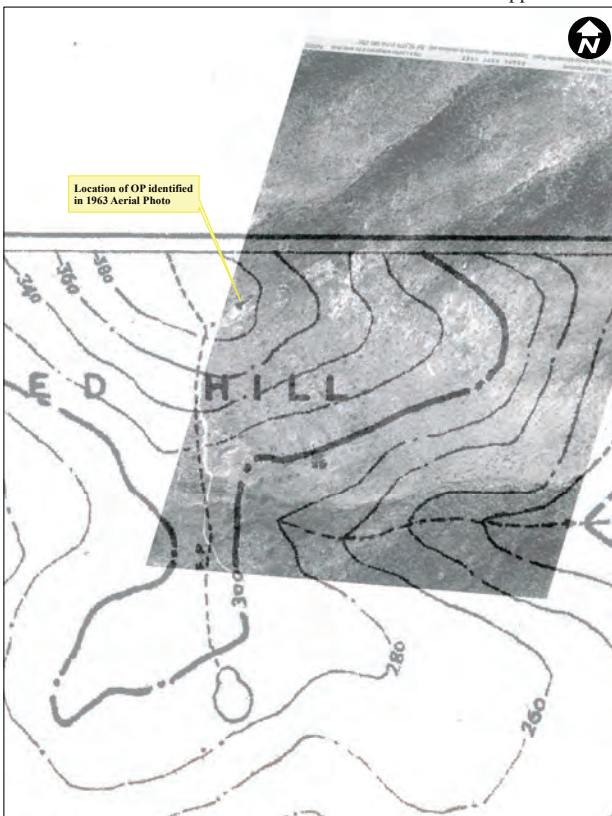
Overlay of Aerial Photo No. 6779 dated 1/2/1963 and Contemporary topographic map and land boundary map 1:1,000

Appendix B3



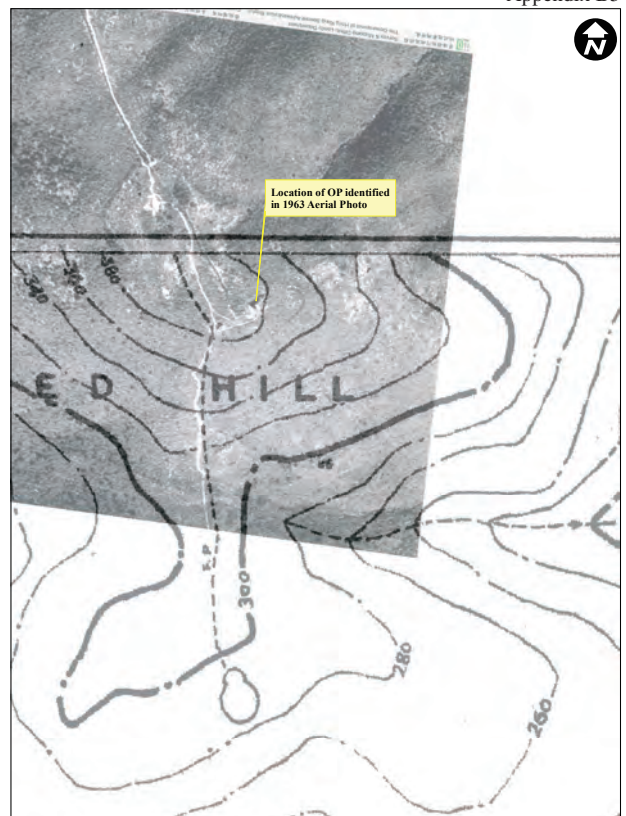
Overlay of Aerial Photo No. 6781 dated 1/2/1963 and Contemporary topographic map and land boundary map 1:1,000

Appendix B4



Overlay of Aerial Photo No. 6779 dated 1/2/1963 and Old Survey Sheet No. C-231-SE dated 1955 (The earliest survey sheet) 1:1,000

Appendix B5



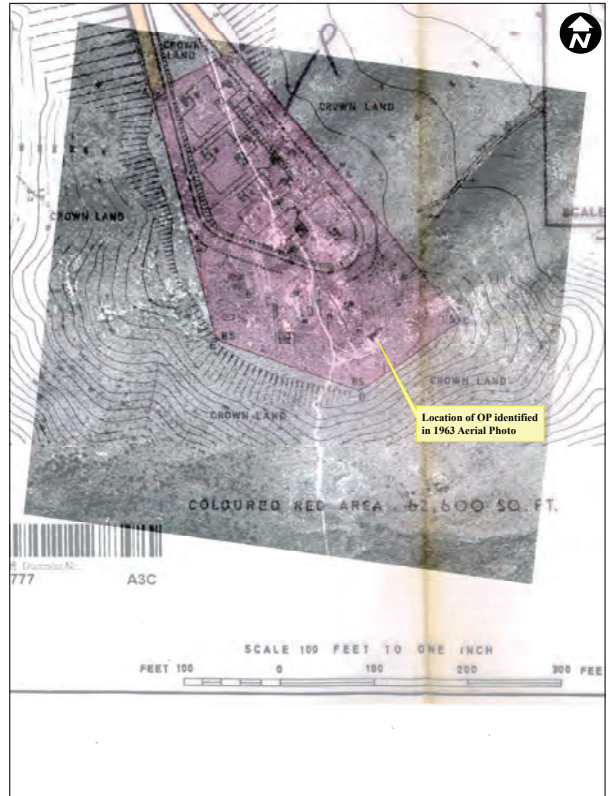
Overlay of Aerial Photo No. 6781 dated 1/2/1963 and Old Survey Sheet No. C-231-SE dated 1955 (The earliest survey sheet) 1:1,000

Appendix B6



Overlay of Aerial Photo No. 6779 dated 1/2/1963 and Grant Plan of RBL 777 dated 7/7/1969 1:1,000

Appendix B7



Overlay of Aerial Photo No. 6781 dated 1/2/1963 and Grant Plan of RBL 777 dated 7/7/1969 1:1,000

Appendix B8



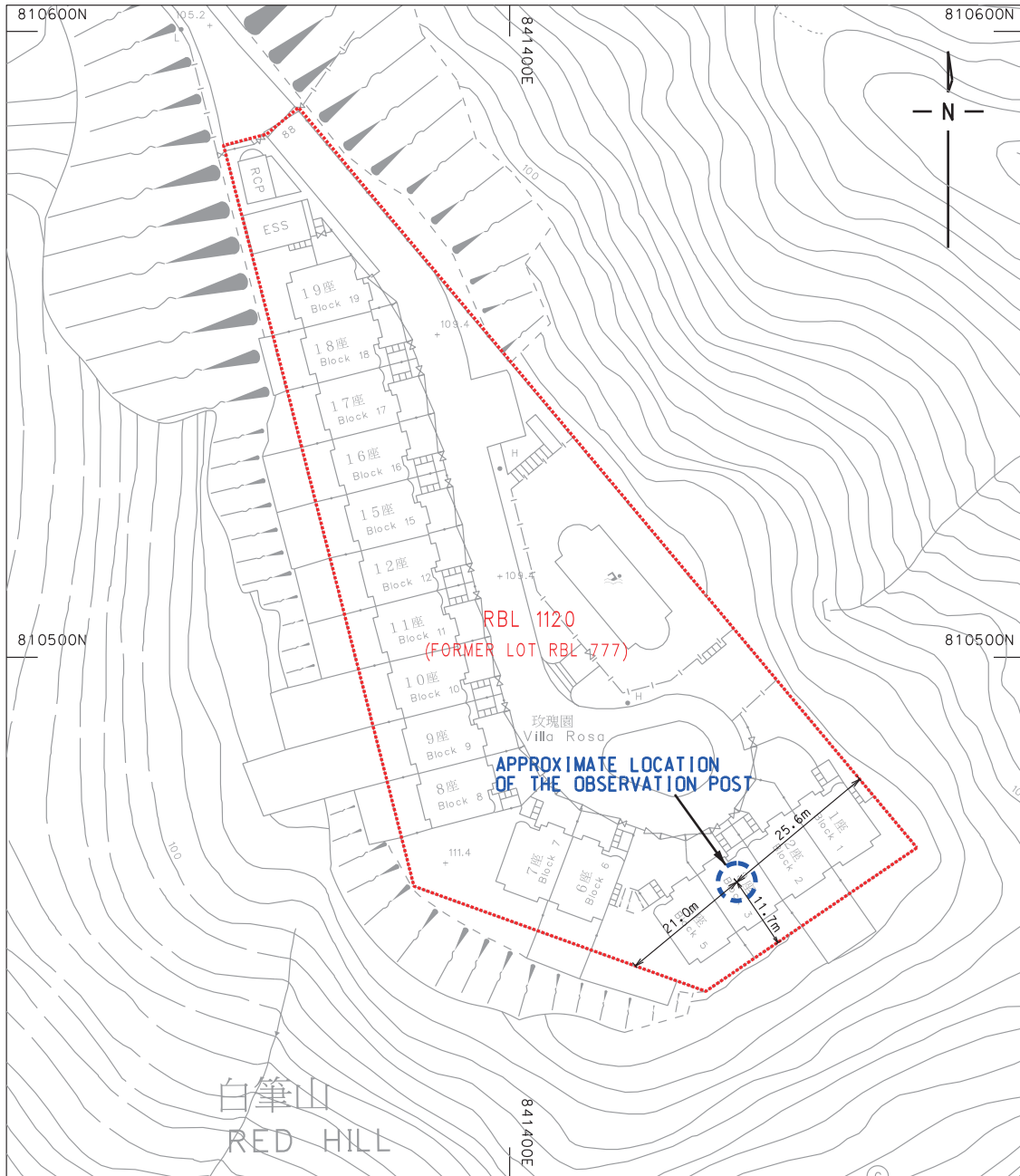
Overlay of Aerial Photo No. 2496 dated 13/12/1964 and the Boundary of RBL 1120 (Former Lot RBL 777) 1:1,000

Appendix B9



Overlay of Aerial Photo No. A37855 dated 7/4/1994 and the Boundary of RBL 1120 (Former Lot RBL 777) 1:1,000

PLAN OF THE APPROXIMATE LOCATION OF THE OBSERVATION POST IN RESPECT TO THE LOCATION OF RURAL BUILDING LOT 1120



LEGEND:

- - - - - LOT BOUNDARY
- Base Map
- APPROXIMATE LOCATION OF THE OBSERVATION POST
- DISTANCE BETWEEN THE CENTRE OF THE APPROXIMATE LOCATION OF THE OBSERVATION POST AND THE LOT BOUNDARY

Survey District: Hong Kong	Remarks: 1. This plan is for identification purpose only. 2. Lot boundaries shown herein were abstracted from Plan No. HK5145-D dated 12/12/1995. 3. Base Map shown herein were abstracted from IB1000 obtained from Lands Department.	建地測量規劃及地理訊息系統有限公司 KELand Surveying, Planning & GIS Co. Ltd. Authorized Land Surveyors Flat B, 20/F, Chatham Commercial Building, No.399 Chatham Road North, Kowloon Tel: 2765 5737 Fax: 2765 5722 Web: www.keland.com.hk E-mail: keland@biznetvigator.com
Scale: 1:5000 on A4		
Date: 4 September 2023		
Survey Sheet No: 15-NE-8B		
Plan No.: KEL/GIS/23/RBL777/P1		

PRACTICE PAPER

Distinctive Characteristics of Land Boundary Surveys

Ken S.T. Ching¹
Circle K.Y. Yuen²

ABSTRACT

This opinion paper explains some features and problems in boundary determinations by land surveyors for private property holdings in Hong Kong's general boundary system due to the government's reluctance to guarantee the accuracy of lot maps registered by land surveyors. The tendency of property owners to litigate and the desirability of reforms to establish a fixed boundary system are discussed.

KEYWORDS

Red Hill, observation post, boundary definition, land surveying, aerial photograph

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DEFINING ONE'S PROPERTY BOUNDARY WOULD AFFECT NEIGHBOURS' BOUNDARIES

Lai (2023), quoting Acton (1988), pointed out that "no property is an Island." He explained that "a lot cannot be an isolated entity but is an integral part of a wider human shore, coordinated or un-coordinated." This statement sheds light on a root problem of property boundary surveys conducted by land surveyors.

Unlike other professionals such as doctors, dentists, accountants, engineers, architects, or non-land surveyors (e.g., quantity and building surveyors), whose professional advice directly and uniquely concern only their client(s), land surveyors' advice in respect of their clients' property boundaries have direct impacts on all adjoining and/or neighbouring property holdings. This characteristic alone separates land boundary surveying from the other professional services that deal with land.

The reason is simple. Once a land surveyor re-defined¹ a client's boundary (according to available boundary evidences), this boundary segment, which is a single line, should also become the same boundary segment for any adjoining owner(s). A land surveyor acting for a lot owner should take heed of the adjacent owner's interest. Yet, in reality, this is a difficult undertaking. The surveyor's findings are prone to be challenged in court by another party who sees that its interests have been jeopardised.

Based on their experiences, the authors have strong reservations about the current Hong Kong land surveying practices in property boundary (re)definition. [They will be elaborated on this in the next section.]

As Lai (2023) pointed out, a lot owner could enjoy the rights within the framework subject

to common law restrictions on the enjoyment of land property. But these rights are never unlimited or unconstrained. Lai pointed out that the holder of a private land parcel, which is a natural unit (Lai & Davies 2020) or basic unit (Lai & Davies 2022) of private planning, has obligations as well as rights. Property boundaries should be not only part of the right to exclude, but also part of the right to include.

Consider the authors analysis (Ching & Yuen 2024, this issue) of Observation Post Red Hill situated within RBL777. Even though it is hardly disputable that the OP fell within the boundary of a private land property, it could have been conserved if the developer had perceived it as a valuable public good as and historical asset and allowed the relevant experts to conduct necessary conservation or rehabilitation actions for it before or instead of expunging it as construction waste.

THE HONG KONG CONTEXT

All land holdings (as lots) in Hong Kong, except the freehold lot granted to the Church of England and occupied by St John's Cathedral along Garden Road, are held as leasehold interests. The registration of a lease and/or any conveyancing document in Hong Kong is a means to record the land rights and obligations of a certain land parcel, but not its unique boundary (which must be a closed loop, not in plurals) vis-à-vis the rest of the world.

As part of land rights, a lot boundary is described by the boundary clause in a land grant agreement (and repeated in a government lease) and depicted in a Lot Plan as a titled land grant document. This plan is the legal boundary backdrop for a particular land parcel.

Surprisingly, under the Hong Kong Land Registration System, land conveyancing

¹ A land surveyor normally refers his land boundary survey work as one that "redefines" the boundary of a land parcel, but does not "define" the parcel's boundary unless it is newly granted. This is because the boundaries of the land were established when the parcel was first granted. Any subsequent action that relates to locating the boundary is a "redefinition" or "reestablishment" of that boundary.

documents are only prioritised according to their dates of registration without any guarantee of title or land boundary by the government. Accordingly, the Lot Plan referred to in a conveyancing document has no statutory significance in terms of boundary certitude and the involved parties have to determine by agreement the effect of the Lot Plan.² When a lot owner appoints a land surveyor to redefine the lot boundary of the owned property in relation to those of an adjoining lot, it is necessary for the surveyor to construe all land grant documents, so as to discover the original intentions of the parties at stake.

The final construction of the original conveyance rests with the court.³ Accordingly, any cadastral surveyor must ask oneself two fundamental questions before conducting a land boundary survey for a property owner:

- (1) How would the court interpret the land grant documents?
- (2) How would the court adjudicate a boundary dispute?

To address these two questions, the surveyor should appreciate that boundary (re)definition or re-establishment is a balancing exercise that is based on the best available evidence and must not materially deviate from the intention of the original grant.

In Hong Kong, such a land boundary has to be

re-established on the ground as a refined line worked out by an Authorized Land Surveyor (ALS)⁴ or a Registered Professional Surveyor (Land Surveying) (RPS (LS)).

Regrettably, the boundary re-establishment process has never gained any legal status. So, in the absence of a legal recognition of a defined boundary, a land surveyor who is hired by a landowner has to bear the full responsibility for any consequence of a boundary that the surveyor helps re-establish.

At present, when a land surveyor is appointed by a client to conduct a land boundary survey, the surveyor would consider all best available boundary evidences and then draw a conclusion by producing a Survey Record Plan (SRP) and a Land Boundary Plan (LBP). Subject to the consent of the client, the SRP and LBP will be deposited to the relevant District Survey Office (DSO) for record and sharing purposes.⁵

Land surveyors in private practice initially welcomed the sharing concept because it appeared to provide a common platform for other surveyors to consult and discover if adjoining lots had been surveyed before deciding if they could adopt the re-defined boundary segments to avoid boundary conflicts between neighbouring lot owners.

Should a surveyor refuse to adopt the boundaries previously re-defined, that surveyor

² The “general” or “approximate” boundary concept.

³ The court will endeavour to interpret the boundary description on the original grant, both textual and graphical, with a view to reconstruct the intentions of the parties for the land parcel’s boundary.

⁴ In Hong Kong, the land boundary survey expert is an Authorized Land Surveyor as registered under the *Land Survey Ordinance* (Cap.473, Laws of Hong Kong).

⁵ This is an administrative mechanism for facilitating the sharing of land boundary records. The government always reiterates, by way of standard letter replies to the land surveyors concerned, that it bears no responsibility to verify or approve the data and information shown in the plans and survey reports. The accuracy of these plans and reports are the sole responsibility of the surveyors. Nevertheless, under S.30 (4) of the *Land Survey Ordinance* (Cap.473, Laws of Hong Kong), an authorized land surveyor has a duty to furnish a duplicate of the SRP and LBP to the Land Survey Authority in respect of the subdivision of land within seven days after the submission of the deed poll(s) or other instruments with the LBPs. These must be registered with the Land Registry under the *Land Registration Ordinance* (Cap.128, Laws of Hong Kong).

should provide better evidence to dispute those boundaries, along with a good argument. That would, however, lead to a boundary dispute.

This system of "first come, first served" is undesirable in light of the following considerations:

First, there is no way to ensure that all affected landowners would be aware of the re-established boundary/boundaries, much less asking all of them to agree on the new boundary/boundaries.

Second, a single land surveyor has no power or duty to survey all adjacent lots and what the surveyor does is only an ad hoc and confined assignment for a particular land parcel (bear in mind that "no property is an island"). The surveyor's assessment may be disputed for being incomplete and/or incompetent.

Third, there is no legal obligation for a land surveyor to adopt the same refined boundary segment. Such a requirement can generate conflict.

While there is simply no final re-established boundary, a boundary dispute may arise and the security of the landowner's property is at risk.

Accordingly, the lack of a binding legal status for a re-established boundary often leads to unwarranted claims of adverse possession. Hence, many public processes, such as building plan approvals and land resumptions, would be made more complicated and time-consuming, which would waste taxpayers' money and the speed of redevelopment, thereby harming the interest of the general public.

Still, increased demand for a precise boundary definition (whether in Hong Kong's urban areas or the New Territories) due to a growing awareness among landowners of the importance of land boundaries, has generated a derived demand for properly dealing with land boundary redefinition exercises. However, a growth in the number of adverse possessions has not alerted the general public to the socio-economic significance of these cases.

Both the government and stakeholders certainly accept the need for a comprehensive systematic land boundary survey for all of Hong Kong. Yet, similar to the resistance to a national survey of China's cultivated land during the Ming Dynasty, neither the government nor landowners dares to press for reforms. Their reasons are:

- (1) "Let Sleeping Dogs Lie": an official boundary re-establishment system with statutory clarity may expose many cases of unauthorised land occupation.
- (2) Lack of Government Commitment: many property boundary irregularities and associated squatting on government and/or private land would be exposed should a large-scale, systematic survey be carried out. The government, as the lessor of land and central organizer of cadastral records, has an unescapable responsibility to address tort claims that would arise because of erroneous and/or missing land boundary records.

Anybody who appreciates the present land boundary situation in Hong Kong realizes that it is rare for two landlords to accept a boundary settlement drafted by independent land surveyors. If an owner is not satisfied with the boundary of one's property, regardless if it is redefined by a neighbour, the owner can take the neighbour and relevant surveyor(s) to court.

It could be inferred, at least from a cadastral land surveyor's perspective, that the most appropriate approach is that adjacent owners in dispute negotiate a solution. Yet, in Hong Kong, settling a boundary dispute outside of the court is rare because the dispute is often more than a rational economic calculation and its professional and legal costs often exceed the value of the land involved because usually only a small portion of the land is under dispute.

Some believe that the court system is a self-correcting mechanism that considers the evidence. A property owner, hence, has a higher possibility of obtaining a "correct" decision to safeguard one's property interests by having one's property boundary clearly delineated, legally recognised and protected, as well as enforced.

As cadastral land surveyors, the authors hope that property owners cooperate or negotiate when a conflict occurs instead of fighting it out in court. This is because, as stated earlier, most boundary disputes involve small plots of land (say, over only a few square feet) or short segments (as little as a few centimetres long) that, from a land surveying perspective, are not worth the cost of litigation. Anger is a key reason for bringing a boundary dispute to court. Cadastral land surveyors are aware of this both in terms of the depth of knowledge and technicalities involved. However, those who work within the legal system may not know land boundary issues as well as cadastral land surveyors. Thus, they may not devise the best solutions to handle such disputes.

Indeed, there is the scenario of one client and a landlord accepting a boundary settlement, as advised jointly by two separate land surveyors. This happens when both parties are involved in an adverse possession process. In this instance, surveyors, as expert witnesses, have to agree on the land boundaries concerned before the case can proceed.

In an adverse possession case, the role of the land surveyor is two-fold:

1. To identify the property boundaries.
2. To ascertain the actual occupied area that was allegedly and adversely possessed.

The first deals with the original property boundaries, while the second deals with occupied areas. An occupier may have only occupied a part of the subject land and even other land parcels, be they government or private land.

During the proceedings, both parties have to agree to the answer a crucial and primary question raised by the court: “Where is the land?” In practice, the two land surveying experts involved have to agree to a joint expert statement in which they have to list the issues on which they both agree and agree to disagree. The statement must also include the original lot boundaries and actual occupied area, as well as its physical features and, most importantly, the land’s occupation history throughout the

relevant period.

Under normal circumstances, both experts will generally agree on the property boundary, but may differ on the occupied area and physical features, as these depend heavily on extrinsic evidence such as old aerial photos and survey sheets, as well as witness testimony.

LAND BOUNDARY AND ECONOMICS

Land is an immovable, spatially-fixed entity (i.e., real property) on which an owner could carry out lawful activities and erect fixtures. Since land itself is a non-productive space, there is a need to properly invest in it, which may include erecting a valuable structure on it, farming, grazing, etc., before its value could be realised. If its boundaries are uncertain, investment in it and even its entitlement is at risk. Thus, this is reason for a precise land boundary survey to clearly delineate a property, especially when the potential investment in it is huge.

