



**Urban Pattern and Architecture of
Traditional Omani Foothill Settlements:
al-Ḥamrā and Birkat al-Mawz**

by

Haitham Najeem Sulaiman Al-ʿAbrī

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*In the name of Allah,
The Compassionate, the Merciful,
Praise be to Allah, Lord of the Universe,
and Peace and Prayers be upon
His Final Prophet and Messenger*

To the source of Courage & Love in my life:

My source of wisdom and role model in life, my father, the great man who taught me the deep meaning of patience, success and achievement in life

My Lovely mother who taught me how to appreciate knowledge, life and work with love

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Haitham Najeem Sulaiman Al-Abri

Abstract:

Outside of Yemen, Oman arguably contains the most significant, active vernacular heritage within the Arabian Peninsula. While some research exists on settlement pattern and architecture of large settlements on the plains (e.g., Manah, Nizwa, Bahla World Heritage Site and ʿIbra), little research has taken place on the nature of Omani foothill settlements. The thesis makes an important contribution to Oman studies by addressing this gap through the study of the urban pattern and architecture of two vernacular foothill settlements – Ḥarāt al-Ḥamrā and Ḥarāt as-Saybānī in Birkat al-Mawz in the Dākhliya (Interior) region of central Oman. The two oasis towns evolved during the Yaʿariba Imamate (mid-17th century CE onwards) and served the purpose of harnessing the tribal support of two important groups in the process of consolidation – the ʿAbriyīn and the Banī Riyām. This thesis argues that the two settlements – new towns by Omani standards – were unique additions to Omani settlement hierarchy, introducing a new category in between the larger settlements of the plains and the small, dispersed settlement pattern of the Oman Mountains. The settlements have been studied by analysing their morphology, or how they were established and evolved over time shaped by the key factors of topography, geology and tribal movement. The thesis extends the discussion by demonstrating how such factors also contributed to the development of dwellings types, distinct in their form and spatial organization. This is accomplished through an interdisciplinary approach to the survey, documentation, analysis and interpretation of the settlements’ morphology.

The research has focused on two principal factors of settlement formation: the physical influence of topography and geology, and the social influence of the evolving tribal pattern. Moving from the regional scale to the local, the topographic aspects identify the wider factors, as well as the more immediate impact of the incline and the

distinctive rock structure on urban pattern. The steeper incline and sudden shifts at Ḥarāt as-Saybānī in Birkat al-Mawz had impacted on the irregular street pattern and dwelling cluster formation. At Ḥarāt al-Ḥamrā, however, the relatively gentle slope had resulted in a more legible order of larger dwelling clusters and wider – more orthogonal – street pattern. Here, the comparatively large open spaces act for the wider community, while at Ḥarāt as-Saybānī communal space is more semi-private and distributive in nature.

The social history aspect discussed the revival of the ʿAbriyīn and the Banī Riyām tribes; both these significant political transformations took place under the Yaʿariba Imamate and were actively supported by them to ensure control over the mountain hinterland. The coalescing of the ʿAbriyīn tribe and the establishment of their own tribal capital (*dar*) at al-Ḥamrā was distinctive from the creation of the Banī Riyām tribal confederation, which established their capital at Tanuf. Birkat al-Mawz, for the Banī Riyām, was important, where the Yaʿariba Imamate had co-invested heavily in agricultural infrastructure – but it was *not* their capital. The confederated nature and gradual migration of groups had evidently affected Birkat al-Mawz; in contrast, al-Ḥamrā evolved more cohesively. The dwellings at al-Ḥamrā accommodated the topographic shift by introducing loftier ground floor spaces, which often accommodated a mezzanine level, adding to their grandeur. In Birkat al-Mawz the sharp shifts resulted in numerous split-levels and stretched out dwellings.

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DECLARATION

I hereby declare that no portion of the work that appears in this study has been used in support of an application of another degree in qualification to this or any other university or institutions of learning. I also declare that the work in this thesis was carried out in accordance with the regulations of Nottingham Trent University.

Signed:

Date:

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Glossary of Abbreviations

ADGD	Centre for Architecture, Design and Global Difference
ARCHIAM	Centre for the Study of Architecture and Cultural Heritage of India, Arabia and the Maghreb
DEM	Digital Elevation Model
GIS	Geographic Information System
HMP	Heritage Management Plan
JOS	Journal of Oman Studies
MHC	Ministry of Heritage and Culture, Oman
MRMWR	Ministry of Regional Municipalities and Water Resource, Oman
MOT	Ministry of Tourism, Oman
NRAA	National Records and Archive Authority, Oman
NSA	National Survey Authority
NTU	Nottingham Trent University
PEC	Pre-Existing Concept
PACI	Public Authority for Craft Industry, Oman
PSAS	Proceeding of the Seminar for Arabian Studies
RP	Reference Point
UNESCO	United Nations Educational, Scientific and Cultural Organization
cm	Centimetres
km	Kilometres
km ²	Kilometres square (Area unit)
m	Meter
mamsl	Meters Above (mean) Sea Level

Abbreviations used in names, places and maps

A.	أبو	Abu (the father of)
b.	بن	bin (the son of)
B.	بني	Banī (sons of a tribe)
H.	حارة	Ḥāra(t) (tribal quarter of)

Translation of Arabic Words

All words and phrases from Arabic written in non-Roman alphabets will be transliterated according to the system set as follows:

ā	ا	ẓ	ظ
b	ب	‘	ع
t	ت	gh	غ
th	ث	f	ف
j	ج	q	ق
ḥ	ح	k	ك
kh	خ	l	ل
d	د	m	م
dh	ذ	n	ن
r	ر	w	و
z	ز	h	ه
s	س	y	ي
sh	ش	ū	ؤ
ṣ	ص	ī	ي
ḍ	ض	aw	ؤ
ṭ	ط	ay	ي

Glossary of Arabic Terms

Local Term	Arabic	Meaning
Ad'Dakhliya	الداخلية	The interior region of Oman.
Aflāj	أفلاج	(pl. <i>falaj</i>) Traditional Omani water channel system that supplies the traditional settlements with water for domestic and agriculture use.
ʿAini <i>falaj</i>	فلج عيني	A spring type <i>falaj</i> which is sourced from a spring (ʿain).
ʿAlim	عالم	(pl. <i>ʿulama</i>) People known for their deep knowledge in Islamic jurisprudence.
Alʿalī	العالی	The upper part or area, referred mostly to a passage, <i>falaj</i> channel, extended settlement or structure name.
ʿAqid	عقد	The pointed arch and also referred to the storage space under the stairs in the dwelling.
ʿArsha	عرشة	The open living or family space between the rooms in the upper floor in the dwelling.
Asāfil	السافل	The lower part or area, referred mostly to a passage, <i>falaj</i> channel, extended settlement or structure name.
'Ayn	عين	Natural water spring.
Bāb	باب	The door.
Baīt	بيت	Dwelling, also locally known to indicate big dwellings in the settlement.
Burj	برج	Tower, known for watch towers or defensive towers.
Dāūdī <i>falaj</i>	فلج داوودي	A mouther-well <i>qanāt-falaj</i> type that is dug by the settlement inhabitants.
Daʿan	دعن	The palm tree branch matters used for drying dates and ceiling construction.
Dahrīz	دهريز	The lobby space and space leading to storage rooms in the ground floor of the dwelling.
Darss	درس	Animal pin in the lower level in the dwelling.

Eid	عيد	An important religious festive day celebrated by Muslims after the Holy month of Ramadan and the 10th day of <i>Thu al-Hijjah</i> .
Falaj	فلج	(pl., <i>aflāj</i>) The traditional irrigation system of water flow throw over ground and underground channel networks.
Fowq	فوق	Up, located in upper level.
Furḍa	فرضة	Communal bathing and ablution structure for males. It can be found inside or outside the mosque.
Gharbī	غربي	Western, located west.
Ghailī falaj	فلج غيلي	A falaj type that is sources from diverted water of the wadī (<i>ghail</i>).
Ghurfa	غرفة	Sleeping room in the upper floor of the dwelling.
Ḥuṣin	حصن	Fort, fortified area.
Imam	امام	The leader of central government authority and of the Ibadi community.
Jahla	جحلة	Clay pot water cooler used for drinking in the dwelling and mosque.
Jidh'a	جذع	The palm tree trunk used for ceiling construction.
Māll	مال	The orchard date palm gardens.
Masjid	مسجد	Mosque ,place of worship.
Miṣbah	مصباح	Window of the dwelling.
Mirzab	مرزاب	Water spout from roof.
Mujaza	مجازة	Female communal bathing structure with a prayer room inside.
Muqāmrah	مقامرة	The room in the mezzanine level, between floor levels.
Mqīḍha	مقيضة	The small dwelling in the orchard date palm gardens.
Mrāq	مراق	Small narrow opining in a wall.
Muṣala	مصلی	Prayer area smaller than a mosque.
Muṭbakh	مطبخ	Kitchen, the cooking space in the dwelling.

Mutrab	مترب	Latrine, traditional toilet.
Nazḍ	نضد	Date storage room in the ground level of the dwelling.
Nuqṣa	نقصة	(pl., <i>naqaṣ</i>) column.
Qunṭra	قنطرة	Any cover over the <i>falaj</i> to provide access to both sides.
Rwzna	روزنة	The niches in the wall.
Rashīd	رشيّد	The leader of family groups within the tribe.
Rufṣah	رفصة	One riser step up.
Sabaḥ	صباح	Gate with a room on top used for male meetings or watching the movement inside and out the settlement.
Sabla	سبلة	(pl., <i>sbal</i>) Social meeting place for males, can be private for one tribe or communal for mixed tribes.
Salat	صلاة	One of five daily prayers.
Shrī'a	شريعة	The local name of the first appeared flow location of the <i>falaj</i> channel, the place for collecting drinking water.
Sharqī	شرقي	Eastern, located east.
Sheikh	شيخ	Tribal leader.
Sidra	سدرة	A type of tree in Oman known to grow in wādīs.
Sikah	سكة	Passage, lane or route.
Sīqaya	سيقية	The channel of the <i>falaj</i> .
Ṣorja	صورجة	The storage room in the dwelling.
Sraj	سراج	Single niche in the wall.
Sufah	صفة	The storage room in the dwelling.
Souq	سوق	The traditional market for trading exchange which can refer to a structure or open area known locally.
Suṭḥ	سطح	The roof in the dwelling.
Tamimah	تميمة	Principal <i>sheikh</i> of a tribal grouping.
Tanowr	تنور	The deep fire hole in the ground used to cook traditional meat in festive occasions.
Tawi	طوي	Water well.

Wādī	وادي	<i>Dry Rivers</i> which discharge storm rain water from the mountains to the lower flat lands.
Wakil (<i>wakil al-falaj</i>).	وكيل	Islamic agent, administrating <i>falaj</i> affairs
Waqf	وقف	Islamic mortmain for charitable purposes.
Wilayat	ولاية	Administrative region.
Qal'a	قلعة	Castle or fort
Burj	برج	Tower
Ḥarah	حارة	Ḥāra(t) (tribal quarter of)
Siyab	سيب	Small stone structures

Chapter-1: Research Introduction

1.1: Introduction

1.2: Rationale

1.3: Methodology

1.4: Research Development

1.5: Literature and Supporting considered disciplines



Chapter-1: Research Introduction

1.1: Introduction

The richness of the traditional built environment of Oman¹ is presented by the diversity and spread of defensive structures - castles, forts and watchtowers - and traditional settlement quarters (Figure-1). The distinguished character of the Omani heritage has generated a research gravity for many scholars over the past four decades within their discipline especially archaeology, history, anthropology, social studies, hydrology, agriculture and architecture. Much of this research was undertaken independently or funded by the Ministry of Heritage and Culture (MHC), especially in the field of archaeology. It also attracted international organisations of the United Nations Educational, Scientific and Cultural Organization (UNESCO), which inscribed *aflāj*², forts³ and archaeological sites⁴ on the world heritage site list. Much of that work has been published in the Journal of Oman Studies (*JOS*)⁵ by MHC, but sadly, most of the work was contributing to archaeology or as governmental reports.

In the last few years, the growth of urban development and neglect of the settlement's previous inhabitants has increased the threat of losing these traditional settlements

¹ Oman, officially known as the Sultanate of Oman, is an Arabian Islamic country located in the southwest of the continent of Asia, on the southeast coast of the Arabian Peninsula facing the Indian Ocean.

² In 2006 the UNESCO listed *falāj* Daris in Nizwa, *falāj* al-khatmīn in Birkat al-Mawz, *falāj* al-Malki in Izkī, *falāj* al-Mayassar in Rustāk and *falāj* al-Jeela in Sur in the world heritage site (MRMWR, 2008, p. 10). These *aflāj* were listed on the basis of; (a) being the oldest water channels with significant engineering technique, (b) gave rise to ancient human settlements; (c) contributed in establishing cohesive system of social solidarity and water managements in shares and distribution.

³ In 1987 the UNESCO listed Bahla fort as a world heritage site, which was later extended to include the entire oasis as a socio-economic and cultural entity.

⁴ In 1988 the UNESCO listed the archaeological sites of Bat, al-Khutm and al-Ayn in the world heritage list.

⁵ The journal was established and has been managed by MHC since 1974 to publish in Arabic and English research on Oman's heritage, culture, history, archaeology and traditional architecture in particular and historical and cultural studies on the Arabian Peninsula, Middle East, Asia and Africa, in general.

altogether, which today mostly lie deserted and at least in partial ruins. These threats alongside the increase in tourist visits, has driven the MHC to give particular attention to traditional settlements. They started first by conducting statistical surveys of all traditional settlements and categorising them with respect to their historical importance in each region. Following this the documentation and production of a heritage management plan was awarded to the centre for the study of Architecture and Cultural Heritage of India, Arabia and the Maghreb (ArCHIAM)⁶ at Nottingham Trent University (NTU).

Although the MHC is trying to document and preserve or conserve the settlements in accordance with their priority list, capacity and limitations, the long-term vision is somewhat unclear in relation to how best these settlements should be preserved physically, historically, culturally and economically. It is important that there is the much-needed production of knowledge from these traditional settlements and its contribution to future research, education and design practice in Oman and worldwide.

“Traditional dwellings and settlements are the built expression of a heritage that continues to be transmitted from one generation to another”
(Bourdier, 1989, p.5).

The key to studying traditional settlements is to understand the way they formed and evolved in terms of urban morphology and architecture. Although some work has been

⁶ The research group focuses on the humanities based study of architecture, material culture and the built environment within a fast evolving context of simultaneous globalisation and heightened awareness of difference. It also understands the practice of design as essentially a discipline of negotiation and dialogue between the wide spectrum of theoretical, social, cultural, political, practical and technological concerns and determinants (www.archiam-centre.com).

done - Manah⁷, Ibrā'⁸, Muḏayrib⁹, Nizwa and Bahla to name some of these – which have been limited in scope in that these focus mainly on large oasis settlements on the plains of interior Oman but also pay uneven attention to urban morphology and dwelling pattern. Hence, this research aims to investigate the morphology and dwelling types of the foothill settlements of al-Ḥamrā and Birkat al-Mawz in inner Oman (Figure-2).

⁷ Soumyen Bandyopadhyay in 1998 studied Manah as part of his PhD dissertation in terms of its architecture, archaeology and social history, later published in 2011 as *Manah: an Omani Oasis, an Arabian Legacy, Architecture and Social History of an Omani Settlement*.

⁸ Ibrā' in the Sharqiyah Region has been studied fairly thoroughly by Colette Le Cour Grandmasion in terms of its setting (Bonnenfand, 1977, pp. 91-94), and the special organisation, tribal groupings and Kingship (Le Cour-Grandmasion, 1977, pp. 95-106).

⁹ Muḏayrib in the Sharqiyah Region has been studied in terms of its setting by Paul Bonnenfant and Colette Le Cour-Grandmasion (Bonnenfand, 1977, pp. 91-94), and its architecture and social History by Paul and Guillemette Bonnenfant and Salim b.Ḥamad al-Ḥarthī (Bonnenfand, 1977, pp. 107-136).



Figure 1: The Sultanate of Oman (Nations, 2004).

