

# **EARCAG FUKUOKA 2025**

**Territorial Justice in times of Polycrisis**

**Persistent Informality and Cultural Heritage:  
Stilt Housing in Tai O Village**

Assoc. Prof. Daniel Elkin

Dr. Norah Wang Xiaolu

Dr. Markus Wernli

Dr. Chi-Yuen Leung

February 2025

---

# Contents

Presentation	Author and Title
1	Research Outline – Abstract Correction
2	Literature Review and Context
3	Research Questions and Methodology
4	Findings
5	Discussion
6	Conclusion
7	References
8	Appendix – Data Pages

## Research Outline – Abstract Correction

This is a presentation of research conducted in Tai O Village, Hong Kong.

The research concerns the specific form of informality experienced in stilt housing in Tai O, a peri-urban settlement within the Special Administrative Region.

Of particular focus are relationships between stilt house inhabitants' experiences of informality in the context of post-colonial development policy.



Image: Context map showing Tai O Village, Lantau relative to The Hong Kong Polytechnic University Hung Hom Campus, approximately 2 hours travel time away. Google Maps.

## Research Outline – Abstract Correction

A correction to the abstract published in proceedings - especially important given the role language and demography play in producing difference in Tai O Village.

Stilt house inhabitants were erroneously referred to as 'Tanka ethnicity' in the original abstract.

This is a mis-characterization of *seui seung yahn* (Cantonese: on-water people), who can be variously distinguished either linguistically as another ethnicity (Kani, 1967) or as a Cantonese-Chinese sub-culture (Anderson, 2007).



Image: Context map showing Tai O Village, Lantau relative to The Hong Kong Polytechnic University Hung Hom Campus, approximately 2 hours travel time away. Google Maps.

# Literature Review and Context

## Relevant History and Policy in Hong Kong (HK)

- Hong Kong's period of colonization by the British: 1841-1997.
- Treaty of Nanking cedes HK Island to the British Empire. The Convention of Peking leased the 'New Territories,' including Lantau Island, to the British.
- The 1844 Land Registration Ordinance and Crown Land Ordinance establish an exclusive leasehold system throughout HK.
- **All non-leased land occupation is designated 'squatting' under the Squatter Control Policy (1891).**
- The 1984 Sino-British Joint Declaration sets terms for HK's handover to the People's Republic of China (PRC).



Image: Context map showing Tai O Village, Lantau relative to The Hong Kong Polytechnic University Hung Hom Campus, approximately 2 hours travel time away. Google Maps.

# Literature Review and Context

## Relevant History and Policy in Hong Kong (HK)

- 1964, 1976, 1977, 1982, 1984: Squatter Control Surveys document informal settlements in HK.
- **1982 Squatter Structure Survey ‘freezes’ built environment conditions in informal settlements, including Tai O Village.**
- Stilt houses in Tai O are listed as, ‘surveyed Squatter Structures,’ meaning:
  - Occupation is tolerated but conveys no legal right to ownership.
  - Physical structure conditions may not be changed from records in the 1982 survey.



Image: Context map showing Tai O Village, Lantau relative to The Hong Kong Polytechnic University Hung Hom Campus, approximately 2 hours travel time away. Google Maps.



# Literature Review and Context

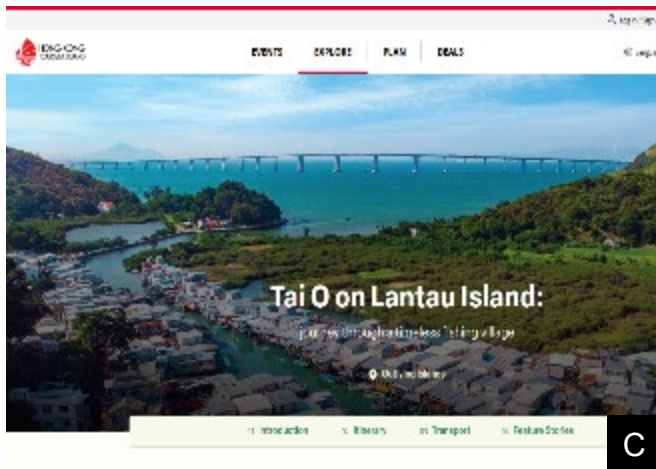


TAI O DISTRICT

No.	Name of Street	Household	Population	Year
1. Tai O	Cheng, Yip, Kan, Hui & Lam	12	Tung Kuo, Po On & Chuen Shun	1632
2. Loong Uk	Loong	7	Po On	1643
3. San Tsuen (included in Tai O)	Pang & Kwok	6	Ma Kung, Tai Leung, Shun Yau	1643
4. Pan Kwai Tsun (included in Tai O)	Yip	5	Po Kwai, Po On	1662
5. Loong	Cheng	10	Po Tin District, Pakien	1651
6. Pan Lam	Ho & Chuen	4	Po On	1678
7. Shui Pik	Tsui	14	Ngan Shi To, Tung Kuo	1510
8. Yan Pui	Pang	22	Ma Tan Wei, Kowloon	1295

History and Conditions in Tai O Village

- About 350 “stilt houses” (棚屋, *pang uk*) remain in Tai O Village (Image: Daniel Elkin).
- Settlement in Tai O is documented back to at least 1632 (Image: Hong Kong Police Force).
- In the post-colonial period, Tai O Village’s natural setting and cultural heritage, including stilt housing, have become important draws for foreign and domestic tourism (Image: Hong Kong Tourism Board).
- In 2017, the Civil Engineering and Development Department (CEDD) included Tai O Village in strategic investment via the Sustainable Lantau Blueprint (Image: CEDD).



# Literature Review and Context

## Informality in Tai O Village

- Informality in Tai O is a specific form of difference initiated in the colonial era and reproduced by governments in the contemporary period.
- It is, arguably, strategic. Hong Kong needs 'culture' (cultural capital) and produces difference in Tai O through informality.



Image: Stilt housing in Tai O Village. Daniel Keith Elkin



# Literature Review and Context

## Informality in Tai O Village

- [Heritage conservation is part of] Hong Kong's search for a new social status in competition with other Asian societies. When many societies develop at a rapid pace and are wealthy, there is a need among them to search for new yardsticks to differentiate themselves from each other. Conservation and preservation have become a new indicator of successful modern and urban metropolis where being cultural is now fashionable and trendy (Kuah, 2016, p. 23).
- This phenomenon in Hong Kong may also connect to the 'preservatism' trend Karita Kan (2025) mentioned in Mainland China.



Image: Stilt housing in Tai O Village. Daniel Keith Elkin

## Research Question and Methodology

### Informality in Tai O Village

- Given this historical and political context, what do stilt house inhabitants experience as dwellers within a specific form of informality?
- What do their testimonies on land tenure, occupation patterns, and interactions with government officers and administrators reveal about their experience living in an urban periphery?



Image: Stilt housing in Tai O Village. Daniel Keith Elkin

# Research Questions and Methodology

Our project was supported by the Hong Kong General Research Fund Project 15600621. It entailed:

- ‘Snowball sampling’ of stilt house dwellings (n=20) in Tai O Village.
- Digital documentation of each house’s physical conditions using a Leica BLK2GO 3D scanner.
- And one or more long-format (60 minutes+) ethnographic interviews with members of each household living in stilt houses conducted in 2021-2022.

Materials gathered through the project include:

- 20 3D scan ‘point cloud’ files available for public download.
- 20 interview transcripts in English and Traditional Chinese available for public download, plus summaries.
- Drawings and diagrams

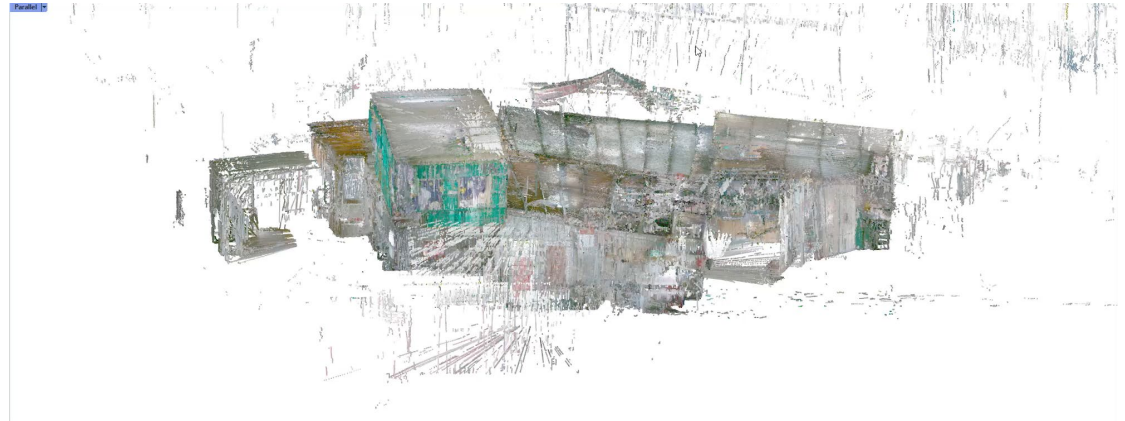


Image: a ‘turntable’ view of one of the 3D scans of a stilt house gathered during the project. Daniel Keith Elkin

# Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Stilt house inhabitants' reports suggest unclear understanding of their land tenure rights, and their land tenure security is deeply in doubt:
  - Informants in 11 out of 20 (55%) households surveyed indicated they held a Surveyed Squatter Structure License.
  - The informant in 1 household offered no data on their license status.
  - The remainder (8 households) indicated they had no license to temporary occupation.
  - Informants in all 20 households indicated their stilt houses had physically changed since 1982, which would mean all 20 violate terms permitting their occupation.

Household Case Number	Informant Age(s) in Years	Informant Gender(s) (M/F)	Compliant with SCP (Y/N/Unknown)	Compliance, Tenure, and Occupancy Details
023157	62	M	N	The informant stated that the house did not have a license.
069817	89	F	Y	The informant described the house as licensed to her late husband.
128590	85	F	N	The informant described paying 'ground rent' to another stilt house resident, rendering her occupancy of the house non-compliant. Additionally, she related that the landlord increased her rent when he was issued a license.
169032	87	F	N	The informant described the house as originally belonging to her father-in-law under a ground rent contract with a landowner who had a license for the oldest part of the house. This agreement renders her occupancy of the stilt house non-compliant.
241590	27	F	Y	The informant was an intermittent occupant of the house and described the stilt house as registered to her great-grandmother. Her grandparents, immediate relatives of the license holder, lived in the house full-time.
261094	88	M	N	The informant stated that the house did not have a license.
326789	60	M	N	The informant stated that the house did not have a license.
328954	88	M	Y	The informant described the case house as licensed, but also related that multiple adjoining stilt houses owned by his brothers, 'share the same stilt license,' which would be a non-compliant arrangement.
478523	60-70	M	Y	The informant stated that the house was registered to his father and the license was later transferred to his name.
539775	73	F	N	The informant described the house as being licensed in her sister-in-law's name, and the sister-in-law willed the house to the informant's husband.
583904	60-70	F	Y	The informant related that her mother-in-law applied for and secured a license for the house forty years ago and willed it to the informant's husband.
651290	82, 80	M, F	Unknown	No data.
687795	78	F	Y	The informant described the case house as licensed to her father, who willed the house to her.
694827	83	F	Unknown	The full extent of the house the informant's family lived in was originally two houses separated over a footpath with a roof bridging between them. The informant describes one part of the house as originally belonging to an aunt with no known license, and the other part as legally registered to her late husband's great grandfather.
705384	66	M	Y	The informant described the case house as licensed in his mother's name.
729485	74	F	Y	The informant described the case house as licensed to her deceased husband.
729580	54, 53-62	F, M	Y	The male informant described the house as legally registered in his mother's name.
837295	86, 83	M, F	Y	The informants described the house as being licensed to one or both informants but stated that the license was lost in a house fire.
853147	67	F	Y	The informant described the case house as being "licensed with a proper lot number," but gave no detail on who is registered on the license.
941756	52, 45-60	F, M	N	The house was licensed to the male informant's elder uncle, who did not live there but allowed multiple parts of his extended family to use the house intermittently.

## Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Stilt house inhabitants' reports suggest unclear understanding of their land tenure rights, and their land tenure security is deeply in doubt:
  - Informants in 2 households related living under 'ground rent' contracts with other stilt house inhabitants. This is illegal under the Squatter Control Policy.