The determination of compensation and loss is principally a matter for the court. But it is a costly and often inefficient process. All of the costs – financial, temporal, and emotional – involved in delineating boundaries and resolving boundary disputes are transaction costs and take resources away from making the land productive.

Litigation on boundary disputes is particularly severe in urbanised areas where:

- 1) Land prices are bundled together.
- 2) Land is either sold or granted with proper documentation.
- 3) There is a rapid increase in land values, as well as an owner’s awareness of the importance of correct boundary delineation.

Most importantly, when a dispute is adjudicated, the court’s decision is final and definitive. Still, litigation as a means to resolve a boundary dispute occurs despite its transaction costs.

Lai *et al.* (2018) explained that there are two surveying factors (i.e., historical and map

representation) that prevent landowners from settling their land boundary disputes by mutual agreement and have to rely on assistance from a firm (the government) and the law (the court) in terms of Coasian logic.

The former surveying factor refers to the ever-changing, contemporary property market. The boundary matters could be regarded as temporal by their nature and the modern boundary is most likely not identical to the customary boundary of old, while the modes of transacting real properties are dissimilar during different epochs. Clearly-defined land rights could, therefore, facilitate land rights transactions and/or trades (i.e., buying, selling, mortgaging, and leasing land) in the contemporary property market.

Compared to the first factor, the second factor is more technical. The rationale behind this is the presence of errors, blunders, and fuzziness, as well as limitations in the personnel and/or surveying instruments employed. Thus, the interpretation of a map or plan's cartographical boundaries by different people could produce different results. It would, therefore, be practical allow a trusted authority, such as the court, to offer a reasonable approximation that settles the differences.

The authors, as land surveying professionals with substantial experience in dealing with property boundary disputes, entirely concur with the propositions of Lai *et al.* (2018), who accurately elucidated and summarised recent tangible boundary dispute issues using sound economic theories. From the technical perspective of a cadastral surveyor, the ideas of Lai *et al.* (2018) relate to the following aspects:

- 1) incomplete/missing land grant records;
- 2) conflicting clauses within the land grant documents and;
- 3) graphical and survey accuracies due to advancements in surveying technologies,

which, in turn, could refine the rough graphical depictions of the lot boundaries in the old grant plans.

In fact, it is rare in Hong Kong for a cadastral land surveyor to be involved in the negotiation process for a land boundary dispute. Indeed, it would be very fortunate for owners of adjacent lots to the one under dispute to welcome any survey work carried on their properties. Even though negotiations are possible, it is doubtful that they could produce a fruitful result, which depends on the following factors:

1. If the owners of the relevant adjacent lots are present during the field survey.
2. If the owners present are amicable to the survey.
3. If the owner who appoints the land surveyor would allow the surveyor to also be a negotiator or mediator.
4. Most importantly, if the owners are ready to disclose their intentions regarding the property boundaries. In general, when an owner⁶ appoints a land surveyor to re-define boundaries, the owner probably has two objectives:
 - (a) To develop one's own land; and
 - (b) To check the extent of one's property boundary or a possible encroachment by an adjacent lot.

In both scenarios, the owner generally has no intention to encroach on adjacent land and, hence, has no initiative to disclose one's intentions regarding boundary determination unless s/he reached a consensus in advance. As Lai *et al.* (2018) pointed out, "the resolution of boundary disputes is a pre-contractual process with a view to determining the *de jure* boundaries. Hence the disputes cannot be resolved by mutual agreement."

⁶ Currently, only the landowner or the owner's legal representative can request a boundary survey from an Authorized Land Surveyor/Registered Professional Surveyor (land surveying). As with the LBP and SRP, after the survey is performed, the results could be deposited at the relevant DSO.

THE NEED FOR CADASTRAL REFORM

It is noteworthy that the property boundary problem is universal and that is why many developing countries have instituted cadastral reforms over the years to support economic and environmental development and stable society. These reforms required overcoming a vast array of legal, technical, and administrative problems. Each country either developed or renewed its own land management/deed registration system along with its corresponding cadastral surveying and mapping systems by implementing new laws to move from a structure of general boundaries to fixed boundaries based on a national coordinates system.

From a cadastral land surveyor's viewpoint, the fixed boundary concept better represents a plot's true land boundaries in terms of the title protection to secure its owner's interests and facilitate sustainable economic development given scarce land resources. In return, this provides substantial social and political benefits and ensures a more stable society because through formalizing and implementing a centralized land records system, the management of a locale should become more efficient through the free and uninterrupted access to property information, the security of tenure, sustainable and environmentally-friendly development, etc. Most importantly, the government is able to remind private land owners/occupants of their obligations.

These obligations stem from the social nature of private land property and do not merely refer to paying land tax. It is more important to impose additional tangential liabilities or restrictions on the landowner under a legal and regulatory

framework, which only the government can do to oversee the safety and liabilities of third parties, the negative rights to not use through the town planning mechanism, etc.⁷

As an empirical study based on a set of novel data, which hypothesizes that cadastral reforms should have a positive impact on economic growth, D'Arcy *et al.* (2021) concluded that, "a very strong correlation between cadastral institutional reforms and economic growth at the cross-country level over a long run." In other words, there is a strong link between well-defined property rights over land and economic growth as "they imply more secure returns on investment, a reduction in the resources needed to defend the rights to land, facilitate land market transactions and increase access to credit."

The study of D'Arcy *et al.* (2021) produced a very long time series for GDP per capita. It justified that, except in Sweden, cadastral reforms were "associated with increased growth rates of GDP per capita" in the other three countries. D'Arcy *et al.* observed that the real interest rates in the United Kingdom and the Netherlands increased substantially, thereby signifying a comparatively strong boost in rural investment demand. In addition, they established that after five years of reform, the investment-GDP ratio increased by about 1.1 percentage points.

As the world further proceeds into its information era, cadastral reforms should be coupled with the rapidly growing waves of big digital data and smart city trends. The development of future smart cities will definitely require access to inclusive services, technologies, and infrastructure. It should embrace the concept of "No one should be left behind"⁸ to ensure that all efforts towards a sustainable, smart city will foster a better future for all.

⁷ In a District Court case (STS 7327/2021), the Court held that the defendant was not guilty of illegally building a road in a Green Belt zone, which was government land. The Court referred to the evidence of an expert witness, who represented the Lands Department's Survey and Mapping Office and pointed out that the Lot Index Plan relied on by the Plaintiff, the Planning Department, might have been incorrectly surveyed. The Court had reservations over the relevant section of the road trespassing on government land, as the plaintiff alleged. It added that the plaintiff never proved that the road section involved belonged to the defendant and that the defendant engaged in illegal dumping there.

⁸ Leave no one behind (LNOB) is the central, transformative promise of the United Nations 2030 Agenda for Sustainable Development and its sustainable development goals (SDGs).

Land boundary rights are undoubtedly a key factor in signifying the essential role of land administration in building sustainable, smart cities. A system of accurate and unambiguous land boundary recordings (i.e., a cadastre) is a critical and fundamental base information layer that could enable the integration of all property-related services administered by the government.

Unfortunately, Hong Kong, a comparatively mature city, lags behind much of the world in this regard due to its government's unwillingness to tackle the root cause of the property boundary conundrum. The government, as the lessor of all land lots in the city, should take a more proactive stance to upgrade and protect property titles by implementing statutorily-assured boundaries to render Hong Kong a world-class smart city.

EPILOGUE

This paper is informed by a desktop study of the findings of a professional land survey for a fixed observation post (OP) situated on the summit of Red Hill near the western side of Tai Tam Harbour on Hong Kong Island. (Ching & Yuen 2024, this issue)

As the Red Hill OP has never been mapped on any survey plan, the study applied the basic land boundary and GIS techniques to conclude that the possible war heritage was situated on a private land parcel.

Throughout the study, the authors expected to instigate more quality studies on the connection between precious vintage war relics and private properties under a feasible and meaningful built heritage conservation policy that considers property boundary issues.

With particular reference to Hong Kong's current situation, this paper reviews the reasons behind its land boundary survey problems and limitations from land surveying and economic perspectives. Finally, the authors recommend timely cadastral reforms for Hong Kong to bring about a fixed boundary system that is accessible to the public to ensure certainty over lot boundaries and, hence, a reduction in the transaction costs

of land property developments, greater public enjoyment, and heritage conservation.

ACKNOWLEDGMENTS

The authors are indebted to the guidance and comments by Sr Dr Lawrence W.C. Lai, Honorary Professor of the Ronald Coase Centre for Property Rights Research, University of Hong Kong. They also thank two anonymous reviewers for their useful comments on the manuscript of this paper.

REFERENCES

- Ching, Ken S.T. & Circle K.Y. Yuen. "An observation post (OP) on a private land parcel on Red Hill." *Survey and Built Environment* 33, no 2 (2024): 13-28.
- Lai, Lawrence W.C. "No property is an island: The private lot as the basic unit of landuse planning & management of a wider world." *Cosmos + Taxis* 11, nos.1/2 (2023): 90-96.
- Lai, Lawrence W.C. & Stephen N.G. Davies. "'Surveying was a kind of writing on the land': The economics of land division as town planning." *Planning Theory* 19, no.4 (2020): 421-444.
- Lai, Lawrence W.C. & Stephen N.G. Davies. "Is non-zoning of land impossible? Eight fundamental propositions of zoning." *Journal of Environmental Policy & Planning* 25, no.3 (2023): 242-257.
- Lai, Lawrence W.C., Stephen N.G. Davies, K.W. Chau, Ken S.T. Ching, Mark H. Chua, H.F. Leung, and Frank T. Lorne. "The determination of the "true" property boundary in planned development: a Coasian analysis." *Annals of Regional Science* 61 (2018): 579-599.
- D'Arcy, Michelle, Marina Nistotskaya & Ola Olsson. "Land property rights, cadasters and economic growth: A cross-country panel 1000-2015 CE." Working Paper in Economics No. 800. Department of Economics, University of Gothenburg, March 2021.

PRACTICE PAPER

Foreword to Field Notes and Photos of World War II British Fixed Observation Posts on Hong Kong Island by Robin Weir

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Robin “Rob” Weir’s field notes and photos of World War II pillboxes (PBs) on Hong Kong Island and the New Territories appeared in the last two issues of this journal (Weir 2023a, 2023b). Along with those investigations, Rob also carried out site investigations of the “artillery observation posts” built as field structures (abbreviated by Rob as “AOPs” on the Gwulo website, but as “OPs” hereafter), though not the more temporary earthwork examples in the New Territories.

This set of notes covers his field discoveries, made during the last half of the 20th and the first decades of the 21st century, of World War II OPs on Hong Kong Island, ten that have survived more or less intact and one mostly demolished. (Figure 1) It is a good companion to an article on the same subject by Davies *et al.* (2022a), which listed the OPs in the order of presentation followed here for easy reference. Recently a twelfth OP has been identified, which also appears on Figure 1.

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1:80000 Hong Kong and the New Territories map published by War Office 2nd edition 1945

Figure 1: 12 (artillery) observation post sites (1 to 12) in Hong Kong Island (Annotation by Y.K. Tan).

Thus, for a complete view of the existing research on OPs on Hong Kong Island, please read this set of notes in conjunction with the work by Davies *et al.* (2022a, 2022b, 2022c) in this journal. Note that OP Red Hill is not covered here or by Davies *et al.* (2022a), but was reported in the last issue of this journal by Davies *et al.* (2023), who identified it during Summer 2023 by studying the 1963 Hunting Surveys Limited aerial photos (Davies *et al.* 2024).

Rob's visits to the 11 OPs recorded here mostly occurred from 1992 to 2013, but especially from 1992 to 1997 (Table 1). His research identified those OPs that belonged to the Mobile Battery East Group; those that fell under Mobile Battery West Group and those which were used for flash spotting.

OP name (location) *Mobile Battery East Group ^Mobile Battery West Group + Flash spotting	Dimensions length from roof tip x width in cm (area)	Year (month) of field study
*Stanley Mound (Tai Tam Country Park)	355x310 (11.0050 sq. m.)	1997 (February)
*+Pottinger Peak (Shek O Country Park)	362x 310 (11.2220 sq.m.)	1996 (February)
*+Mount Parker (encircled by Tai Tam [Quarry Bay Extension] Country Park)	c372x310 (11.7490 sq.m.)	1997 (February)
+Braemar Hill (Tai Tam [Quarry Bay Extension] Country Park)	#348x307 (10.6836 sq.m)	2009 (April), #2023 (October)
+Jardine's Lookout (Tai Tam Country Park)	336x308 (10.3488 sq.m.)	1992 (May), 1997 (March),
+Mount Nicholson/Middle Gap	#356x307 (10.9292 sq.m.)	2013 (August), #2023 (2 November)
+Wanchai Gap (down a spur below Black's Link)	NA (destroyed after 1963)	2009 (December)
^Victoria Peak	NA (in a closed area)	1998 (March)
^High West/Harlech Road (Lung Fu Shan Country Park)	360x310 (11.1600 sq.m.)	1996 (September)
^Mount Kellett/Matilda (Pokfulam Country Park)	364x305 (11.1020 sq.m.)	1997 (March)
^Middle Spur (down a spur below Tsz Lo Lan Shan [Violet Hill] Path)	362X309 (11.1858 sq.m.)	1997 (December)

Table 1: Year of field studies of Hong Kong Island World War II (artillery) observation posts

#Supplementary field measurement by Vincent N.H. Chan of University Hall and Nixon T.H. Leung with Issac S.H. Cheuk and Winston S.T. Li of Ricci Hall on 27 October 2023; Andy K.L. Wong of the same hall on 2 November 2024.

Similar to his field notes for PBs, Rob's OP field notes are accompanied by very meticulous hand-drawn sketches of individual OP layouts, some of their special external and internal features (such as the OPs' ventilation shafts), and coloured photos that he took. (The exceptions were for OP Victoria Peak, which was in a closed area and, hence, inaccessible; OP Wanchai Gap, destroyed sometime after 1963; and OP Mount Parker, whose entrance was blocked by the construction of a radar station during the 1970s.)

The second and third authors of this foreword have added aerial and drone images, maps, and recent site photos where available to help illustrate

the morphology and settings of these small OPs. Aerial images of OP Middle Spur, taken by the RAF in 1949, but not identified in Davies *et al.* (2022a), have been found and reported as supplementary information for Rob's field notes. A comparison of aerial photos taken in different years shows that OP Mount Parker became very easy to access by walking all the way up Tai Koo Path, which was renamed Mount Parker Road after the war and extended to the summit during the 1970s to build the radar station. Today the OP sits on a slope above a retaining wall, which poses a physical access barrier below the perimeter fence of the radar station.

Rob's PB and OP field notes are very important as the first known and reported set of measured drawings of these field structures, no original drawings from their time of construction having survived. The OPs' sizes and designs were, more or less, standardized, averaging about 11.0 sq. m. in size, 3.6m in length (from tip to rear) and 3.1m in width. Table 1 shows that the variations in length (from tip to rear) were about 43cm ranging from 336cm (OP Jardine's Lookout) to 379cm (OP Mount Parker). Widths varied by about 5cm from 305cm (OP Matilda) to 310cm (OP Stanley Mound, Pottinger Peak, Mount Parker, High West). OP JLO is the smallest and OP Mount Parker the biggest.

Taking the mean set of figures (L = 3.6m, W = 3.1m) the variation of L = ±6%, W = ±1% is well within field construction tolerances and argues a standard plan with two variants to cater for the differing number of loopholes.

The number of loopholes (5 single and six double) did not affect the shape and size of its perimeter. That is an important empirical finding since to the casual eye a two-loophole OP (like OP Pottinger in Figure 2 and Matilda in Figure 3) may look larger than a one-loophole one (as in the case of OP Jardine's Lookout in Figure 4).

OP Pottinger Peak

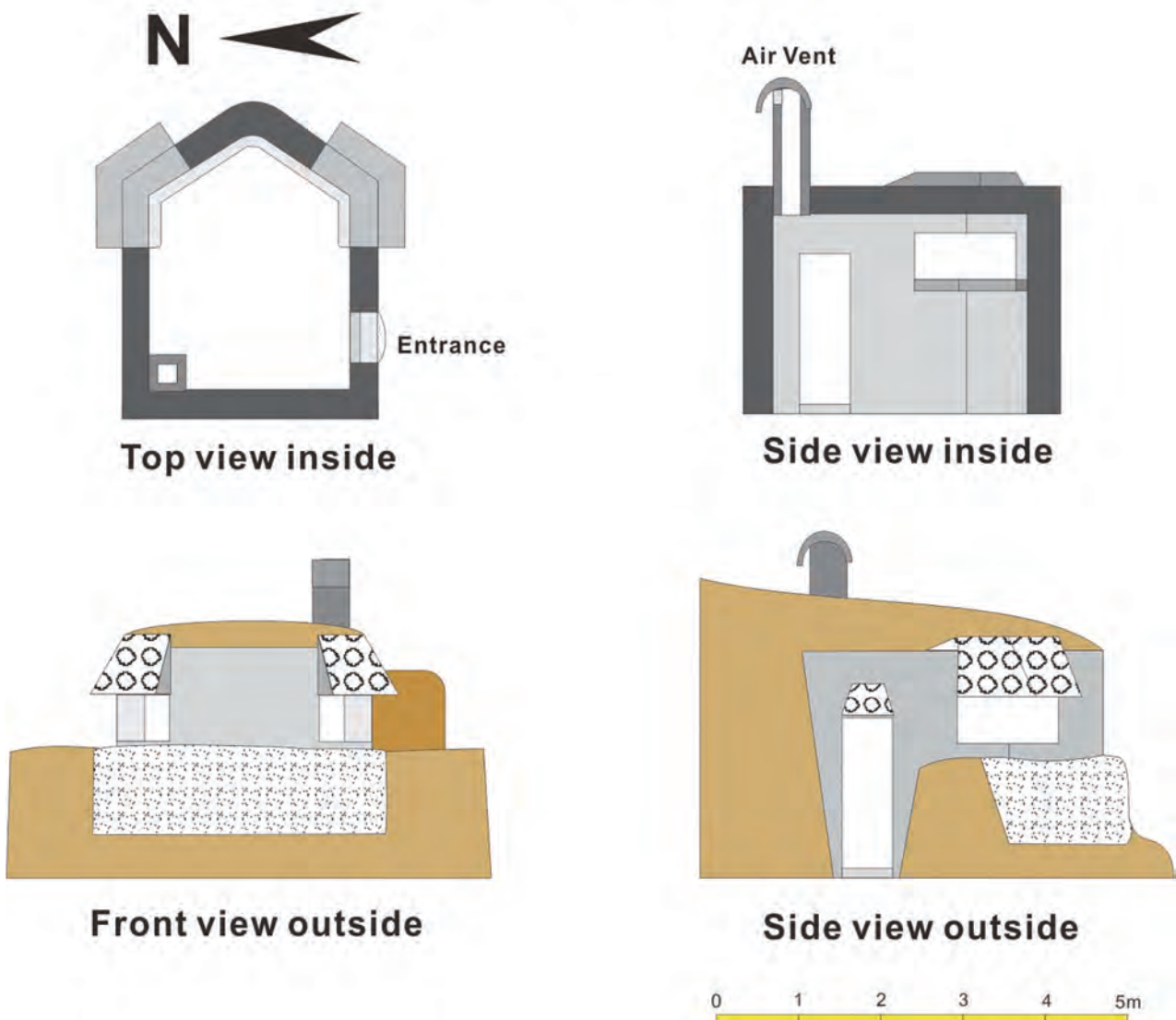


Figure 2: Top and side views of OP Pottinger (by Y.K. Yan).

OP Matilda

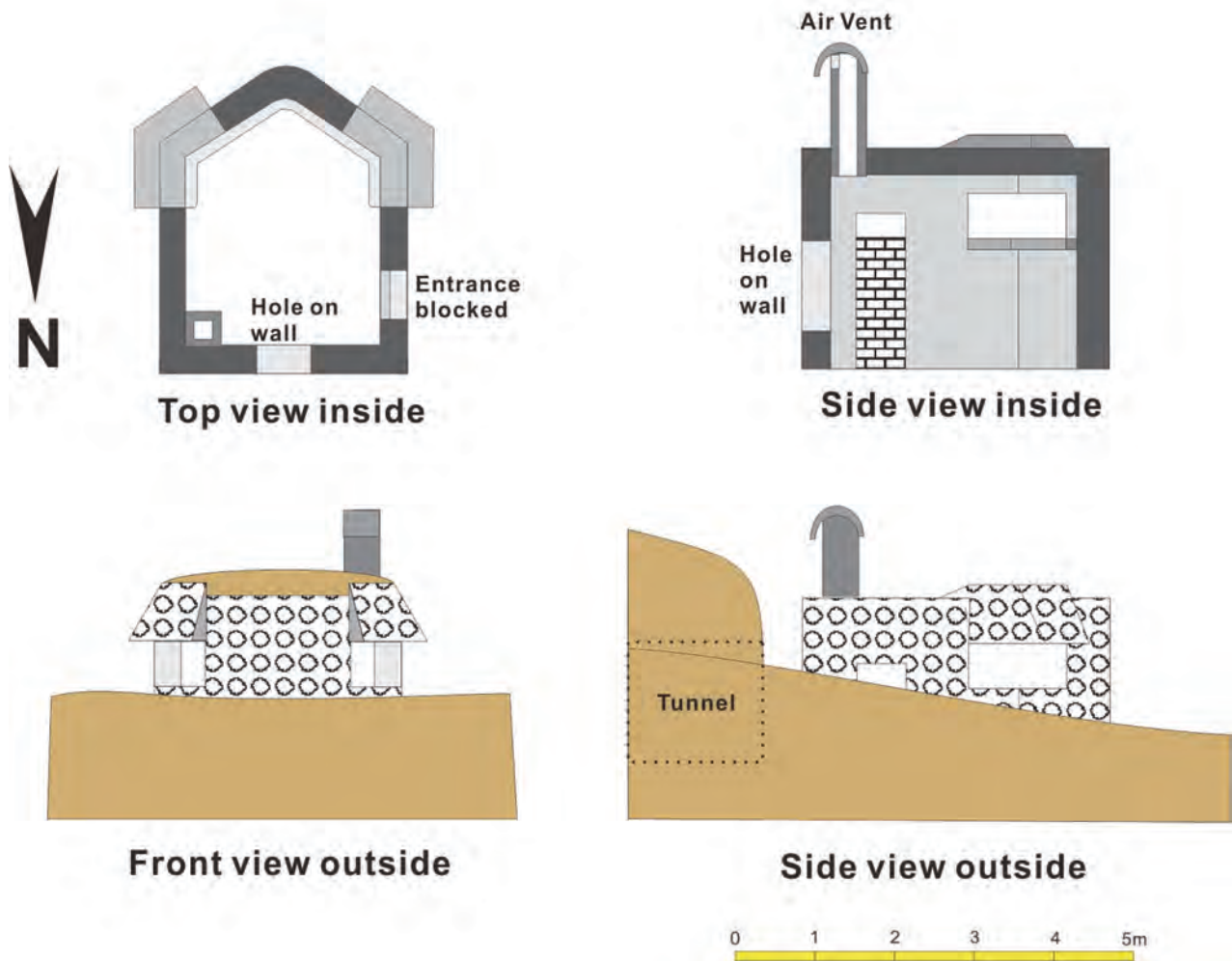


Figure 3: Top and side views of OP Matilda (by Y.K. Yan).