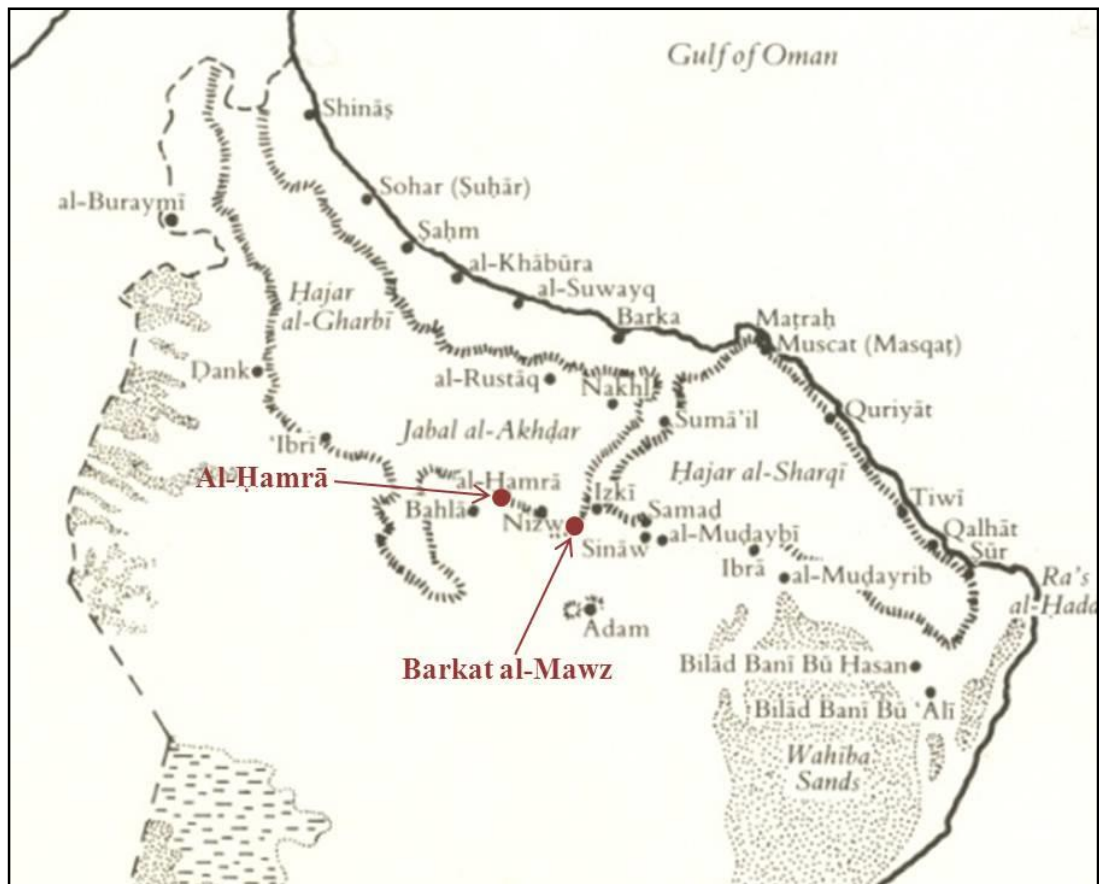


Figure 2: Settlement locations of al-Ḥamrā and Birkat al-Mawz.

Statement of the Problem

The JOS publications have contributed knowledge in the different disciplines; have concentrated on the archaeology – Umm an-Nar settlements (3rd millennium B.C.) for example, and some inner oasis and coastal settlement quarters. There, however, is often a lack of a holistic approach to settlement analysis. Moreover, they suffer the problem of generalization and are fundamentally descriptive works. The closest to a detailed analysis was those of Grandmason (1977) in Ibrā' and Bandyopadhyay (2011) in Manaḥ. Following extensive research on traditional Omani built environments; Bandyopadhyay acknowledged the problematic aspects of synthesis and interpretation in that field and emphasized that:

“... The key reason for the study of the built environment is to pursue and develop historical knowledge ... and to theorise on the relationship between people, their society, and their material culture and that analysis and speculative interpretation is a key to unlocking that knowledge ... for a contextual interpretation as an important means of historical investigation into meaning and knowledge production. Context can indeed be of temporal, spatial, environmental, physical, social, cultural, political, behavioural, disciplinary or textual nature – with their differing, often overlapping, scales of operation ...”
(Bandyopadhyay, 2002, p.16).

The problem is that there has been no clear contribution in understanding the traditional settlements through addressing the strong bond between people and people, people and environment, people and buildings, and buildings and environment. This, I contend, can only be achieved through addressing the urban morphology and dwelling types. Addressing these two aspects will contribute to providing a holistic

understanding to traditional settlements and establish ways of achieving continuity between traditional and contemporary architecture. In doing so, it will attempt to investigate the foothill settlements by acknowledging all contributing factors. This in turn is intended to develop a fuller analytical and theoretical construction of settlement morphology and dwellings typology in central Oman.

Research aims

The key research aims are to understand:

- The distinctive characteristics of foothill settlements in relation to other settlement types.
- How the inhabitants adapted to the ambient natural environment, especially the topography.
- The impact of the tribe's revival and unity to the settlement's social organisation and solidarity.
- How the dwelling types reflect a distinctive identity in relation to other settlements.

Research Questions

To fill the gap in research on traditional settlements quarters, this investigation will focus on the two aforementioned foothill settlements to understand their formation both at settlement and dwelling levels. To accomplish this, the key questions could be established at two levels, relating to settlement morphology and dwelling types:

- **Q1: Settlement's morphology: What factors contributed to the formation of the foothill settlements?**

What made these sites available? What factors influenced the urban pattern of the two settlements and how did the inhabitants adapt and shape them? How did topography and the urban fabric contribute to the scale of the dwelling clusters and the variety of

dwelling forms? Was there a defined structure or organisation in its pattern? Did the settlements clarify a sense of core and edge? How did communal institutions (e.g., mosque, *sablah*, gates, the Qur'an school, public bathing areas and the *sug*) contribute to their ordering?

Although Bandyopadhyay addressed the setting and townscape of Harāt al-Bilād in Manah, he did not address what made the site available. Additionally, he defined the natural geographic external edge but did not explain their influence on the morphology (Bandyopadhyay 2011). His morphological hypothesis - gradual transformation of successive settlements edges - addressed its evolution as blocks giving rise to street hierarchy resulting from accessibility of the blocks, but did not define, for example, how they relate to each other, their diversity in scale and the detailed evolution of individual blocks.

In Al-^cAqr in Nizwa, Bandyopadhyay's morphological hypothesis – street extension with linear structures – addressed its evolution starting from an assumed core around Masjid ash-Shawadhnia (an ancient mosque) and in relation to the Nizwa fort but did not explain why and how the factors influenced its linear formation. In Bahla, he argues that its ring form clustered around a hillock occupied by the fort and the great mosque was driven by the expansion of back-to-back dwellings to form a lozenge-like shape with arced peripheral streets culminating in small squares. Although this might explain its form, it does not fully address the location selection of the core settlement (Al-^cAqr) and the relation between the *falāj* network and successive expansions (Bandyopadhyay 2005).

In the case of Ibrā', Grandmason argues that terrain and water resources have more influence on the distribution of people and the organization of their activities. He states that *falāj*, security and social organization are the main structural factors affecting the

spatial organization of the oasis. Although he studied the land area, its structure, the population, organization of inhabited areas, the neighbourhoods and the structural elements that shaped them, it did not address their interrelation and their contribution to the settlement's morphology (Grandmasion 1977).

In the above cases of Manah, Nizwa, Bahla and Ibrā', though some valuable work has been done, the issue of historical morphology has been given uneven attention. The present research builds on their work as useful secondary material and approach the main settlement of āl-Hamrā oasis with a holistic and detailed analysis.

▪ **Q2: Dwellings: How did the settlement's morphology contribute to the dwelling types, forms and space organisation?**

Did the space organisation in the dwellings vary with respect to its location within the settlement as a whole and the cluster block in specific? Did the social and socio-political status contribute to the dwelling location, scale, form and architectural feature? How did different dwelling types respond to challenging climatic, environmental and topographic features and convey social and cultural ideas at the same time? How did the dwellings relate to the communal institutions?

Bandyopadhyay's discussion on Manah also covered the dwelling types based on the study of resident tribal groups, followed by a later discussion on their typology through space organization driven by the deconstructed courtyard concept. However, he did not explain how space organization and dwelling location contribute to their form. Additionally, he did not explain how continuous dwelling influence each other's formation (Bandyopadhyay, 2011).

In Mudayrib Grandmasion describes the dwellings to have the concept of courtyard – often known as the 'Arab-style' - to assure privacy. He addressed the concept as being constituted of an interior courtyard surrounded on one or more sides by a covered

gallery decorated with archways to which several rooms open. Although the work addressed the basic concept of space organization, it did not explain how this concept negotiated with change in location and other factors to introduce other forms and types (Grandmasion 1977).

To the north of the Bātina coast, in Şuhār, Kervran describes the traditional Şuhāri houses oriented to the north-east, facing the sea, with a rectangular form core, the *hawsh* (courtyard) and enclosed by rooms on one or two sides. He adds, that the *liwān* – open arched gallery enclosed from three sides – attached to private living quarters are always facing the entrance on the west side (Kervran 1976). Although Kervran addressed the main principle of form and space organization, she did not explain how it evolves with change in location and its relation to other houses.

In the south at Zafār, Costa addressed the dwelling types based on each settlement's dwelling space organization concept. In Mirbāt, he describes starting with a walled forecourt in front and the *shamsiyah* (i.e., light and ventilation shaft) to be the core of the house and rooms clustered around it in the first level while the storage in the lower. In Salālah in al-Hāfah quarter, describes them to be similar to Mirbāt dwellings without a forecourt in front and the core is *mahādhara* (i.e., one of the main focuses and living room in the dwelling). Although Costa addressed space organization in each type based on climatic factors, but, didn't consider social and morphological influences.

From the above dwelling types studies of Manah, Mudayrib, Şuhār, Mirbāt and Salālah, it seems that there is a lack of considering the topography challenge, how people engage with space and how dwelling relate to each other in specific and in the settlement as a whole. Hence, this investigation will build up on their studies as second hand data and will also study all dwellings typology (scale, form, individual, cluster blocks and space organisation) that evolved in relation to the settlement's morphology.

Research Objectives:

- To document the traditional foothill settlements from a historical, social and architectural perspective, and study how they interrelated.
- To study the social, geographical and political pre-settling factors that contributed in the settlement's formation.
- To analyse the cohesive relation between geography, setting and topography.
- To highlight the political influence of the Yaʿrubah Imamate (17th century) in the settlement's development and social organisation of the tribes.
- To analyse the influence of topography and geology on the formation of the urban fabric and dwelling clusters.
- To analyse the dwellings regarding their space organisation and location and its relation to other structures.

1.2: Rationale

Rationale of studying traditional settlements

According to the first phase of the settlement survey undertaken in 2009 by MHC, there were over 800 traditional settlements in Oman, of which 32.9% were located in the Dakhliya (Interior) region. These settlements also vary according to their geographical location: 43% were on the plains, 37% in the foothill areas, 14% in the mountains and 2% on wadī (seasonal river) beds. Within these settlements, MHC assesses that 50% were made of mud bricks, 24% of stone and 26% were made of a composite stone and mud-brick construction. These statistics indicate the richness and diversity of types of traditional settlements in Oman that has remained till the present day. When visiting these settlements, looking at its structures, walking through its

empty passages and entering its deserted dwellings, one realises that the remains of material culture and the formation of the settlements have a long story to tell. Looking into how the *falaj* channels penetrate the settlements and how the palm groves integrate with life in the settlements, one realises the bigger context of the idea of ‘dwelling’. It is the story of the sacred relationship between people and people, between people and buildings, and between building and the environment – one that reveals the significance of these settlements and the formation over time of their identity. The morphological content reveals the social unity and solidarity reflecting a sustainable way of living driven by continuity.

Rationale of Choosing Foothill settlements

Over the last four decades many research publications and scholars from various disciplines have conducted research on traditional settlements addressing their history, anthropology, archaeology, agriculture, socio-cultural, socio-political, architecture and urban pattern. Most of these studies have focused on discipline-specific studies of the coastal (e.g. Baṭinah region oases) or inner oasis settlements (e.g., Nizwa, Maṇḥ, Bahla & Izkī)¹⁰ addressing each discipline individually. However, the foothill settlements, which, as mentioned above, although cover 37% of the total types of traditional settlements in north Oman due to long stretch of the Ḥajar Mountains, have been neglected in research. The foothill settlements are striking in their amazing physical containment which embrace the mountains, and in turn are embraced by the palm groves and *falaj* channels. The whole context is like a dawn of life shedding

¹⁰ These settlements were considered the oldest in the Dakhliya region (*Jawf*) and were the Islamic and capital centre for the Imamate in their time which may indicate the reason for attracting scholars. For example, the oasis of Bahla was the capital of the Nabāhina Imamate in the 15th and 16th century, which was known as the Dark Age in Oman history. Nizwa was the capital and Islamic centre during the Yaʿrubah Imamate, known as the golden age, starting from Imam Nasir b. Murshid 1624-1629 AD.

layers of sky, mountain, settlement, people, water, and palm grove in a perfect poetic picture of life. They are clearly significant in their setting and formation from the walled inner oasis settlements reflecting efficiency in investing the land with limited built space and resources resulting in uniqueness in their patterns, both social and physical. The study of foothill settlements will contribute in understanding (a) the geographical setting and topographic challenge, (b) design solution emerging from topography challenge and resource limitations, (c) the inhabitants' interaction with, perception of and reaction to the environment, (d) their urban and architectural characteristics, (e) the morphology in comparison to other settlements types (e.g. Nizwa, Manah, Bahla & Izkī).

Rationale of Selecting Case Studies

Ḥārat al-Ḥamrā – currently known as Ḥārat al-Wiṣṭā¹¹ – in al-Ḥamrā oasis is chosen as the main case study with Ḥārat as-Saybānī in Birkat al-Mawz oasis as the comparative settlement, both in the Dakhliya region. The two traditional foothill settlement quarters were established in the mid-seventeenth century – during the Yaʿaribah Imamate period of Sultan b. Saif (1649-80 AD) – both located on hills overlooking the palm gardens and surrounded by watchtowers on the surrounding hills. They are both located at the foot of the two most important mountains in the ad-Dhāliyah (also known in earlier times as the Jawf) region: al-Ḥamrā by Jabal Shams and Birkat al-Mawz by Jabal al-Akhḍar. Their strategic location indicates their importance geographically and politically for the resident tribes who emerged as strong groupings in the seventeenth century and the Imamate of the time. Al-Ḥamrā is 17 km north of Bahla while Birkat al-Mawz is located equidistant between Nizwa in

¹¹ It was known as Ḥārat al-Ḥamrā but after the extension of the ḥārat from east by Ḥārat as-Sharquiyaḥ, west by Ḥārat al-ʿAlī and north by Ḥārat al-Ḥaditha, it became known as Ḥārat al-Wiṣṭā.

the west and Izkī in the east (Figure-3). The close proximity of al-Ḥamrā and Birkat al-Mawz from the aforementioned older and larger settlements is also evidence of their political and geographical importance.

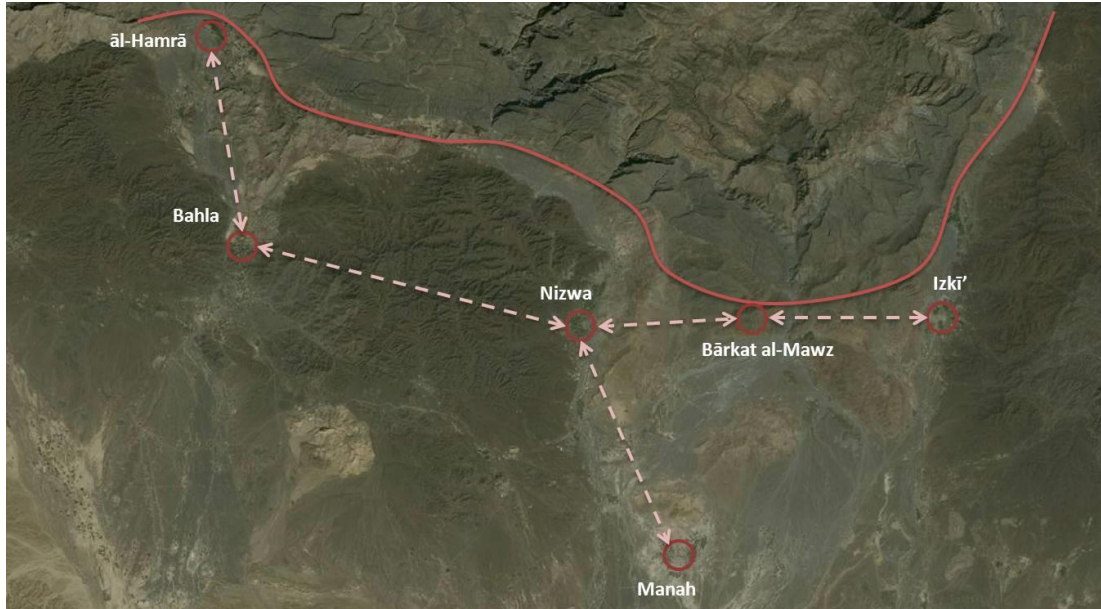


Figure 3: The location of foothill settlements of al-Ḥamrā and Birkat al-Mawz in the Jawf region with respect to the surrounding oasis settlements.