[House Case Number]

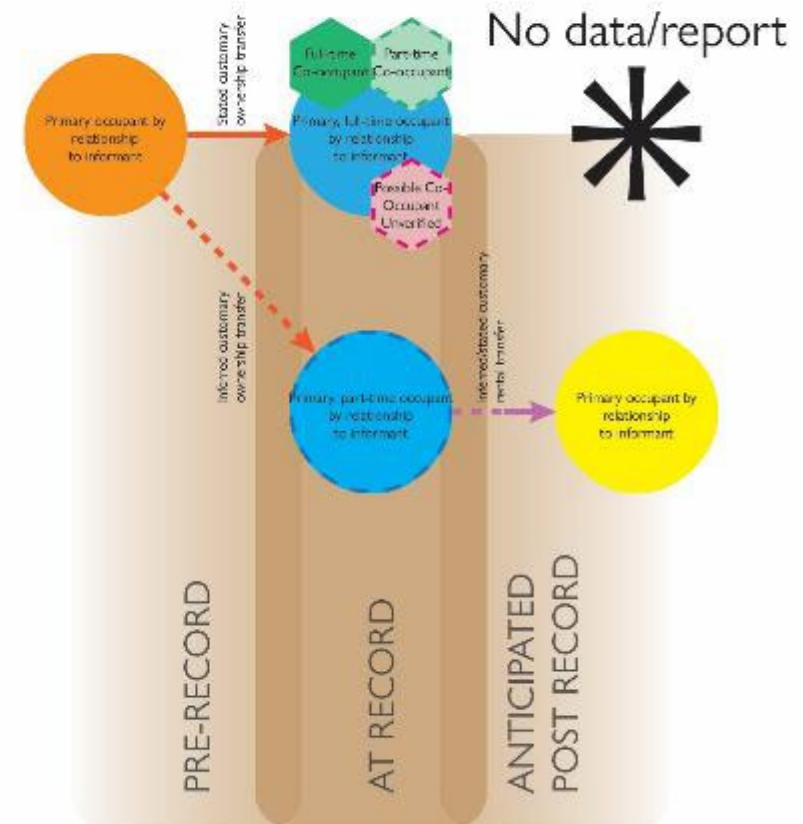


Image: Interpretation key for stilt house occupation pattern diagrams.



## Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Stilt house inhabitants' reports suggest unclear understanding of their land tenure rights, and their land tenure security is deeply in doubt:
  - Informants in 19 (95%) households sampled indicated their intent to transfer occupation to their family members.
  - These would not be legal transfers (no data from 1 household).

### Case 729580

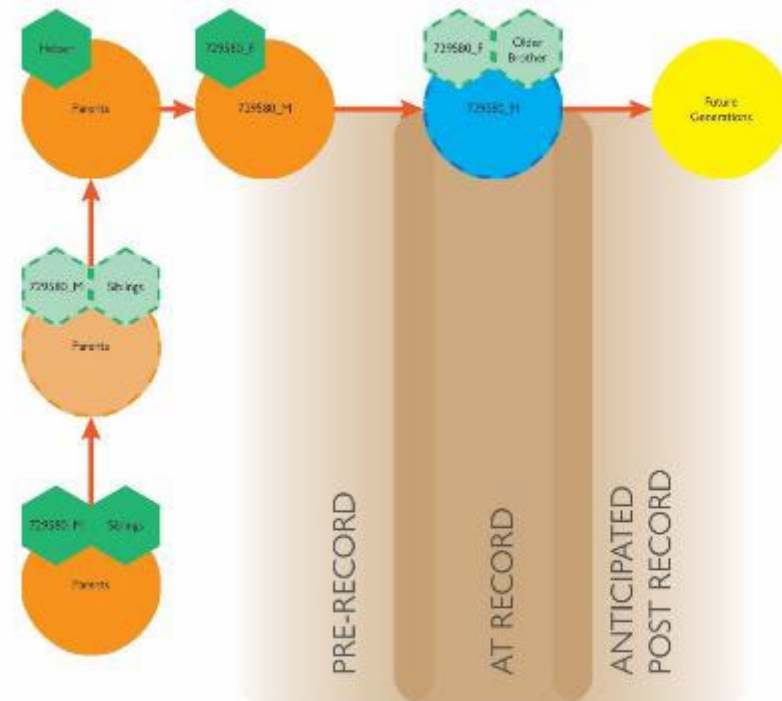


Image: Occupation pattern in house 729580

## Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

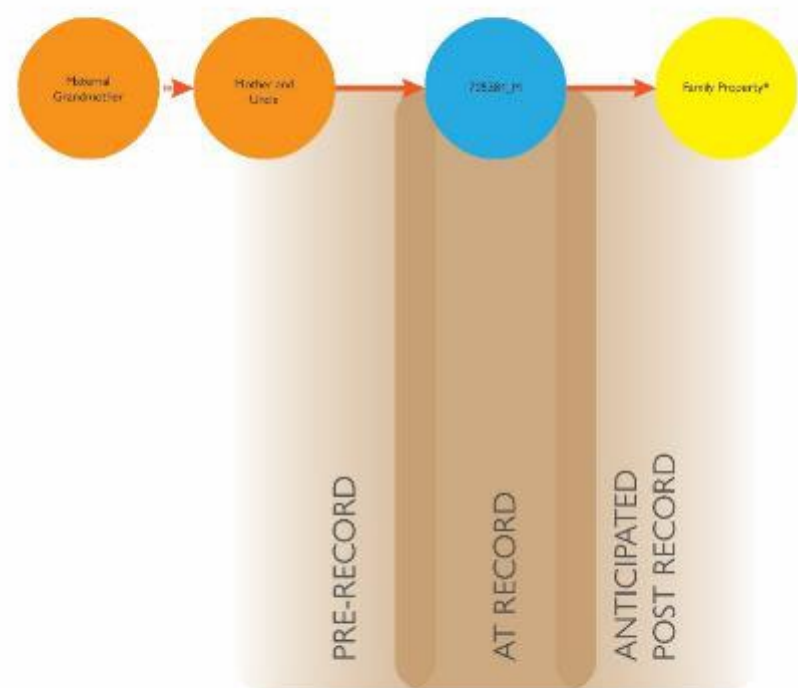
- Stilt house inhabitants' reports suggest unclear understanding of their land tenure rights, and their land tenure security is deeply in doubt:
  - Informants in 2 households related that the Hong Kong Government changed its stance on their right to rebuild stilt houses after a fire in 2000 after stilt house inhabitants applied political pressure.

### Case 705384 Informant Testimony

Yes, at the beginning the government[']s attitude towards rebuilding stilt houses was very strict. I remember during a meeting at the town hall, a female officer mentioned the government would demolish the houses if they were rebuilt. We, the people of Tai O, said that we wanted to get our licenses to prove that we have been living here for a long time. Some people had licenses that were over a hundred years old, and my mother's license had been around for

over eighty years

### Case 705384



\*The informant stated his desire to will the house to the family for shared use amongst its members.

Image: Occupation pattern in house 705384

## Findings

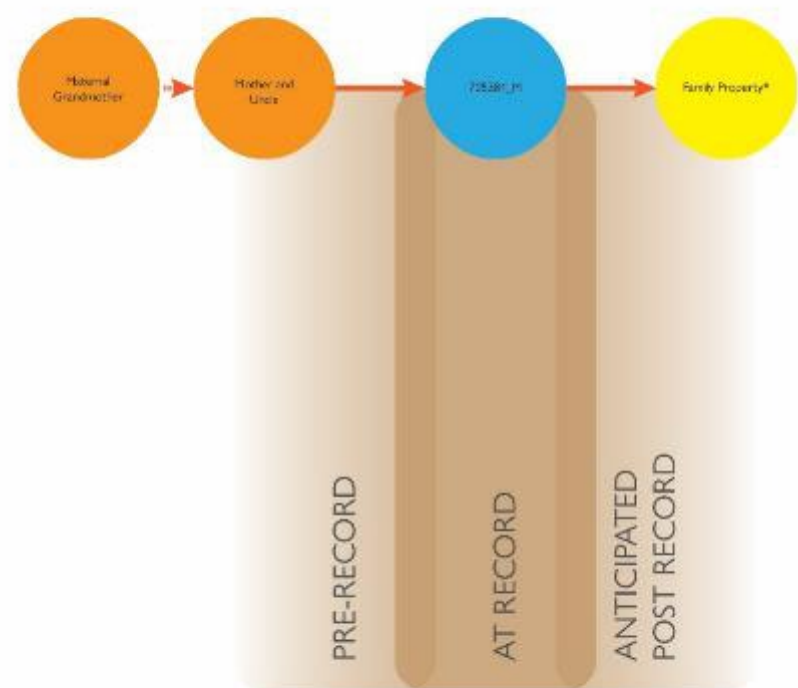
Review of point cloud geometry and thematic coding of interview data reveal that:

- Stilt house inhabitants' reports suggest unclear understanding of their land tenure rights, and their land tenure security is deeply in doubt:
  - Informants in 2 households related that the Hong Kong Government changed its stance on their right to rebuild stilt houses after a fire in 2000 after stilt house inhabitants applied political pressure.

### Case 705384 Informant Testimony

After that meeting, no more meetings were held. Not long after, the government released a document stating that Tai O was a tourist area, and they would try not to demolish our stilt houses. It was okay for us to rebuild, but we needed to apply for permission.

### Case 705384



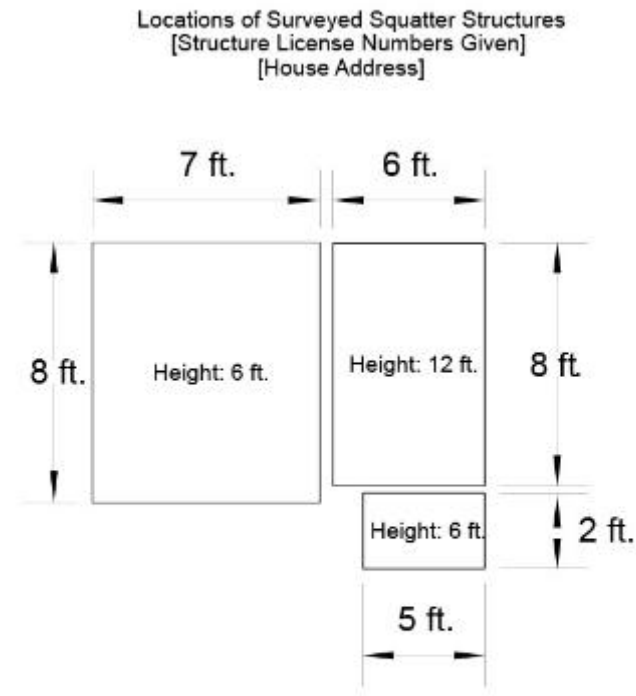
\*The informant stated his desire to will the house to the family for shared use amongst its members.

Image: Occupation pattern in house 705384

# Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Stilt house inhabitants' reports suggest unclear understanding of their land tenure rights, and their land tenure security is deeply in doubt:
  - Informants in 1 household (case 729580) related that they faced enforcement action which forced them to renovate and then vacate their stilt house, despite having a license to temporary occupation.



For Information Only  
Not to Scale

Image: Reproduction of enforcement letter issued to inhabitants of house 729580.

# Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Many stilt house inhabitants related customary land tenure arrangements that do not fit well into container categories for land occupation:
  - In cases 326789 and 694827, each household occupied a house composed of two original buildings connected over a public footpath.
  - In case 328954, multiple households in an extended family occupied several stilt houses under one license.
  - In case 941756, members of the household occupied the house temporarily, sharing it among extended family members.

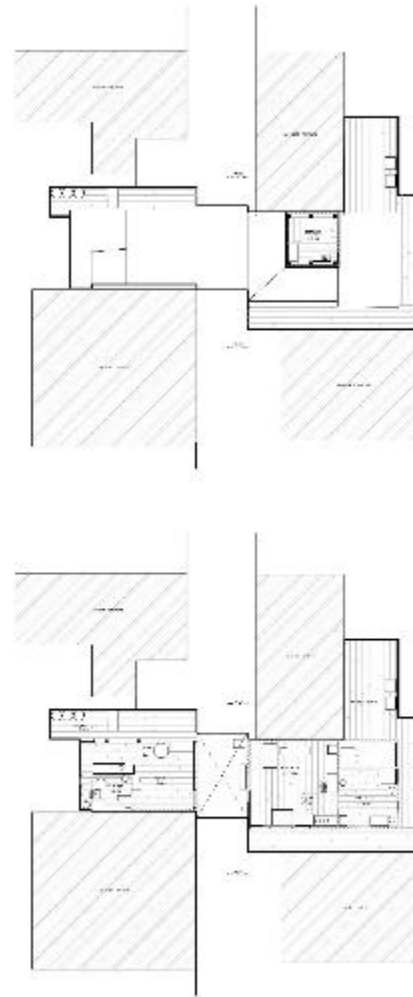


Image: Floor plans of house 326789



# Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Many stilt house inhabitants related customary land tenure arrangements that do not fit well into container categories for land occupation:
  - In cases 326789 and 694827, each household occupied a house composed of two original buildings connected over a public footpath.
  - In case 328954, multiple households in an extended family occupied several stilt houses under one license.
  - In case 941756, members of the household occupied the house temporarily, sharing it among extended family members.