OP Jardine's Lookout

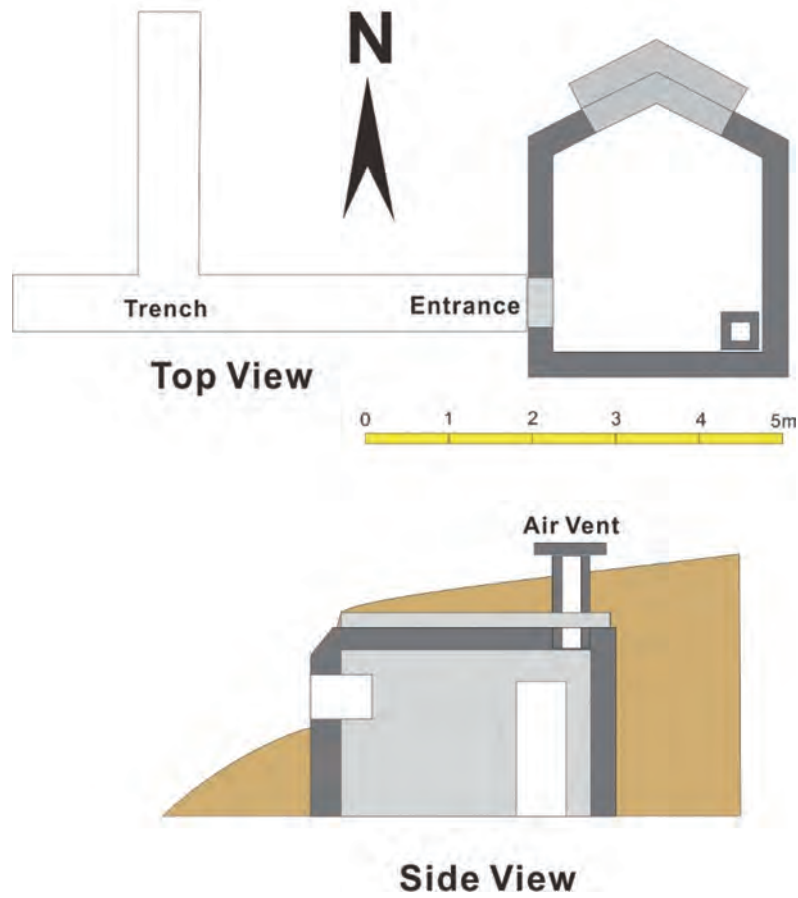


Figure 4: Top and side views of OP Jardine's Lookout (by Y.K. Yan).

The site photos Rob took during his field surveys are also useful control referents. A comparison of the photos taken by Rob and more recent photos shows that the ten surviving OPs and their surroundings have changed over the years. In the case of OPs Stanley Mound, Jardine's Lookout, and High West, their roofs have been converted into or modified as public viewing platforms. OP Pottinger Peak lost its stone course below its right viewing aperture, while a narrow earth platform has been formed in front of it.

The four aforesaid OPs are the most accessible, being located along trails of country parks. Access to four of the other six OPs, while also within country parks, is more challenging, with one of them requiring extra caution.

Most of the OPs' interior walls have been defaced by graffiti and paint left by squatters. Hit marks by unknown parties can be found along the surface of OP Pottinger Peak and the inside of OP Middle Gap. Whether they were produced during the Battle of Hong Kong or came after the war awaits further study by historians.

Unlike PBs, which were built either at possible landing sites along the shore or near tactically important hill gaps and road/path junctions, OPs were constructed along the line of descending mountain spurs or near hill summits to maximize observational range in order to monitor enemy movements and, subsequently, to direct artillery fire by observing the fall of shot.

Although far smaller in size than and less prominent in battle compared to PBs, OPs played an important role. Perhaps as interesting, though sadly no useful records have survived, their surveillance role during the intense battle would have meant their small crews would have been eye-witnesses to many of the battle's key moments. For example, the massing of Japanese forces before the amphibious assault on 18th December. That assault's lodgment and swift

breakout. As well as exactly what was going on as, successively from the east, the OPs were abandoned, with their crews retreating to ad hoc, improvised locations, as we learn from the graphic description by Major Monro on the last day of the battle as he visited Mobile Battery West Group's remaining positions in the Victoria Peak area,

"I tried to find the O.P. which was somewhere in the direction of the Tod's old house, but it was shelled as I went along the path which came into view of the enemy, and had to make a bolt for it."

If they were still in position on the afternoon of Christmas Day, after the surrender at 1530hrs, the occupants of OP Matilda probably saw the torpedo boats carrying Admiral Chan Chak's party out of the city from Aberdeen at around 1630 hrs. (Lau 2021, <http://www.hongkongescape.org/Escape-2.htm>).

Since the end of the war, the OPs have also mutely witnessed the dramatic local socio-economic changes in the territory and, hence, are of educational value. After the war, OP Pottinger Peak and OP Mount Nicholson (Middle Gap) were "adaptively reused" by squatters until they were evicted by the government. OP Victoria Peak has remained the property of a private communications company that succeeded the Hong Kong operated parts of the famous British controlled, international communications behemoth Cable & Wireless, which, together with Radio Hong Kong (later Radio Television Hong Kong), was once under government direction.

Visitors have left graffiti and slogans in many open access OPs – including those that were difficult to access. They are mostly trivial, but along the interior back wall of OP Mount Parker is painted a typical leftist slogan¹ of the 1967 Riots.

¹ It reads, in partly-simplified Chinese, 「團結起來，爭取更大勝利」 or, "Unite! Strive for Greater Victory!"

REFERENCES

Davies, Stephen N.G., Lawrence W.C. Lai & Y.K. Tan. "Fixed observation posts on Hong Kong Island." Surveying and Built Environment 31, no.1 (2022a): 45-104.

Davies, Stephen N.G., Lawrence W.C. Lai & Y.K. Tan. "A new and anomalous observation post above Shaukeiwan (Shau Ki Wan)." Surveying & Built Environment 31, no.1 (2022b): 120-127.

Davies, Stephen N.G., Lawrence W.C. Lai & Y.K. Tan. "A new, possibly Japanese observation post/pillbox and shelter in Hong Kong Park," Surveying & Built Environment 31, no.1 (2022c), pp.128-137.

Davies, Stephen N.G., Lawrence W.C. Lai & Y.K. Tan. "Red Hill fixed observation post (OP): An update." Surveying & Built Environment 32, no.2 (2023): 25-34.

Lai Lawrence W.C., Y.K. Tan & Stephen N.G. Davies. Pillboxes on Hong Kong Island in the Era of World War II, Hong Kong Institute of Surveyors, Hong Kong, 2021.

Davies, Stephen N.G., Lawrence W.C. Lai, Hon Chim Chiu & Y. K. Tan. "Discovery flows from mapping for conservation planning: The case of finding and mapping of World War II British Hong Kong defence structures." Town Planning Review (2024):forthcoming.

Lau, Alfred Y.K. "Rear-Admiral Chan Chak's contributions to the defence of Hong Kong and his escape, 1941." Surveying & Built Environment (Special Issue) December (2021): 51-62.

Weir, Robin. "Field notes and photos of pillboxes on Hong Kong Island in the era of World War II by Robin Weir." Surveying & Built Environment 32, no.1 (2023a): 110-168.

Weir, Robin. "Field notes and photos of Gin Drinker's Line Pillboxes Nos. 313, 314, 315 & 419: The last four standing pillboxes of the Kowloon Peninsular Inner Line (a.k.a.

the Gin Drinker's Line)." Surveying & Built Environment 32, no.2 (2023b): 47-90.

Field Notes and Photos of World War II British Fixed Observation Posts on Hong Kong Island: Twenty Years in Search of Those Remaining

Robin Weir

ABSTRACT

Based on a study that spread over more than 20 years from the 1990s, these field notes and photos show measured drawings of the World War II British fixed observation posts on Hong Kong Island for conservation planning purpose.

KEYWORDS

Observation posts, flash spotting, aerial photos, maps

INTRODUCTION

With the promotion of conservation planning in mind, the written notes reproduced in Appendix I here reflect details of the World War II British Hong Kong artillery observation posts (OPs), field works built of reinforced concrete on Hong Kong Island. I visited most of these OPs over a period of more than 20 years from 1992 to 2013. Some of the subjective comments made in early visits may vary to those made later, particularly where better information has become available. Dimensions shown are centimetres, the symbol after some are a personal indicator of approximately.

When I first started finding OPs, beginning with Jardine's Lookout, like the pillboxes (PBs) I had very little knowledge of what I had found. When research eventually produced a list of their positions it was under a heading Artillery, Observation Posts. For my own identification purposes these became Artillery Observation Posts (AOPs). In recent times I have learned that no such nomenclature for these exists in the British Army, an OP is an OP, period. Therefore, although my hand-written field notes retain AOPs the printed text of the article will refer to OPs.

MILITARY PLANNING CONTEXT

Little is known about any OPs before the mid 1930's. The construction of the Gin Drinker's Line (GDL) across the Kowloon Peninsular brought the first documentation of OPs for Artillery purposes, but was limited to the GDL. The introduction of the *Interim Hong Kong Defence Scheme of 1939*¹, subsequent to the decision from London to only defend Hong Kong Island with the strategic aim of denying Victoria Harbour to the enemy², except for the retreat down the Kowloon Peninsula, brought the British artillery back to prepared positions on the Island. To prepare for controlling the artillery a number of fixed OPs were constructed for the Mobile Artillery and for Counter Battery Flash Spotting. These OPs were distinct from Battery OPs associated with coastal fixed gun batteries like those at Belchers, Mount Davis, Aberdeen Island (Ap Lei Chau), Chung Hom Kok Fort, Stanley Fort, Cape D'Aguilar (Bokhara and Cape D'Aguilar Battery), Cape Collinson and Pak Sha Wan.

OPERATIONAL ASPECTS OF OBSERVATION POSTS

The Mobile Artillery, as explained further below, manned by the Royal Artillery, consisted of guns and howitzers primarily for support of Infantry whilst the Flash Spotting was the function of the Counter Battery Group, identifying enemy artillery by the gun flashes as they fired, and directing return fire from British guns onto those positions.

At the time of this planning, Hong Kong had extremely limited capabilities for aerial observation, and the likelihood of the situation improving in the foreseeable future was low,³ so observation of an enemy's action had to be from the ground. Having the ability to look down on the enemy from hilltops would increase the distance available for sighting, but the Army had already discovered as early as the 1890's, that building defences on the highest points could be seriously compromised by fog and low cloud for a large part of the year.⁴ A solution was to build OPs at varying heights above sea level and as any attack by land was expected to be down the Kowloon Peninsula, the majority were built facing that (northern) direction, although a number faced other directions to counter possible sea-borne landings on the south of Hong Kong Island or the nearby islands. Dealing with any attacking naval forces involved was the responsibility of the Coastal Artillery batteries.

The Mobile and Counter Battery (CB) Artillery were divided into three groups, (a) Mobile Artillery East Group with the headquarters (Hqts) initially at Tai Tam Gap; (b) West Group with Hqts at Wan Chai Gap; and (c) CB Group with Hqts at Wong Nei Chong Gap, the OPs being included in the same artillery grouping and controlled through their respective Hqts. Calls for artillery support were via OPs who transferred the request to Hqts, where it was determined which Batteries to use and supply target information for them. In an emergency situation OPs could directly co-ordinate artillery fire onto pre-registered Defensive Fire Task positions.⁵

¹ The National Archives UK. (TNA). WO 106/2379: Hong Kong Interim Defence Scheme 1939. (With amendments to 1941).

² TNA CAB 21/2427: The Future Policy for The Defence of Hong Kong, 1938.

³ TNA CAB 21/2426: Hong Kong Defence Questions. 1937 – 38.

⁴ See TNA CAB 11/58: Revised Scheme of Defence 1894; and TNA CAB 11/58: HK Defence Plan 1911. During the twenty years ending in 1903 the number of days in one year was 147 during which fog occurred at levels between 2,000 feet and 1,000 feet, and 52 days at those between 1,000 feet and 800 feet. Only on very rare occasions was fog observed as low as 500 feet.

⁵ TNA WO 106/2379.

This all involved communicating over large areas by the widely separated individual units. In our era of mobile and satellite phones it is somewhat difficult to accept that it was all done using fixed telephones with buried cables, over a hugely complex controlling system involving human telegraphists making manual switch connections, any of which could be disrupted by enemy action.

Figure 1 shows the configuration of the communication network for Mobile Battery

East Group. The OPs involved were OPs Stanley Mound, Red Hill, Pottinger Peak and Mount Parker. Figure 2 shows the configuration for Mobile Battery West Group. The OPs involved were those at Wanchai, Victoria Peak, High West, Kennedy Town, Matilda and Middle Spur. Figure 3 depicts the configuration of the communication network for flash spotting OPs which were Pottinger, Mount Parker, Braemar Hill, Jardine's Lookout, Mount Nicholson, Wanchai, Mount Austin, and Kennedy Town.

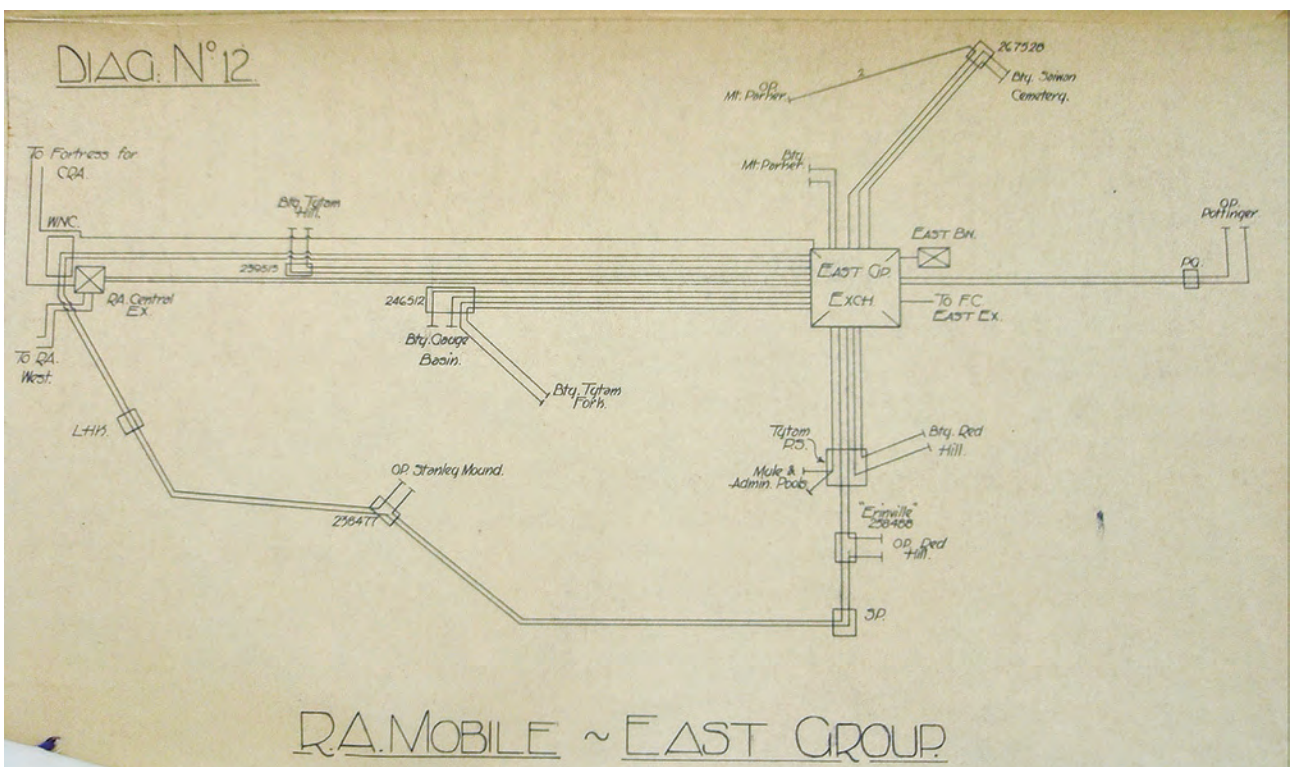


Figure 1. Configuration of communication network for mobile battery East Group. (Source: TNA WO 106/2379)

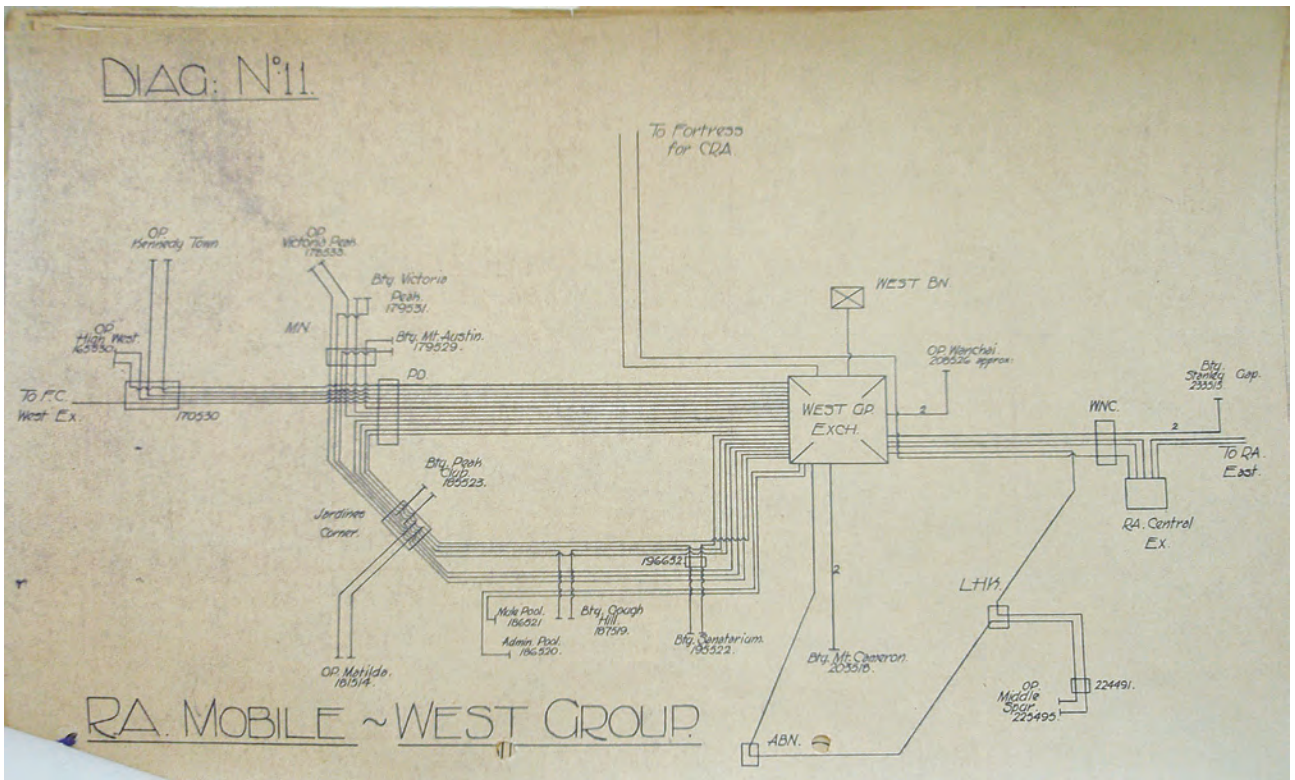


Figure 2. Configuration of communication network for mobile battery West Group. (Source: TNA WO 106/2379)

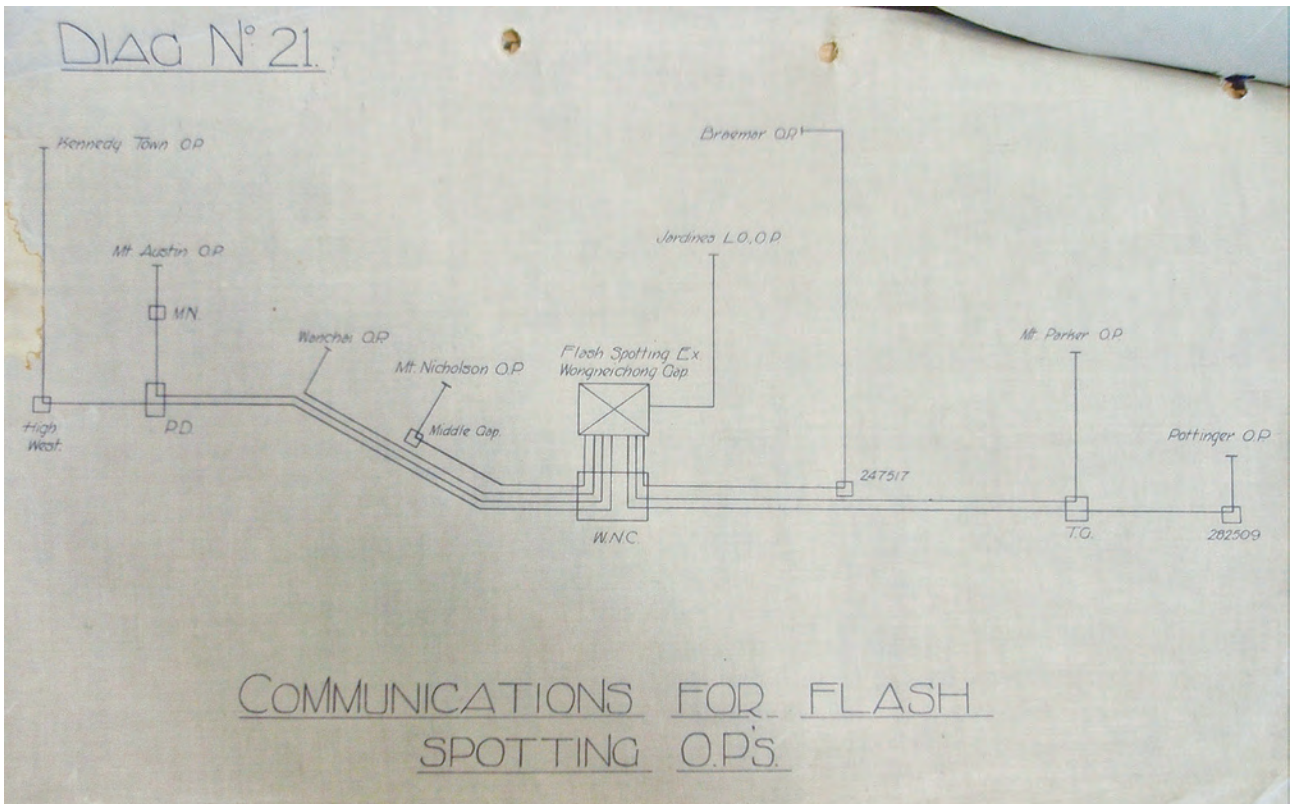


Figure 3. Configuration of communication network for flash spotting observation posts. (Source: TNA WO 106/2379)

It will be noted that there are some OPs marked on these figures which do not appear in the notes in Appendix I. These (like OP Mount Austin, Kennedy Town) have not been found, the most likely reason being that they have been destroyed during the construction of offices or housing. An obvious example being Red Hill OP (at lower right-hand side) in Figure 1. Not indicated on any government map, it was identified by Davies *et al.* (2023) on aerial photographs up until 1963, after which the area became an extensive private housing estate.