However, there are also a number of differences. Ḥārat al-Wiṣṭā is inhabited by the ʿAbriyīn tribe, while as-Saybānī by mainly the mixed tribes of Banī Riyām confederation with a small ʿAbriyīn presence. The street network is more complex in al-Wiṣṭā, although the scale of the dwelling clusters is larger in as-Saybānī. The latter evolved at the same location while in as-Saybānī the expansion created a number of satellite settlements, the more prominent ones being Ḥārat al-Wādī and Ḥārat al-Makasir. Al-Wiṣṭā has one *falaj* channel passing through it (*siqyat* al-Bilād / *falaj* al-Ḥamrā) while as-Saybānī has two (*siqyat* al-ʿAlī and as-Sāfil¹² / *falaj* al-Khaṭmeen). The top edge of al-Wiṣṭā is marked by two towers with an approximately straight street leading through the built up area while as-Saybānī is marked with one tower at the apex of the hill. Al-ʿAbriyīn were scattered in Rustāq, ʿIbrī, Nizwa and Shinas and

¹² *Siqyat* al-ʿAlī means the upper channel and as-Sāfil meaning the lower channel in respect to topographic levels.

some came from the Jabal Shams Mountain before settling in al-Ḥamrā; the latter were the main supporters and allies of the Ya'ariba who settled in Birkat al-Mawz. Most of the tribes in as-Saybānī came from Jabal al-Akhḍar Mountains, and from Izkī and Nizwa.

The table below summarizes the differences and similarities between the two settlements:

Settlement	Ḥārat Al-Wiṣṭā	Ḥārat as-Saybānī
Location	āl-Ḥamrā	Birkāt Al-Mawz
Settlement type	Foothill	Foothill
Dwellings	140	65
Gates	4	4
Towers	10: 2 in the settlement and 8 surrounding	8: 1 in the settlement and 7 surrounding
Mosques	4	1
Extended settlements	3 (Al [°] Alī, Al-Ḥadītha & As-Sharqiya)	2 (Maqaseer and Al-Wādī)
Falaj	(<i>falāj</i> al-Ḥamrā) : 2 channels, Al-Bilād and Asseḥmah	(<i>falāj</i> Al-khatmain): 2 channels, al- [°] Alī (upper) and as-Sāfil (lower)
Tribes	Main: [°] Abriyīn Others: Khatrī – Ḥaṭālī – Nā [°] abī – Sharmahī – Dhulī – [°] Azizī – Ya [°] rubī – Nāṣrī – Riyāmī – Shukrī - Bimanī	Main: Banī Riyām Others: Ṣaqrī – Fahdī – Tobī – Siyabī – [°] Abrī – Na [°] abī – Ḥaḍramī - Shariqī
Importance	Gateway to Jabal Shams and main settlement for Abriyin	Gateway to Jabal Al-Akhdar and main settlement for Bani Riyam and Ya'rbi Imam in Bait Al-Ridadh
Wādīs	3: wādī Ghul, wādī Milh and wādī Al-Muaidin	1: wādī al-Mid'am
Main Enemies	Bani Hinah	Bani Rawaha
Allais	Bani Ghafir and Bani Jabir	All sub-tribes under Banī Riyām

Table 1: summary of comparison between Ḥārat Al-Wiṣṭā and Ḥārat As-Saybani

Rationale of Selecting Other Compared Cases:

Throughout the literature review, analysis and discussion of the research, former and on-going settlement research, documentation projects and studies will be

acknowledged as supportive and comparative case studies and as secondary material to build up an empirical understanding of settlement morphology and architecture in central Oman. The considered work is of Bandyopadhyay in Ḥārat al-Bilād in Manah and al-ʿAqr in Nizwa (Bandyopadhyay, 2011), and the Ibrāʾ and Mudayrib study by Grandmason in 1977. Additionally, the HMP projects by ArCHIAM research centre on Ḥārat al-ʿAqr in Bahla, Ḥārat al-Yemen in Izkīʾ, Ḥārat As-Sulaif in ʿIbrī and Ḥārat al-Hujra in Bidbid / Fanjā, all undertaken in 2012-13 will also be referred to (Plate.3).

These selected settlements share in common their walled nature, yet they vary in their geographical location, their political influence, their structure and the tribal mosaic. The comparison with their morphological content and formation factors will contribute towards a better understanding of how diverse influences have shaped the foothill settlements, both socially and physically. The geographical location, topography and tribal mosaic and power dynamics are key influences in shaping the foothills. The oasis settlements selected for comparison are politically important in the sense of being Islamic centres of learning and the capital of the Imamate (e.g. Bahla and Nizwa). They are also unique in their pattern with other important formatory influences of the mixed tribe mosaic, the Friday or Great Mosque and the fort (i.e. Bahla, Nizwa and Manah).



a.



b.



c.



d.

Plate 1: (a) Hārat al-Yemen, Izkī', (b) Hārat al-Bilad, Manah, (c) Hārat Al-'Aqr, Bahla, (d) Hārat al-Ḥujra, Bidbid/Fanjā (aerial photo, courtesy of NSA).

Interdisciplinary study:

The traditional settlements have attracted scholars of geography, archaeology, history, anthropology, social studies, hydrology, agriculture and architecture, who have often tended to work in disciplinary isolation. The importance of these disciplines to the study of traditional settlements is evident through the disciplinary knowledge these bring in; however, the sum is greater than its parts - the many factors not only contribute but interact in shaping the settlement. Kent has highlighted the importance of interdisciplinary research:

“... [i]nterdisciplinary research provides more alternatives with which to view data. Awareness of different disciplines allows one to introduce novel approaches not considered before, to have access to different data base which may enhance a discipline’s pre-existing one, and to avoid mistakes already made and corrected in other disciplines” (Kent, 1990, p. 1).

Bandyopadhyay, likewise, in his research on Ḥārat al-Bilād in Manāḥ in 1998 highlighted the importance of a more holistic approach to integrating other disciplines in the study of traditional Omani settlement:

“... [n]ow a holistic picture can only be painted when the colours are drawn from a palette of all possible related disciplines. There often seems to be a distinct reluctance to do this, especially when the drawing of experiences from such “unscientific” disciplines as mythology and folklore become necessary. This also calls for radically different and much more complex methodology than the “scientific” approach would normally warrant” (Bandyopadhyay, 1998, p. 387).

The contributions from the considered disciplines will develop the supporting evidence base for a better understanding of settlement formation.

1.3: Methodology

Research Method:

To undertake the holistic approach, this author studied three methods: phenomenology, Environment-Behaviour Relations (EBR) and environmental psychology. Seamon and Mugerauer argue that the phenomenology of environment and place examines three major themes: first, the essential quality and interconnections of human environmental experience; secondly, the qualities of environment, such as sound, topography, light, and special qualities, which promote a particular character of place and landscape; thirdly, the extended context of social and symbolic environments fundamental to place (Seamon, 2000, p. 5). Rapoport, in proposing EBR, suggests that an approach should involve analysing a broad body of evidence that provide a large amount of material (Rapoport, 1990, p. 12). He argues that the environment is best conceptualised as the organisation of space, time, meaning, and communication, or, alternatively, as the relation between people and people, people and things, and things and things (*ibid*, p. 11).

“.....the domain must include human behaviour, the relation between the behaviour and the built environment, and the relationship among the components (or elements) of the built environment. Moreover, the latter must go beyond buildings – they need to include systems of setting of which buildings form only a part; they also need to include fixed, semi-fixed, and nonfixed feature elements...”(Rapoport, 1990, p.11).

Environmental psychology, considered by many as a relatively new field of intellectual inquiry, is necessarily a multidisciplinary field of inquiry focused on human behaviour in relation to the physical setting (Proshansky, 1967, p. 7). However, Proshansky also highlights a problem with this method when considering the human behaviour and the physical setting: "... the environmental psychology is confronted with the special problem of deciding which of the various levels of human or social organization should be undertaken to conceptualise the study (*ibid*, p. 8).

This research has considered adapting Seamon and Magerauer, and Rapoport's method in study the notion of place, relation between man and environment, man and built environment, and interpreting them with the urban and architectural analysis in understanding to the urban morphology and dwellings types. This is due to the fact that traditional settlements form in a context of interrelation between man and environment.

The author shall approach the research with the grounded theory (Hunter, 2008, p. 86). This approach asks the researcher not to begin with a theory and not to have any preconceived ideas but allows the theory to emerge (*ibid*, p. 87). The theory will be generated through varying sources, which includes case studies, field observation, interviews, historical records and documents. It is approached in three phases, data collection, data preparation and analysis and theory or concept development. Phase one, data collection, is based on fieldwork conducted in the selected settlements (survey drawings, notes, photos), interviews (recordings, notes, transcripts) and all existing literature and reports. Phase two, data preparation and analysis will be through various methods to be discussed later. Phase three, the generation of the conceptual

theory of the settlement's morphology and dwelling types which will be a result of the analysis and combination of literature, observations, common sense and experience.

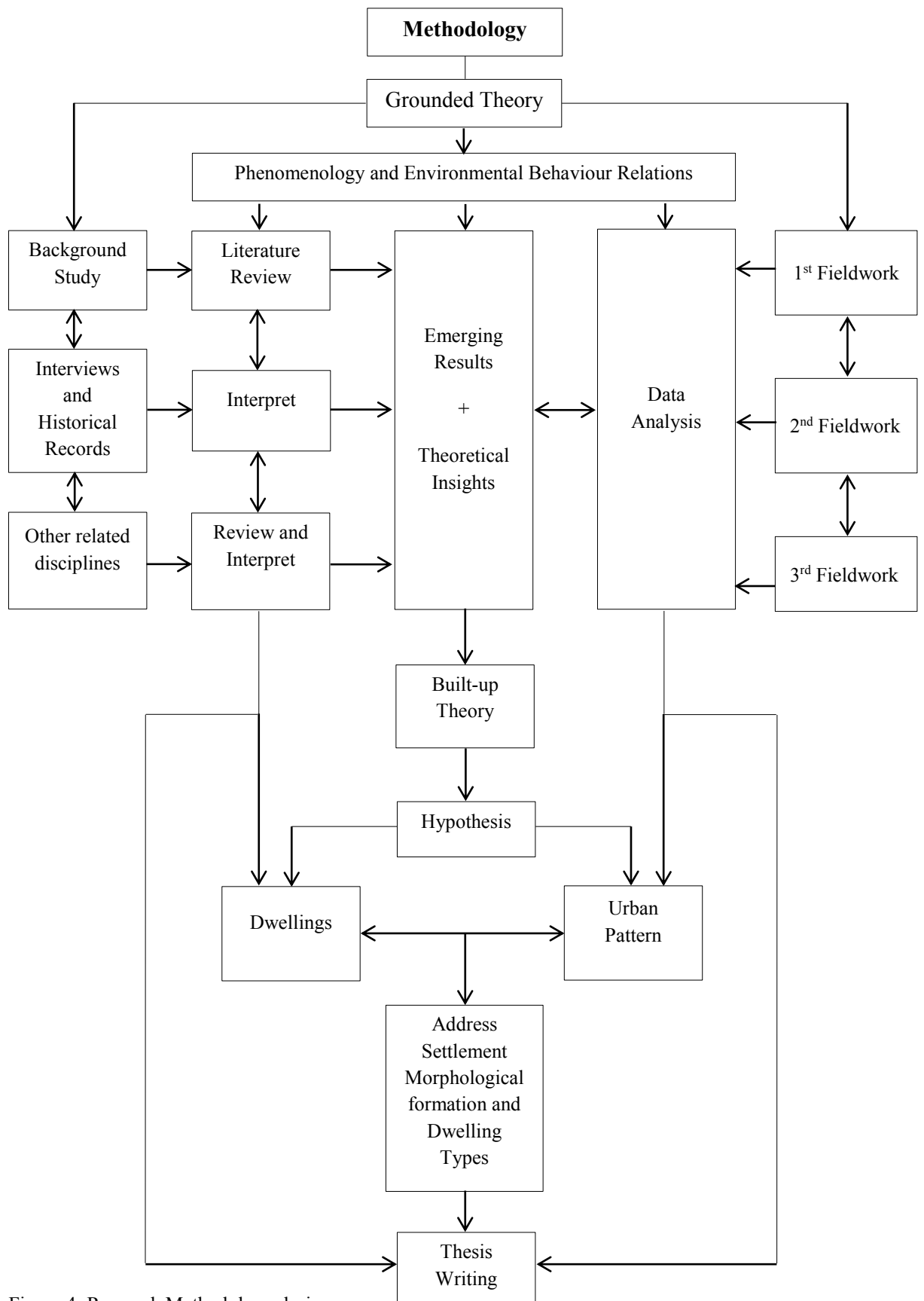


Figure 4: Research Methodology design

Empirical Methodology Adopted:

To achieve these aims, I approached the research employing the grounded theory which has allowed me to collect and investigate a large body of material from diverse disciplines and sources (Hunter, 2008, p. 86). The key method adopted here in relation to traditional settlements is fieldwork data collection. This was collected in phases over a three-year period, the two most comprehensive fieldwork seasons were between November 2010 and March 2011 (Birkat al-Mawz / Ḥarāt as-Saybanī)¹³ – as part of the Nottingham Trent University collaborative research project with MHC to document and produce an HMP on Ḥarāt as-Saybāī, and in 2011 February (al-Ḥamrā / Ḥarāt al-Wiṣṭā). This was followed by another phase of fieldwork in al-Ḥamrā in February 2013 for the completion of any outstanding documentation. Background literature was collected from 2008 onwards and was continually reviewed. The HMP project made it possible to have a full documentation of not only all the structures of Ḥarāt as-Saybāī but the NTU research team managed to document some parts of the constituent ḥarāt of al-Maqaseer and al-Wadī. This was due to the relatively small number of dwellings and other communal and defensive structures (about 65) in as-Saybāī. However, the large scale and number of dwellings and other communal and defensive structures in al-Ḥamrā (over 200) resulted in a more selective documentation.

Revisiting the settlement - Ḥarāt al-Ḥamrā – after being raised in my grandfather's dwelling (may Allah rest his soul in peace) for fieldwork brought back memories. Memories when the settlement was well populated and alive with its social traditions. Being raised in that time, I gained a great deal of experience and perspective to the

¹³ It was an intensive full documentation of Birkat al-Mawz covering the three constituent settlements of Ḥarāt al-Wadī, Ḥarāt al-Maqaseer and mainly on Ḥarāt as-Saybanī. The documentation included the townscape, the layouts of all structure types, photos, tribal information and history of the oasis.

way of life in the settlement. The simplicity reflected the true meaning of settlement in the inhabitants view, and their strong social ties gave me a sense of solidarity and intimate belonging. Their devotion to their livelihood reflected the sacred relation between people and the surrounding environment. This devotion is driven towards the prosperity of their families.

Walking through the silent passages in the deserted settlement triggered these memories back and every element in the settlement echoed a meaning. I can still hear the steps of older inhabitants in the passages, I can smell the aroma of cooking from the dwellings, I can hear the women chatting during their coffee break, and I can hear the auction from the *souq*. I realized with that my fieldwork will be walking with these memories and that I shall ask the settlement once more to share it with me. I spent the first two days walking through the settlements passages, entering random unlocked dwellings, and through the palm groves. In following days, I started to select the dwellings to be documented and arranged to interview some of the previous inhabitants.

To ensure getting the most reliable and historic tradition, I arranged to interview Shaikh Jaber b.Mohammed Al-^cAbrī – owner of Bait as-Şafah and known for his significant historic knowledge. I also interviewed Hilal b.Shikhan Al-^cAbrī – the last remaining master builder and the current *falaj wakil* – who contributed by identifying the owners of most of the dwellings and the *falaj* management system. Shaikh Abdullah b.Mohammed Al-^cAbrī – one of the last known religious scholars of his generation and Imam of al-Ḥadith mosque – who also contributed with great insight on the settlement's history. S^coud b.Sulaiman Al-^cAbrī – the producer of traditional vinegar for the settlement – also shared experiences of his life in the settlement. I have

also interviewed Shaikh Mohammed Al-Subḥī – the *rashid* of Banī Subḥ – who contributed in giving a wider historic record of the oasis. All these interviews were recorded on videos, and voice recorders and by taking notes.