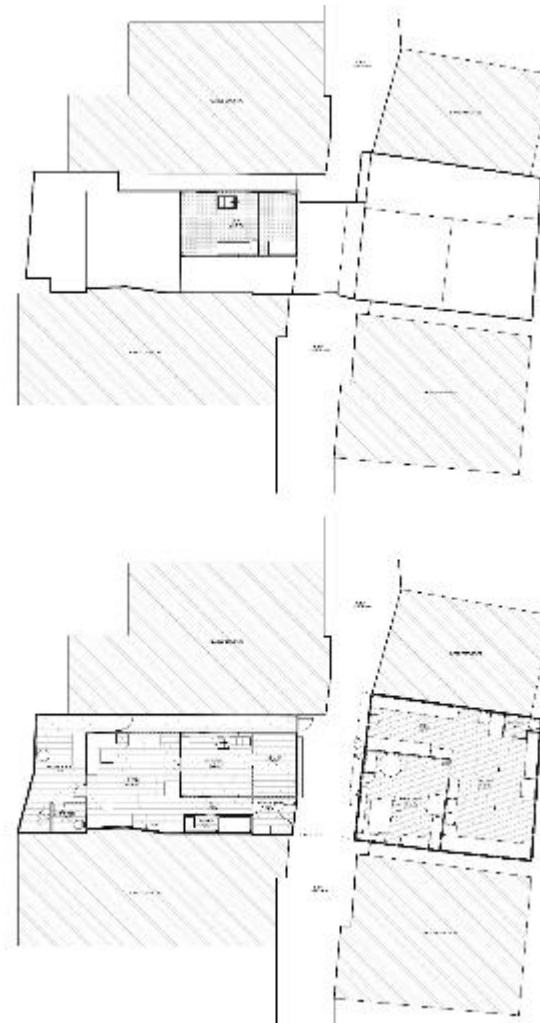


Image: Floor plans of house 694827

# Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Many stilt house inhabitants related customary land tenure arrangements that do not fit well into container categories for land occupation:
  - In cases 326789 and 694827, each household occupied a house composed of two original buildings connected over a public footpath.
  - In case 328954, multiple households in an extended family occupied several stilt houses under one license.
  - In case 941756, members of the household occupied the house temporarily, sharing it among extended family members.

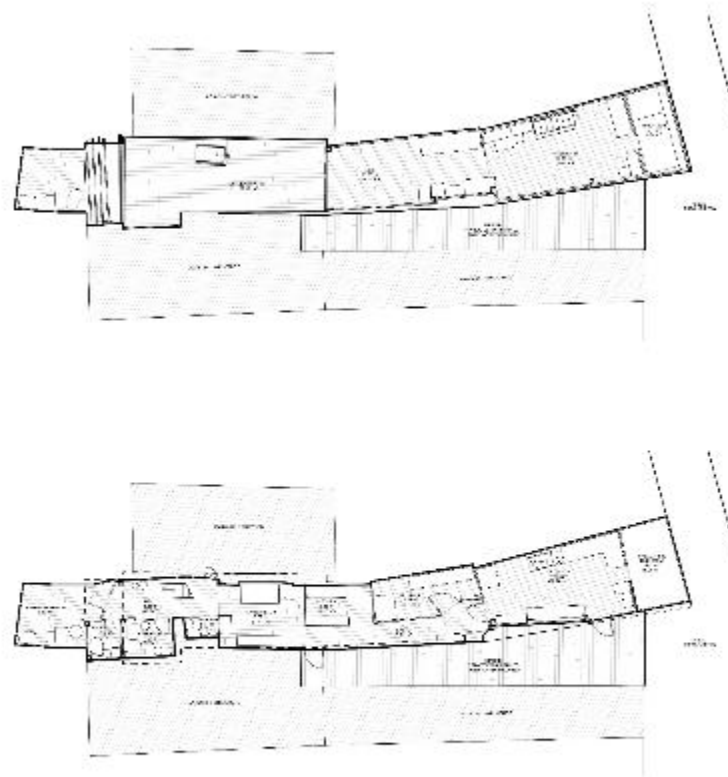


Image: Floor plans of house 328954

# Findings

Review of point cloud geometry and thematic coding of interview data reveal that:

- Many stilt house inhabitants related customary land tenure arrangements that do not fit well into container categories for land occupation:
  - In cases 326789 and 694827, each household occupied a house composed of two original buildings connected over a public footpath.
  - In case 328954, multiple households in an extended family occupied several stilt houses under one license.
  - In case 941756, members of the household occupied the house temporarily, sharing it among extended family members.

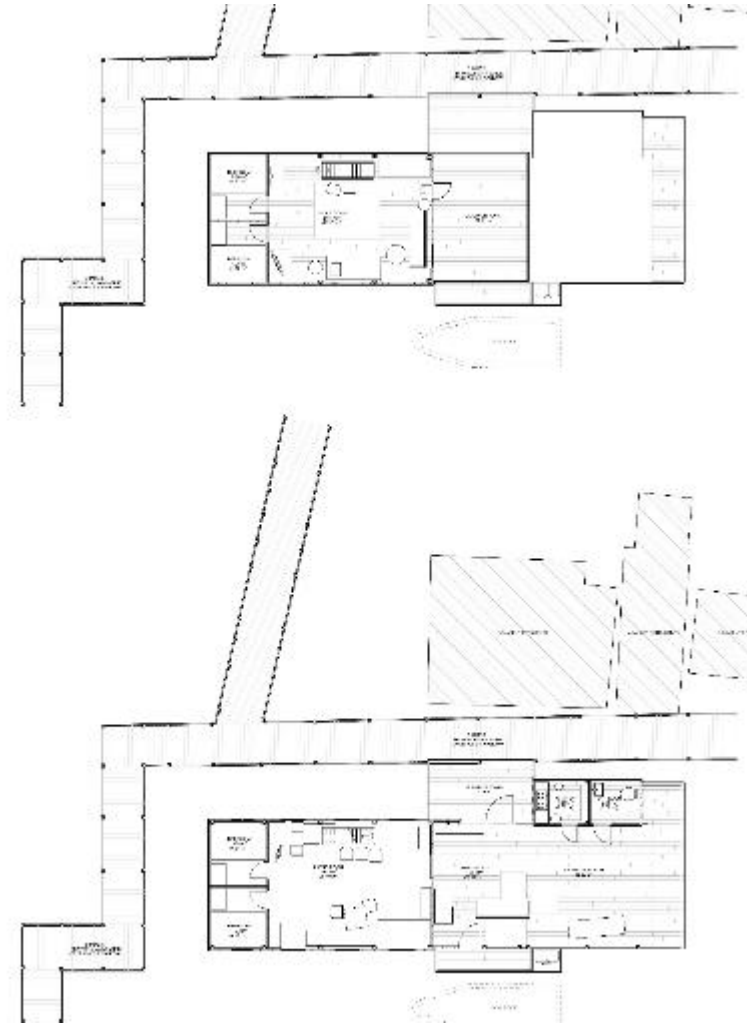


Image: Floor plans of house 941756

# Discussion

## Findings:

- Inhabitants' land tenure is highly uncertain, and the terms of their tolerated occupation are likely poorly communicated, given how inhabitants understand their tenure.
- Inhabitants' occupation patterns and understandings of tenure are highly diverse and do not fit well into governmental container categories of 'legal' tolerated occupation.



Image: Stilt housing in Tai O Village. Daniel Keith Elkin

## Discussion

### Limitations:

- The HK Lands Department does not keep records of stilt house occupancy conditions, making verification of inhabitants' land tenure status claims nearly impossible or meaningless.
- The political environment in HK and Tai O Village made sampling difficult, meaning our sample is not representative of the ~350 remaining households remaining in stilt houses.
- It bears stating that stilt house inhabitants live nominally without paying land taxes and often paying minimal or no rent.
- Despite their land tenure insecurity, and their reports on increasingly severe damage to their housing from typhoons and flooding (climate change) they generally reported that they wanted to remain in their housing.



Image: Stilt housing in Tai O Village. Daniel Keith Elkin



## Conclusion

Tenure conditions and security in stilt houses in Tai O Village are complex, poorly understood, and broadly non-compliant with constraining development policy.

Given the HK Government's desire to conserve stilt houses as cultural heritage, political will and innovative strategies will be necessary to halt their decline under the 'managed persistence' of informality (Smart, 2001).

In the meantime, stilt house inhabitants face uncertainty regarding their land tenure status, which could threaten their persistence as a housing culture.

Officers of the HK Government have also specifically suggested seizure of stilt houses to 'facilitate cultural conservation' (Wong, 2019).

Any effort to "regularize" land tenure in Tai O Village, even on the condition that stilt houses are vacated, would require considerable legal negotiation.

A retired Lands Department officer stated any change in Tai O would likely "strike a nerve."



Image: Stilt housing in Tai O Village. Daniel Keith Elkin

# Image and Reference Sources

Anderson, E. N. (2007). *Floating World Lost: A Hong Kong Fishing Community*. University Press of the South, Incorporated.

Bravo, G. (2012). Cultural commons and cultural evolution. In *Cultural Commons: A New Perspective on the Production and Evolution of Cultures* (pp. 36–55). Edward Elgar Publishing Limited. <https://doi.org/10.4337/9781781000069.00011>

Census and Statistics Department & The Government of the Hong Kong Special Administrative Region. (2021). *2021 Population Census (CENTAMAP)*. Retrieved April 26, 2024, from [https://census.censtat.gov.hk/hong-kong/islands/CHMA/Lantau?field=t\\_pop&sort=default](https://census.censtat.gov.hk/hong-kong/islands/CHMA/Lantau?field=t_pop&sort=default).

Chan, S. C. (1998). Politicizing Tradition: The identity of Indigenous inhabitants in Hong Kong. *Ethnology*, 37(1), 39. <https://doi.org/10.2307/3773847>

Chun, A. (2004). Unstructuring Chinese society: the fictions of colonial practice and the changing realities of 'land' in the New Territories of Hong Kong. In *Routledge eBooks*. <https://doi.org/10.4324/9780203642054>

Cheung, A. B. (1998). From Colony to Special Administrative Region: Issues of Hong Kong's Autonomy within a Centralized Authoritarianistic State. *Verfassung in Recht Und Übersee*, 31(3), 302–316. <https://doi.org/10.5771/0506-7286-1998-3-302>

Clementi, Cecil. (April 20, 1904). [Memorandum from Cecil Clementi to Hon. Colonial Secretary, 1904]. Retrieved from Hong Kong Government Records Service, (HKRS 58.DS.1.25.5). Hong Kong Public Records Building. 13 Tsui Ping Road, Kwun Tong, Hong Kong.

Civil Engineering and Development Department. (2017). *Sustainable Lantau Blueprint*. The Government of the Hong Kong Special Administrative Region. Retrieved April 26, 2024, from <https://www.lantau.gov.hk/en/news-publications/publications/sustainable-lantau-blueprint/index.html>

Cobbinah, P. B. (2023). The oddity of desiring informality. *Dialogues in Human Geography*, 20438206231191737.

Donders, Y. (2020). Cultural heritage and human rights. *published in: Oxford Handbook on International Cultural Heritage Law, Amsterdam Law School Research Paper*, (2020-37).

Finn, B. M. (2023). The structure of informality: The Zambian copperbelt and the informal/formal dialectic. *Dialogues in Human Geography*, 20438206231168883.

Finn, B. M. (2024). Informality at the heart of sustainable development. *Dialogues in Human Geography*, 20438206241240216.