For further detailed reading on the Hong Kong OPs, refer to the article By Davies *et al.* (2022) in Vol. 31 Issue 1 of this journal.

Appendix 1 presents my field sketches and photos of the 11 OPs in an order that follows that adopted by Davies *et al.* (2022).

REFERENCES

Davies, Stephen N.G., Lawrence W.C. Lai & Y.K. Tan. "Fixed observation posts on Hong Kong Island." Surveying and Built Environment 31, no.1 (2022): 45-104.

Davies, Stephen N.G., Lawrence W.C. Lai & Y.K. Tan. "Red Hill fixed observation post (OP): An Update." Surveying & Built Environment 32, no.2 (2023): 25-33.

APPENDIX I: Field Notes and Photos of World War II British Fixed Observation Posts on Hong Kong Island

Stanley Mound

LOCATION: On the southern side of Hong Kong Island above Stanley Gap Road. Sealed closed and almost completely buried. Now used as a rest area and lookout on the Wilson Trail. Faces south.

Sketch

STANLEY MOUND ARTILLERY OP 16.2.97 Sheet 1 of 1

At side of old path, which is now the Wilson Trail. Roof used as a viewing point, with panoramic views over Stanley, channel and islands. Area surrounded by low, thick scrub. Had previously stood on this spot without realising what was underneath.

Appears to be a standard two loop hole, rounded front OP. Buried in hillside to about 30 cm below loop holes, which are bricked-in. Access to left side entrance was originally from a short trench starting at the trail/path. Entrance is bricked in, and buried up to just below 2nd hinge level. Airstair on RHS rear has standard sloped front. Cement "globbs" are on eyebrows and front/side of walls. The roofline has been raised to form the base of viewing area, airstair filled in.

N22 13 64
E114 12 42
67 32m

YEAR SURVEYED: 1997 (February)



Left front. (February 1997)



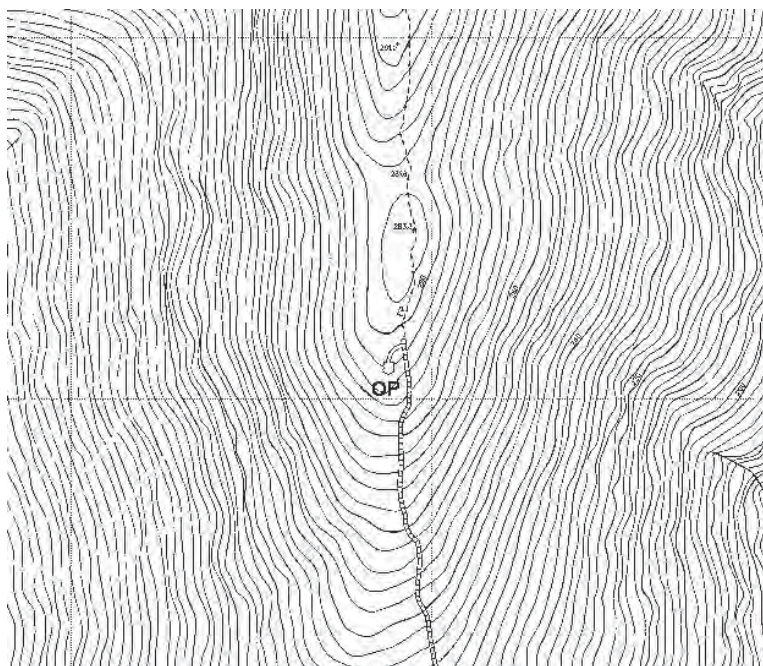
Right front. (February 1997)



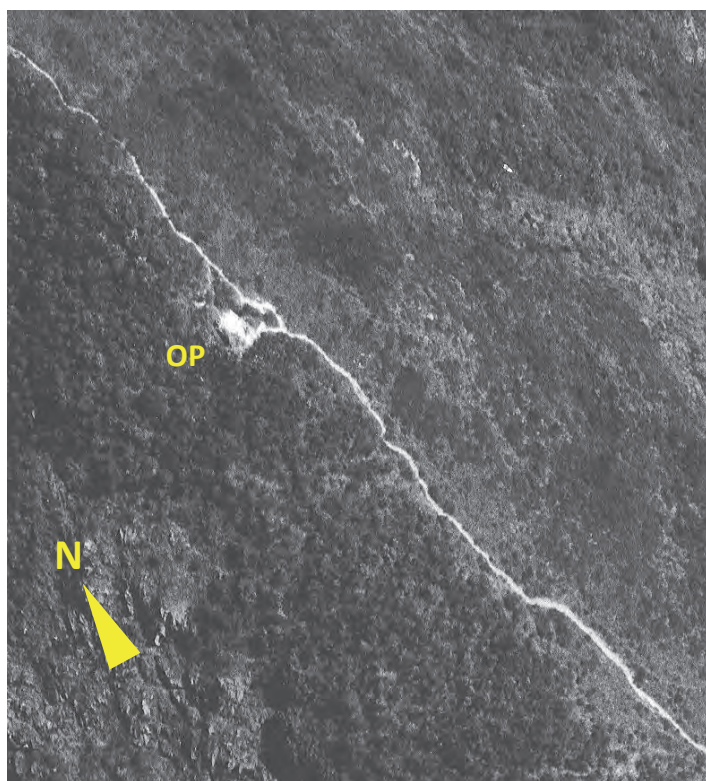
Left side with blocked entry.
(February 1997)



Looking south from the roof of OP, now a tourist
lookout. (17 February 2021 by Lawrence W.C. Lai)



Location of the OP. (1:1000 15-NE-7C (Ed 1999-12))



Aerial view of the OP. (Hunting Surveys Ltd. aerial photo No. 6662, 1 February 1963)

NOTES

Entrance blocked, loopholes sealed, and the top of the OP converted into a public viewing deck.

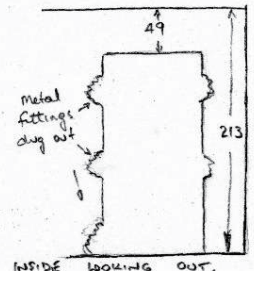
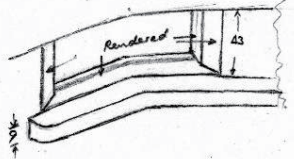
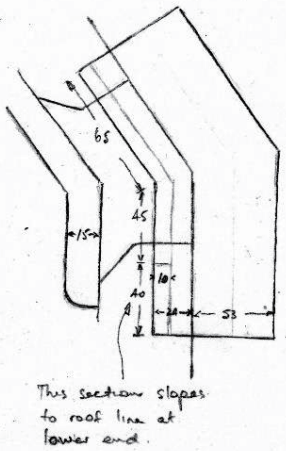
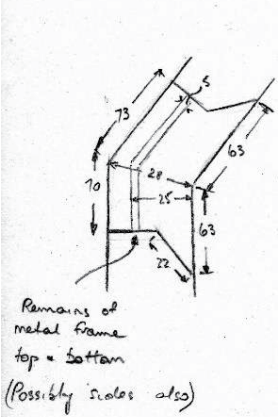
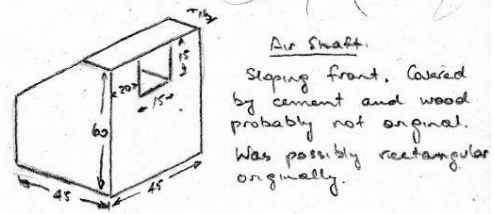
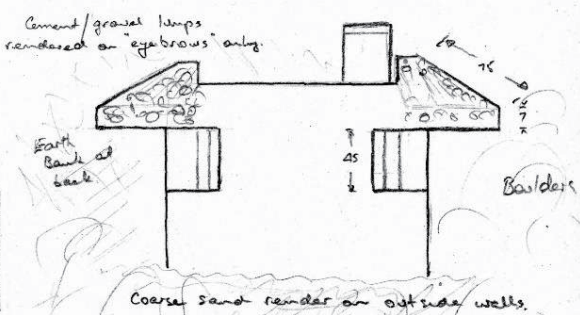
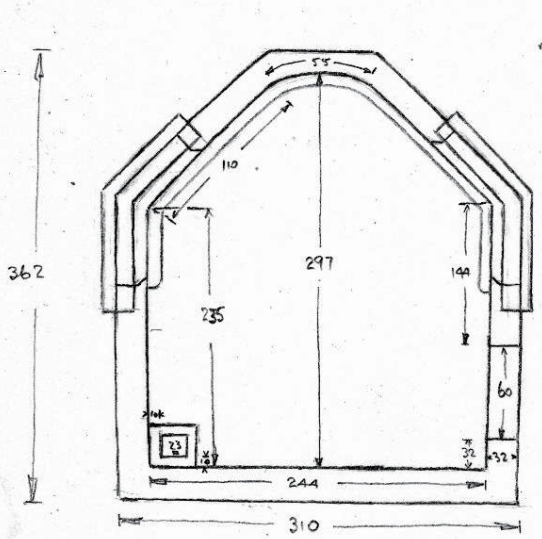
Pottinger Peak

LOCATION: The eastern end of Hong Kong Island.
Faces north-east.

Sketch

ARTILLERY OBSERVATION POST POTTINGER PEAK FEB 96 SHEET 1 of 1

Eastern side of Pottinger Peak. Lookout for Eastern Fire Command.
Set into hillside at back, with several large boulders adjacent.
Possible attempt to blend it with area, but its sharp outline makes it obvious, even from a distance.
Overlooks Junk Bay, Cape Collison Light house from left window, Cape Collison Conventional Institution (Collison Battery) around to Shek O from right window.
Large "eyebrows" over the windows on outside. Possible protection.
No shutters in window areas although there are rusted remains of metal frames in the window surrounds.
Some damage to concrete around window ends. (Erratum?)



YEAR SURVEYED: 1996 (February)



Right front from below. Note lower stone course.
(February 1996)



Entrance on right side.
(February 1996)



Front from below. (February 1996)



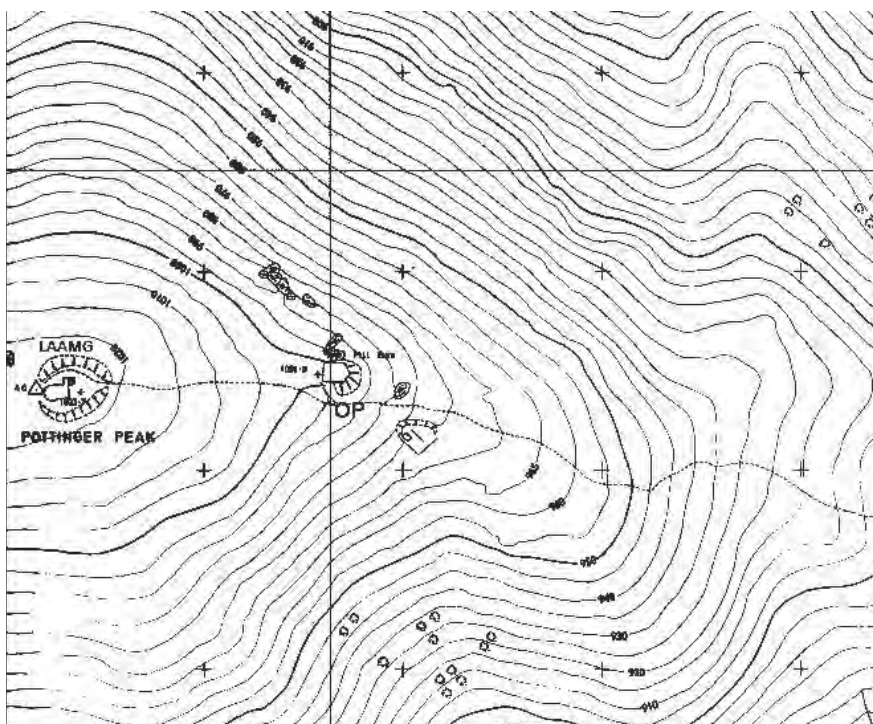
Roof from above and behind. (February 1996)



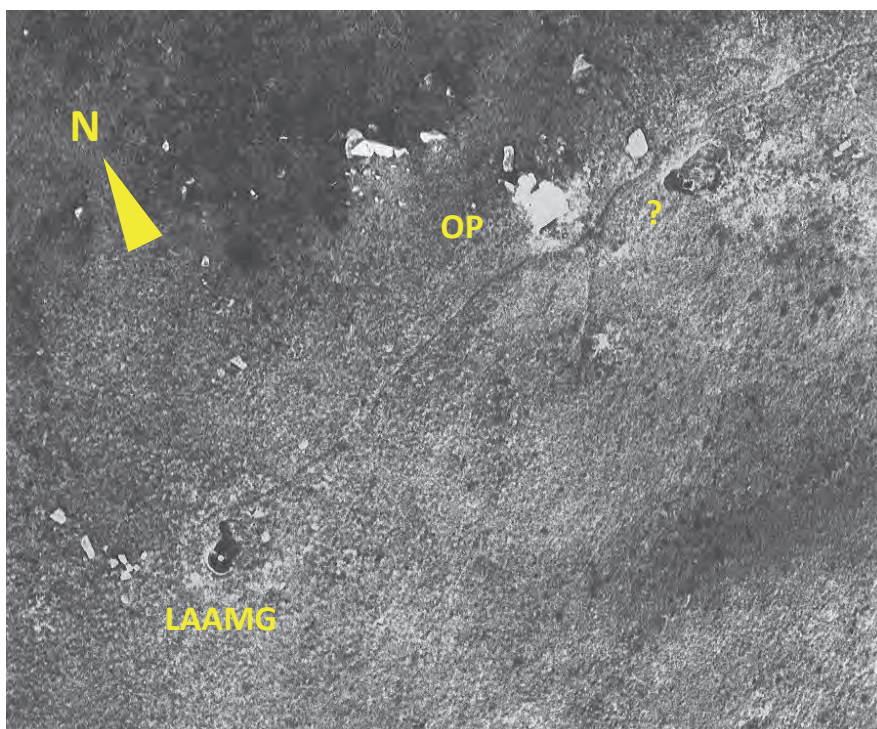
The OP on foggy hill top. (February 1996)



Front view: Lower stone course along the right front found in 1996 (see top left figure at page 48) has gone. (6 February 2021 by Lawrence W.C. Lai)



Location of OP. (1:600 215-SW-8 (Ed 1968-11))



Aerial view of OP. (Hunting Surveys Ltd. aerial photo No.6881, 1 February 1968)

NOTES

Accessible and intact except for metal parts, used at some time as a squatter hut. The ruins of a light anti-aircraft machine gun (LAAMG) position can be found at the summit of Pottinger Peak.

Mount Parker

LOCATION: Towards the eastern end of Hong Kong Island above Mount Parker Road, below the radar golf ball. Faces north.

Sketch

MT PARKER ARTILLERY OP

8.2.97

Sheet 1 of 2

Dug into side of hill immediately below the compound around the radar golf ball. Immediately above the access road, which is of recent vintage.

Approximately 300m from supposed position as indicated in file WO 106/2379

This one is of the single loophole variety, with a continuous 'eyebrow' on exterior above the loophole.

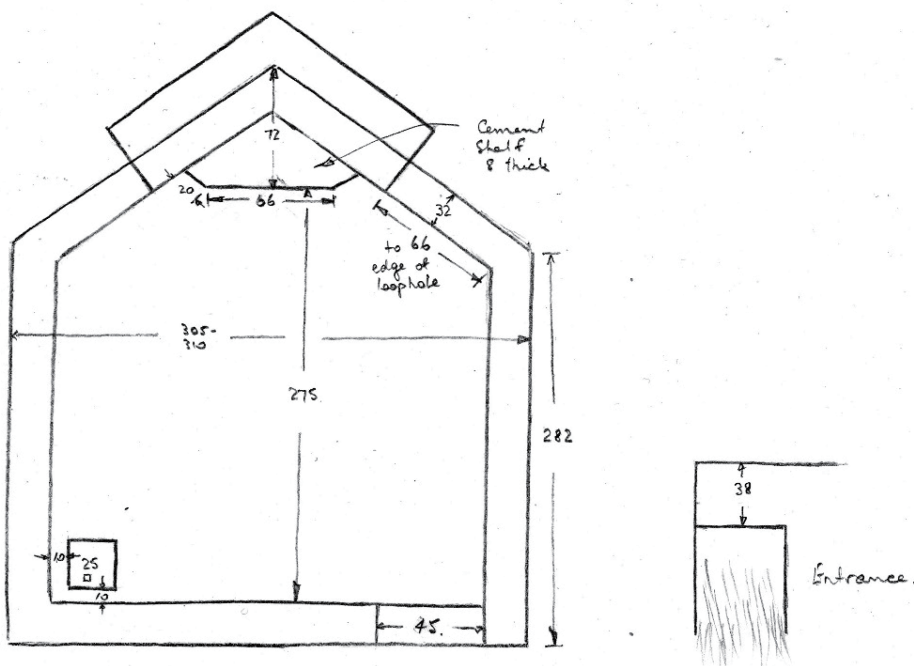
Roof covered with rocks, earth and grass, similar to surrounds, but at least some has come down the hill from earthworks at radar site. Entrance at back is now completely covered over, with some debris entering the OP.

'Eyebrows' have some cement 'globs' (first sized) as seen on others for camouflage purposes. Loophole apparently had two shutters, now missing, hinged to open outwards at bottom. Metal frame complete, but corroded.

Signs of places for three beds on LH interior wall. No other fittings.

Faces North, directly at Kar Tak.

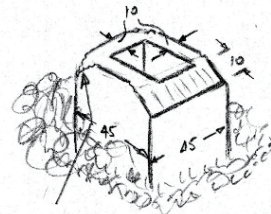
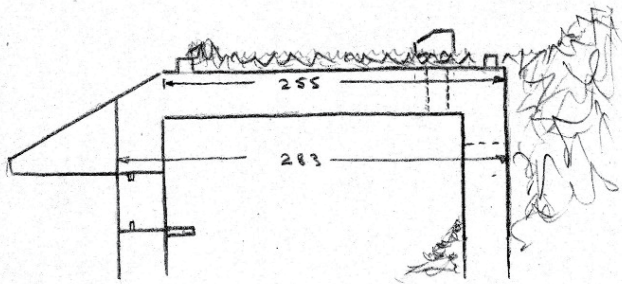
N 21 16 05 6/8
E 114 13 40 30m GPR.



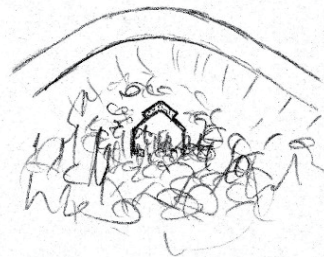
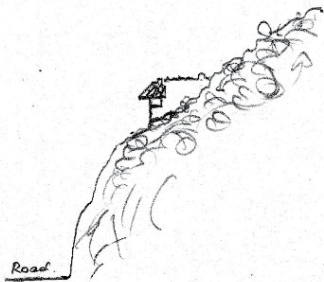
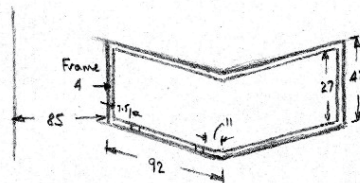
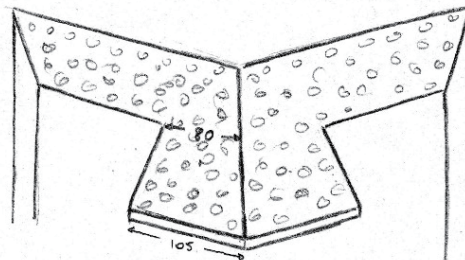
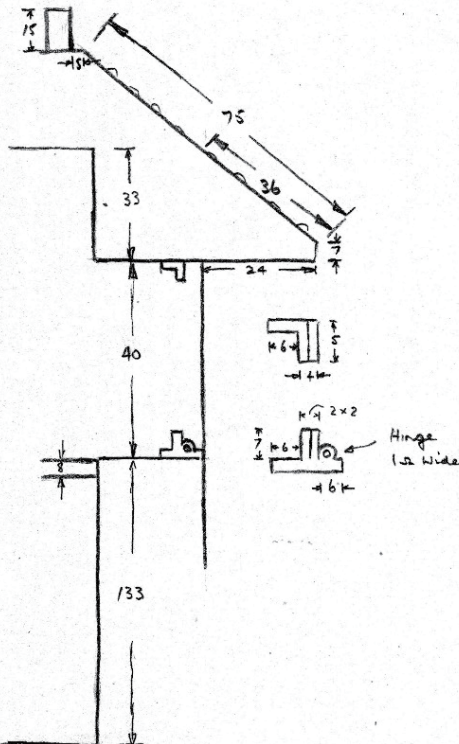
MT PARKER ARTILLERY OP.