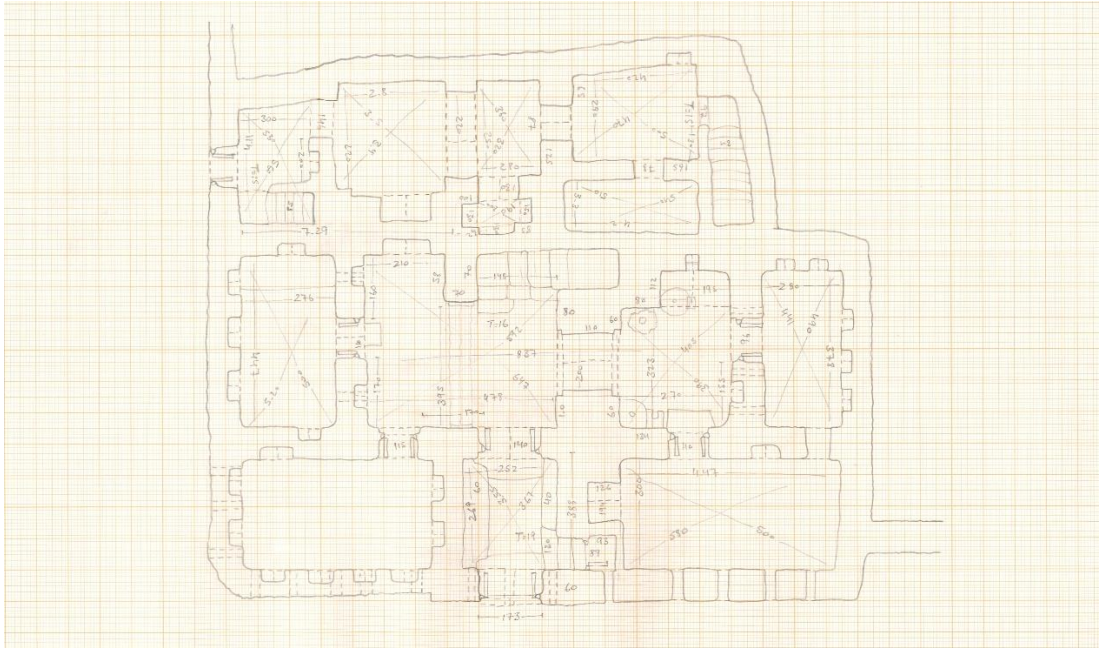
Due to the fact that I had to conduct the fieldwork in al-Ḥamrā alone, I had to seek my cousin's assistance in taking the measurements. The survey of the selected dwellings was divided, with sketches followed by photographs taken from morning till noon, and measurements taken in the afternoon until sunset. Permission from some of the previous inhabitants had to be taken to unlock and access their dwellings. This process continued for the first two fieldwork visits to al-Ḥamrā. The fieldwork experience in as-Saybānī was different from that of al-Ḥamrā. There was no memory to be revisited which gave the work a more sense of curiosity and pleasure of exploring the unknown. Soon after conducting the interviews with previous as-Saybānī inhabitants, their memory and story of the settlements became our memory, which introduced a new sense of continuity to the settlement's legacy.

The collection of this material would not have been possible without the help of the previous inhabitants of Ḥarāt al-Wiṣṭā – some of whom are sadly no longer alive – who are acknowledged at the beginning of this thesis. The interviewees were unable to identify the erstwhile inhabitants of a small number of dwellings due to many reasons. While the identification of the original inhabitant was certain but the change in ownership and the possibility that the properties might have been sold afterwards made it difficult in these cases. This reason, and the evacuation in the mid-1980s - more than 25 years ago - made the memory fade and owners are long forgotten except for the well-known dwellings.

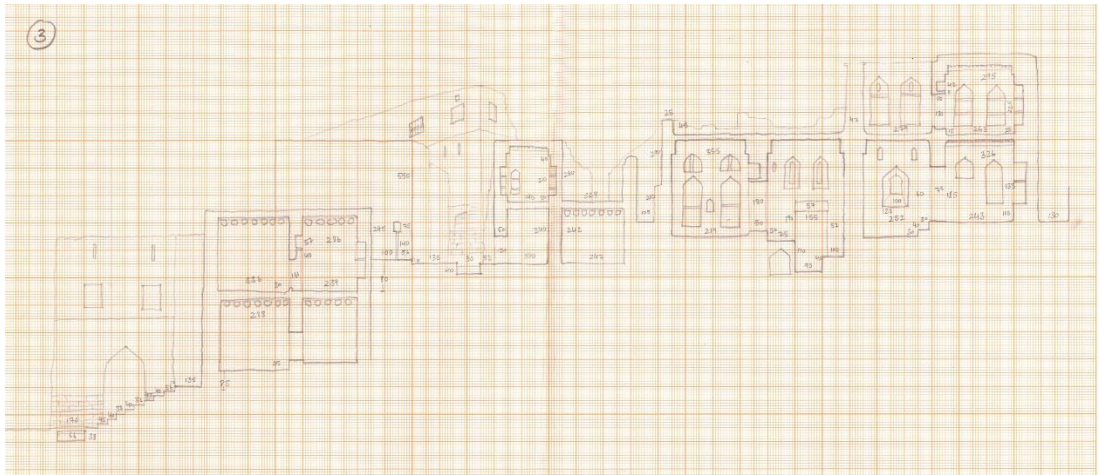
Data Collection Process:

The fieldwork documentation of both settlements consisted of:

- Survey drawings (plans, elevations and sections) of archaeological remains, townscape, defensive and other architectural components, selected dwellings/clusters and architectural features.
- Photographic survey cataloguing urban and architectural spaces and features, and archaeological sites, using digital photography and recorded on separate catalogue.
- Catalogue entry using standard pro-forma, all descriptions cross-referenced with photographs and drawings.
- Interviews with present and previous residents of the settlement to identify tribal and settlement pattern and record oral history. This has contributed in understanding the social and cultural values of all structure types and functions, and addresses the group and tribal organisation (Plate-2).
- Aerial photographs and large-scale topographic maps of the region and oasis, obtained courtesy of National Survey Authority NSA/ ministry of defence MOD, were appropriately enlarged (scale 1:100/ 1:200) and shadow corrected. These provide the base map to locate, orientate, configure structures and produce detailed plans.
- Documents and reports of surveys, project management, heritage plans or touristic proposal from various Omani government bodies, wherever available, were collected.
- Collecting Arabic and English language literature from local and specialist libraries in Oman and the UK.



a.



b.



c.



d.

Plate 2: Examples of sketches and interviews made during fieldwork; a. Ground floor plans of dwellings D30 and D31 (cf. Chapter 5), b. A cross section sketch of the lower part of Ḥarāt as-Saybānī, c. Interview with a younger previous inhabitant of Ḥarāt al-Ḥamrā (Jabir Al-ʿAbrī), d. Interview with the falaj waqil of Ḥarāt as-Saybānī (ʿAbdullah al-Saqrī).

Data Preparation Method:

The aerial photos and topographic maps collected on both oasis settlements contributed as follows:

Phase 1: Base Map

- To be used and employed as base map in the sketching up process of the whole settlement.
- To establish the land use in the whole oasis.
- Define the location of the settlement with respect to the surrounding natural environment and the built environment.
- Define the settlements form as a whole and the form of each individual structure and the streets hierarchy.
- Understand the topography contribution to the settlements form, location and scale as a whole and individual structure.

Phase 2: Analysis

The map analysis method of Worthington and Robert was adapted, which is description, analysis and interpretation of the physical features and settlement patterns based upon the 1:10000 scales Aerial photo and large scale topography map (Worthington, 1975, p. 7). He process was as follows:

- 1) Description: will include written description on physical and cultural features and supported by map evidence. Such description will consist:
 - An assessment of the position of the higher and lower ground with possibility to divide the area in to physical zones (built up zone, vegetation, piedmont, wādī...etc.).

- Each zone will then be described in more details (higher zones, lower zones, edge zones, core zones...etc.).
- 2) Analysis: each zone will be analysed in relation to its location, function and pattern with respect to the topographic influence and supported by diagrammatic evidence.
- 3) Interpretation: from the two previous stages, it can be interpreted as follows:
- The special feature of each zone.
 - The relation between the zones.
 - The factors that contributed to their location, function and pattern.

Data Analysis and Interpretation Method:

Urban and Architectural Preparation for Analysis:

Settlement Patterns

After drafting the whole settlement in details, a code pattern will be produced to mark all the dwellings and communal and defensive structures. From the interpretation of the interviews and personal observation on the field, the following drawings can be prepared for analysis:

- Settlements components: defining all structure types with colour codes in which similar structures have the same colour code.
- Settlements communal structures: colour coding all the communal structures with respect to function and the gender of users.
- Tribal pattern: colour coding each dwelling according to the owners tribe.
- Street rout hierarchy: the street routs will be coded according to their category of width, function, orientation and location.

- Dwelling cluster block scale: colour coding the cluster blocks from individual to two attached dwellings to bigger clusters according to their regularity, complexity and density of the blocks.
- Topography dwelling pattern: colour coding all dwellings with respect to the contour line.
- Access points: marking the main and secondary access points in the settlement as a whole and those for the dwellings.
- Edge and central: colour coding the edge and central dwellings.
- Special architectural feature: marking the dwellings with special architecture features (central column, sky light, courtyard...etc.).

Dwellings

The detailed draft of the settlement will be followed by drafting the selected dwellings floor plans individually and in cluster blocks in which the following drawings can be prepared for analysis:

- Dwelling space code: coding all the spaces in the dwelling according to their function and organisation.
- Double walls: marking the back to back double walls in the selected dwelling cluster block.
- Stone walls: marking the full height stone wall in each dwelling if any.
- The foundation scale: marking the stone foundation scale in all the dwelling in the cluster block.

Urban and Architectural Analysis:

The three interrelated methods addressed by Trancik (1986) will be adapted to analyse the urban pattern and dwellings:

- **Figure-Ground method:** This theory will establish the relation between the solid mass (dwelling cluster) and open voids (street passages and open spaces). The objective of this manipulation is to clarify the structure of urban spaces in the settlement by establishing a hierarchy of spaces of different sizes that may be individually enclosed but ordered directionally in relation to each other. It will also contribute in defining the built up ratio and structure density (Trancik, 1986, p. 98).
- **Linkage method:** This theory is derived from the 'line' in connecting one element to another. The lines in the settlement will be reflected by the gates, *falāj*, the main streets, passages between dwellings and open spaces....etc. This will contribute to understanding the relation and connection between these elements (*ibid*, p. 106).
- **The Place method:** this method focuses on the component of human needs and cultural, historical, and natural context. In place theory, inhabitants require a relatively stable system of places in which to develop themselves, their social lives, and their culture and other activities. These needs give manmade space an emotional content – a presence that is more than physical (*ibid*, p. 112).

The author will also consider the possibility of employing the generative syntax method (Hillier, 1984) which sees the settlements as a bi-polar system arranged between the primary cells or buildings (dwellings, etc.) and the carrier (surroundings outside the settlement). Despite the contribution these analysis, the author is also depending on his own analysis of observation, experience and common sense.

Challenges and Limitations:

As expected, data collection fieldwork was faced with many challenges throughout. The first challenge was the hot arid climate of Oman which made fieldwork possible during the winter months of relatively cooler weather (between October and March). In some cases it was not possible to define the original dwelling owners due to a number of reasons. Firstly, many older previous inhabitants, who had in-depth knowledge of the settlement, are sadly no longer alive. Secondly, the change in dwelling ownership through time had made it difficult to identify the original owners. Thirdly, the memory of the current older inhabitants is also fading with time and the younger generation have limited knowledge. Fourthly, parts of the settlements lie in ruins, which made it difficult to identify plans, property boundaries and consequently, ownership. And finally, the settlement is now encroached by modern development at the expense of the traditional dwellings, erasing the original traces and in some cases, parts of the settlement. These challenges made it necessary to conduct as many interviews as possible to ensure identification of the settlement components and dwelling owners. The interviews included the older inhabitants who possibly knew most about the settlements, the *falaj* keepers (*waqil*), family heads, tribal group heads (*rashīd*), the imam of the mosque, some of the inhabitants who still reside in the settlement as well as members of the younger generation.

1.4: Research Development

Theoretical Insights:

Studying in detail the former contributions done in the traditional settlements in central Oman has contributed in highlighting some theoretical insights. Geographically, these oasis settlements share the natural resources of Al-Ḥajar Mountains especially the *wādī* channels. From a social point of view, these settlements are settled in varying numbers by the same tribes. From a historical perspective, the oasis settlement of Nizwa, Bahla and Manāḥ had a political, religious and economic influence in the Jawf Region. The foothill settlement of al-Ḥamrā and Birkat al-Mawz share these geographical, social, and historical interest with the other oasis settlements. These theoretical insight will contribute in forming a connection and clear understanding on the similarity and differences between the foothill settlements and the plain oasis settlements. These theoretical insight are as follows:

- Most of the settlements in Inner Oman (Jawf region) were rather located within the Al-Ḥajar Mountains or clustered around it (in the piedmonts).
- The settlements type had a gradual and historic sequence (i.e., evolved morphology), *wādī* edge settlement (i.e., al-Yemen in Izkī' and Al-[°]Aqr in Bahla), piedmont settlements (i.e., al-Bilād in Manāḥ), *wādī* settlements (i.e., Nizwa), mountain settlements (i.e., Balad Seet in Jabal al-Akhḍar and Misfāt al-[°]Abriyīn in Jabal Shams) and finally the later foothill settlements (i.e., Birkat al-Mawz and al-Ḥamrā).
- The external edge of the settlements was mostly defined naturally either by *wādī* channel, mountain, and topography or built environment by *falaj* channels or palm groves (e.g. Ḥārat al-Bilād in Manāḥ, Ḥārat al-[°]Aqr in Bahla, and Ḥārat as-Sulaif in [°]Ibrī).

- There seems to be a sense of core extension and edge transformation through the settlement evolution life time.
- The *falaj*, security and social organization were common factors among the settlements and were the main structural factors affecting the spatial organization of the oasis.
- There are three types of edges, the internal core of the settlement (i.e., core block), and the edge of the settlement itself (i.e., wall, gate, dwelling and towers) and the oasis edge.
- The *falaj* and topography define the regularity or irregularity in the street hierarchy and settlements formation.
- The early settlements (i.e., Bahla, Izkī', Manah and Nizwa), were walled and protected by a fort and associated with Great Friday Mosque. These settlements were highly dense inhabited with mix-tribes indicating their importance politically and religiously.
- The watchtowers around the oasis were not only for defence purpose but, also to state a sense of territoriality (i.e., oasis boundaries) spotted from afar.
- The consistency and inconsistency between the dwelling blocks indicate the settlements evolution direction.
- The consistency and inconsistency between the side-by-side and back-to-back dwelling walls indicates the dwellings block or street line evolution direction.

Built-up Theory:

From the theoretical insights on the former studied settlements above, the author has noticed the strong influence the geographical location, the nature of surrounding environment and the inhabitants needs (i.e., water, security and social organization) on

Saybānī in Birkat al-Mawz, the *PEC* were the tower and small structures behind it ,at the top, to be the core of the settlement's radial evolution with topography negotiation.

Contribution to Knowledge:

The research aims to achieve a discrete contribution towards the knowledge of the Omani traditional built environment and the study of settlements in the field by establishing, (a) the appropriate approach to studying traditional settlements in general and its morphology and dwellings in specific. This will define lessons that can be learned in urban morphology and design and its implication on future research, design and practice. (b) A detailed interdisciplinary investigation on the traditional settlement morphology and dwellings. This will be contributed in parallel with an appropriate documentation (drawn – historical – social - cultural) to these case studies. (c) An understanding of the inhabitants' perception to their natural environment and built environment. Their perception will also contribute in establishing whether the morphology, form of the settlement and dwelling types reflects the specific identity of the inhabitants.

Research Organization and Layout:

This research starts by introducing the problem and the theoretical background, and then moves on to introduce the settlements and address the factor that contributes to their formation. The research is divided into six main chapters: research introduction; al-Ḥamrā and Birkat al-Mawz: the setting; al-Ḥamrā and Birkat al-Mawz: urban pattern and architecture; al-Ḥamrā and Birkat al-Mawz: tribal pattern and settlement structure; al-Ḥamrā and Birkat al-Mawz: dwellings and architecture; and finally, the conclusion.

Chapter-1 (Research Introduction): This chapter consists of five main headings, Introduction, rational, methodology, research development and literature and supporting disciplines. The introduction provides a statement of the problem, the research aims, questions and objectives. This is then followed by a rational for studying traditional Omani settlements, and especially, choosing the foothill settlements, and the specific case studies. The methodology illustrates the key research methods for data collection, preparation, analysis and interpretation and their challenges and limitations. This is followed by a discussion on research development, which includes the theoretical insights, research hypothesis, contribution to knowledge and the research organisation and layout. This chapter is concluded by a discussion on the multidisciplinary literature which illustrates the present state of knowledge in relation to traditional settlement studies.

Chapter-2 (al-Ḥamrā and Birkat al-Mawz: the setting): This chapter focuses on the environmental setting of the interior of Oman, and the two settlements under consideration, al-Ḥamrā and Birkat al-Mawz. The discussion on the environmental setting of the interior describes the geological setting, the topography, the hydrology and wadī drainage system, the geology and structure, the climate and the environmental pattern and settlement location. This is subsequently treated in more detail in relation to al-Ḥamrā and Birkat al-Mawz.

Chapter-3 (al-Ḥamrā and Birkat al-Mawz: urban pattern and architecture): This chapter discusses the close relationship between topography and urban pattern, which

includes the topographic influence on both al-Ḥamrā and Birkat al-Mawz in settlement formation and ensuing urban pattern.