*Full Text of Sino-British Joint Declaration* [Key documents | chinadaily.com.cn. (2007). Retrieved January 29, 2025, from [http://www.chinadaily.com.cn/china/HK15th/2007-06/20/content\\_15483595.htm](http://www.chinadaily.com.cn/china/HK15th/2007-06/20/content_15483595.htm).

Gonçalves, J. M., & Gama, J. M. R. F. (2020). A systematisation of policies and programs focused on informal urban settlements: reviewing the cases of São Paulo, Luanda, and Istanbul. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, 13(4), 466–488.

The Government of Hong Kong. (1891). An Ordinance to make provision with respect to Squatting on Crown Lands. In *Historical Laws of Hong Kong Online* (2cbc551fe273d116f972731dace4695d). Retrieved April 29, 2024, from <https://oelawhk.lib.hku.hk/archive/files/2cbc551fe273d116f972731dace4695d.pdf>

The Government of Hong Kong. (1900). An Ordinance to facilitate the Resumption by the Governor of Crown Lands required for Public Purposes. In *Historical Laws of Hong Kong Online* (7616bd5db017a4c39606bfe894b03ed0). Historical Laws of Hong Kong Online. Retrieved January 29, 2025, from <https://oelawhk.lib.hku.hk/archive/files/7616bd5db017a4c39606bfe894b03ed0.pdf>.

The Government of Hong Kong. (1844). An Ordinance to provide for the registration of deeds, conveyances, wills, and judgments affecting real or immovable property. In *Historical Laws of Hong Kong Online* (788563a3553ff58977d1d1eacbddc9df). Retrieved April 29, 2024, from <https://oelawhk.lib.hku.hk/archive/files/788563a3553ff58977d1d1eacbddc9df.pdf>

The Government of Hong Kong. (1898). Convention between Great Britain and China respecting an Extension of Hong Kong Territory. Signed at Peking, 9th June, 1898. In *Historical Laws of Hong Kong Online* (a65ca57b4094055dac220188d5c70309). Retrieved January 29, 2025, from <https://oelawhk.lib.hku.hk/archive/files/a65ca57b4094055dac220188d5c70309.pdf>

可兒 Kani, Hiroaki 弘. (1967). *A general survey of the boat people in Hong Kong*. Southeast Asia Studies Section, New Asia Research Institute, The Chinese University of Hong Kong. <https://ci.nii.ac.jp/ncid/BA08879977>.

# Image and Reference Sources

The Hong Kong Government. (1955). Annual department report by the commissioner for resettlement. In *Digital Repository - Hong Kong University Library* (hkgro\_r43\_1954-55). Retrieved January 29, 2025, from <https://digitalrepository.lib.hku.hk/catalog/nc586q75g#?c=&m=&s=&cv=&xywh=-716%2C-140%2C3230%2C2740>

Hong Kong Tourism Board. (2024). *The best things to do on Lantau Island* | Hong Kong Tourism Board. Discover Hong Kong. Retrieved April 26, 2024, from <https://www.discoverhongkong.com/ca/explore/great-outdoor/the-best-things-to-do-on-lantau-island.html>

Huang, S. (2017). Revamping Tradition: Contested Politics of 'the Indigenous' in Postcolonial Hong Kong. In *Routledge eBooks* (pp. 85–110). <https://doi.org/10.4324/9781315640112-5>

Kamalipour, H., & Peimani, N. (2023). On the ethics of researching informal urbanism. *International Development Planning Review*, 1-13.

Korah, P. I. (2020). Exploring the emergence and governance of new cities in Accra, Ghana. *Cities*, 99, 102639.

Kuah, K. E. (2016). Heritagizing lifestyle in Hong Kong: social capital and cultural memories of the Tai O fishing community. In *Routledge eBooks* (pp. 23–41). <https://doi.org/10.4324/9781315628974-8>

Lai, L., Chua, M. H., & Lorne, F. T. (2014). The Coase Theorem and squatting on Crown Land and water: A Hong Kong comparative study of the differences between the state allocation of property rights for two kinds of squatters. *Habitat International*, 44, 247–257. <https://doi.org/10.1016/j.habitatint.2014.06.032>

Lands Department. (2023). Squatter Control Policy on Surveyed Squatter Structures. In *Lands Department April 2023*. The Government of the Hong Kong Special Administrative Region. Retrieved April 29, 2024, from [https://www.landsd.gov.hk/doc/en/publication/sqco/scpp\\_e.pdf](https://www.landsd.gov.hk/doc/en/publication/sqco/scpp_e.pdf)

Lee, N. (2000, July 2). Tai O fire leaves 300 homeless. *South China Morning Post*. Retrieved April 29, 2024, from <https://www.scmp.com/article/320397/tai-o-fire-leaves-300-homeless>.

Legislative Council of the Hong Kong Special Administrative Region. (1997, July 1). *Adaptation of Laws (Crown Land) Ordinance*. Retrieved April 29, 2024, from <https://www.legco.gov.hk/yr97-98/english/bills/a029-e.htm>

Li, T. M. (2014). What is Land? Assembling a resource for global investment. *Transactions of the Institute of British Geographers*, 39(4), 589-602.

Lin, Oli, 林奧莉. (2022, July 3). 香港回歸25年漁業式微 僅餘1125名水上人 最多人從事行業非打魚. 香港01. <https://www.hk01.com/研數所/784008>

Loo, M. (2024, September 5). *Lands Department - Director's message*. Retrieved January 29, 2025, from <https://www.landsd.gov.hk/en/about-us/director-message.html>.

Maung, N. L., Kawasaki, A., & Amrith, S. (2023). Spatial and temporal impacts on socio-economic conditions in the Yangon slums. *Habitat International*, 134, 102768.

Mesgar, M., & Ramirez-Lovering, D. (2021). Informal land rights and infrastructure retrofit: A typology of land rights in informal settlements. *Land*, 10(3), 273.

Mottelson, J. (2023). On informal housing supply restrictions and livelihood in informal settlements: Implications for sustainable development. *Sustainable Development*, 31(5), 3566-3578.

Munshifwa, E. K. (2023). Institutional analysis and informal urban settlements: A proposition for a new institutionalist grounded property rights perspective. *Land Use Policy*, 134, 106906.

Ng, T. (2016, January 28). *Small House Policy*. Legislative Council of the Hong Kong Special Administrative Region. Retrieved January 29, 2025, from <https://www.legco.gov.hk/research-publications/english/essentials-1516ise10-small-house-policy.htm>

Nichols, R. (2017). Theft is property! the recursive logic of dispossession. *Political Theory*, 46(1), 3–28. <https://doi.org/10.1177/0090591717701709>

Olajide, O. A. (2023). Coloniality and racialization of informality. *Dialogues in Human Geography*, 20438206231217572.

# Image and Reference Sources

Potts, S. (2023). Law's place in economic geography: Time, space, and methods. *Environment and Planning A: Economy and Space*, 0308518X231201233.

Rafieian, M., & Kianfar, A. (2023). Gaps in urban planning: A systematic review of policy-making in the informality of urban space. *Habitat International*, 142, 102962.

Rosaldo, R. (1989). Imperialist nostalgia. *Representations*, 26(1), 107–122.  
<https://doi.org/10.1525/rep.1989.26.1.99p0282w>

Rudel, T. K., & Hernandez, M. (2017). Land tenure transitions in the global south: trends, drivers, and policy implications. *Annual Review of Environment and Resources*, 42, 489–507.

Sassen, S. (2016). The global city: Enabling economic intermediation and bearing its costs. *City & Community*, 15(2), 97–108.

Schofield, W. (1968). Pile Houses at Tai O, Lantau Island, Hong Kong, 10th January 1937. *Journal of the Hong Kong Branch of the Royal Asiatic Society*, 197–200.

Shaheed, F. (2011). Report of the independent expert in the field of cultural rights, Farida Shaheed. In *United Nations Digital Library* (A/HRC/17/38). Human Rights Council. Retrieved June 21, 2024, from [https://digitallibrary.un.org/naana/record/706502/files/A\\_HRC\\_17\\_38-EN.pdf?withWatermark=0&withMetadata=0&version=1&istDownload=1](https://digitallibrary.un.org/naana/record/706502/files/A_HRC_17_38-EN.pdf?withWatermark=0&withMetadata=0&version=1&istDownload=1)

Smart, A. (2001). Unruly Places: Urban governance and the persistence of illegality in Hong Kong's urban squatter areas. *American Anthropologist*, 103(1), 30–44.  
<https://doi.org/10.1525/aa.2001.103.1.30>

Smart, A., & Fung, C. K. C. (2023). Hong Kong public and squatter housing. In *Hong Kong University Press eBooks*. <https://doi.org/10.1515/97898888842407>

Spolaor, S., & Oliveira, V. (2022). Towards a progressive understanding of informal settlements: the contribution of the fringe-belt concept. *urbe. Revista Brasileira de Gestão Urbana*, 14, e20210353. Vasile, M., & Vasile, M. (2022). Grabbing the commons: Forest rights, capital and legal struggle in the Carpathian Mountains. *Political Geography*, 98, 102718.  
<https://doi.org/10.1016/j.polgeo.2022.102718>

*Sustainable Lantau Office - Lantau Conservation Fund*. (2025, January 9). Retrieved January 30, 2025, from <https://www.lantau.gov.hk/en/lantau-conservation-fund/index.html>.

Wang, H. C. (2023). Examining the impact of in-situ infrastructural upgrading on sustainability in informal settlements: The case of Accra, Ghana. *Journal of Urban Affairs*, 45(3), 665–684.

Wekesa, B. W., Steyn, G. S., & Otieno, F. F. (2011). A review of physical and socio-economic characteristics and intervention approaches of informal settlements. *Habitat international*, 35(2), 238–245.

Wong, M. (2019, May 22). *LCQ1: Conservation of the stilt houses at Tai O*. Retrieved April 29, 2024, from <https://www.info.gov.hk/gia/general/201905/22/P2019052200546.htm>

Wong, W. K. (1999). *Tai O: Love Stories of the Fishing Village*. Concern Group for Tai O's Culture and Antiquities.

Tang, C. H.-W. (2010). Hong Kong Leasehold Land Tenure and Boundary System. *Journal of Cadastre*, 40(1), 49–61.  
<https://www.kci.go.kr/kciportal/po/search/poSereArtiList.kci?sereId=002069&volIssId=VOL000018599>

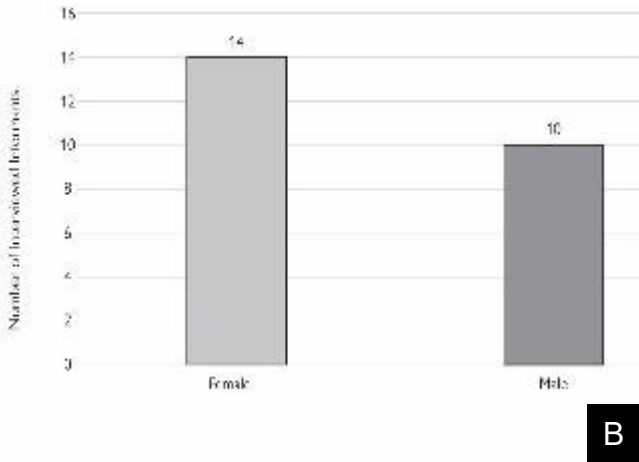
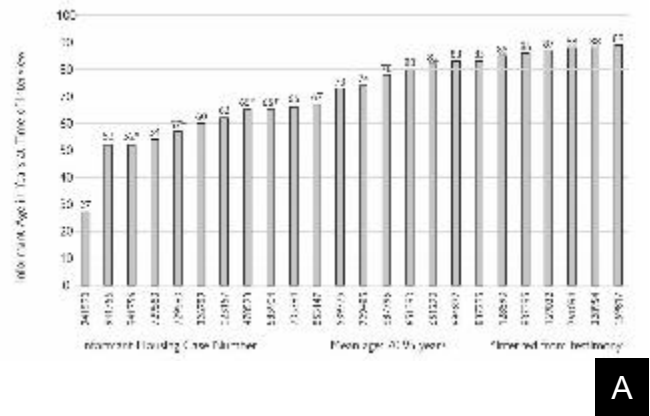
Werlin, H. (1999). The slum upgrading myth. *Urban Studies*, 36(9), 1523–1534.  
<https://doi.org/10.1080/0042098992908>

Yeung, G. (2013). *棚屋上下 Stilt Houses*. Yi Hu.