8.2.97

Sheet 2 of 2



Possibly also sloped at back



YEAR SURVEYED: 1997 (February)



View from Mount Parker Road. (October 2006)



View from roof top looking down towards Tseung Kwan O (Junk Bay).
(1 December 2020 by Lawrence W.C. Lai)



Right side from road. (February 1997)



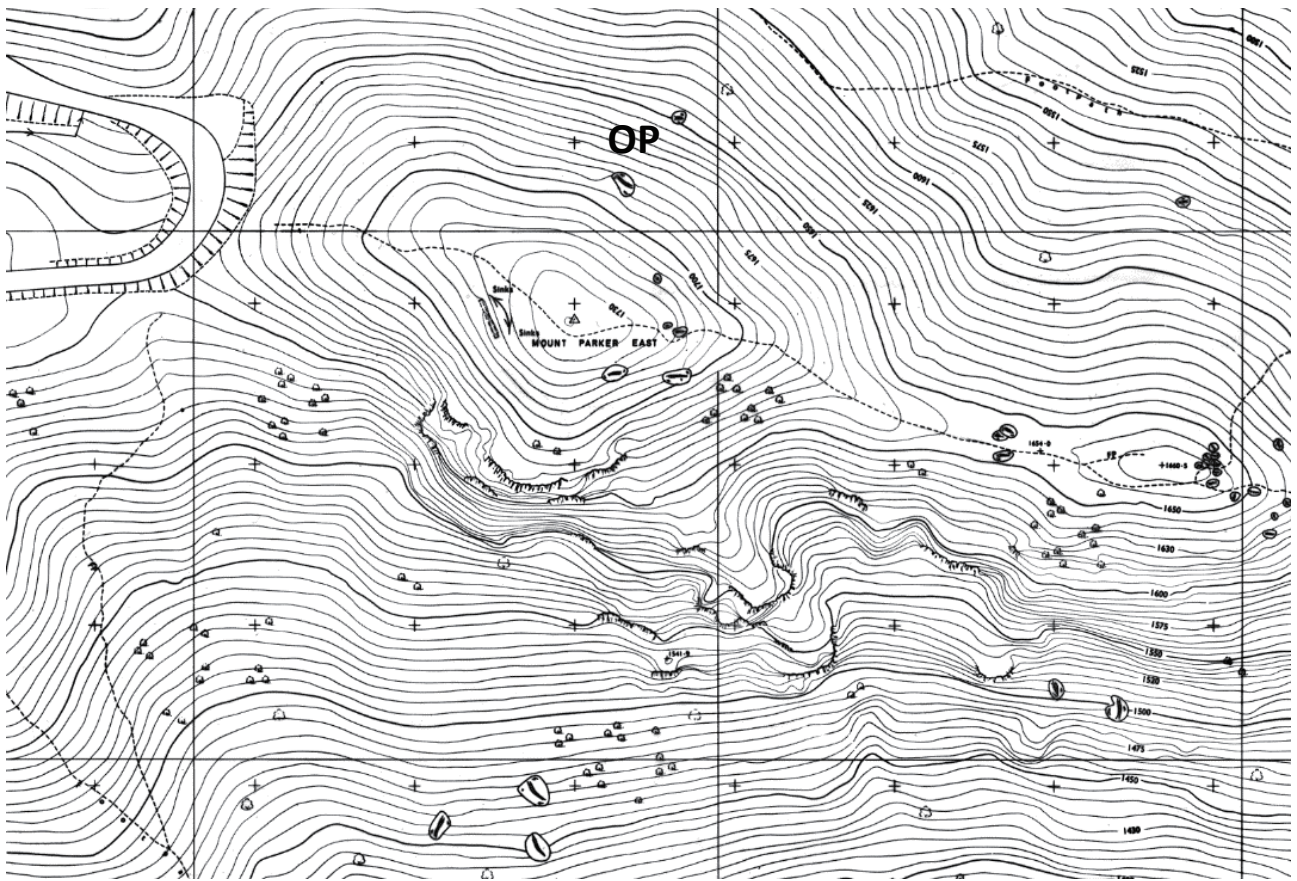
Right front corner.
(February 1997)



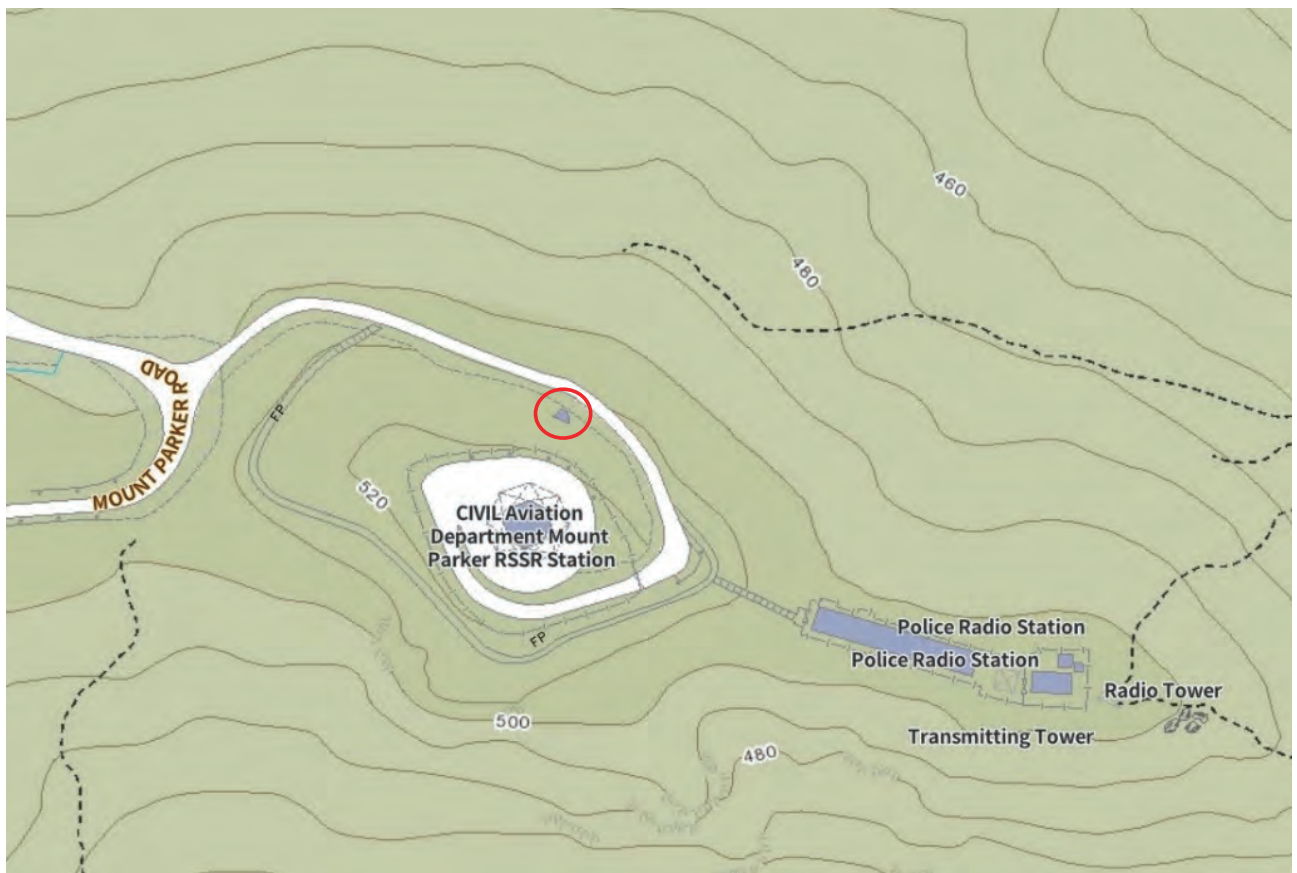
Frontal area. (February 1997)



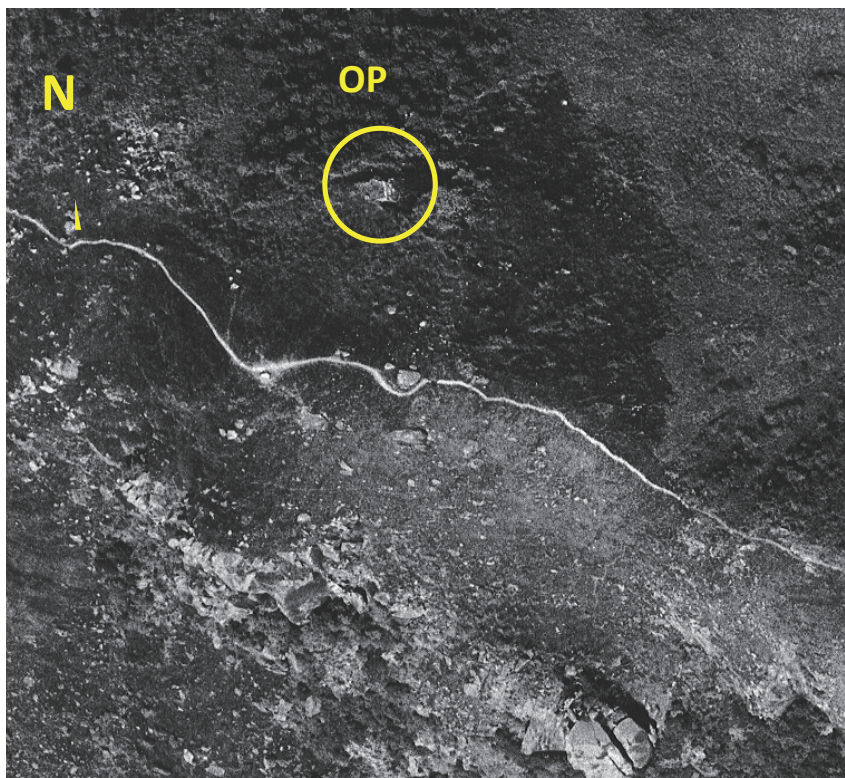
Rear interior wall with the entrance blocked due to radar station construction. (February 1997)



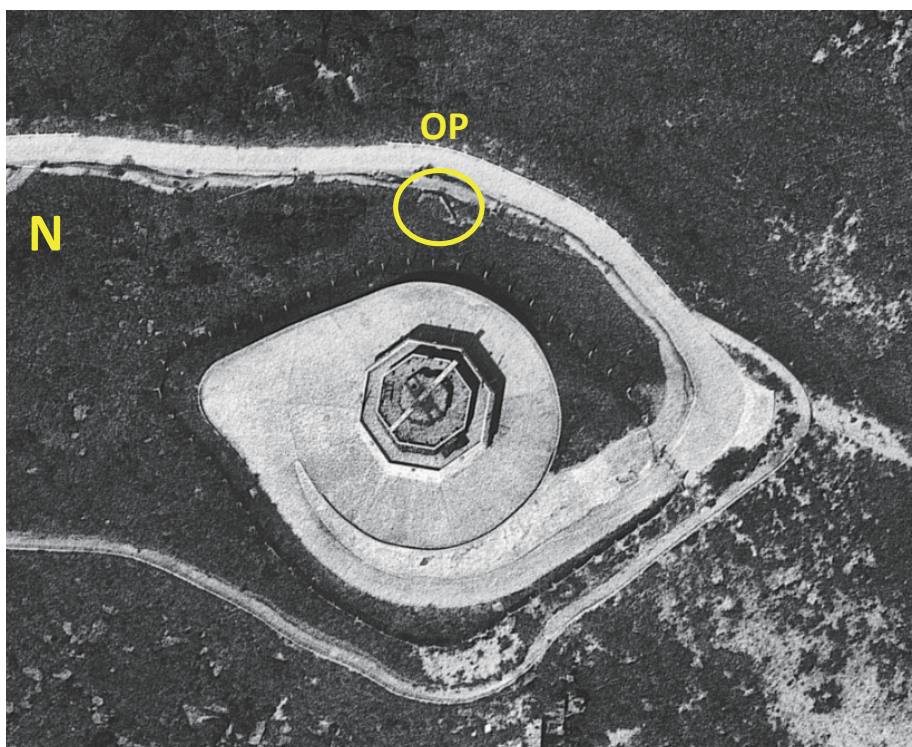
Location of OP. (1:600 214-NE-11 (Ed 1974-06))



OP on current map. (www.map.gov.hk)



Aerial view of OP in 1963. (Hunting Surveys Ltd. aerial photo No.8043, 1 February 1963)



Aerial view of OP in 1977. (Hong Kong Government photo 19342, 15 September 1977)

NOTES

Intact but partly buried by earth slippage, which has entered the OP.

Braemar Hill

LOCATION: In the eastern part of Hong Kong Island. Poor condition and has part of the floor removed to access a tunnel. Faces north.

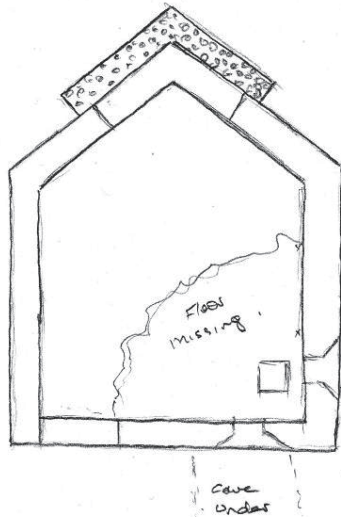
Sketch

BRAEMAR Hill AOP

5.4.09

Sheet 1 of 1

Poor condition, buried to roof at front although back clear. Apparent attempt at demolition, several large cracks in sides and back. Floor partly dug out to provide entry to cave underneath and behind. Single opening at front, with characteristic 'eyebrow' above. The airshaft is missing, only the hole in roof remaining.



Two topholes have been located through the back and side wall

* Positions for two stretcher beds



YEAR SURVEYED: 2009 (April)



Roof and front left corner. Upper part of air shaft gone. (April 2009)



Frontal area. (April 2009)



Interior front wall with remains of loophole. Cracks suggest settlement due to loss of ground water and soil erosion due to tunneling. (April 2009)



Interior rear right side with two holes cut through walls, and airshaft in roof. (April 2009)



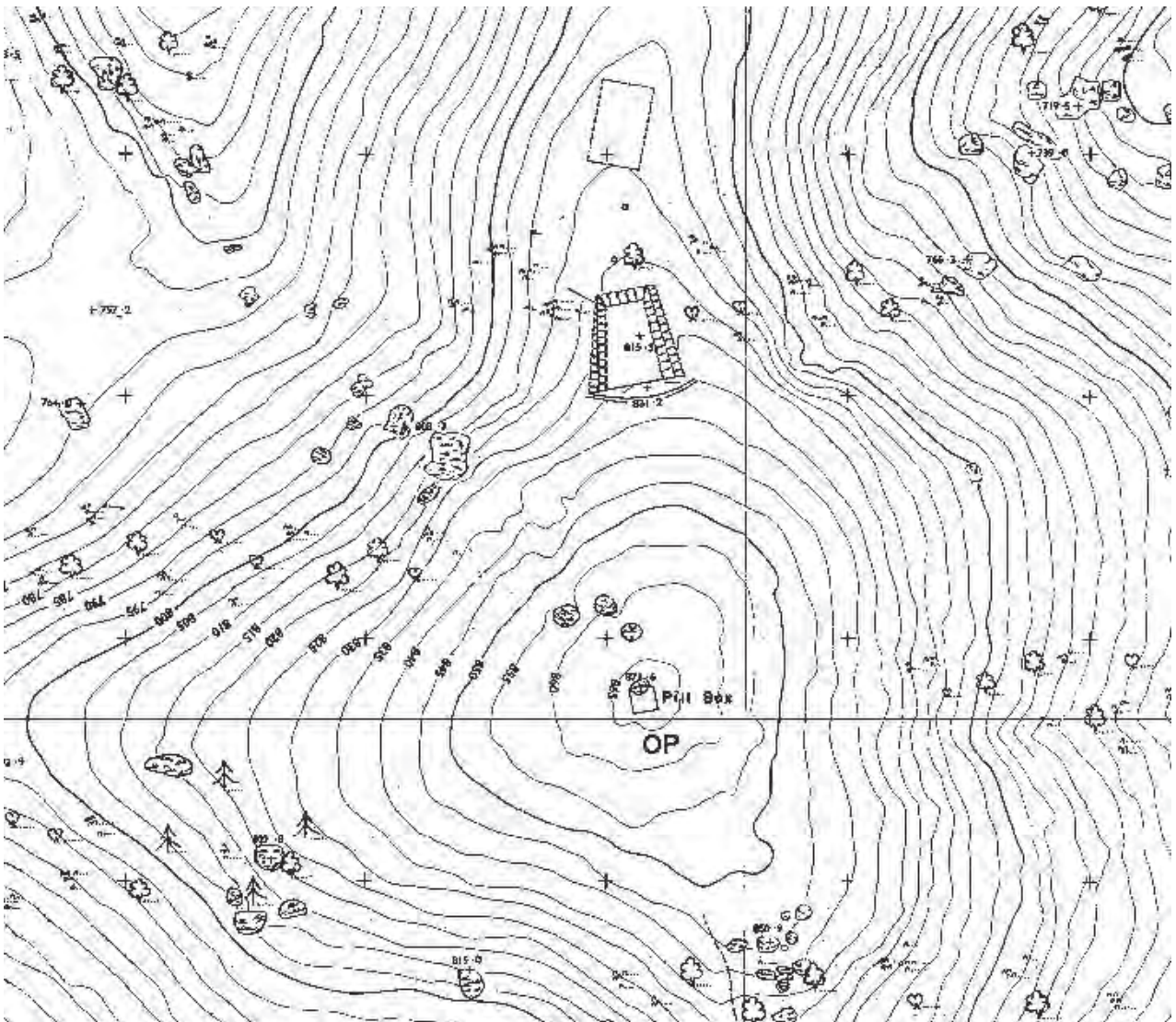
Interior rear with a hole cut through floor for tunnel access. (April 2009)



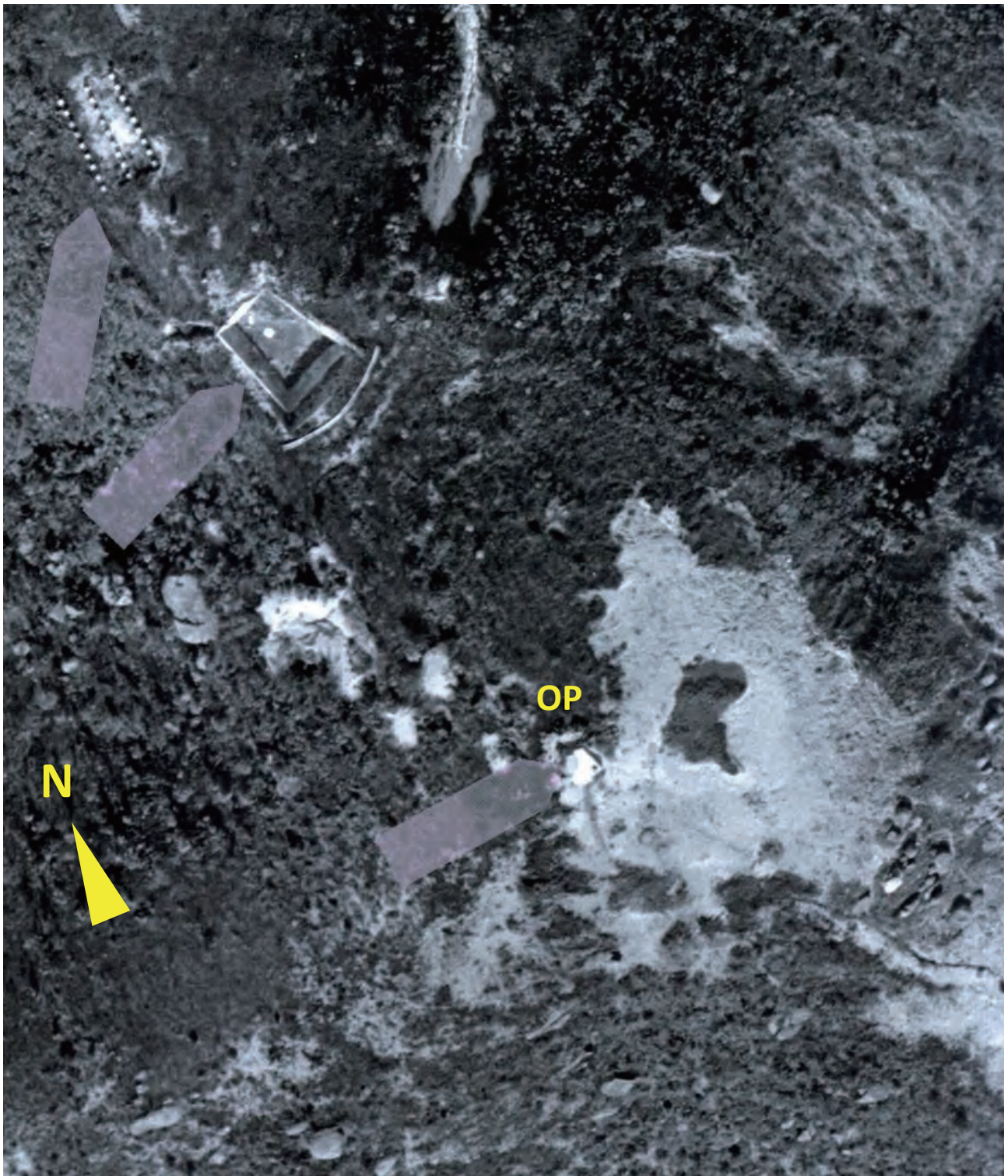
Drone view of the OP. (November 2020 by Y. K. Tan)



View from near the OP. (13 February 2021 by Lawrence W.C. Lai)



Location of the OP. (1:600 survey map 197-SW-12 (Ed 1963)
Map notation “Pill Box” a misnomer.



Aerial view of the OP. (Hunting Surveys Ltd. aerial photo No. 7450, 2 February 1963)

NOTES

A tunnel was dug below the AOP, presumably by the Japanese. The two improvised openings in the walls, again presumably Japanese, would enable it to be used as a pillbox.

Jardine's Lookout

LOCATION: Central part of Hong Kong Island on the western side of the peak of Jardine's Lookout. Accessible from the Hong Kong Trail. Faces north-west.

Sketch

JARDINES LOOKOUT OP 1.3.97 Sheet 1 of 2

Smaller type of OP, similar to Mt Parker. Single loophole across front.

Dug into hillside, entry on LHS by trench about 15m long. Just below trig point marker, facing Central / Causeway Bay / TST. No view to sides because of position in hillside.