Chapter-4 (al-Ḥamrā and Birkat al-Mawz: tribal pattern and settlement structure): This chapter discusses the social history of al-Ḥamrā, which also includes a short overview of the archaeology of early human settlements and movement in al-Ḥamrā region, and the seventeenth century revival of the ʿAbriyīn tribe and the consequent emergence of al-Ḥamrā, the *falaj* and the settlement beginnings, and finally the setting and components of Baldat al-Ḥamrā. It is followed by a detailed discussion on the tribal pattern of Ḥarāt al-Wiṣṭā. The pattern is mirrored in the case of Birkat al-Mawz which materialised contemporaneous to al-Ḥamrā following the revival of the Banī Riyām tribal confederation in central Oman. The focus at Birkat al-Mawz is on the settlement quarter of Ḥarāt as-Saybānī.

Chapter-5 (al-Ḥamrā and Birkat al-Mawz: Dwellings and architecture): This chapter focuses on dwelling spatial organisation, its relationship to topography. The foothill settlement dwellings illustrate a variety of space types and functions. The discussion then moves to the relationship between topography and dwelling level and space structure which include individual dwellings, dwelling cluster, and communal space related to dwelling clusters. And finally, the epilogue summarises the findings of this chapter.

And finally, **Chapter-6 (epilogue)** summarises the key conclusion of the research and findings, and proposes recommendations.

1.5: Literature and Supporting Considered Disciplines

The Omani renaissance of 1970 was the dawn that opened the country's economy to the outside world with increased interaction, which also resulted in attracting international research institutions, organisations and individual researchers. The diverse topography and historic and cultural wealth generated a research gravitas for scholars from many disciplines. In spite of this, the research on traditional Omani architecture of the interior in specific, but also Oman in general, exhibits limited research compared to its Arab counterparts. The important recipient has been the disciplines of archaeology, hydrology, geography, geology and social anthropology. The research effort of many scholars of diverse backgrounds in the last four decades, although focused and dedicated to their own disciplines, are useful in terms of understanding the influence of such disciplinary studies on the built environment and settlement morphology. In this present study, the discussion will consider the disciplinary contributions of both pre- and post-1970 activities, which have a direct relation to the context of traditional settlements.

A notable contribution in socio-political studies and the Omani traditional irrigation system (*aflāj*) came from the work of John, C. Wilkinson. In his first work¹⁴, he attempted to construct an understanding of the historical geography of Oman. This was followed by his D.Phil thesis (1969)¹⁵, which expanded on Oman's significantly complex social history, social organisation and political ideology. In 1977 he managed to connect and develop further the work of his D.Phil. His 1977 thesis on methods of

¹⁴ Before his thesis, he published a journal paper on the historical geography of the Trucial States. Wilkinson, J. C., "A Sketch of the Historical Geography of the Trucial Oman Down to the Beginning of the Sixteenth Century", *Geographical Journal*, Vol. cxxx, 1969, pp. 337-349.

¹⁵ Wilkinson, J. C., *Arab settlement in Oman: The Origins and Development of the Tribal Pattern and its Relationship to the Imamate*, unpublished D.Phil, University of Oxford, 1969.

water exploitation and its close relationship to social organisation and its influence to land was published as, “*Water and Tribal Settlement in South-East Arabia: A Study of the Aflaj of Oman*”. This work discussed at length the origins, nature and management system of the *aflāj* which was explained through the tribal social structure (Wilkinson, 1977). Wilkinson’s other major work, *the Imamate Tradition of Oman*, was the result of further research¹⁶ after 1977 on the Islamic water laws and the concept of territory. This work focuses on the Ibadi Imamate, tracing its presence through history and its influence in the Imamate through defined periods (the ‘Imamate cycle’) along with a lengthy discussion on tribal and Imamate structures. Between this and his latest milestone publication of 2010, *Ibadism: Origins and Early Development in Oman*, where he deconstructs the origins and evolution of Ibadism into a *madhhab* (school) through a historical perspective incorporating the tribal dimension (Wilkinson, 2010).

Other social-anthropological, historical and economic works were contributed by Carter, Birks, Dale and Christine Eickelman, and Peterson. Birks highlighted the deep transition of the Shawawi groups in Northern Oman from semi-nomadic way of life to the modern Sultanate (Birks, 1976). The Shawawi groups tend to live outside the settlements but in close proximity, and more oriented towards herding than agriculture. In another work, Birks describes the role of the ‘Awāmr tribe, the experienced well and *falaj* excavators (Birks, 1976)¹⁷. Lorimer’s¹⁸ gazetteer was the first of its kind in recording historical and genealogical information of the Arabian

¹⁶ Wilkinson, J. C., “Islamic Water Law with Special Reference to Oasis Settlements”, *Journal of Arid Environment*, vol. I, pp. 87-96. Additionally, “Traditional Concepts of Territory in South East Arabia”, *Geographical Journal*, Vol. CXLIX, pp. 301-315.

¹⁷ Published in the same Journal under “The Awāmr: Specialists well and falaj diggers in Northern Interior Oman”, *JOS*, Vol. 2, 1976, pp. 93-100.

¹⁸ Lorimer, J.G., *Gazetteer of the Persian Gulf, Oman and Central Arabia*, Vol. i (Historical and Genealogical), Vol. ii (Geographical), 1908 (Vol. ii), 1915 (Vol. i), Superintendent of Government Printing, Calcutta, Gregg reprint, 1970.

Peninsula, followed by the work of Miles which consisted of a semi-historical record of Oman Peninsula (Miles, 1919), starting from Arab migration to the Al Bu Saidi Sulatns. A broad contribution on the tribes of Oman was by Carter which updates and completes the record collected by Lorimer and Miles (Carter, 1982). Both works contributed to the understanding of the social and tribal structure, and the political power of traditional Oman.

The contribution towards understanding the traditional Omani culture and society was marked by Dale and Christine Eickelman's work in understanding the women's social and economic role in the family and settlement scale. Christine's work was more focused on the role and position of women in the settlement, focusing her study on the women of al-Ḥamrā¹⁹. While Dale, has contributed to the understanding of Ibadi theocracy and religious knowledge in inner Oman²⁰. Another important contribution in understanding the segregation of women and the graceful quality of social relation is by Wikan in Suhar (Wikan, 1982).

Most of the archaeological excavation reports in Oman were published in the Journal of Oman Studies (JOS), which is sponsored by MHC. The journal has published over the last 35 years descriptions of digs and surveys, catalogues of finds and speculations on dating. The first to be published was by the Harvard Archaeological Survey²¹, and

¹⁹ Eickelman, C., (1) "Women and Community in Oman", New York University Press, New York and London, 1984. (2) "Fertility and Social Change in Oman: Women's Perspectives", The Middle East Journal, Vol. 47. No. 4, 1993, pp. 652-666.

²⁰ Eickelman, D.F., (1) "Religious Knowledge in Inner Oman", JOS, Vol. 6, Part 1, 1983, pp. 163-72. (2) "From Theocracy to Monarchy: Authority and Legitimacy in Inner Oman, 1935-1957", International Journal of Middle East Studies (IJMES), Vol. 17, 1985, pp. 3-24. (3) "Ibadism and the Sectarian Perspective", in, Pridham, B.R., (ed.), *op. cit.*, 1987, pp. 31-50.

²¹ Hastings, A., Humphires, J.H., Meadows, R.H., "Oman in the Third Millennium BC", JOS, Vol. 1, 1975, pp. 9-56.

then followed by the contribution from the Danish archaeological team²². Many archaeological excavation and digs took place along the coastal area and on and around the al-Hajar mountain region and dated the early settled life to the 3rd millennium BC. Orchard and Stanger confirmed this date on their work on oasis towns in al-Ḥajar Mountains by studying *Umm an-Nar* settlements (Orchard & Stanger, 1994). The archaeological results of Jutta Haser survey camping in Wādī Bani Awf and al-Ḥamrā in (1999) and (2000) contributed in understanding the pre-historical context of the area²³. The complete archaeological work of Cleuziou and Tosi on the prehistoric civilizations in Oman gave a clear picture of the early human activities and settled areas (Cleuziou, 2007).

The scholars agree that the *falaj* (traditional irrigation system) came from Iran during their political influence around 1000 BC, which was the dawn of Iron Age settlements (*ibid*, p. 152). According to Omani folklore, Sulayman b. Dawood commanded his servant to dig 10,000 *falaj* channels in 10 days to facilitate his trip from Persepolis and Jerusalem. In the present day over a 1000 *falāj* are spread all over Oman. It has also had a great share of research devoted to it since it is considered to be the backbone of life for all the settlements and agriculture land in the region. First contribution was by Wilkinson (1977), he studied the *afalāj* origin, organisation and traditional techniques of water-exploitation (Wilkinson, 1977). The work of Costa (1994) also added great value of understanding architecture of *afalāj*, their features and distribution system (Costa, 1994). A broad study on the star gazing system in *falaj* management was

²² Frifelt, K., "A Possible Link between the Jemdat Nasr and the Umm an-Nar Graves of Oman", JOS, Vol. 1, 1975, pp. 57-80. Additionally, "Evidence of a Third Millennium BC Town in Oman", JOS, Vol. 2, 1976, pp. 57-74.

²³ Haser, J., "Formation and Transformation processes of oasis settlements in the Sultanate of Oman: preliminary report on the new field project", Proceedings of the Seminar of Arabian Studies, Vol. 30, 2000, pp. 115-118.

undertaken by Nash, where she described in details the technique of using stars in *falaj* distribution (Nash, 2007). In recent years a great deal of research on *falaj* management system and sustainability was contributed by Al-Ghāfir²⁴.

The research on the Şuḥārī houses by the coast of Şuḥār in the Bāṭinah region by Kervran *et al* was a documentation focused on describing the al-Hajra houses and construction materials with a general description of the old town²⁵. These dwellings tend to form in a single-story courtyard structure, made of palm fronds or fired mud bricks. Kervran has also highlighted the historical importance of Şuḥār through the findings of pre-Islamic and Islamic levels of her archaeological research in Şuḥār (Kervran, 2004). The construction material used in the Şuḥārī houses reflects the diversity of the built environment of the Bāṭinah region which was also suggested by Costa in 1985 (Costa, 1985). Costa has discussed the built environment of the Bāṭinah at length, which in his words reflects the ethnic and cultural complexity of its population. He refers the superior quality of the palm-frond houses to two main factors; technological and environmental. The first adopts the dynamic principle of allowing

²⁴ Al-Ghafri, A., Norman, W., Shayya, W., & McCann, I., "Aflaj irrigation and on-farm water management in northern Oman", Irrigation and Drainage Systems, Kluwer Academic Publisher, Netherlands, Vol. 12, 1998, pp. 35-48.

Al-Ghafri, A., Norman, & Shayya, W., "Irrigation Water Costs and Management Practices Among Farms in Northern Oman", Agricultural Services, Sultan Qaboos University, Vol. 3, 1998, pp. 1-8.

Al-Ghafri, A., McCann, I., Al-Lawati, A., & Shayya, H., "Aflaj: the challenge of preserving the past and adapting to the future", Oman International Conference on the development and management of water conveyance Systems (Aflaj), Ministry of Regional Municipalities, Environmental and water resource, 2002.

Al-Ghafri, A., Inoue, T., & Nagasawa, T., "Daudi Aflaj: the Qanats of Oman", Proceedings of the Third Symposium on Xinjiang, China, 2003, pp. 29-36.

Al-Ghafri, A., Norman, W., & McCann, I., "On farm labour allocation and water use in smallholder irrigation systems: lessons from Africa and Arabia, Transition on Ecology and Environment, Vol. 80, 2005.

Al-Ghafri, A., "al-Aflāj al-Omania: manẓumat Ḥayat Muhaddadah", Regional Conference for the protection of groundwater, Trablus, 2006.

²⁵ Kervran, M., Le Cour-Grandmaison, C., Soubeyran, M. & de Pemille, A.V., "Şuḥārī Houses", JOS, Vol. 6, Part 2, 1983, pp. 307-316, plus plates.

Kervran, M., "Archaeological Research at Şuḥār 1980-1986", JOS, Vol. 13, 2004, pp. 263-381.

air ventilation through the walls, giving full advantage of sea breeze. The second in a socio-anthropological of economy, were the fishermen tends to invest more in the boat and fishing rather than a house (Costa, 1985, p. 119). The study done in Ibrā' and Mudayrib area by Bonnenfant and Le Cour-Grandmaison highlights the relation between kingship spatial organisation geographically (Bonnenfand, 1977). This work is extended farther addressing the spatial organisation, tribal groupings and kingship in Ibrā' by Grandmasion (Le Cour-Gandmasion, 1977). While the architectural and social history at Muḏayrib was addressed by Guillemette *et al* gave a more detailed analysis in traditional settlements studies (Bonnenfand, 1977).

Chapter-2: Al-Ḥamrā & Birkat al-Mawz: The Setting

2.1: Introduction

2.2: The Environmental Setting of the Interior

2.3: Al-Ḥamrā

2.4: Birkat al-Mawz



Chapter-2: Āl-Ḥamrā & Birkat al-Mawz: The Setting

2.1: Introduction

The relationship between mankind and earth has always been a sacred one and has provided the fundamental source of resources for all human needs. The environment was not only a dwelling place but also a source of inspiration and challenges to learn from and develop. This understanding of the environment along with the human social behaviour led to the emergence of human settlements. The physical environmental diversity influences the evolution of settlements and urban patterns. Hence, it is necessary to discuss the environmental setting (i.e. geography, geology, regional character, topography, climate, hydrology) to emphasise their special characteristics and influences on settlement formation.

This chapter therefore aims to describe in a holistic way the setting of the foothill settlements of Ḥarāt āl-Wiṣṭā in āl-Ḥamrā and as-Saybānī in Birkat al-Mawz. This will be achieved by describing the physical setting, starting with the regional setting of the interior as a whole and moving to the setting of al-Ḥamrā and Birkat al-Mawz. This description will include the regional, geographical, geological structural setting of each *ḥarat*. By doing so, it will define the pre-existing physical factors in the case of both settlements. This chapter will also provide the foundation that supports the analysis in Chapter-4 and contribute in building-up and developing a clear argument as to the formation of both *ḥarat* and the possible factors that influenced their formation and development.

2.2: The Environmental Setting of the Interior

Introduction

An understanding of the traditional settlement's setting and behaviour starts by looking at it from the larger contextual perspective. This context is presented by the geography, topography, geology, hydrology and climate. Defining the character of each environmental element, along with their influence and interrelation to each other, will contribute in understanding the environmental influence from a regional level to the oasis territory level, and so to the settlement setting and behaviour. The regional context will cover Jabal Akhdar in general – the south face of it more specifically (Landward face) – also known in the past as the Jawf region. This will contribute in addressing the impetus provided by these environmental contents to the settlement's inhabitants with which they existed in harmony over centuries.

Geographical Setting

The Dakhliyah (Interior) governorate²⁶ is neighboured by five governorates: to the north by Muscat and Baṭīnah, to the east by Sharqiyah, to the south by Wiṣṭa and to the west by Ṣāhira (Figure-6). It embraces within its diverse topography the important historical centres of Izkī, Bahla, Nizwa, Manah and Adam. The extension of the Ḥajar Mountain chain from northern (Ruūs al-Jibāl) to eastern (Rās al-Ḥadd) Oman has provided a natural reference and a boundary – a physical core (Wilkinson, , 1977, p. 6) – between the coast line (Maritime face) and the Dakhliyah governorate (Landward face), (cf. Chapter-2). The Landward face can be divided into two main topographical categories: the mountain fold zone and the plain desert foreland (*ibid*, p. 12). To the

²⁶ Dakhliyah governorate consist of eight *wilayats* (districts), Nizwa (the capital of Dhakhliyah Governorate), Bahla, Izkī, al-Ḥamra, Adam, Manah, Samāil and Bidbid.

north the interior is bounded by the south flank of the largest structural domain in the western Ḥajar Mountains (Ḥajar al-Gharbī), Jabal al-Akhḍar (Hanna, 1995, p. 47). The southern boundary is marked by the curved range of the Adam Mountains²⁷. To the east the interior is bounded by the Samāil Gap²⁸ and Jabal Sufra (Wilkinson, , 1977, p. 7), and on the west limited by the dissected low hills of Ḥamrat ad-Durū^c and Jabal al-Kawr (Figure-6). These natural boundaries describe a settled area of about 8000 km² in the interior, mainly within traditional oasis settlements, also known historically as the Jawf²⁹ region (Wilkinson, , 1977, p. 14).