Zhang, Y. (2012). Heritage as cultural commons: towards an institutional approach of self-governance. In *Cultural Commons: A New Perspective on the Production and Evolution of Cultures* (pp. 153–177). Edward Elgar Publishing Limited.  
<https://doi.org/10.4337/9781781000069.00011>

Zazyki, M. A., da Silva, W. V., de Moura, G. L., Kaczam, F., & da Veiga, C. P. (2022). Property rights in informal settlements. *Cities*, 122, 103540.

# Appendix – Data Pages



- A. The informants we spoke to (n=24) were mostly elderly (mean age = 70.95 years).
- B. We mostly spoke to female informants (58.3%).
- C. Most were married (91.7%) and 1/3 of informants who were married reported that they experienced arranged marriage.

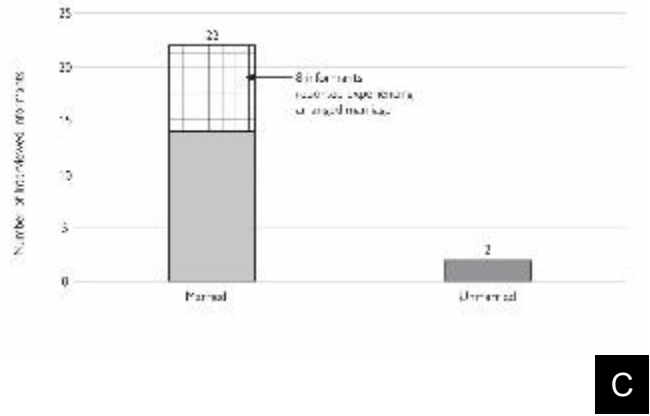
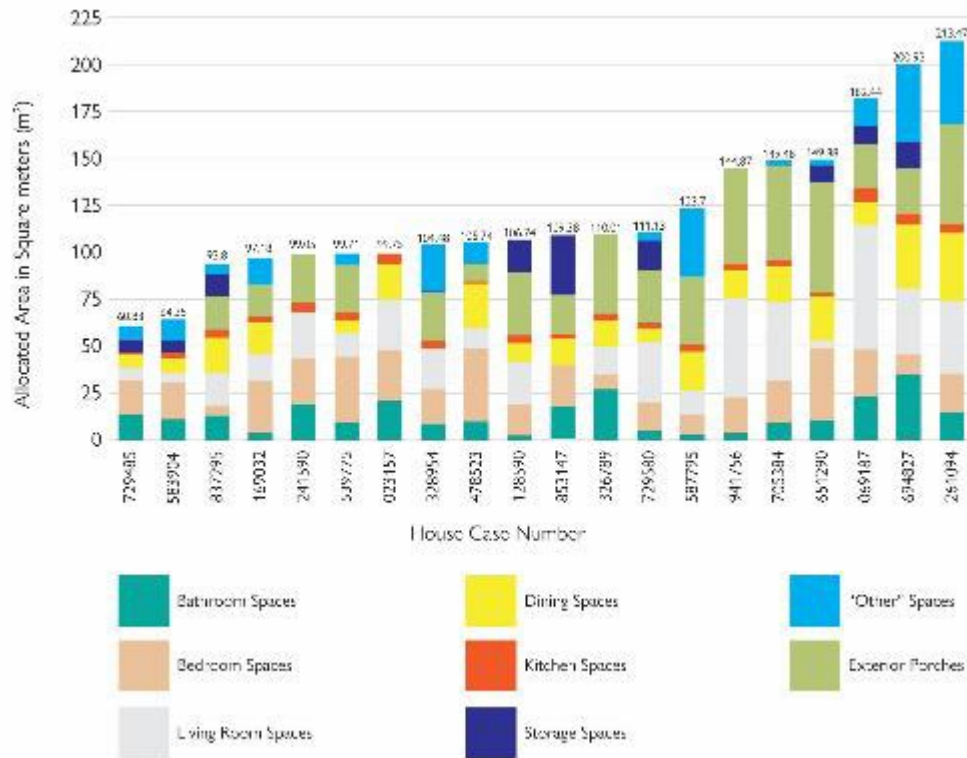


Image: Interpretation key for stilt house occupation pattern diagrams.



## Appendix – Data Pages



A. Stilt houses sampled ranged in gross floor area from 60.83 to 213.47 square meters in size.

Image: Spatial allocation by program areas in sampled stilt houses. Daniel Keith Elkin

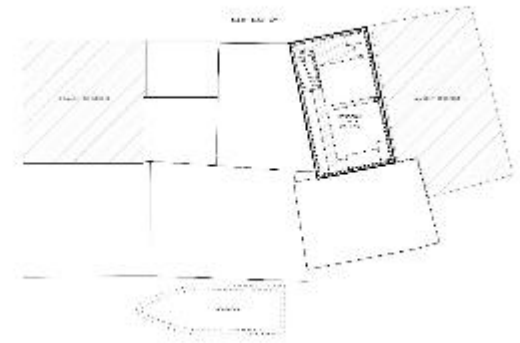
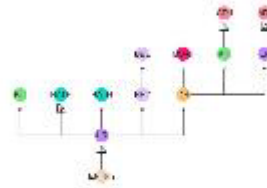
## Appendix – Data Pages

One, male informant. 62 years of age.

Stated the house did not have a license, and that he planned to transfer the house to his daughters or granddaughters.

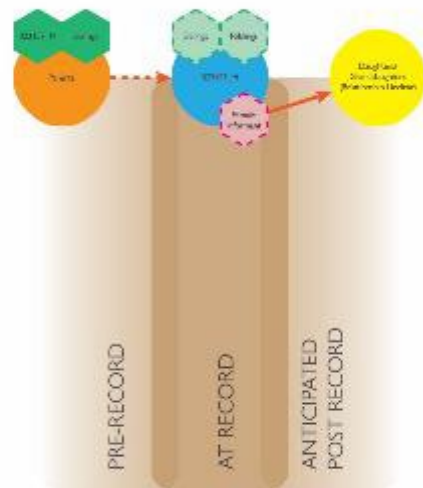
023157 SPATIAL PROGRAM NODE TREE

VOICE COUNT: 12  
 SPEECH COUNT: 12  
 ORANGE LEVEL: 3  
 (2) (8) - 1100-81  
 ACCESS TO ADJUNCT: YES  
 NOT A FLN TR



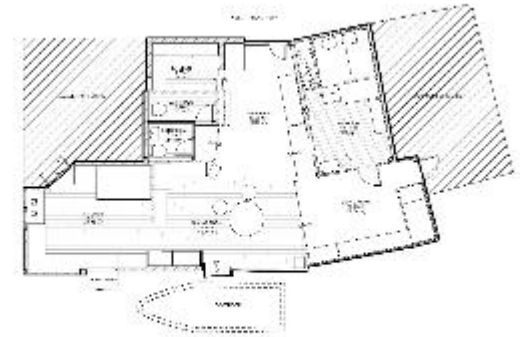
### First Floor Plan

Case 023157



**LEGEND**

	Accounting		Accounting		Accounting
	Business		Business		Business
	Finance		Finance		Finance
	Marketing		Marketing		Marketing
	Operations		Operations		Operations
	Human Resources		Human Resources		Human Resources
	Information Systems		Information Systems		Information Systems
	Law		Law		Law
	Public Administration		Public Administration		Public Administration
	Social Sciences		Social Sciences		Social Sciences
	Arts and Humanities		Arts and Humanities		Arts and Humanities
	Health Sciences		Health Sciences		Health Sciences
	Engineering		Engineering		Engineering
	Computer Science		Computer Science		Computer Science
	Mathematics		Mathematics		Mathematics
	Natural Sciences		Natural Sciences		Natural Sciences
	Physical Sciences		Physical Sciences		Physical Sciences
	Life Sciences		Life Sciences		Life Sciences
	Earth and Planetary Sciences		Earth and Planetary Sciences		Earth and Planetary Sciences
	Agriculture		Agriculture		Agriculture
	Environmental Sciences		Environmental Sciences		Environmental Sciences
	Interdisciplinary Studies		Interdisciplinary Studies		Interdisciplinary Studies



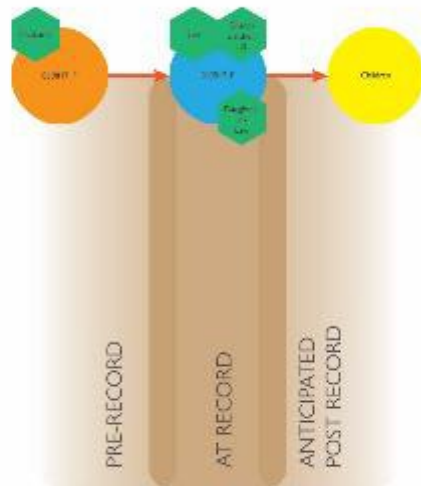
### Ground Floor Plan

## Appendix – Data Pages

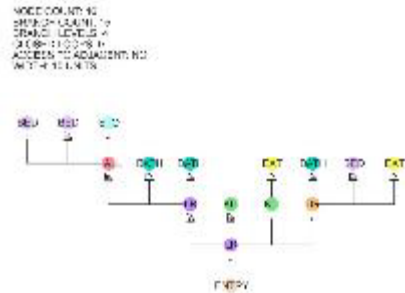
One, female informant. 89 years of age.

Stated the house was licensed to her deceased husband. Indicated her desire to transfer the house to her children.

Case 069817



069817 SPATIAL PROGRAM NODE TREE



**LEGEND**



## First Floor Plan



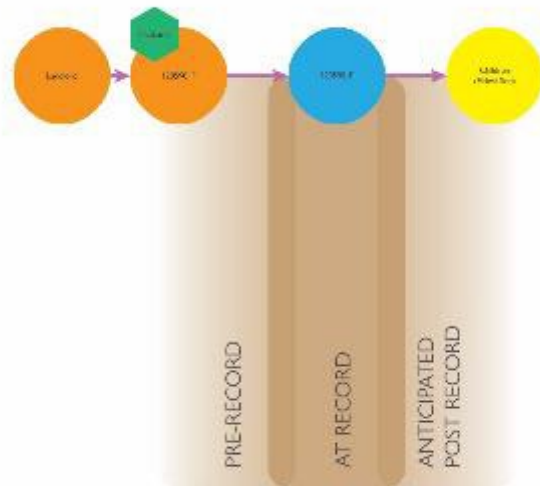
### Ground Floor Plan

## Appendix – Data Pages

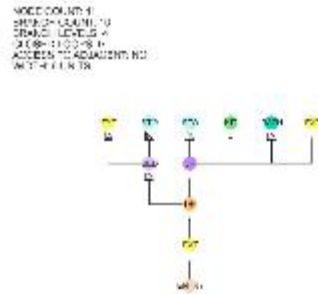
One, female informant. 85 years of age.

Stated she paid 'ground rent' to another stilt house resident 'landlord' who had a license for the location. Stated she intended to pass the house to her eldest son.