Does not have "eyebrows" of others, but does have cement 'globbs' in same position. Front above loophole damaged / demolished. Earth level to bottom of loophole, but could be from slip/runoff. Area immediately in front, and sides, covered by low, thick brush. Behind & above is grass. (Attacked by Japanese 12/41)

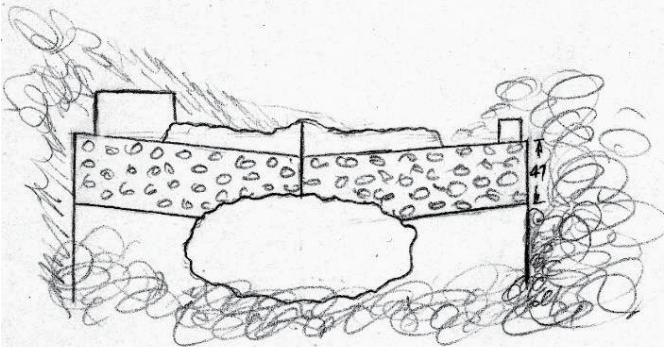
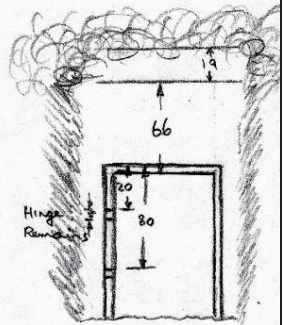
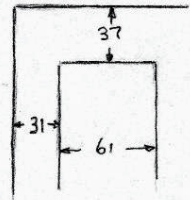
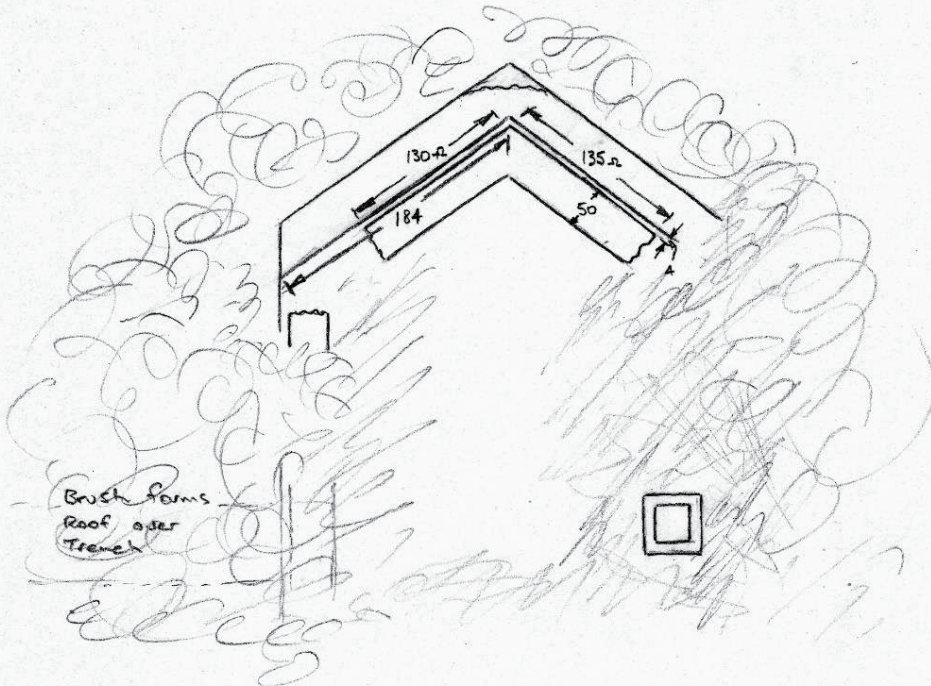
The sketch shows a cross-section of a bunker with a peaked roof. The roof slope on the left is 31 degrees, and on the right is 62 degrees. The total width of the bunker is 246 units. The height from the ground level to the peak is 305 units. The height from the ground level to the top of the front wall is 234 units. The front wall has a height of 145 units. The ground level is indicated by a dashed line. A small square in the bottom right corner of the bunker is labeled '24 0 12 12'. A note next to the sketch says 'x Position for 2 beds.'

Smooth rendering interior walls. Originally whitewashed? Deep earth and rubbish on floor. No accurate measurement of interior height possible. Not less than 174 at door.

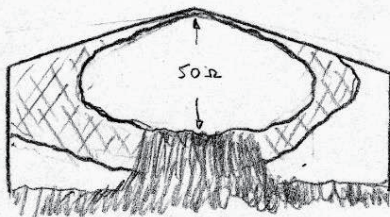
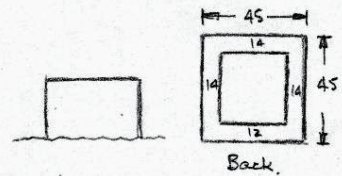
JARDINES LOOKOUT OP.

1.3.97

Sheet 2 of 2

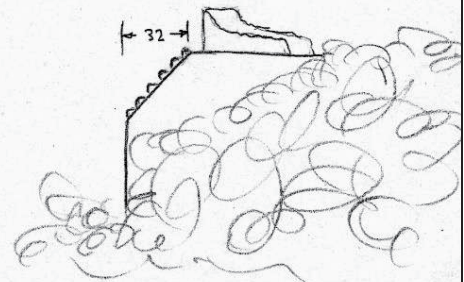


Frame.
Badly Corroded



Inside

loophole demolished (enemy action?)
most of rendering missing from
remains of wall (xv) Earth
slip through loophole (xviii).



YEAR SURVEYED: 1997 (March)



Left side and roof. (May 1992)



Top of the OP. (November 2009 by Y. K. Tan)



Left side photos

Top: Roof from behind.

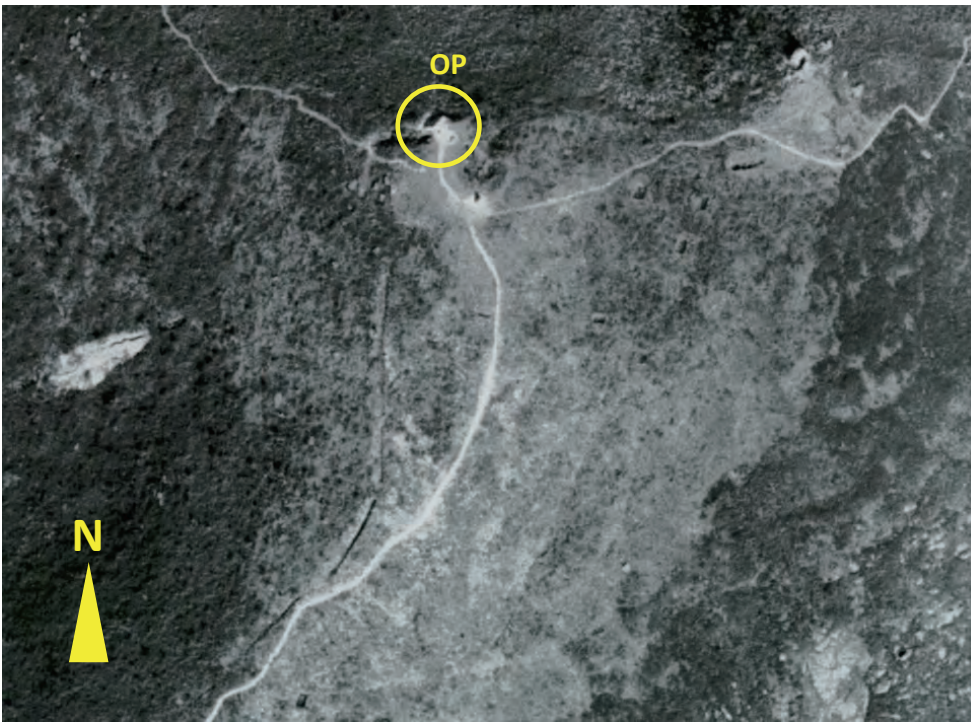
Middle: Left side and roof.

Lower: Remains of front wall from inside.

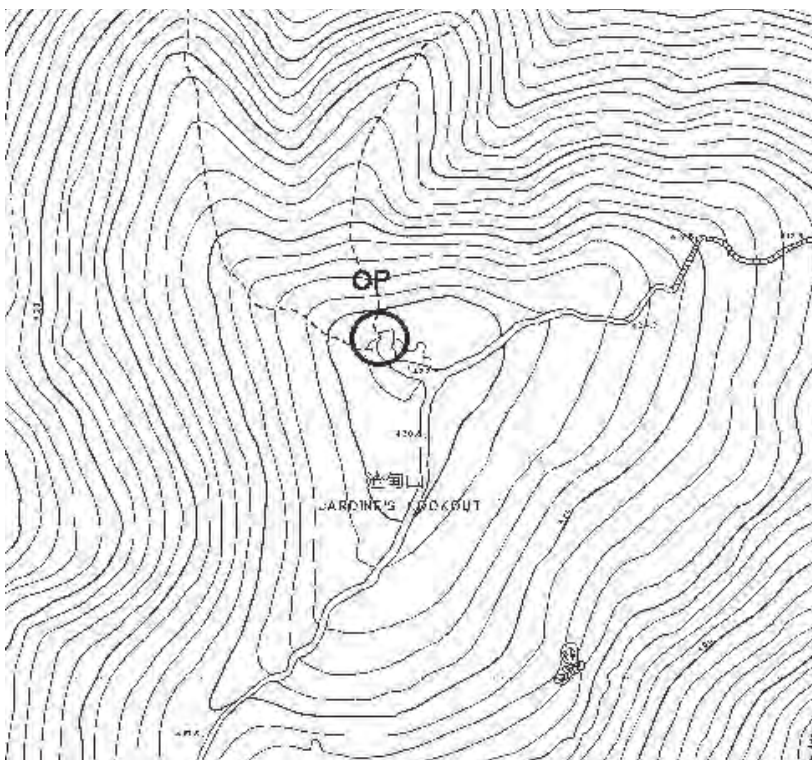
Right side photo

Entrance from trench.

(All photos March 1997)



Aerial photo of JLO OP. (Hunting Surveys Ltd. aerial photo No. 8055, 6 February 1964)



Location of the OP. (1:1000 11-SE-16B (Ed 2014-10-07))

NOTES

Partly buried, with significant damage to the front. The top of the OP has been converted into a public viewing deck.

Mount Nicholson/Middle Gap

LOCATION: In the central part of Hong Kong Island on the lower slope of Mount Nicholson near Middle Gap. Faces north.

Sketch

Mt Nicholson AOP

18.8.2013.

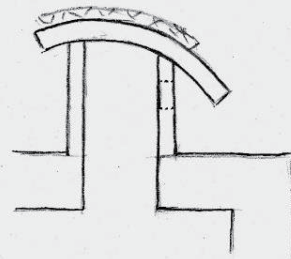
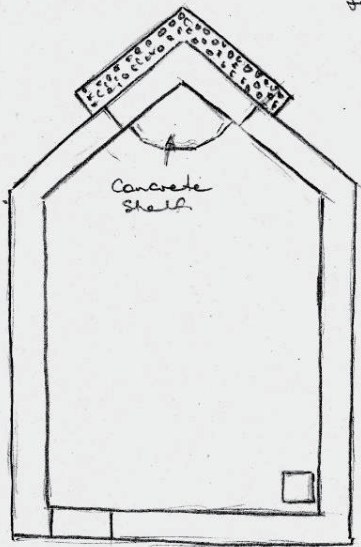
SHEET 1 of 1

In heavily overgrown area on N. side of hill, at low level.

Intact, with one shutter still in place. The other lying on ground in front has mostly rusted away, except for locking clip.

Has been used as squatter hut and painted blue inside. Single opening at front with two shutters and one "eyebrow". Rear opening, original door intact and in place. 3 slides for locking, 2 hinges, peephole with swinging cover.

Metal shutters at front have two hinges on bottom, single sliding bolt at top.



Single outlet and curved cap seen before on Middle Spur AOP. Additional layer of cement on top appears to be a later addition.

Similar size to other single opening AOP's seen at Jardines HQ, Mt Parker, Braemar Hill, Wan Chai Gap.

YEAR SURVEYED: 2013 (August)



Interior front wall with loophole, one cover missing. (August 2013)



Exterior rear wall and door, airshaft on roof. (August 2013)



Airshaft on roof. (August 2013)



Exterior of loophole, one cover missing. (August 2013)



Remains of missing loophole cover.
(August 2013)



Interior side of entry door.
(August 2013)



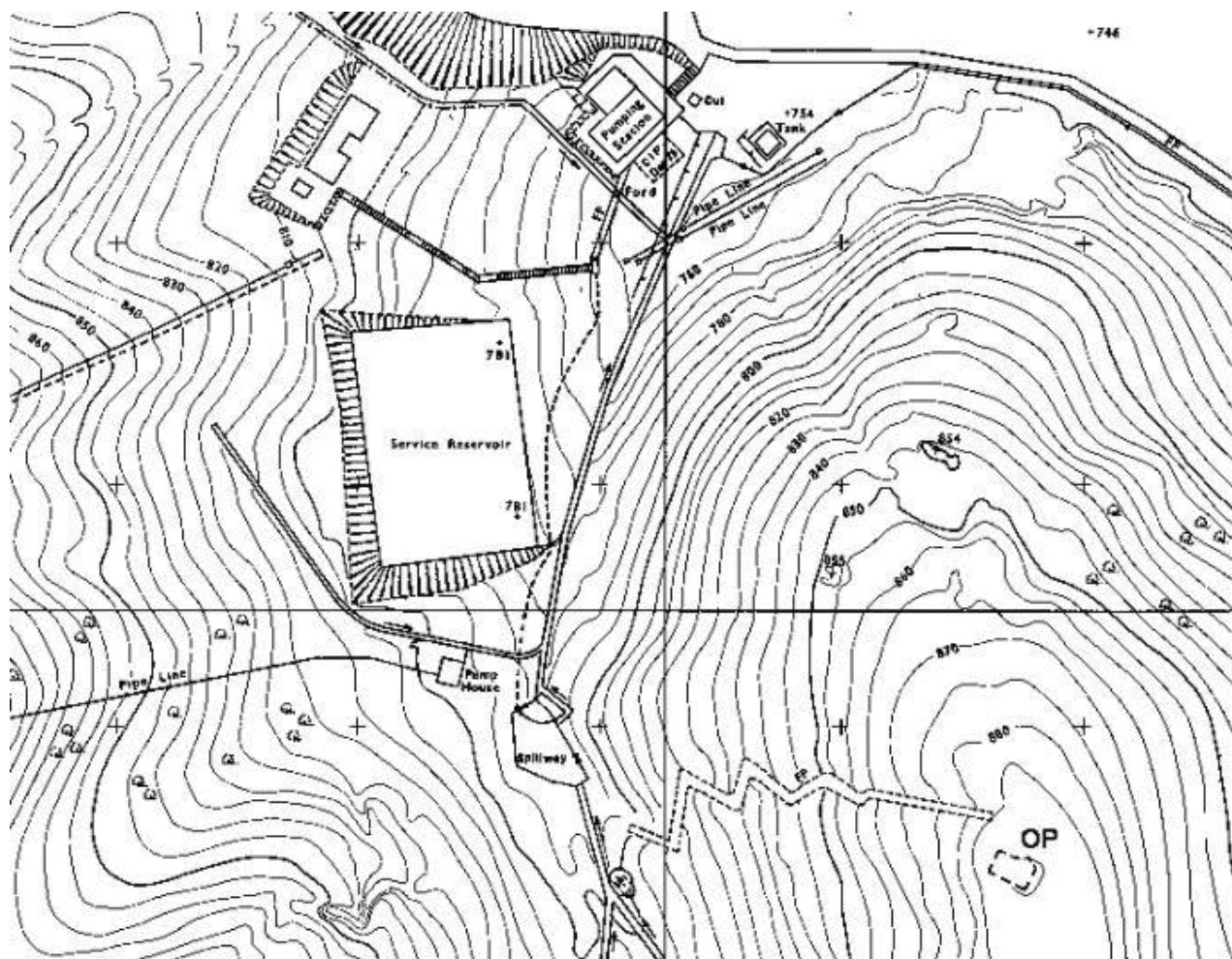
OP seen from Black's Link.
(12 April 2023 by Lawrence W.C. Lai)



Front view of OP.
(12 April 2023 by Lawrence W.C. Lai)



Aerial view of the OP. (Hunting Surveys Ltd. aerial photo No. 7271, 1 February 1963)



Location of the OP. (1:600 213-NE-15 (Ed 1973-12))

NOTES

Overgrown, and previously used as a squatter hut. Structure mostly intact with original steel door and loophole cover.

<p>Wan Chai Gap</p>	<p>Location: Below Black's Link in the central part of Hong Kong Island. Faces north.</p>
---------------------	---

Sketch

AOP WAN CHAI GAP 10.12.09 Sheet 1 of 1

Partly demolished; walls remain but roof has fallen into interior and front "eyebrow" and wall are only rubble.

Set into ridge line below Black's link and above Stubbs Road. Appears to have been buried at least to level of roof on sides and back - possibly originally completely covered.

Remains of eyebrow

Rusted frame remains of openings

Roof debris

Stone walls each side to height of roof.

Remains of concrete path

Metal looks below glass on "eyebrow" remains.

Dotted line indicates continuation of wall from remains of inside wall.

Rusted remains of stretcher points on inside back wall.

Remains of roof airshaft

Originally appears to have been single opening at front, similar to Sardines, Braemar, Mt Parker.

Dimensions appear similar also.

Inside walls usual smooth rendering.

Area very overgrown.

YEAR SURVEYED: 2009 (December)



Exterior of ruined front wall.
(December 2009)



Collapsed roof, entry at bottom left.
(December 2009)



Entry looking in. (December 2009)



Interior of ruined OP. (December 2009)



Front of OP ruins. (24 January 2022 by Lawrence W.C. Lai)



Rear view of OP ruins. (24 January 2022 by Lawrence W.C. Lai)



Top view of OP ruins. (4 January 2022 by Lawrence W.C. Lai)



Location of the OP. (1:600 213-NE-10 (Ed 1974-11))



Aerial view of the OP. (Hunting Surveys Ltd. aerial photo No. 7271, 1 February 1963)

NOTES

Overgrown and partially collapsed. Roof destroyed, lower section still remains.

Victoria Peak

Location: On the western end of Hong Kong Island on Victoria Peak and above the end of Mt Austin Road. Faces north.



Left front and side. (March 1998)



Right front and side. (March 1998)



Left front (29 November 2021 by Stephen Y.H. Yip)

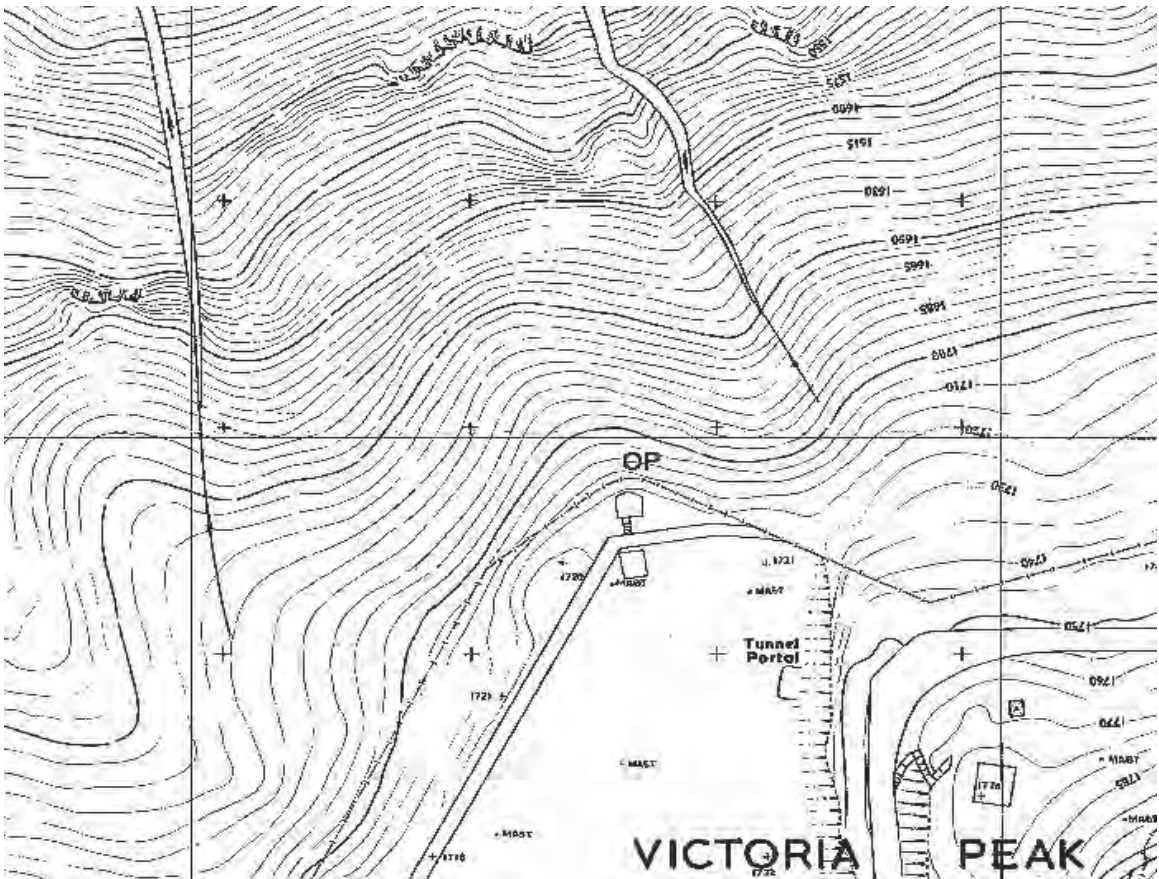


Rear side. (29 November 2021 by Vincent N.H. Chan)

Note the camouflage treatment of the rear and side walls. A new layer of concrete has been poured on its roof.

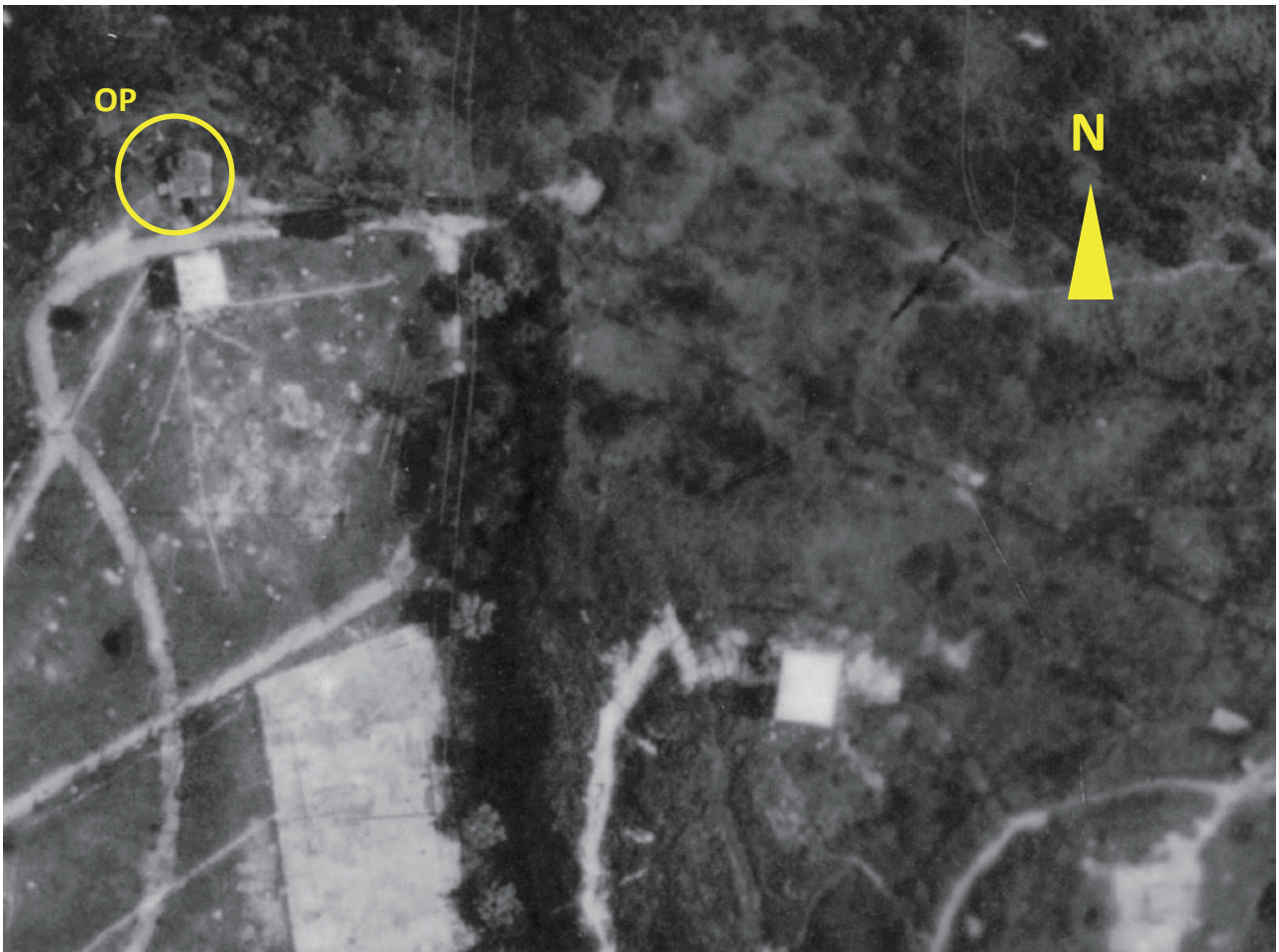


Entrance. (29 November 2021 by Vincent, N. H. Chan)



Location of the OP. (1:600 195-SE-16 (Ed 1974-03))

Note a tunnel portal in the vicinity of the OP.