The Jawf with its natural boundaries, form an isolated centre, or an inner ‘bight’ (Wilkinson, 1987, p. 29). These boundaries of Jabal al-Akhḍar, Samāil Gap, Adam Mountains chain, Jabal al-Kawr and the hills of Ḥamrat ad-Durū^c form natural shields and gateways into the Jawf region. Geographically, Wilkinson in 1987 divided the Jawf settlements setting into three groups according to the morphology of the drainage basins (*ibid*, p. 29). First, those within the mountains up the wadīs heights (e.g. al-Ḥamrā, Tanuf, Birkat al-Mawz, Imṭī). Secondly, those in the major wadī drainage channel - fortified settlements - in the piedmonts (e.g. Bahla, Nizwa and Izkī) and finally, the settlements in the outer open-land (wadī catchment) area (e.g. Jibrīn, Bisya, Manaḥ and Adam).

²⁷ Named after the oasis of Adam, which is located between two of these mountains.

²⁸ It is also known historically and locally as wadī B.Rawaḥa.

²⁹ Jawf, in classic Arabic means: the hollow open land in the middle, the inwardly vacuum or space, the wadī, the resource and capacity, the easy widening of the earth. All these meaning fulfil the big context meaning of; a wealthy inner open land with natural settling resources.

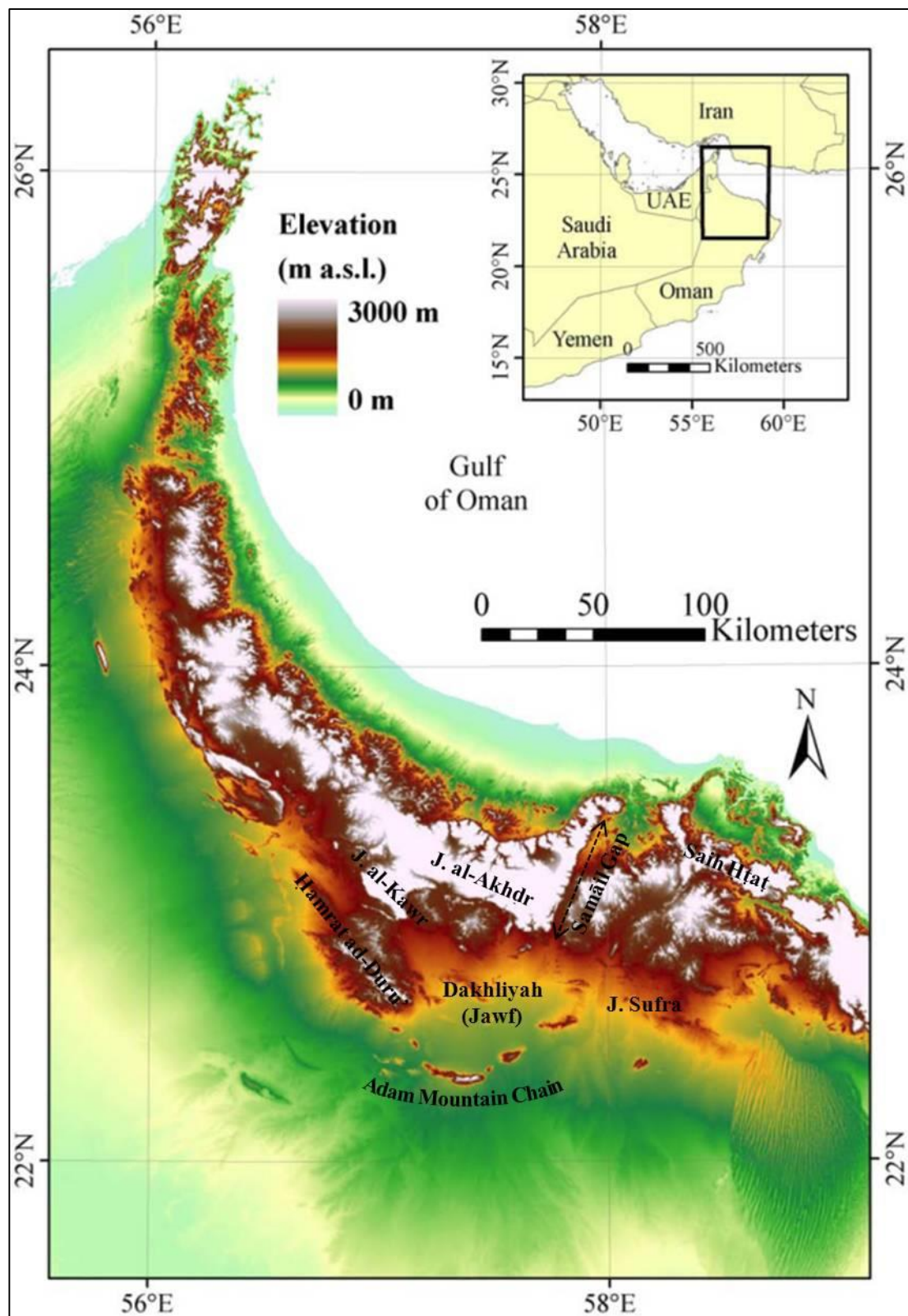


Figure 6: The central geographical location of the Dakhliyah governorate (Jawf region) with the natural mountain and hill boundaries surrounding it, modified by author, (after Luedeing & Buertert 2007:vol112, 1184, Figure 2).

Topography

The Jawf region contains a gradual gradient, from the lowest piedmont desert plain of 270 m amsl at Adam to the southern flank of Jabal al-Akhḍar (2980 m amsl), and to its highest peak (Scholz, 1977, p. 47) (i.e. Jabal Sham)³⁰ of 3141m³¹ amsl (*ibid*, p. 7). This is structured into four topographical zones (*ibid*, pp. 6-10): mountain region (III), north inner foot-hill and wadī zone (IV), wadī catchment zone (V) and finally the desert zone (Figure-7 & 8). The mountain zone (III) is sub-divided into bowls (e.g. Saḥtan bowl and Mastal bowl), plateaus (e.g. Sīq plateau), karst holes (e.g. Missfat al-‘Abriyīn and Missfat al-Khawaṭr) and foothills (i.e. al-Ḥamrā and Birkat al-Mawz) (Figure-9). The inner foothill (piedmont) zone (IV) is sub-divided into the dissected low hills and the wadī drainage channels, which dwindle in scale when moving further south.

The limestone-dolomite massif of Jabal al-Akhḍar is divided into two mountains: the long 70 km stretch of Jabal Nakhal on the northeast face (Samāil Gap) and the 30 km long south face of Jabal al-Akhḍar, with its highest peaks of 25 km long of Jabal Shams (or Jabal al-Qannah) at the southwest. Attached to Jabal Shams further south is Jabal Ghul and Jabal al-Kawr respectively. Jabal al-Kawr forms a massif mountain rising to 1800 m amsl covering 600 km² (Wilkinson, 1977, p. 12). Opposite to Jabal al-Kawr in the south are the dissected low hills of Ḥamrat ad-Duru’ which form part of the Ḥawasina group³². 80 km to the south of Jabal Al-Akhḍr is the Adam Mountain chain

³⁰ Jabal Shams is also locally known as Jabal al-Qannah, and Qannah is classic Arabic means; the solo mountain high in the sky.

³¹ It has also been highlighted as 3000 m high (El-Baz, 2002, p. 5), while al-Adawi stated the height to be 3,035 m (Al-Adawi, 2006, p. 12). But all sources agree that Jabal Shams is the highest peak in Oman.

³² Named after wadī Ḥawasina basin, which extends from Ḥamrat ad-Duru’ hills in the in the west to Ṣufrat Adawh in the east. Its formation also extends along the south face of Jabal al-Akhḍar. It is divided in to three groups: the Umar Group, Al-‘Aridh/Kawr Group and the Sumeini/ Ḥamrat ad-Duru’ Group (Matter, 2001, p. 13).

(arc-shaped), which consists of Jabal Qusybah, Jabal Nihaydah, Jabal Salakh, Jabal Hinaydil and Jabal Madamar,³³ respectively from west to east (Al-Kindi, 2010, p. 8). The dissected low hill (south of Bahla and Nizwa) south of Jabal al-Akhḍar are known locally as Jabal Ḥammah (F. Bechenec *et al* 1990, p. 220).

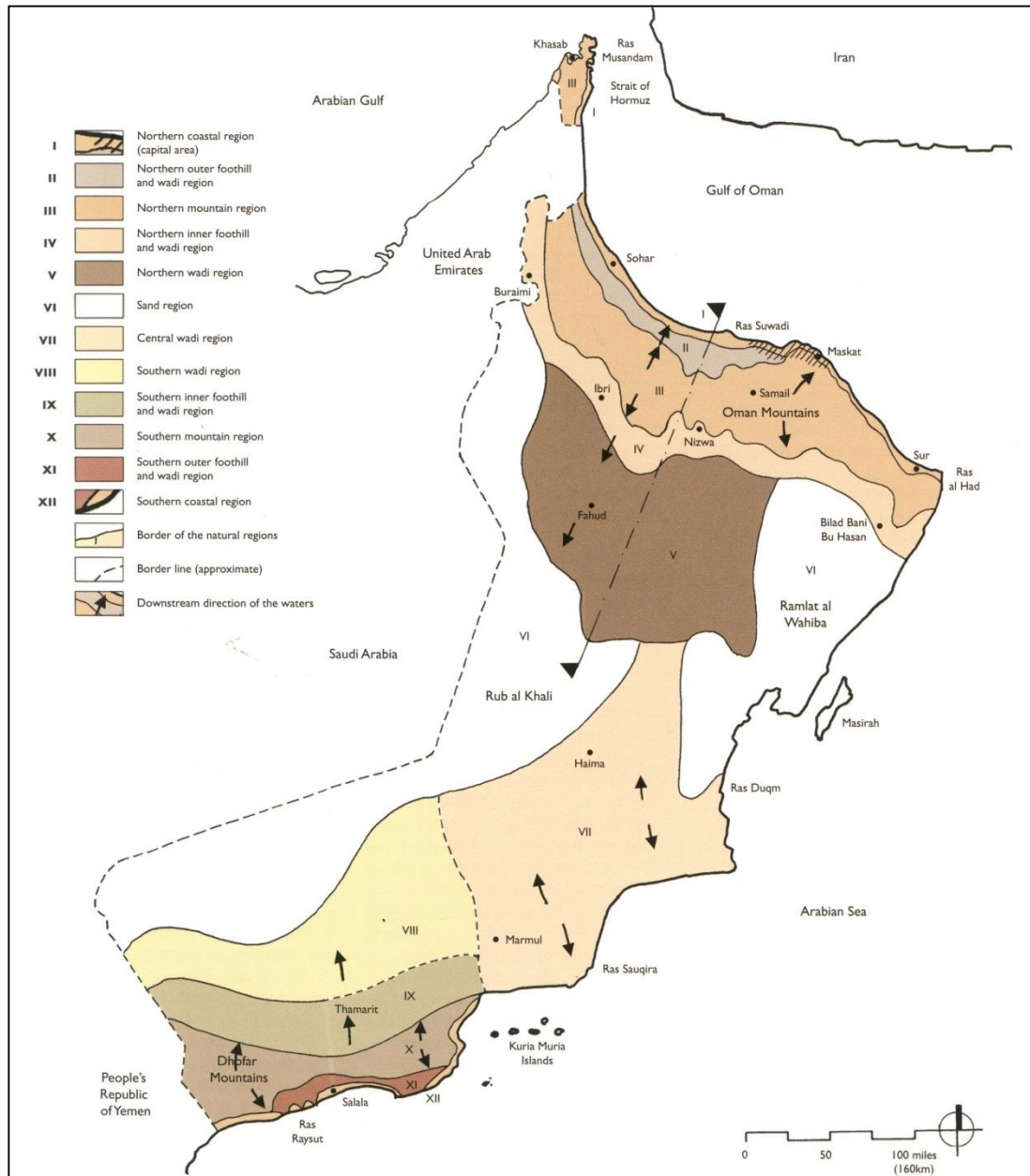


Figure 7: The main geographical regions defined by Scholz in Oman, note: the Ramlat al Wahiba in the east region of Oman has changed by a Sultani Decree to Rimal ash-Sharqiyah (after Bandyopadhyay 2011, Scholz 1977: PartII, 8, map 1).

³³ The oasis of Adam is located south Jabal Madamar.

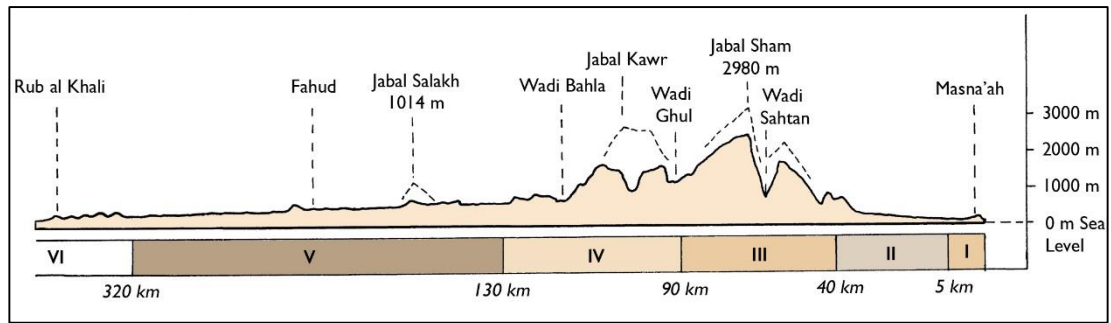


Figure 8: Section crossing through Jabal al-Akhḍar and Jawf region showing the topographic diversity, (I) north coast, (II) north foot-fills, (III) Jabal al-Akhḍar, (IV) inner foot-hills, (V) wadī catchment area, (VI) desert region, (after Bandyopadhyay 2011, after Scholz 1977: PartII, 8, Figure 1).

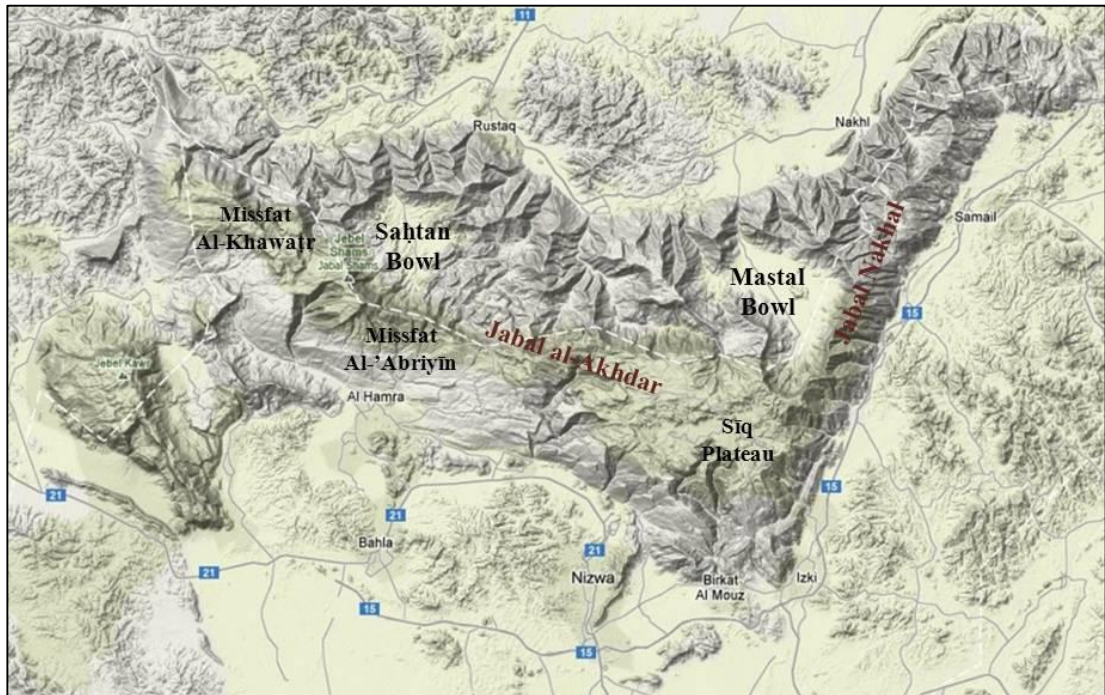
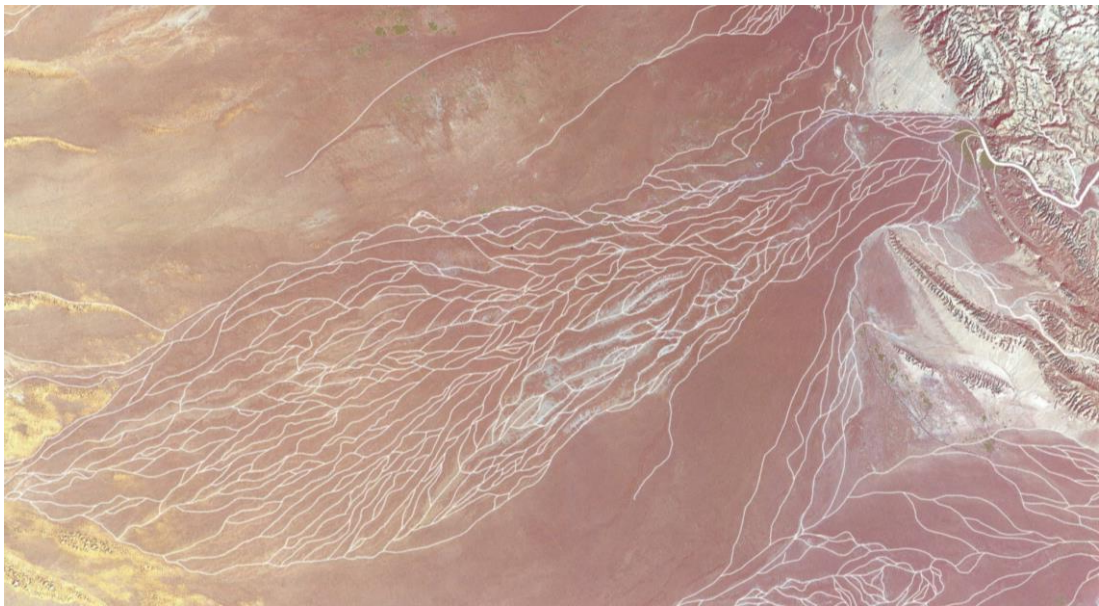


Figure 9: The sub-division of the mountain zone topography: bowls (Sahtan and Mastal), plateaus (Siq), karst holes (Missfat Al-'Abriyīn and al-Khawatr) and hills (after google maps terrain).