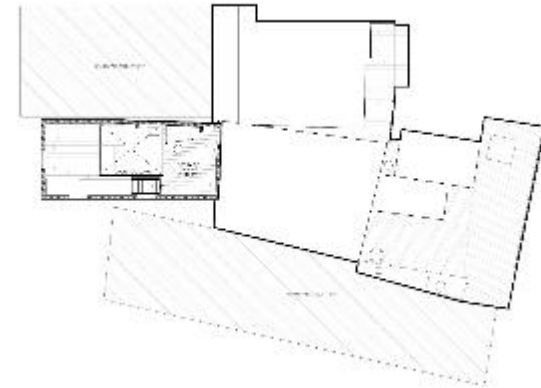
Case 128590



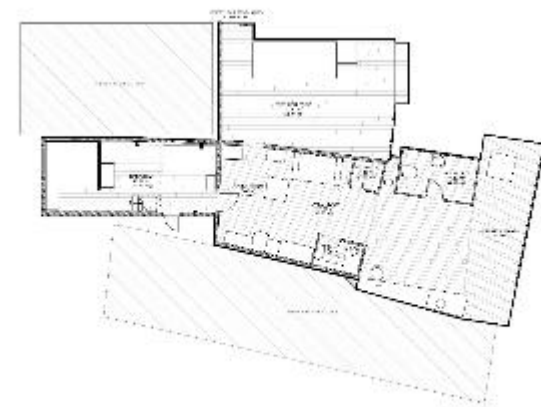
128590 SPATIAL PROGRAM NODE TREE



LEGEND

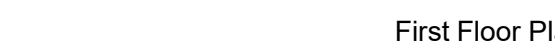
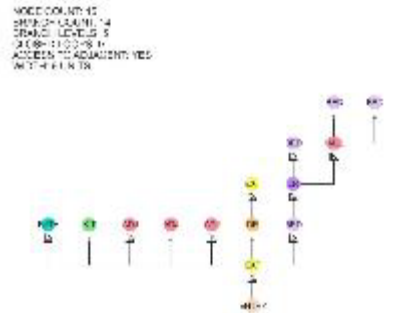
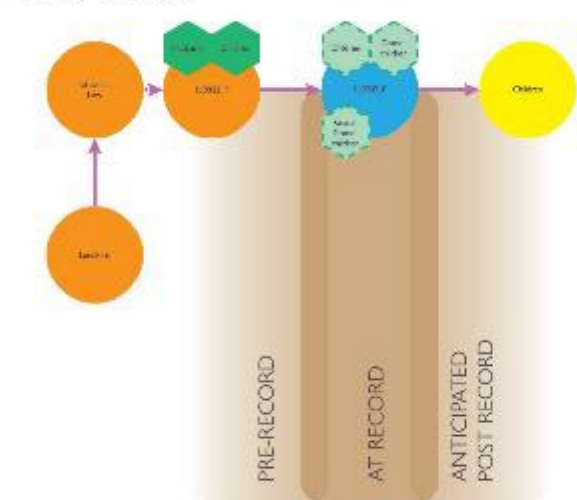


### First Floor Plan



### Ground Floor Plan

Stated the house originally belonged to her father-in-



---

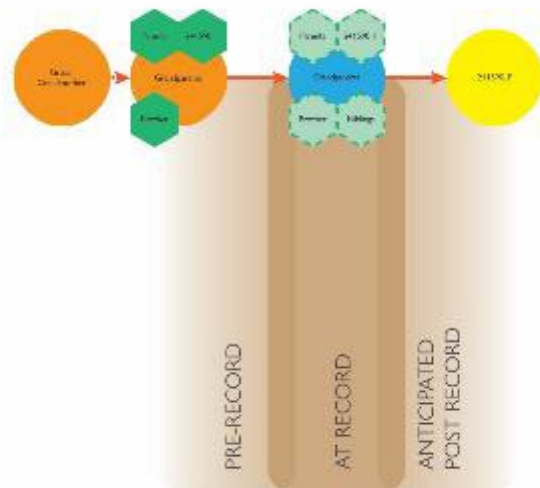


## Appendix – Data Pages

One, female informant. 27 years of age.

Described the house as licensed to her deceased great-grandmother. She was an occasional occupant who expected her grandparents to will the house to her.

Case 241590



241590 SPATIAL PROGRAM NODE TREE

MOORE COOKING  
KITCHEN 2nd FLOOR  
DINING LEVELS 2  
REAR LEVELS 2  
ACCESS TO ADJACENT NO  
ON 1-4 2 1 1 1 1



LEGEND

	101. What is the purpose of this document?		102. What is the main objective of this project?		103. What is the scope of this study?
	104. What are the key findings of this research?		105. What are the limitations of this study?		106. What are the implications of this research?
	107. What are the conclusions of this study?		108. What are the recommendations for future research?		109. What are the acknowledgments of this study?
	110. What are the references of this study?		111. What are the appendices of this study?		112. What are the glossary of this study?

Stated that the house did not have a license. Stated his intent to will the house to his children.

NO. 000,000,000  
 100% CUMULATIVE  
 100% CUMULATIVE  
 100% CUMULATIVE  
 100% CUMULATIVE  
 100% CUMULATIVE  
 100% CUMULATIVE



		
Alvin: le gars qui aime le sport	Marcel: le gars qui aime le sport	Alvin: le gars qui aime le sport
		
Alvin: le gars qui aime le sport	Marcel: le gars qui aime le sport	Alvin: le gars qui aime le sport
		
Alvin: le gars qui aime le sport	Marcel: le gars qui aime le sport	Alvin: le gars qui aime le sport
		
Alvin: le gars qui aime le sport	Marcel: le gars qui aime le sport	Alvin: le gars qui aime le sport
		
Alvin: le gars qui aime le sport	Marcel: le gars qui aime le sport	Alvin: le gars qui aime le sport
		
Alvin: le gars qui aime le sport	Marcel: le gars qui aime le sport	Alvin: le gars qui aime le sport

Floor plan of the second floor of the building at 1000 17th Street, NW. The plan shows a large central area with diagonal hatching, a smaller room labeled 'RECEPTION' on the left, and a complex arrangement of rooms on the right side. A scale bar is visible at the bottom.

16/4/2025	Persistent Informality and Cultural Heritage: Stilt Housing in Tai O Village	35
-----------	--	----

Stated that the house did not have a license. Stated



First Floor Plan



Stated that the house did not have a license. Stated

also includes two buildings spanning over a public



First Floor Plan



Figure 1 shows a schematic diagram of a building's structural system. It depicts a cross-section of a building with a central core and two side wings. The core is labeled 'Core' and contains a 'Staircase' and 'Elevator'. The wings are labeled 'Wing A' and 'Wing B'. The diagram illustrates the layout of the building, including the placement of columns and beams, and the location of the staircase and elevator.



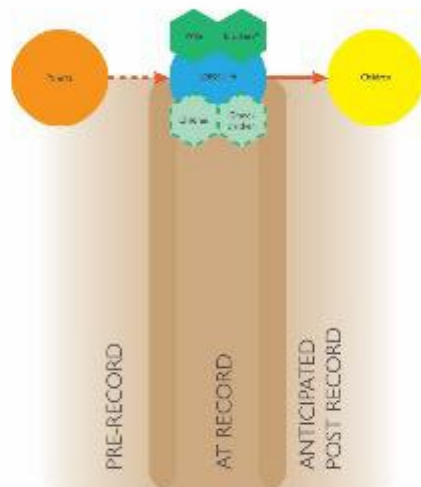
16/4/2025	Persistent Informality and Cultural Heritage: Stilt Housing in Tai O Village
-----------	--

## Appendix – Data Pages

One, male informant. 88 years of age.

Stated the house did have a license, but that surrounding houses occupied by his brothers were occupied under the same license. Stated his desire to will the house to his children.

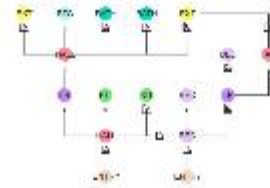
### Case 328954



\*The informant's brothers occupy adjacent stilt houses under the same Surveyed Squatter Structure License assigned to the case house.

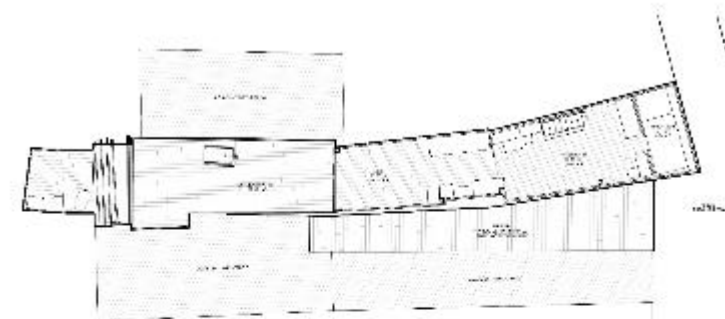
### 328954 SPATIAL PROGRAM NODE TF

MOET CON UNIT 17  
 UNIT 20-22 UNIT 17  
 DRAGON LEVELS 4  
 (1) 1000 1000 1  
 ADDRESS TO ADJACENT NO  
 (1) 1-4 11 11 11

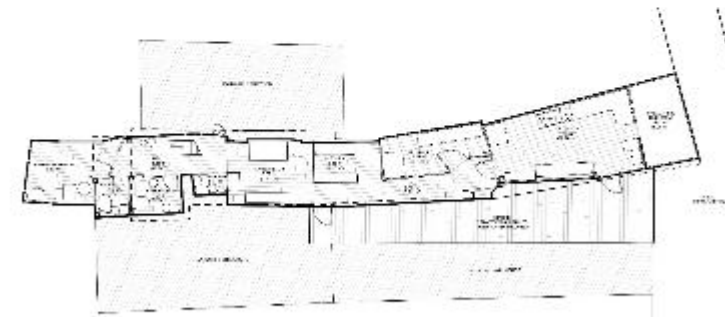


### LEGEND

1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1
1000 1000 1	1000 1000 1	1000 1000 1



First Floor Plan



Ground Floor Plan

Stated the house had a license in his name, originally his fathers. Stated his intent to will the house to his younger brother.

The diagram shows a horizontal flow from left to right. It starts with an orange circle labeled 'Start', followed by a dashed arrow pointing to a blue circle labeled 'At record'. A pink cloud labeled 'Vibe' is positioned above the 'At record' circle. A solid arrow then points from the 'At record' circle to a yellow circle labeled 'Change Point'. Below the flow, three vertical brown bars are labeled 'PRE-RECORD', 'AT RECORD', and 'ANTICIPATED-POST RECORD' respectively.

NODE COUNT: 42  
 RPTG: 2.0241E-4  
 PRNG: LEVEL: 4  
 CRITERIA: 1.0196E-6  
 ACROSS: 2 ADAPTIVE: YES  
 DELT: 4.0E-18

```

graph TD
    12((12)) -- L --> 13((13))
    12 -- R --> 14((14))
    13 -- L --> 15((15))
    13 -- R --> 16((16))
    14 -- L --> 17((17))
    14 -- R --> 18((18))
    15 -- L --> 19((19))
    15 -- R --> 20((20))
    16 -- L --> 21((21))
    16 -- R --> 22((22))
    17 -- L --> 23((23))
    17 -- R --> 24((24))
    18 -- L --> 25((25))
    18 -- R --> 26((26))
    19 -- L --> 27((27))
    19 -- R --> 28((28))
    20 -- L --> 29((29))
    20 -- R --> 30((30))
    21 -- L --> 31((31))
    21 -- R --> 32((32))
    22 -- L --> 33((33))
    22 -- R --> 34((34))
    23 -- L --> 35((35))
    23 -- R --> 36((36))
    24 -- L --> 37((37))
    24 -- R --> 38((38))
    25 -- L --> 39((39))
    25 -- R --> 40((40))
    26 -- L --> 41((41))
    26 -- R --> 42((42))
  
```

	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?
	What is a speech bubble?		What is a speech bubble?		What is a speech bubble?

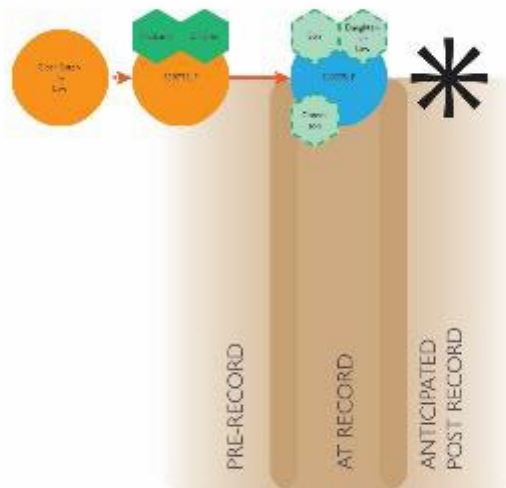


## Appendix – Data Pages

One, female informant. 73 years of age.

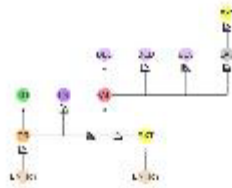
Stated the house was licensed in her sister-in-law's name. Sister-in-law willed the house to the informant's husband. No data on intended future transfer.