Aerial view of the OP. (RAF aerial photo 6063 81A/128, 8 May 1949)

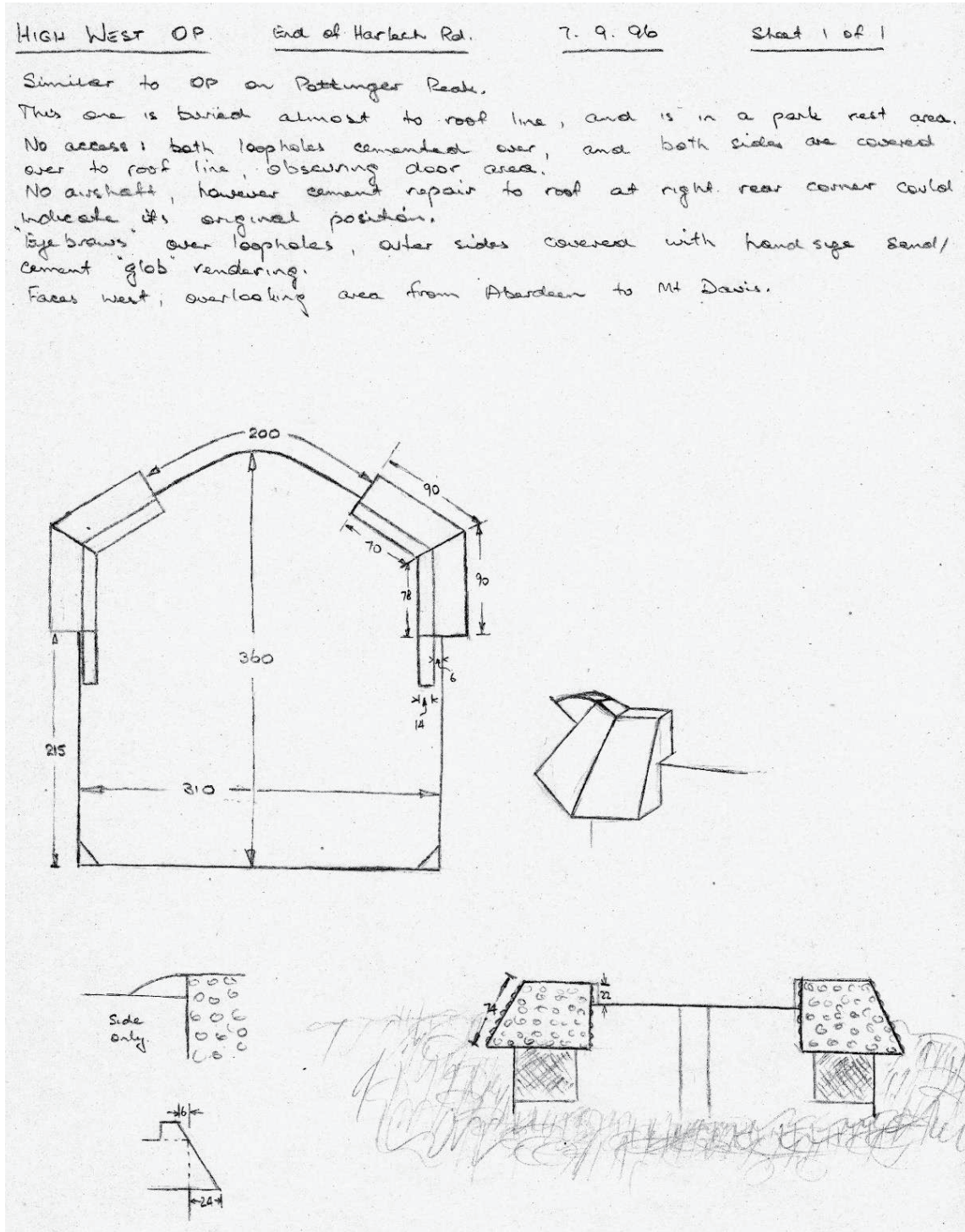
NOTES

Within a Telecom restricted area and not accessible without permission. The front shutter area is sealed and roof converted but the OP otherwise appears intact. Now in use by the facility operator as dangerous goods storage.

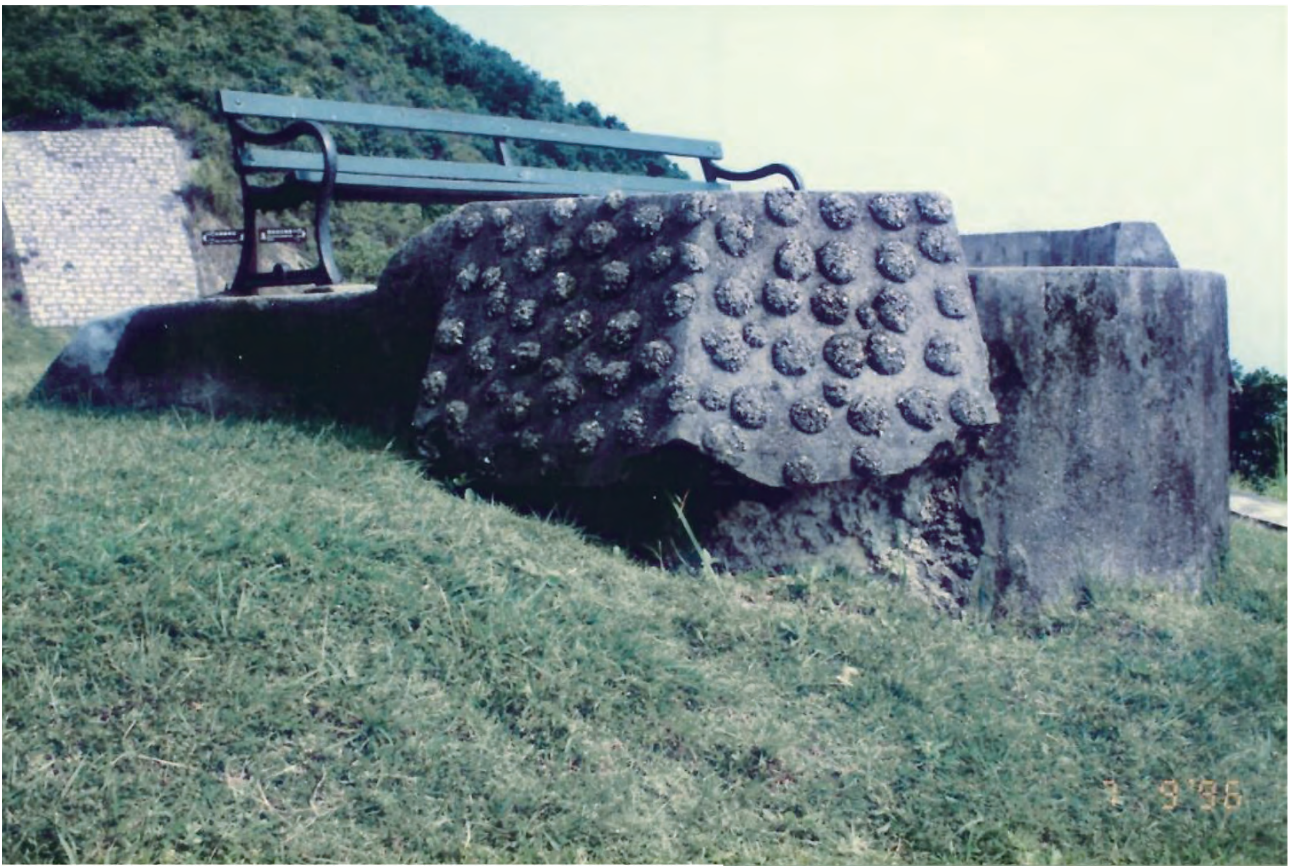
High West/Harlech Road

LOCATION: At the end of Harlech Road.

Sketch



YEAR SURVEYED: 1996 (September)



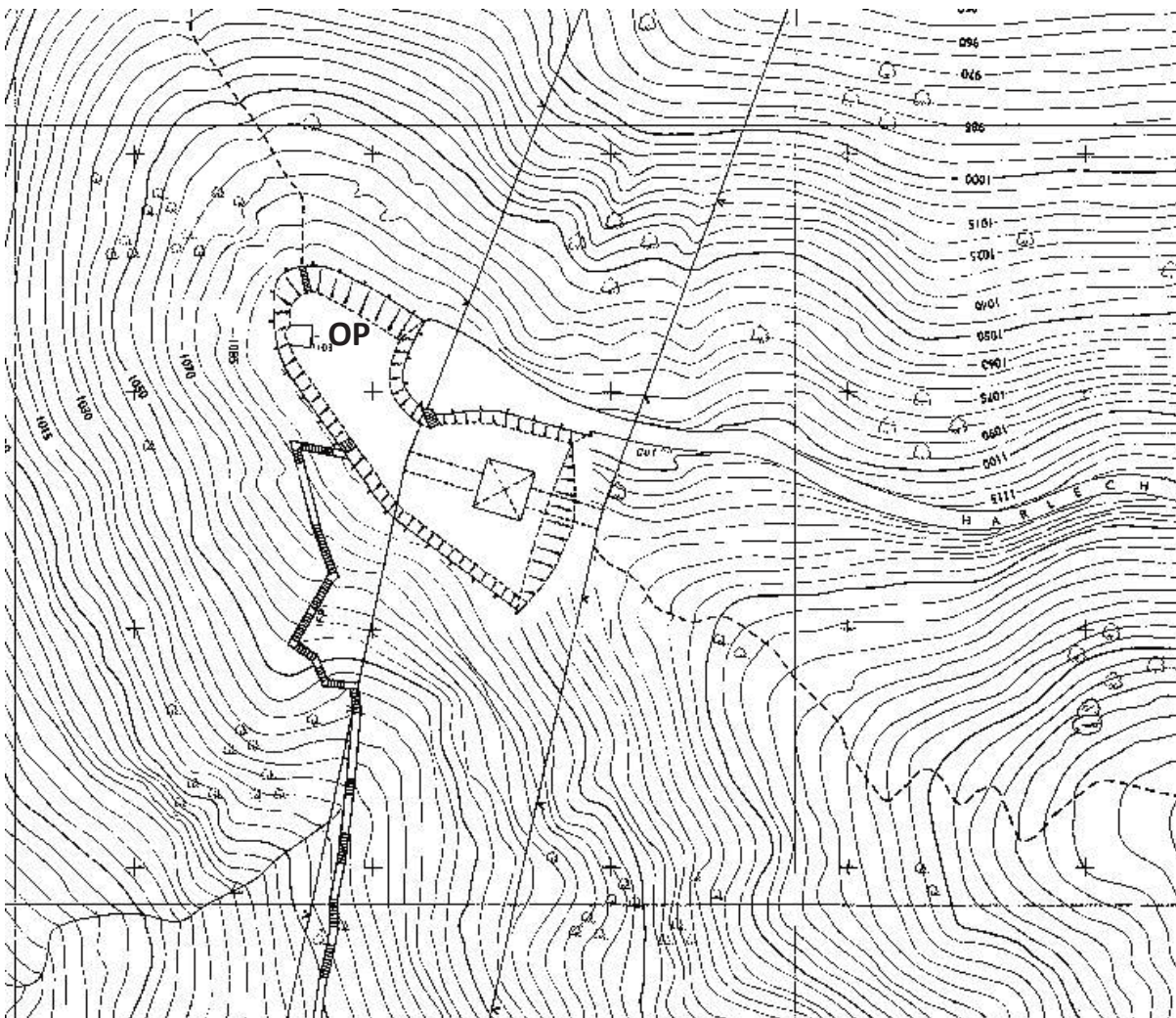
Right front exterior. (September 1996)



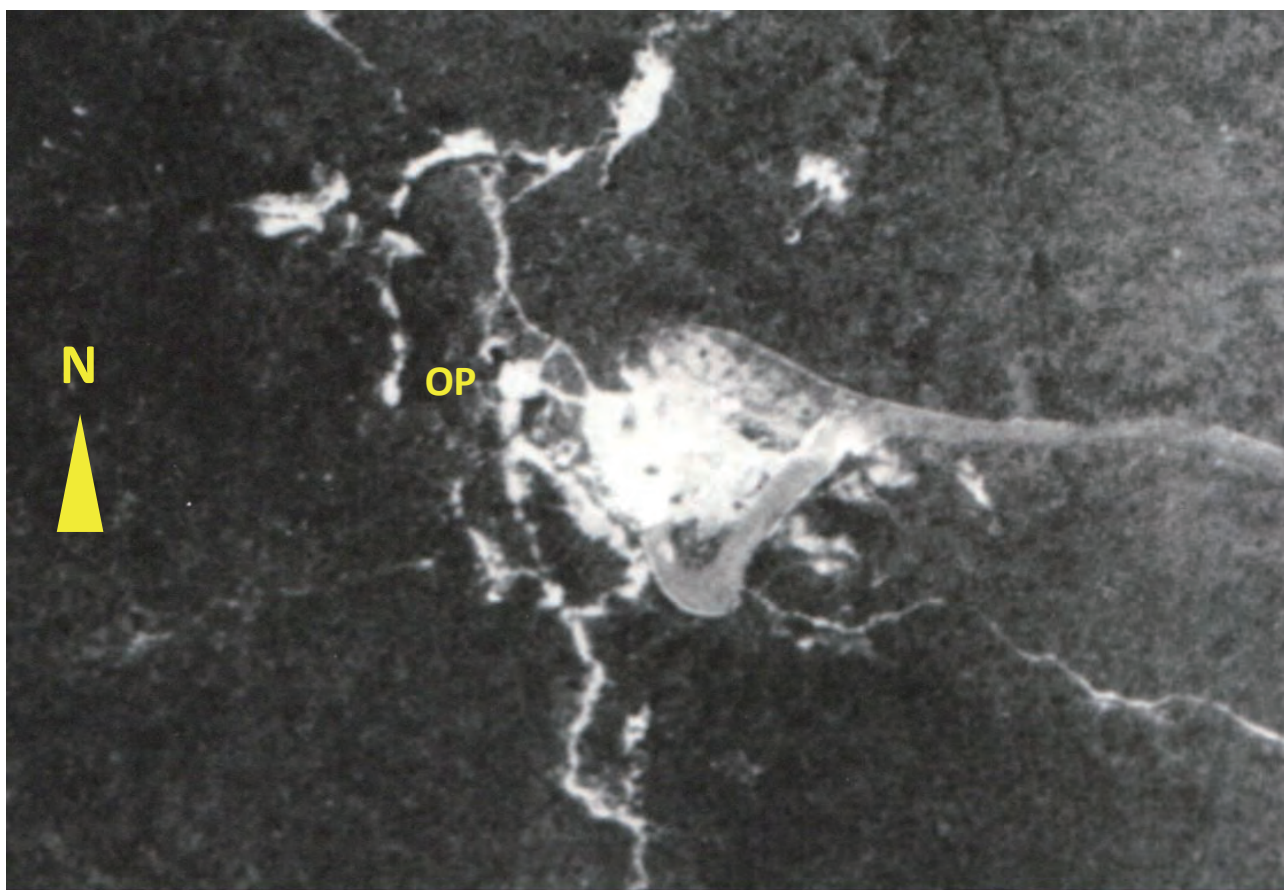
Left side and roof. (September 1996)



High West OP converted into a public viewing deck with an information board next to it.
(April 2016 by Y. K. Tan)



Location of the OP. (1:600 212-NE-2 (Ed 1975-01))



Aerial view of the OP. (RAF aerial photo 6134 81A/128 8 May 1949)

NOTES

Entrance buried, loopholes sealed, and the top of the OP converted into a public viewing deck.

Matilda/Mount Kellet

Location: In the western part of Hong Kong Island directly below Matilda Hospital. Faces south.

Sketch

MATILDA OP.

2. 3. 97

Sheet 1 of 2.

Similar shape to several others i.e. two loopholes. On side of hill just below Matilda Hospital.

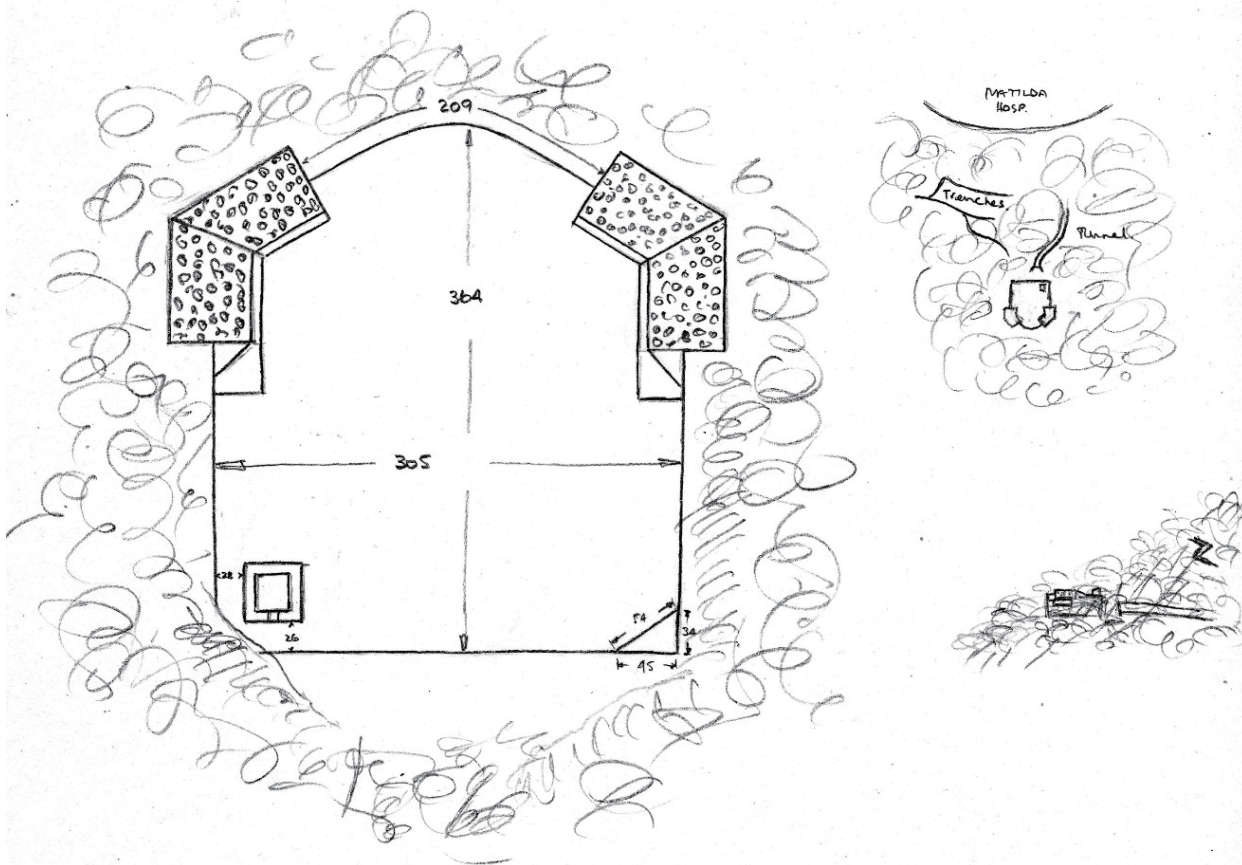
area very heavily overgrown. Site not as noted on maps.

Only found by luck and dumb persistence.

Generally good overall condition, isolation probably helps.

Normal "eyebrows" over loopholes; usual cement globe, but they also continue along the side to the back. Not noted on airshaft.

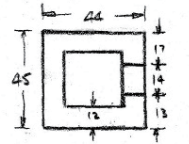
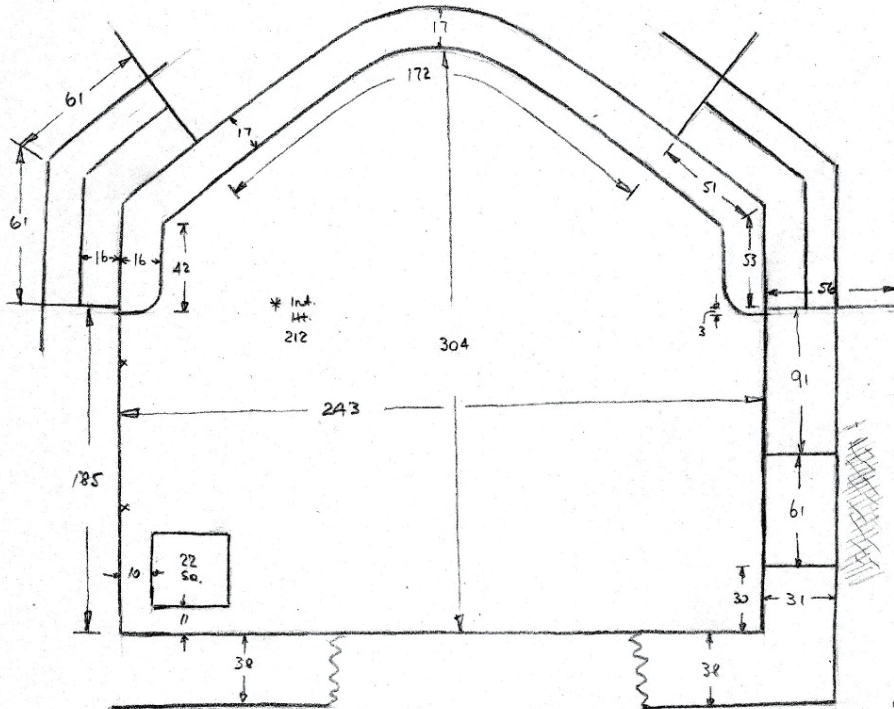
Interesting variation is a hole hacked through the back wall, allowing access to a long tunnel into hill. Length of tunnel not determined due no companion, and fading torch. Not less than 30m, and still going.