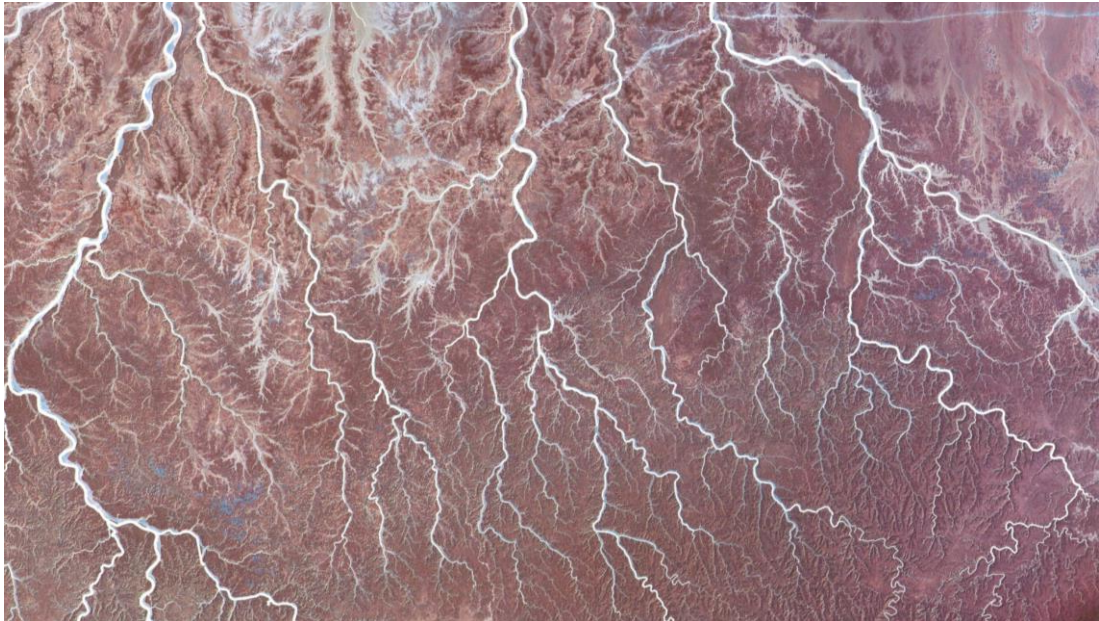
Hydrology and Wadīs

The wadīs (s. wadī) – dry river beds which discharge storm rainfall - form an important factor in the topographical context and landscape pattern. The local geology and climate are the main factors in defining the location, shape and nature of the wadī in each region. The wadī flow channels are divided into four main types, braided (interwoven channels), dendritic (tree-like patterns), meandering (sinuous course) and rectilinear patterns (El-Baz, 2002, p. 18). The braided pattern mostly forms in plain areas or flood plains and evolve when the discharge reaches its capacity (Plate-3). The

dendritic pattern is more branching and characterised by the uniform underlying bedrock (e.g. massive igneous rocks or flat-lying sedimentary layers), (Plate-3). The meandering patterns are similar to the braided patterns in forming in plains but they differ in sense of the discharge sweeping bends through creating sinuous course (Plate-4). The rectilinear pattern is the most commonly found in south flank of Jabal al-Akhḍar, where it results from significant structural influences (i.e., faults or fractures), mainly in bedrocks (Plate-4).



a.

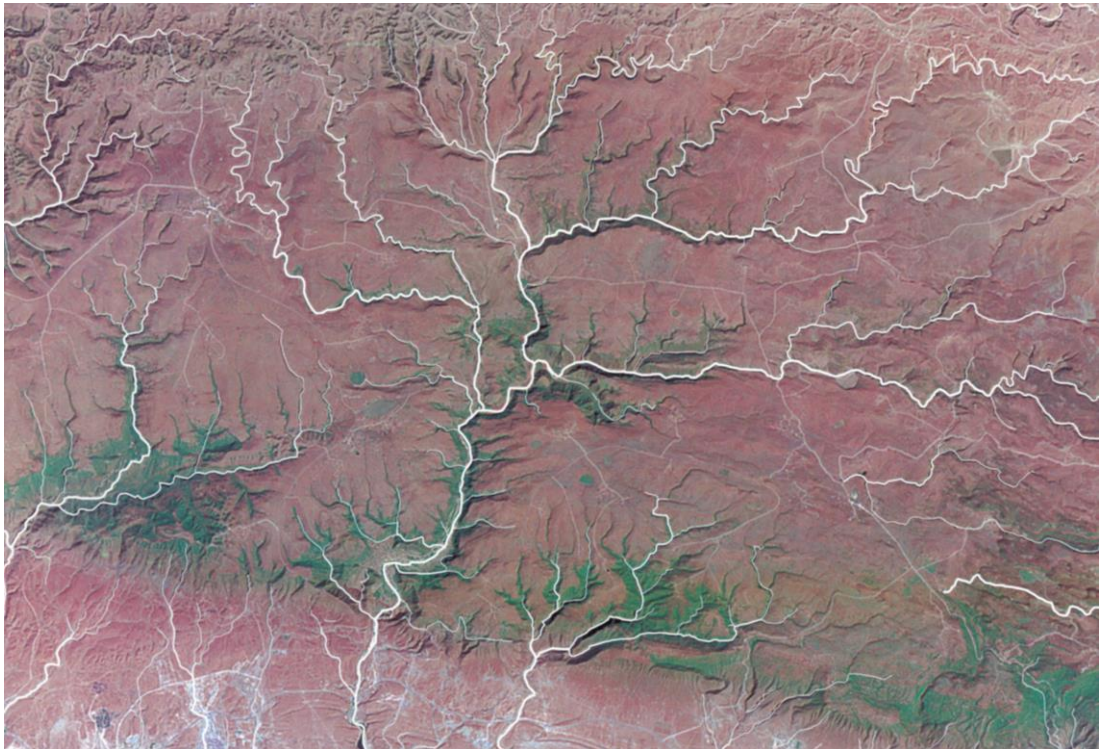


b.

Plate 3: Wādī pattern types in Oman (1); a. Braided drainage pattern, b. Dendritic drainage pattern (after El-Baz 2002, 19).



c.



d.

Plate 4: Wadī pattern types in Oman (2); c. Meandering drainage pattern, d. Rectilinear drainage pattern (after El-Baz 2002, 20).

There are nine wadīs discharging down from the top of the south flank of Jabal al-Akhḍar and Samāil Gap through gorges and flows to the final main wadī catchment area of the Jawf (Wilkinson, 1977, p. 12). Wilkinson listed them from a socio-political

perspective (Figure-10): wadī Sayfam, wadī Bahla, wadī Abyaḍ, wadī Mu'aydin, wadī Ḥalfayīn, wadī Andām and wadī Samad Hanna (1995, p.47). Wadī Mu'aydin, wadī Tanuf, wadī Ghul and wadī Nakhr are some of the major wadīs on the southern flank. However, these wadīs patterns are categorised as curve-linear pattern in the mountain created by the faults, fractures and joints and changes to dendritic pattern when reaching lower gradient reflecting the change in topography and wider landscape (El-Baz, 2002, p. 18).

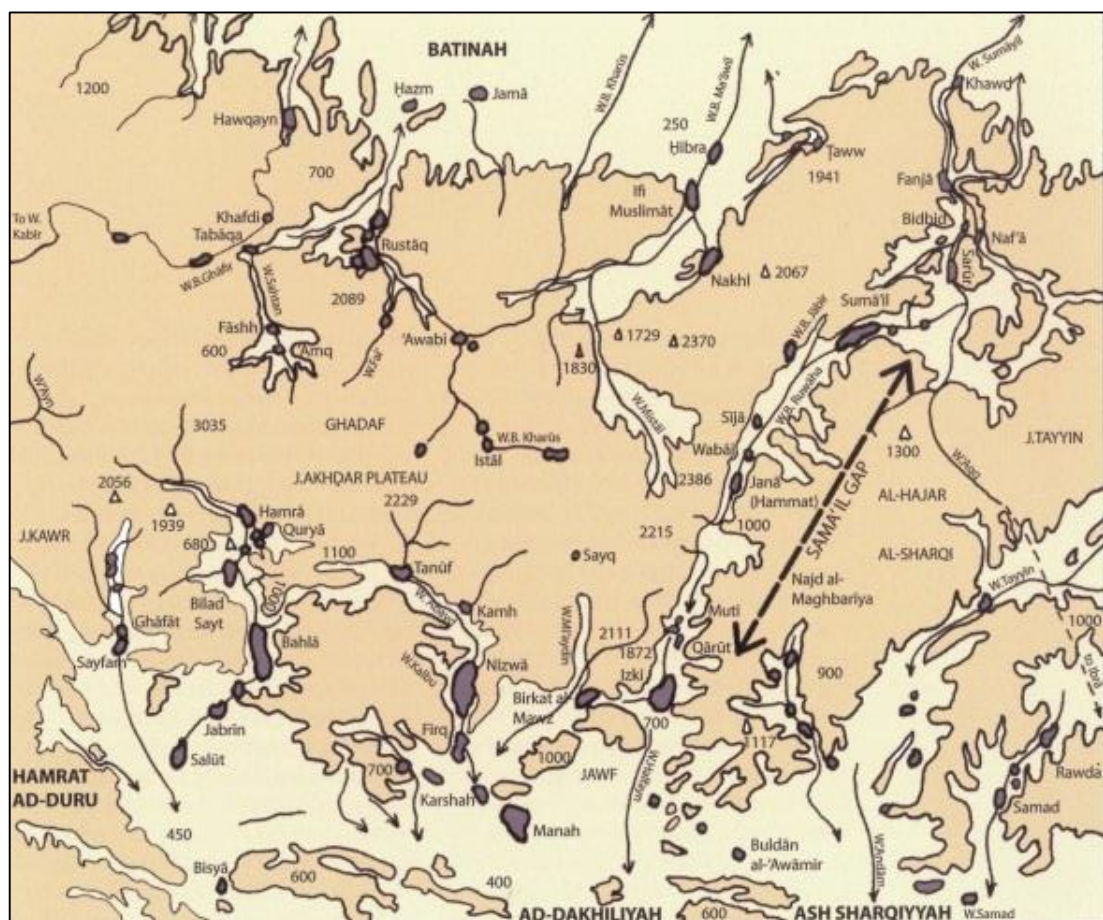


Figure 10: The arrows show the wadī discharge route southward from the mountain zone to the lower hill zone, (Bandyopapahyay, 2011, p. 23, Figure-6) (after Wilkinson 1977: 11, Figure 3).

Suspended sediment in these water courses are deposited at the base of the mountain as alluvium. The significant decrease in the gradient at the bottom of the mountain contributes in settling the sediments out, known as alluvial fans, creates fertile soil (El-Baz, 2002, p. 18). The alluvial plain south of Jabal al-Akhdar dissected by low hills,

along with the rectilinear paths contributes in joining the wadī drainage into two main wadī flows, wadī Ḥalfayin - consisting of wadīs Ḥalfayin, Mu'aydin and Abyadh, and wadī Bahla - consisting of wadīs Bahla and Sayfam (Matter, 2001, p. 6). This fertile arable soil in the alluvial plains consists of a combination of sand, gravel, silt and clay (Al-Jahwari, 2008, p. 22).

Geology and Structure

The central mountains comprise an internal zone, of Jabal al-Akhḍar, Jabal Nakhal and Saiḥ Ḥṭat, and an external zone (foreland) of the Ḥawasina foreland fold, the Adam Mountain Chain, and the thrust belt (Matter, 2001, p. 6), (Figure-12). The southern flank of Jabal al-Akhḍar dips at an angle of 20° to 40° under the alluvial plain (Figure-15 & 16). The northern flank of the Adam Mountains anticlines at 60° and at 35° on the southern limb. They are grey in colour and consist of limestone and dolomite massifs. It is categorised into four groups known as Akhḍar, Saḥtan, Kahmah and Wasia, respectively from the base to the top. Between the Jabal al-Akhḍar and Adam Mountains anticlines, is the extension Ḥawasina foreland folds and thrust belt which extends over 240 km (Matter, 2001, p. 6).

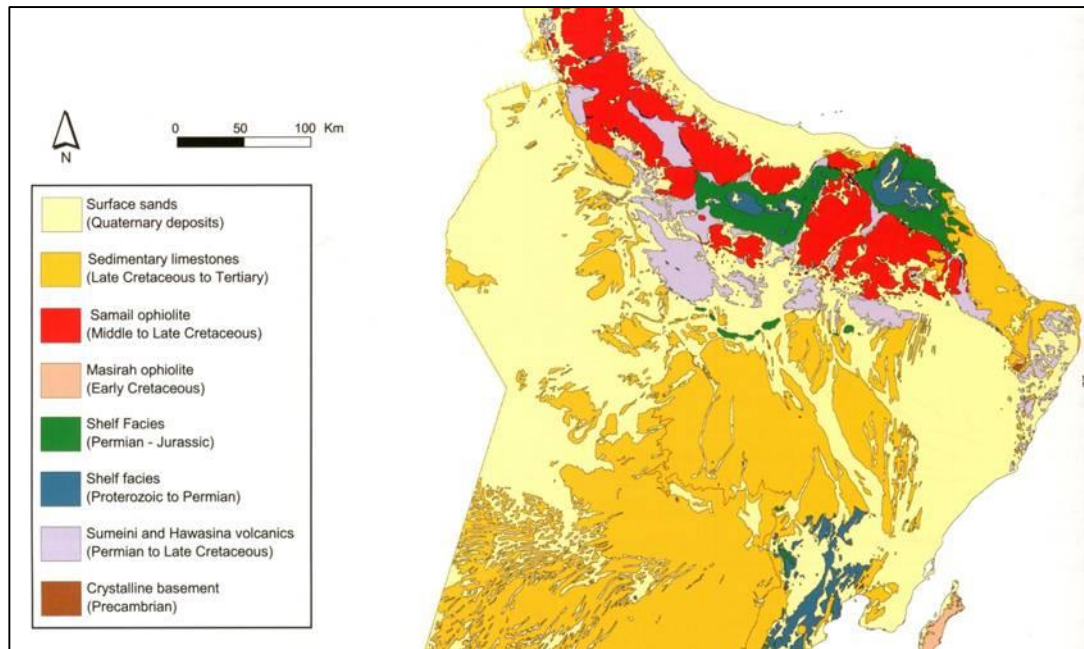


Figure 11: The geological structure of northern Oman, (El-Baz 2002:10, map).