Case 539775



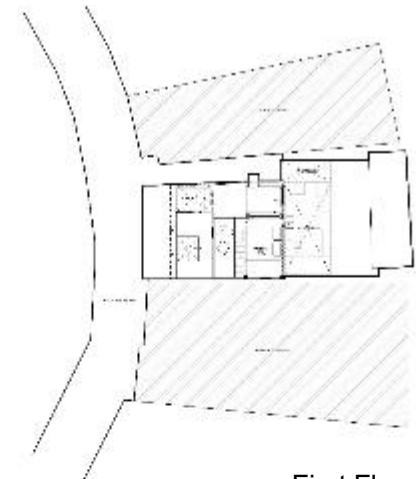
539775 SPATIAL PROGRAM NODE TREE

MOIST COOL INT 13  
WATER 24 COOL INT 13  
DRAINAGE LEVELS 4  
CEILING 13 COOL INT 13  
ADDRESS 12 ADDRESS INT 13  
WATER 24 COOL INT 13

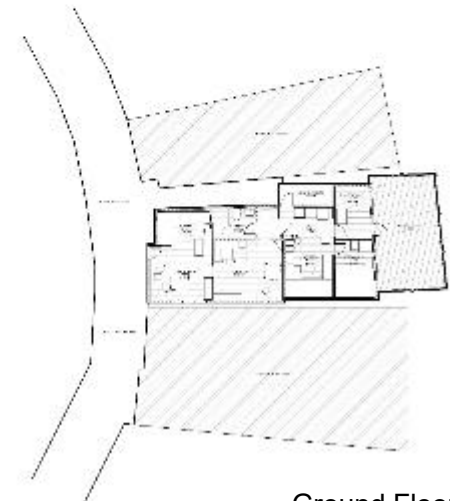


LEGEND

13	Moist Cool Int	13	Water 24 Cool Int	13	Address Int
24	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int
13	Water 24 Cool Int	13	Water 24 Cool Int	13	Water 24 Cool Int



First Floor Plan



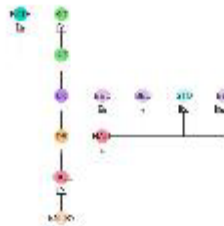
Ground Floor Plan

Stated her mother-in-law secured a license for the house and willed it to her husband. Stated her intent to will the house to her children.

The diagram illustrates the stages of a patient's journey through the healthcare system, categorized into three phases:

- PRE-RECORD:** This phase includes the initial stages of the patient's journey, represented by orange circles labeled "Admission" and "10000 L".
- AT-RECORD:** This phase includes the stages where the patient is actively receiving care, represented by a blue circle labeled "10000 P" and a green circle labeled "Discharge".
- ANTICIPATED POST-RECORD:** This phase includes the final stage of the patient's journey, represented by a yellow circle labeled "Discharge".

The journey progresses from left to right, indicated by arrows connecting the stages.

[illegible]

## First Floor Plan

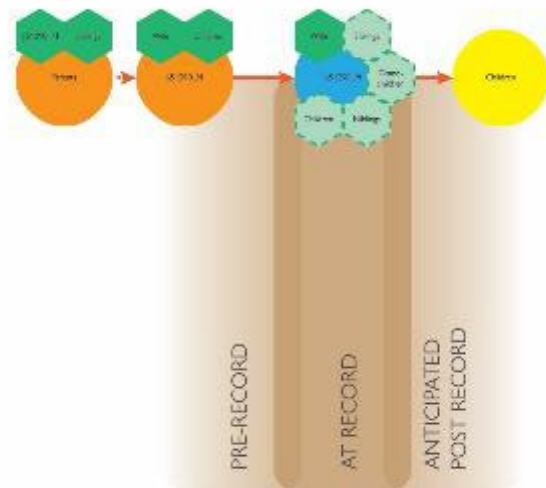
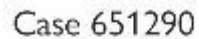


## Ground Floor Plan

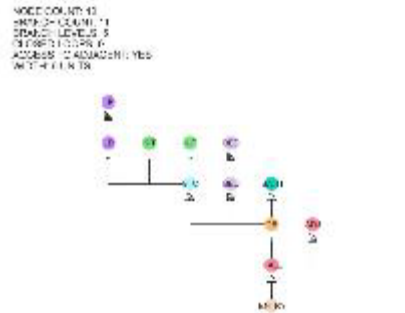
## Appendix – Data Pages

Two, informants. 1 Male, 82. 1 Female, 80.

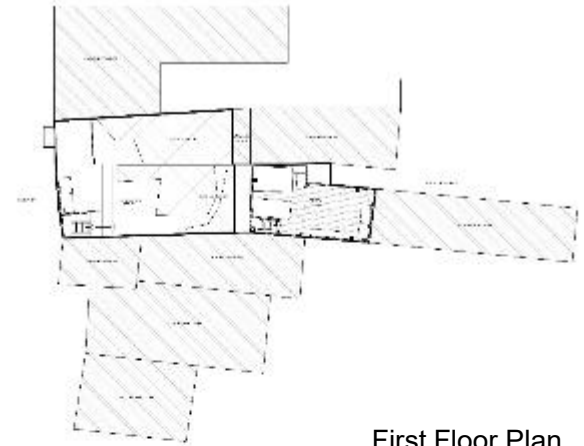
No data on license status. Stated their intent to will the house to their children.



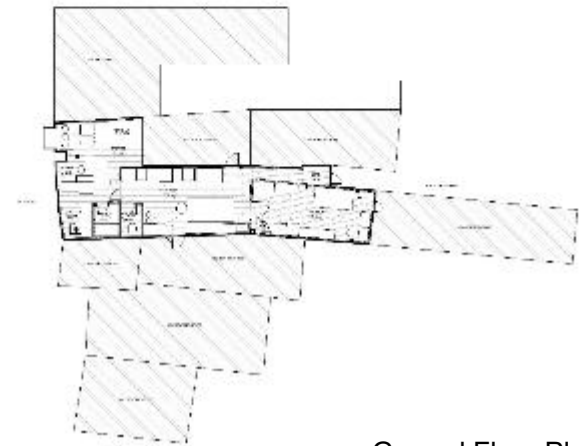
651290 SPATIAL PROGRAM NODE TREE



### LEGEND



### First Floor Plan



### Ground Floor Plan

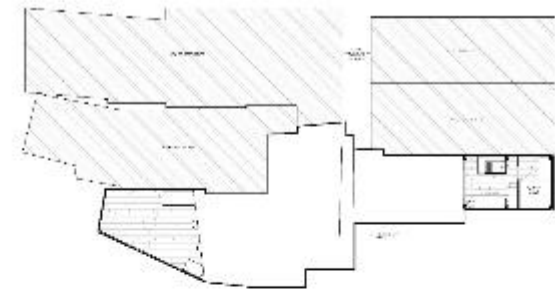
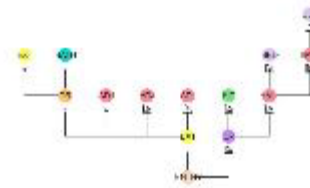
## Appendix – Data Pages

One, female informant. 78 years of age.

Stated the house was licensed to her father, who willed it to her. Stated her intent to will the house to her daughters.

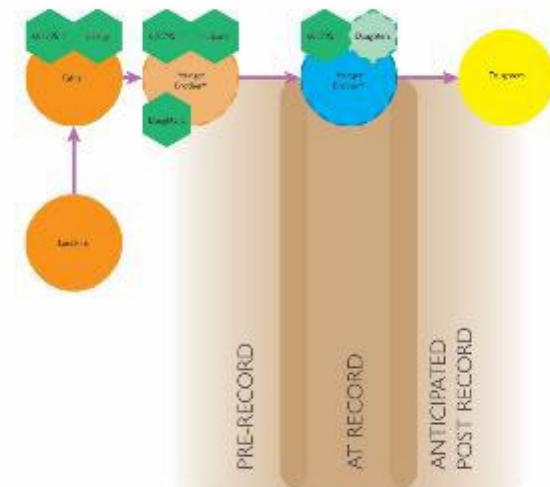
687795 SPATIAL PROGRAM NODE TREE

HOUSE NO. 14  
SPATIAL COORDINATE: 2  
SERIAL: 1475-5-1  
CLUSTER: 1475-5-1  
ADDRESS: 1475-5-1  
ADDRESS: 1475-5-1



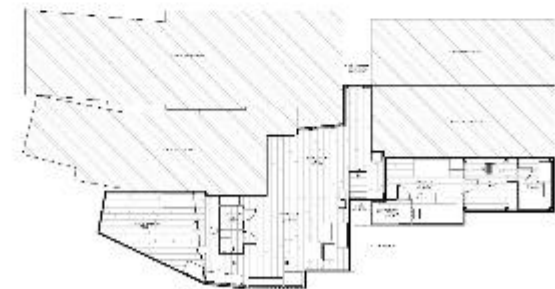
First Floor Plan

Case 687795



LEGEND

1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1
1475-5-1	1475-5-1	1475-5-1



Ground Floor Plan

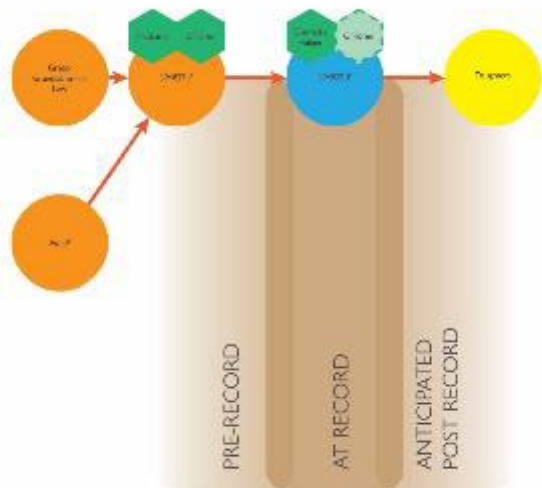
\*The informant's younger brother inherited the customary right to live in the case house from their father, but he did not live there at the time of record.

## Persistent Informality and Cultural Heritage: Stilt Housing in Tai O Village

43

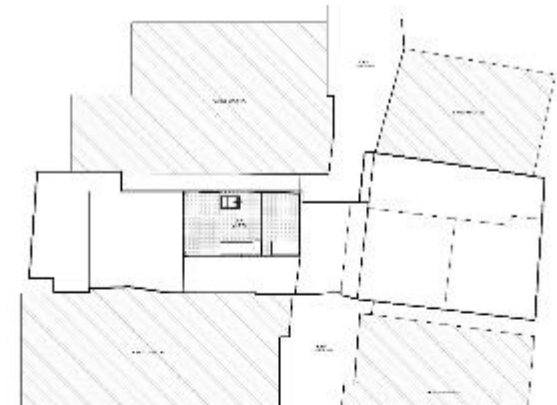
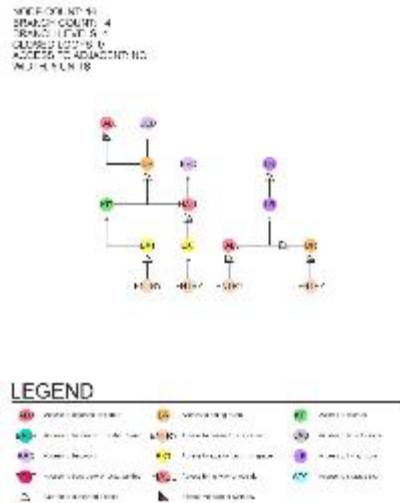
One part of the house was originally licensed to her husband's great grandfather. The other part belonged to her aunt, with unknown license status. Stated her intent to will the house to her daughters.

Case 694827



\*The case house has two parts that bridge over a public through-way. The informant inherited each part of the house from a different family member.

694827 SPATIAL PROGRAM NODE TREE



### First Floor Plan



### Ground Floor Plan

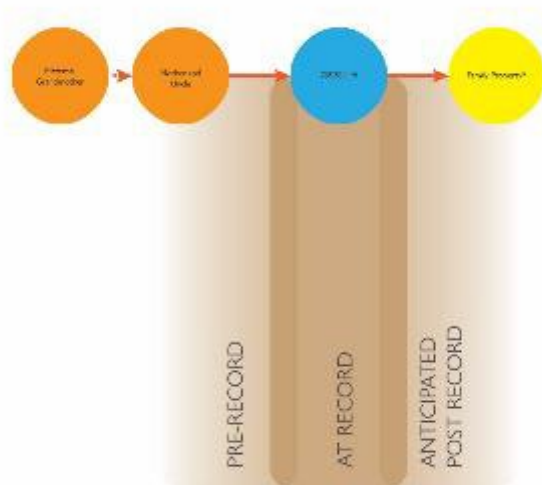


## Appendix – Data Pages

One, male informant. 66 years of age.

Stated the house was licensed in his mother's name.  
He stated his intent to will the house to the family as a sharing property.

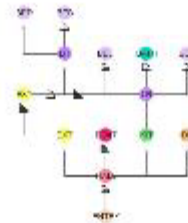
### Case 705384



\*The informant stated his desire to will the house to the family for shared use amongst its members.