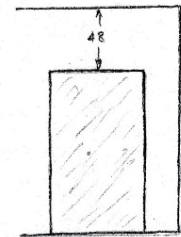
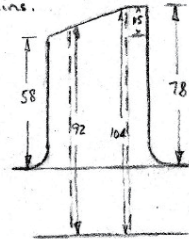
MATILDA OP

2-3-97

Sheet 2 of 2

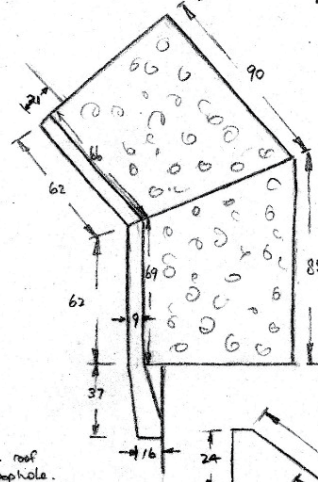
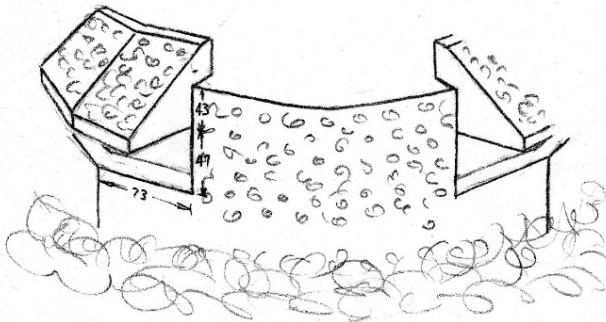
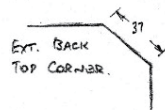


No signs of cap remains.



Only remains of frame on outside, which is blocked by bricks/earth.

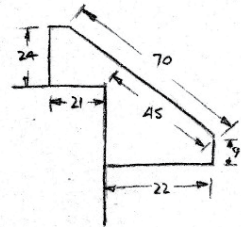
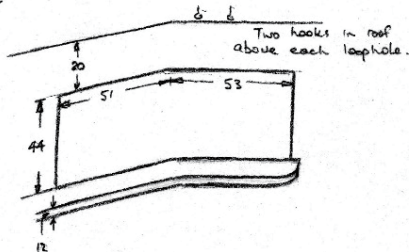
x 1 Bed.
Roof at airshaft ~ 30.



No frames or shutters remaining.
Brackets to support frames still in place.

'Globs' on front and sides, down to level of bottom of loopholes.

Some slight damage to ext walls around loopholes, probably due to cutting out metal frames.



YEAR SURVEYED: 1997 (March)



Left front. (March 1997)



Hole through back wall leading to tunnel entry. (March 1997)



Interior looking forward. (March 1997)



Tunnel entry behind OP. (March 1997)



Right side rear, entrance (obscured), airshaft on roof. (March 1997)



View from OP roof. (1 February 2021 by Lawrence W.C. Lai)



Rear side and roof of OP. Opposite the back of the OP, with a hole hacked through, is a tunnel dug into the hillside.

(1 February 2021 by Lawrence W.C. Lai)



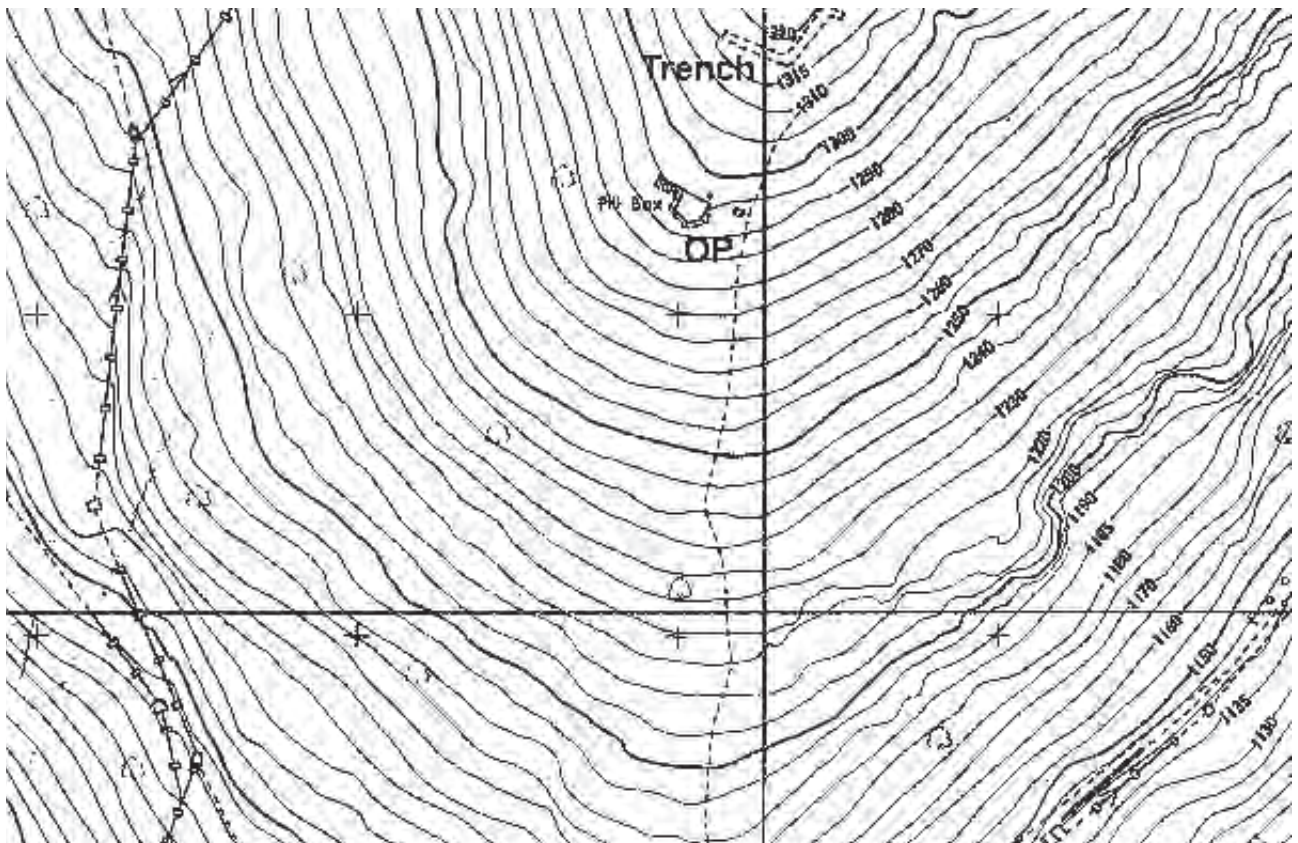
Inside of OP showing its two loopholes and entrance, blocked by bricks and earth.
(February 2021 by Lawrence W.C. Lai)



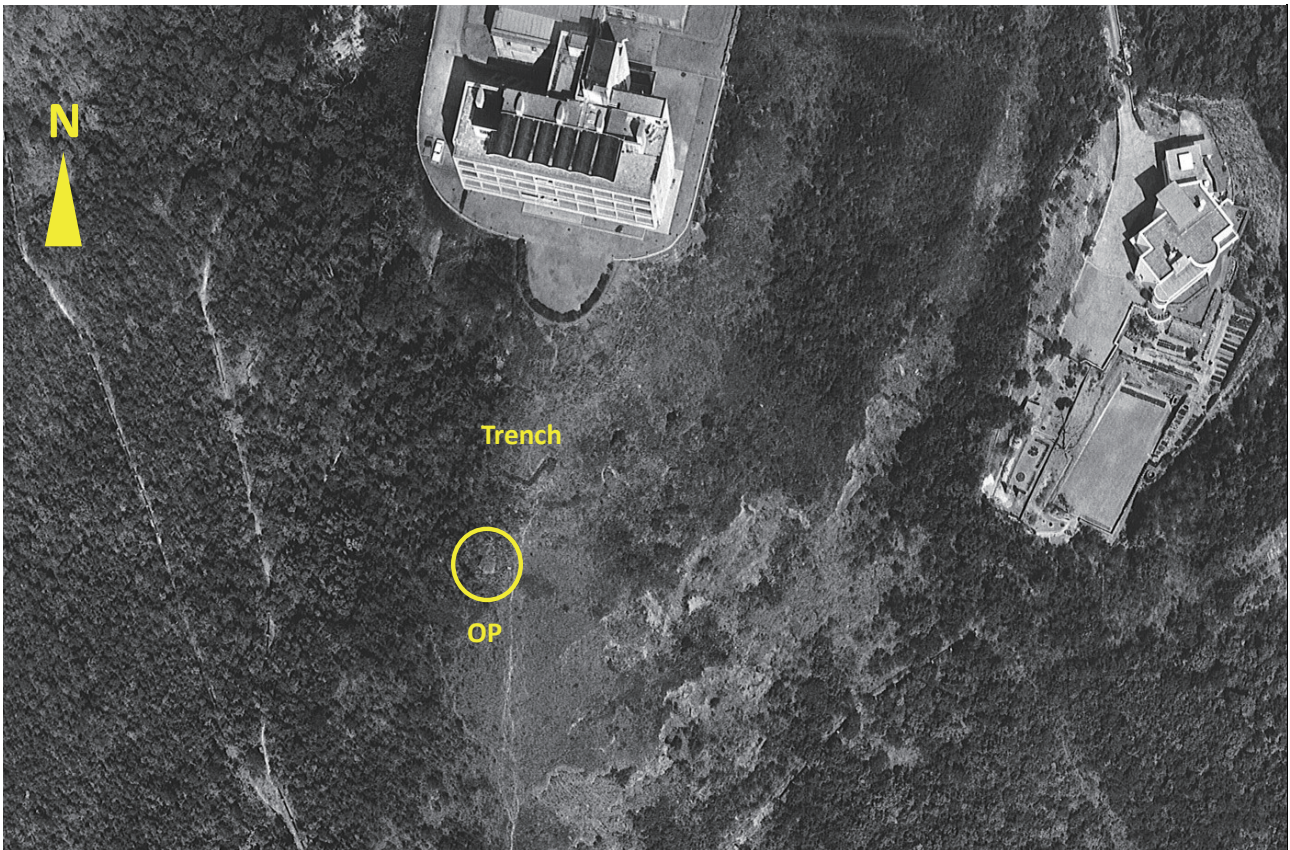
Front view. (31 January 2022 by Lawrence W.C. Lai)



Right side of OP with a blocked entrance. (31 January 2022 by Lawrence W.C. Lai)



Location of the OP. (1:600 213-SW-5 (Ed 1973-11))



Aerial view of the OP. (Hunting Surveys Ltd. aerial photo No. 7271, 1 February 1963)

NOTES

Mostly intact except where a hole has been hacked through the rear wall.

Middle Spur

LOCATION: The southern side of Hong Kong Island below Tsz Lo Lan Shan (Violet Hill) Path above Repulse Bay Road. One loophole faces Deep Water Bay, the second Repulse Bay/South Bay area.

Sketch

ARTILLERY OP MIDDLE SPUR 14.12.97 Sheet 1 of 3

In good condition, although with some battle damage. Now a brush covered area, above service reservoir.

Roofline slightly different to others, the 'eyebrow' above loopholes is cut into roof/walls. Both covered in sand/cement 'globs', no other exterior rendering apparent.

Interior has shrapnel marks in most walls, concentrated around right side/entry area.

Door is original, in good condition, but jammed in open position by rocks and earth. Loophole shutters are missing.

A long slit trench runs across the front of the OP. A cement path runs from the OP to Repulse Bay Rd (may not be original)*

Most of the roof is covered, to some depth, with earth, rocks and brush.

* and nearby Shelter.

Top covered with earth, rocks, brush to about 60 cm. Measurements not possible.

Rock and earth have fallen into entry way. Door blocked in open position.

Back and roof became one.

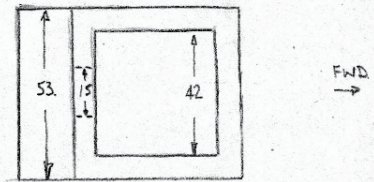
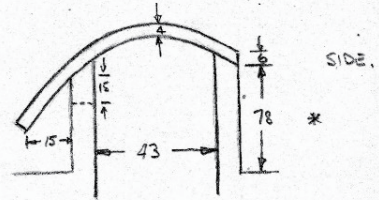
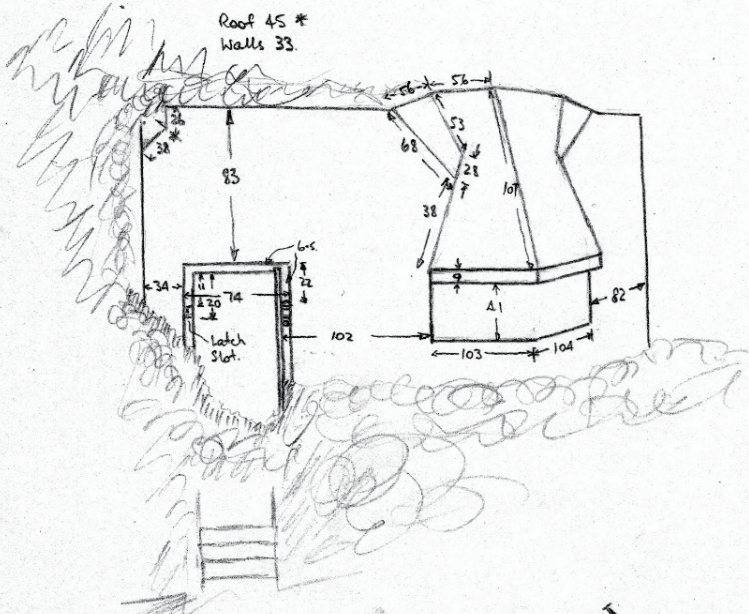
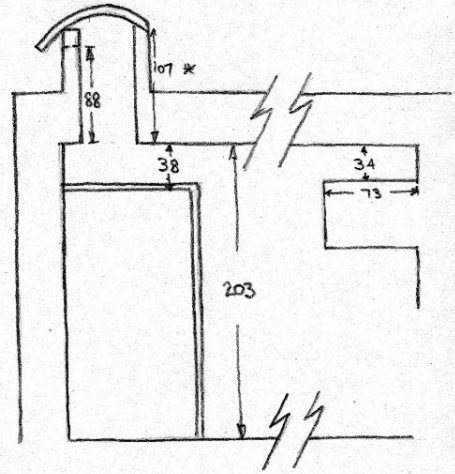
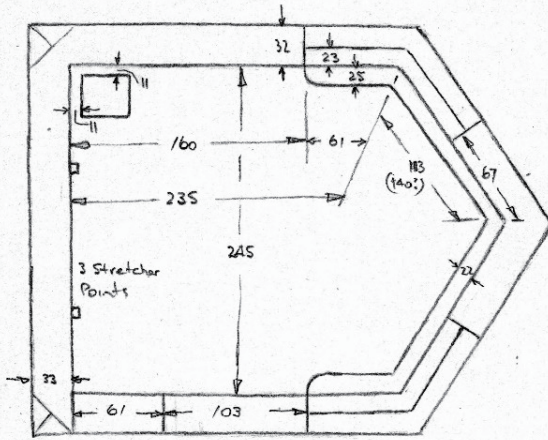
Covered to about 30 cm below loopholes.

Slit Trench.

ARTILLERY OP MIDDLE SPUR

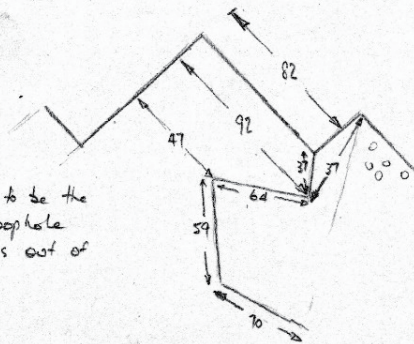
12.12.97

Sheet 2 of 3



* 3 measurements do not sum correctly.

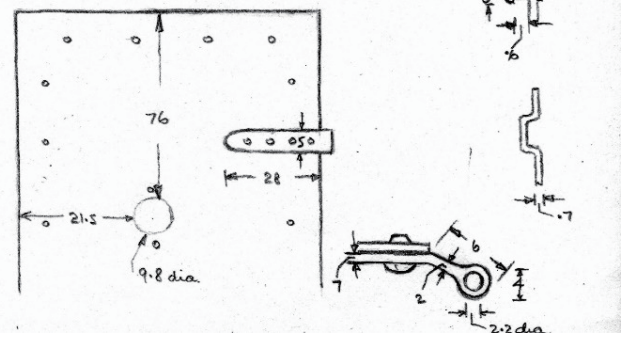
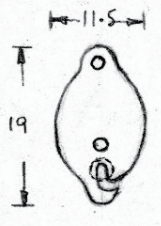
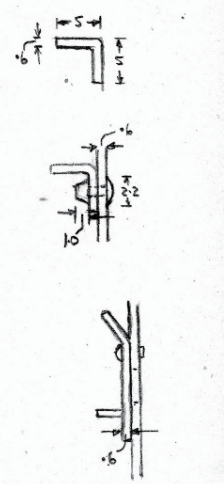
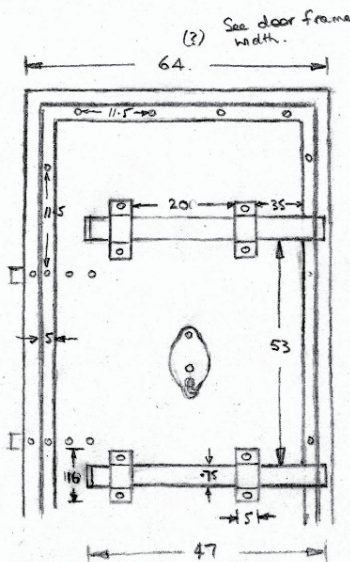
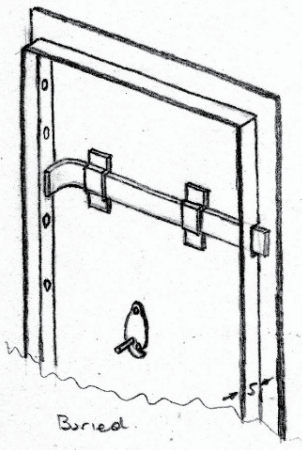
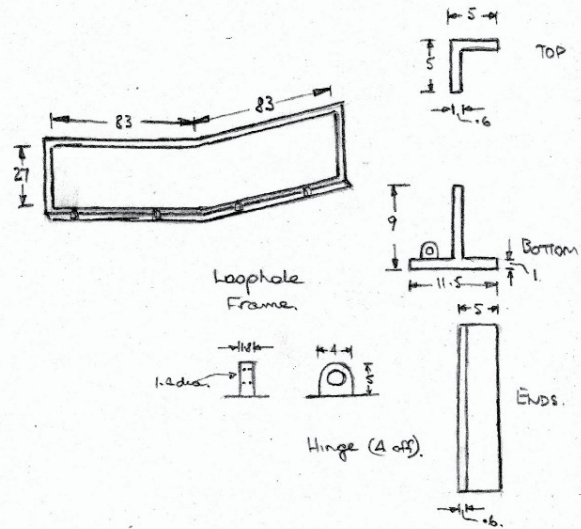
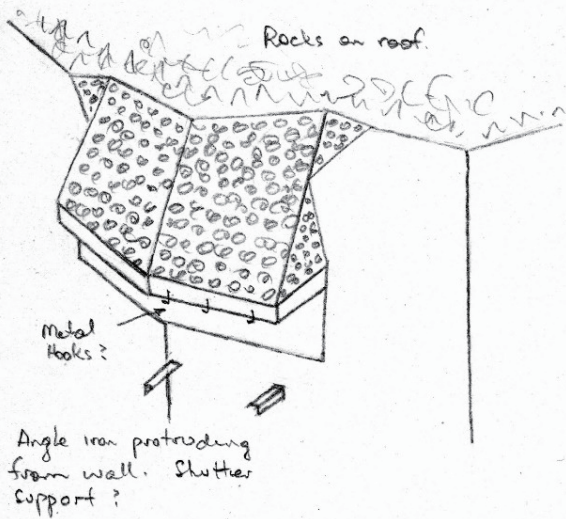
This is supposed to be the area above loophole eye brows, but is out of perspective.



ARTILLERY OP MIDDLE SPUR

14.12.97

Sheet 3 of 3.



YEAR SURVEYED: 1997 (December)



Right side
and front.

December
1997



Right side
from above.

December
1997



Front right
loophole.

December
1997



Front right
loophole from
interior. Note
shrapnel damage
on wall.

December 1997



Rooftop airshaft
and cap.

December 1997



Metal door,
probably original.

December 1997



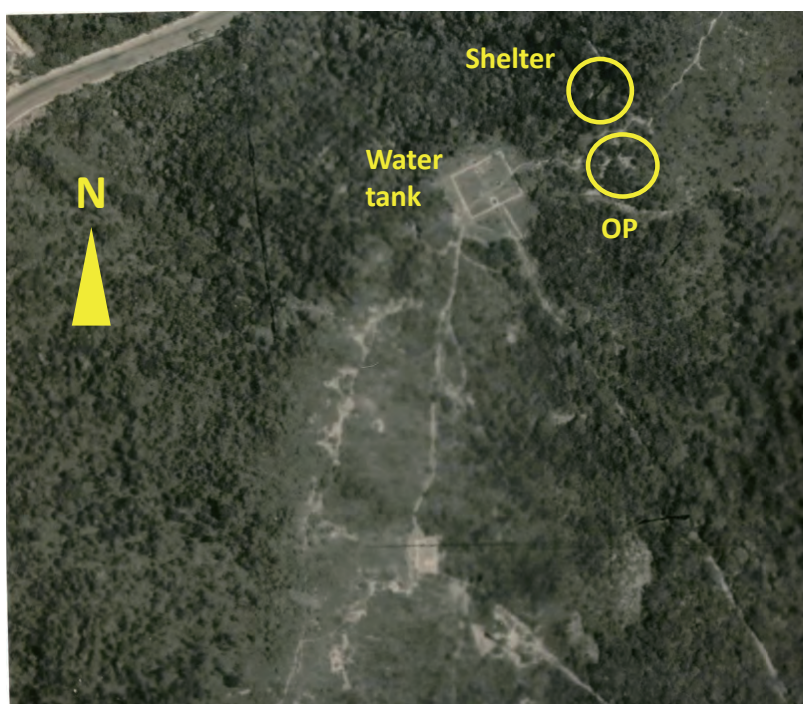
Front view of OP. (7 January 2022 by Lawrence W.C. Lai)
Note the rectangular portal for cables close to its right hand aperture near the ground.



Shelter near the OP. (17 February 2021 by Lawrence W.C. Lai)



Location of the OP. (1:600 231-NW-05 Ed 1963-02)



Aerial view of the OP. (RAF aerial photo 6162 812A/127, 8 May1949)

NOTES

Accessible and intact although metal shutters are missing. Appears to have shrapnel damage inside.