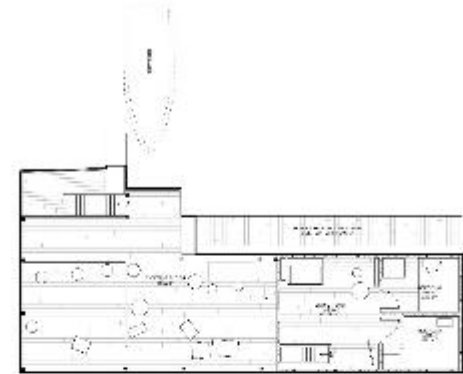
### 705384 SPATIAL PROGRAM NODE TREE

HOUSE NO. 11  
SPATIAL COORDINATE: 4  
SPATIAL LEVEL: 5.5  
CLIMATE: 11.1  
ADDRESS: 11.1  
ADDRESS: 11.1

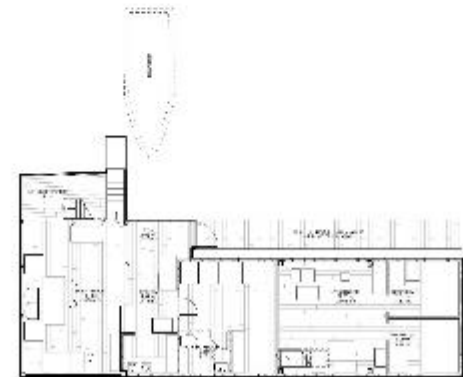


### LEGEND

11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1
11.1	11.1	11.1



First Floor Plan



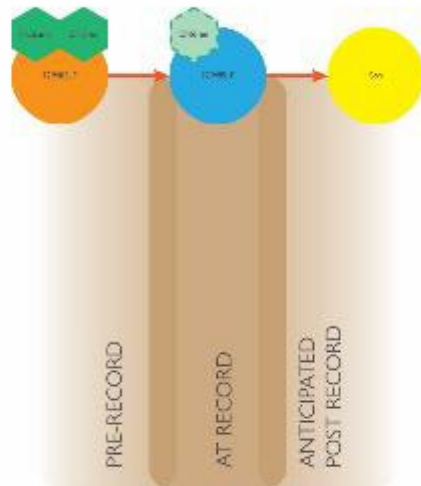
Ground Floor Plan

## Appendix – Data Pages

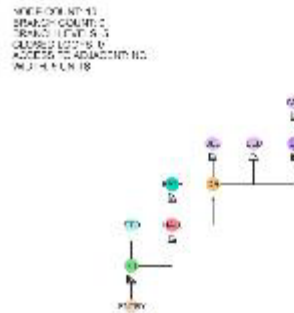
One female informant, 74 years of age.

Stated the house was licensed to her deceased husband, and that she intended to will the house to her son.

Case 729485



729485 SPATIAL PROGRAM NODE TREE



LEGEND



First Floor Plan



Ground Floor Plan

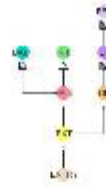
## Appendix – Data Pages

Two informants. One female, 54. One male, 53-62.

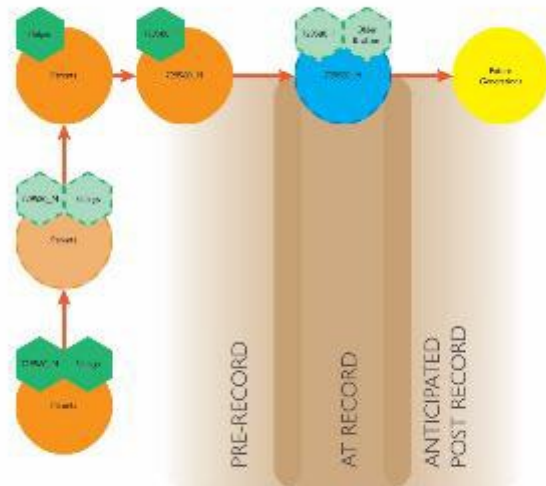
Stated the house was licensed to the male informant's mother. This house faced enforcement action in 2021/22.

729580 SPATIAL PROGRAM NODE TREE

NOCT COUNT: 2  
NOCT 24-12-2017  
DRAWN: LEWIS A  
REF: 801101010  
ADDRESS: 12 KASADENI RD  
DWG: 4-1-1-101

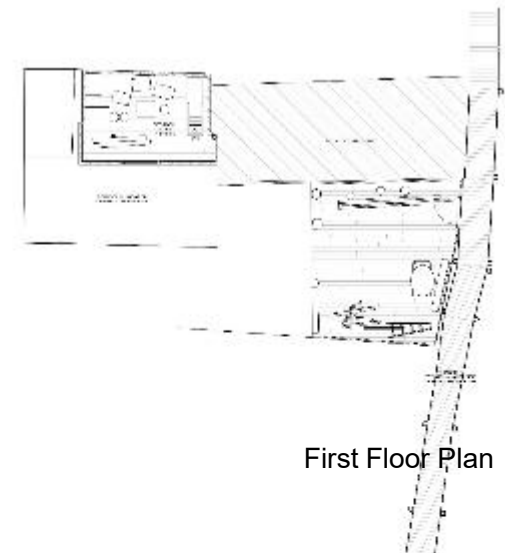


Case 729580



LEGEND

L101: Main structure	L101.1: Main structure	L101.2: Main structure
L101.1.1: Main structure	L101.1.2: Main structure	L101.1.3: Main structure
L101.1.1.1: Main structure	L101.1.1.2: Main structure	L101.1.1.3: Main structure
L101.1.1.1.1: Main structure	L101.1.1.1.2: Main structure	L101.1.1.1.3: Main structure



First Floor Plan



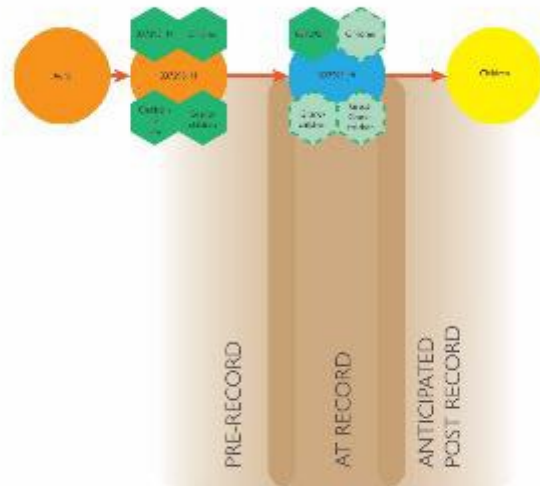
Ground Floor Plan

## Appendix – Data Pages

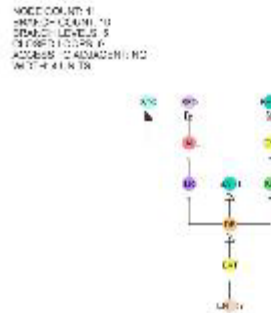
Two informants. One male, 86. One female, 83.

Stated the house was licensed to one or both of them, but license lost in fire. Stated intent to will the house to their children.

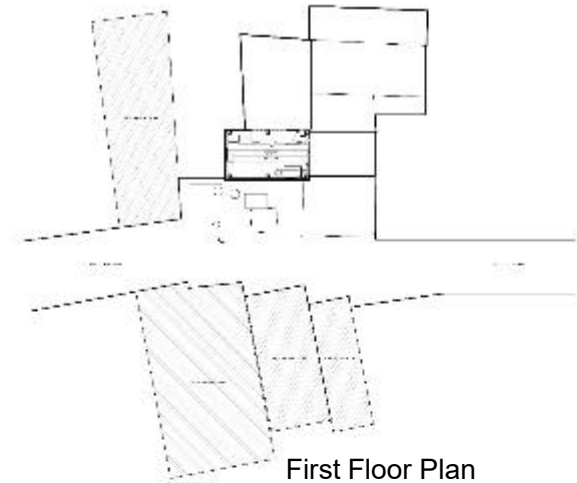
Case 837295



837295 SPATIAL PROGRAM NODE TREE



**LEGEND**



### First Floor Plan



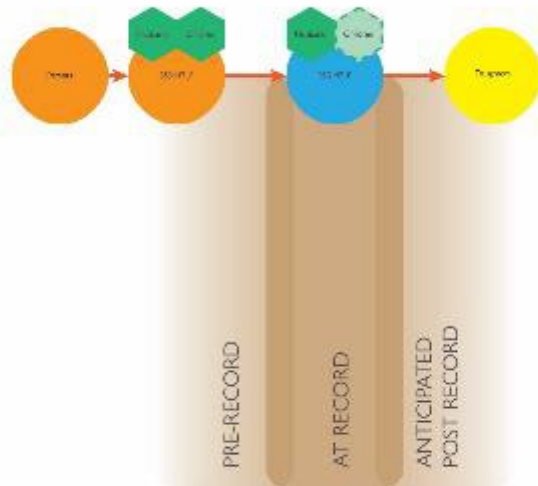
### Ground Floor Plan

## Appendix – Data Pages

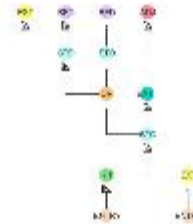
One female informant, 67 years of age.

Stated the house was licensed but gave no detail on who held the license. Stated her intent to will the house to her daughters.

Case 853147

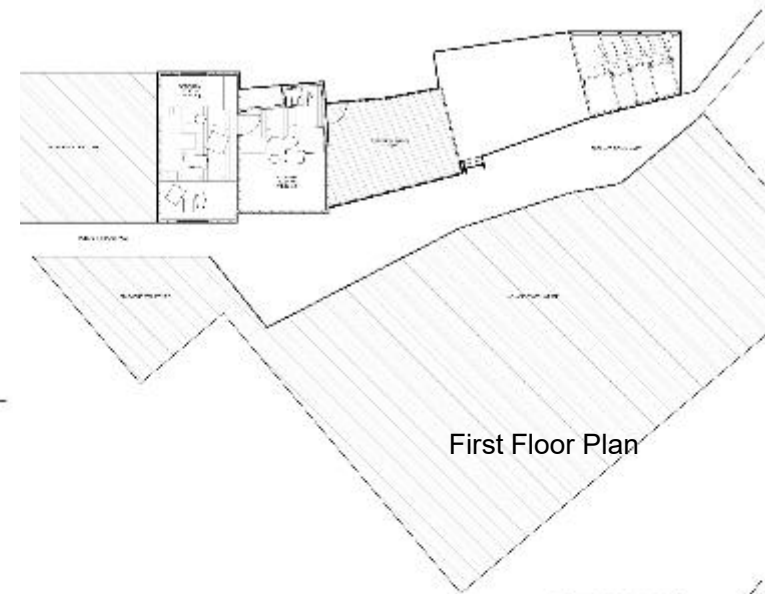


853147 SPATIAL PROGRAM NODE TREE



LEGEND

	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen
	Wiederholungsfragen		Wiederholungsfragen		Wiederholungsfragen



### First Floor Plan



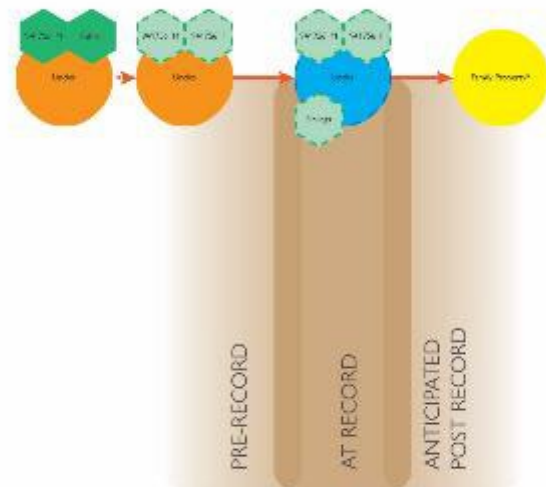
### Ground Floor Plan

## Appendix – Data Pages

Two informants. One female, 52. One male, 45-60.

Stated the house was licensed to the male informant's elder uncle, who let extended family members use the house intermittently.

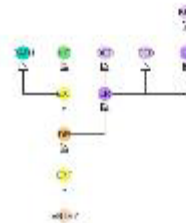
### Case 941756



\*At the time of record multiple members of the family including the informants used the case house intermittently with the informant's uncle's permission.

### 941756 SPATIAL PROGRAM

MOET CON UNIT 13  
MOET CON UNIT 13  
STAIRS LEVELS 5  
STAIRS LEVELS 6  
ADDRESS: 12 ROADEN RD  
DATE: 4/11/18



### LEGEND

100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system
100	Water supply system	100	Water supply system