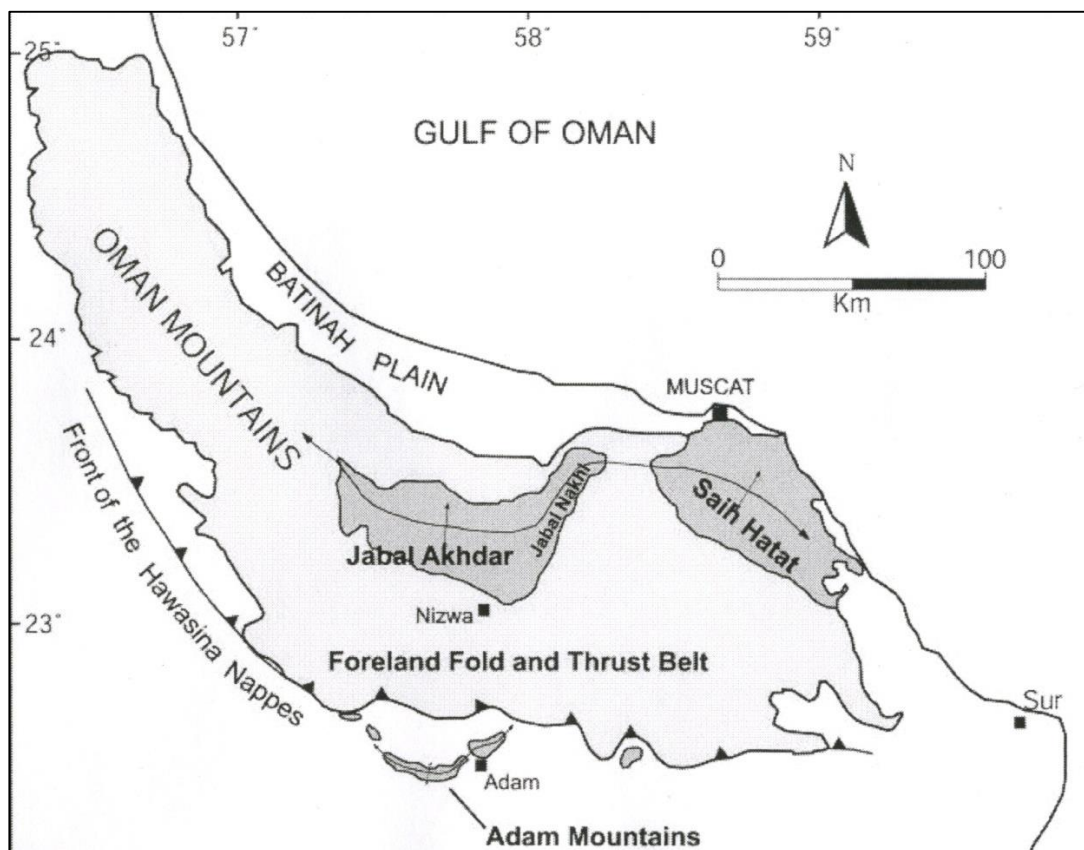


Figure 12: The division of internal zone (Jabal al-Akhdar, Jabal Nakhal and Saih H̥tat) and external zone (Adam Mountain Chain and Hawasina foreland fold and thrust belt), (Matter 2001:35, Figure 1-3).

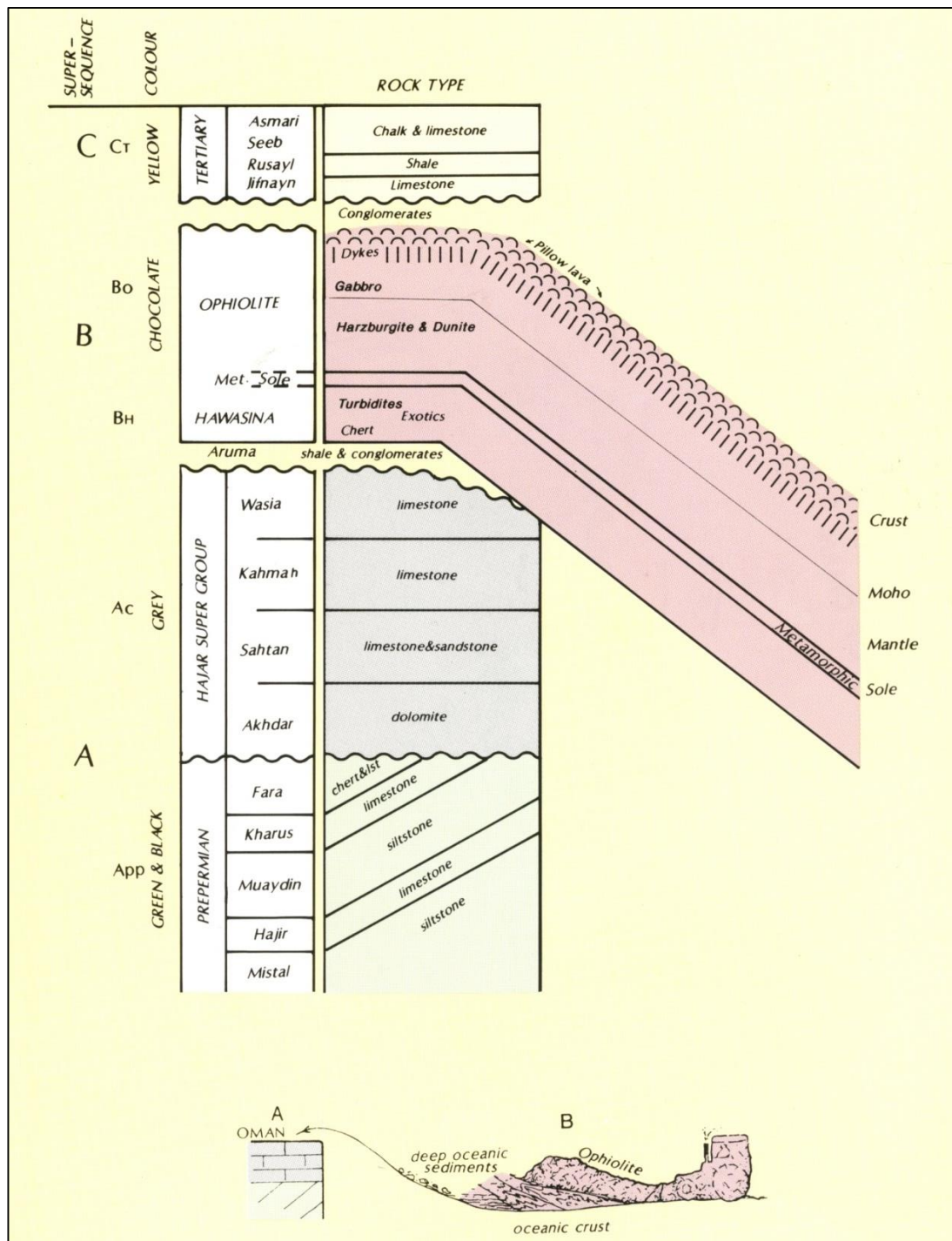


Figure 13: Sketch showing the stratigraphy of the Hajar mountain of Oman (Hanna, 1995, p. 43).

The structure of the main anticline formed by the succession of the thick limestone of Jabal al-Akhḍar is strong and deeply fractured, faulted and partly karstified³⁴ (Matter, 2001, p. 9). These inclines display a set of primary and secondary fractures parallel to

³⁴ An area of irregular limestone formed by dissolution and characterised by sinkholes, caves and underground drainage streams.

its axis. Two principle sets on the southeast incline (i.e, Sīq Plateau and Jabal Ghul) of Jabal al-Akhḍar are defined, the first set inclines from northeast to southwest (1, Figure-14) and the second inclines from west-northwest to east-southeast (2, Figure-14). The dominant fracture set on the southwest to western anticline inclines from west-northwest to east-southeast. This anticline landscape is patterned by joints and fractures, which are found in two sets, vertical and perpendicular to the dipping surface plain.

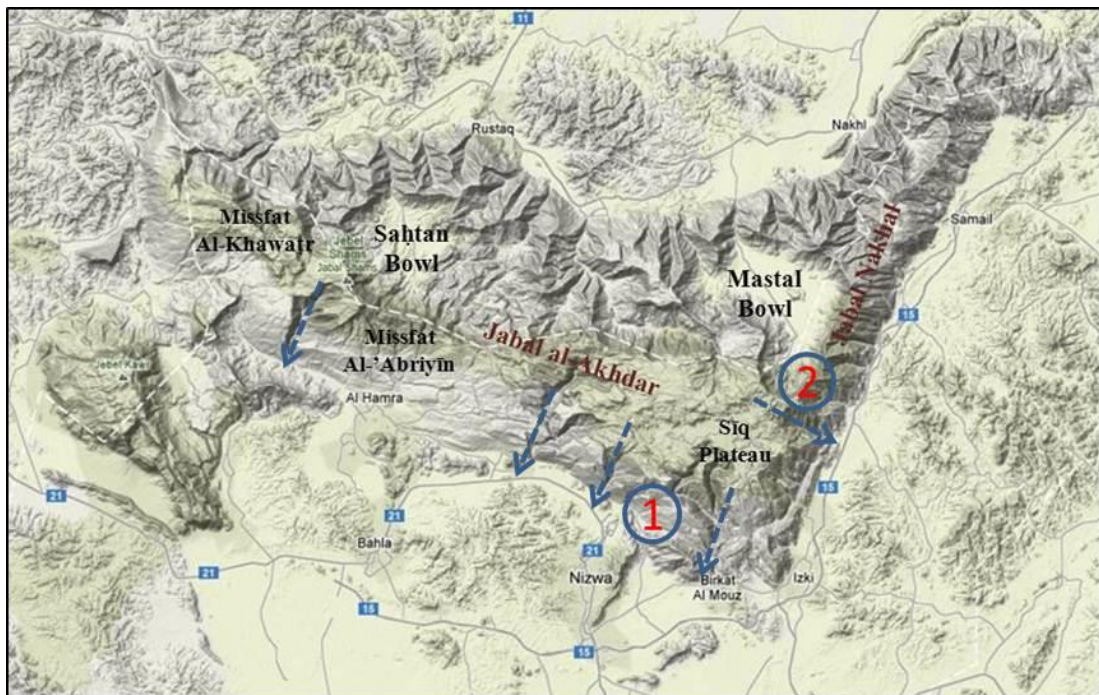


Figure 14: The main anticline sets of Jabal Akhḍar, (1) northeast to southwest, (2) west-northwest to east-southeast, (after google maps terrain).

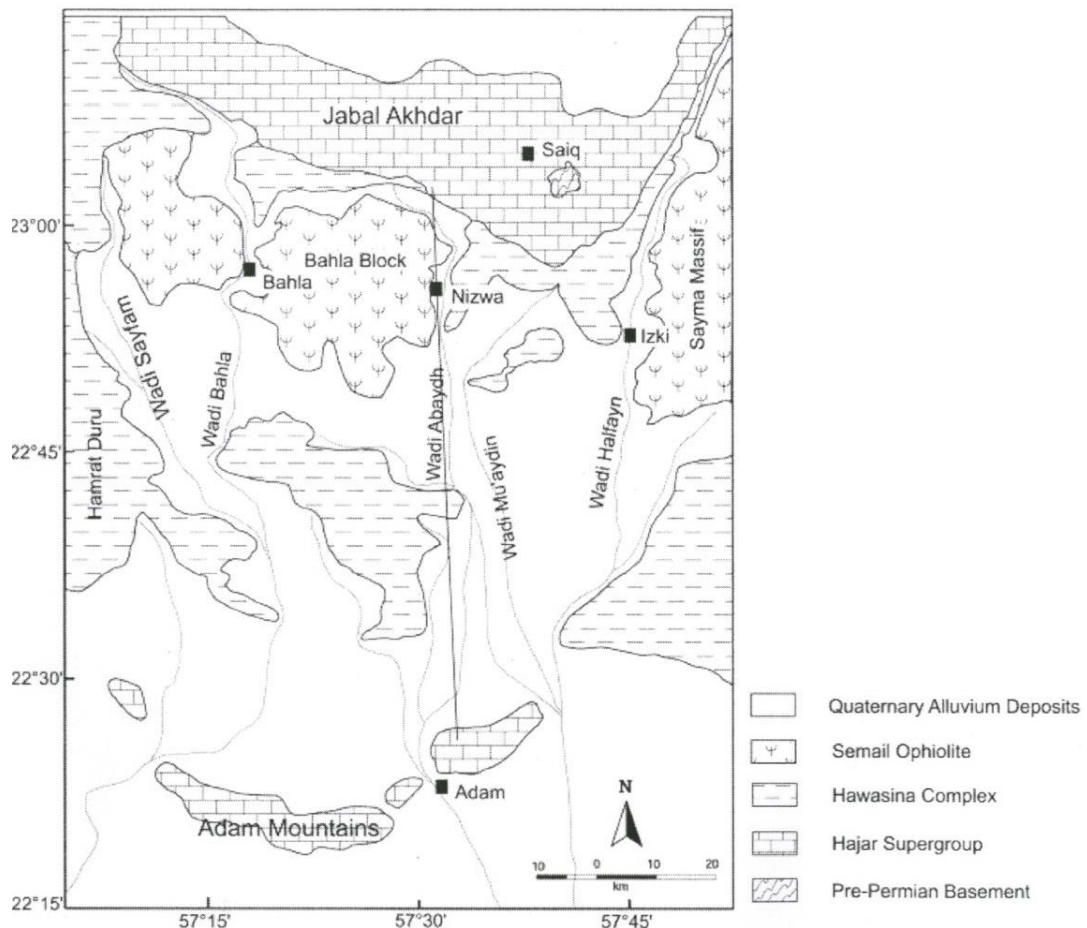


Figure 15: The main geological units in the Jawf region, (Matter 2001: 34, Figure 1-4).

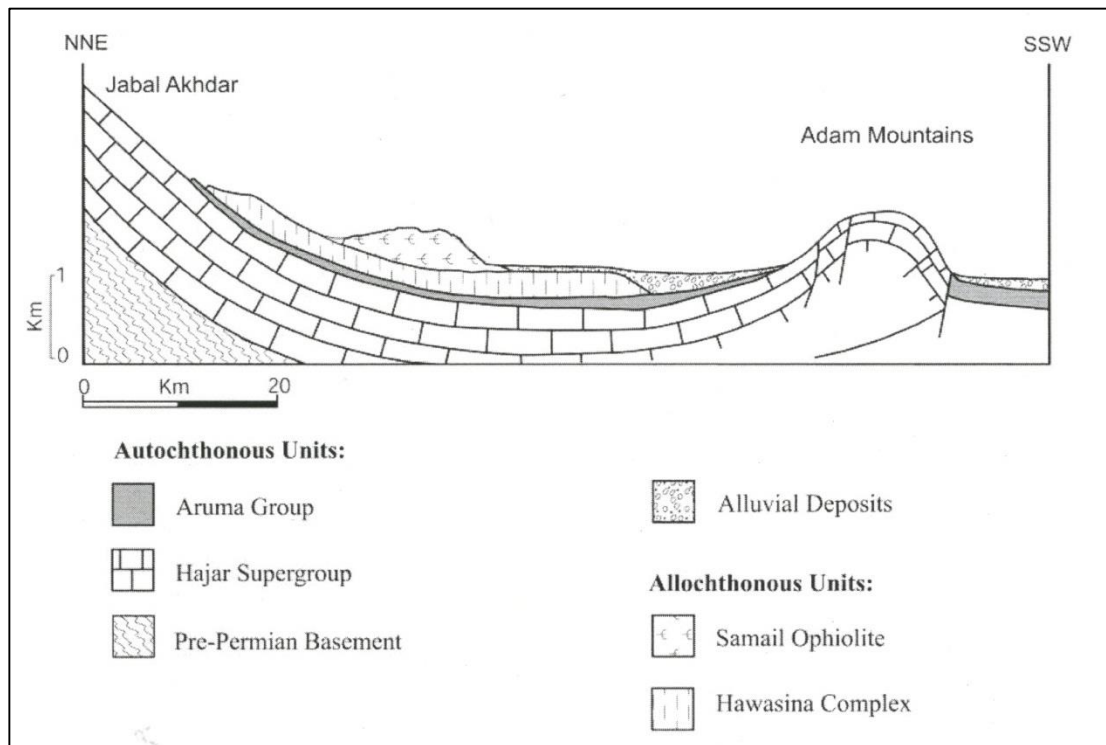


Figure 16: Geological cross section showing the main lithological layers from Jabal al-Akhḍar to the Adam Mountains, (Matter 2001: 36, Figure 1-4).

Climate

The geographical location of Oman at southeast of the Arabian Peninsula defines its hot arid climate positioning it as part of the inter-tropical convergence zone (ICTZ)³⁵ (El-Baz, 2002, p. 13). This zone produces the *seif*³⁶ precipitation over the peaks of Jabal al-Akhḍar caused by the extra-tropical systems in winter. Additionally, the winter high pressure zone (WHPZ) over Caspian Sea contributes in producing the prevalent north-western winds in Oman (*ibid*, p.13). These two factors (ICTZ and WHPZ), results in three wind patterns over Oman in the course of the year (Figure-17). The two main seasons in Oman are summer (June to September) and winter (November to April). The annual mean temperature is 17°C in the Jabal al-Akhḍar mountains, 11.6°C at its peaks in Jabal Shams (2003-2010 records)³⁷, and 25 - 28°C in the alluvial plains south of Jabal al-Akhḍar (Matter, 2001, p. 19).

The annual mean rainfall is 90 mm in the alluvial plain (*ibid*, p.19) and 300 mm in the Jabal al-Akhḍar mountain (El-Baz, 2002, p. 13). Most of the rainfall in the mountains with maximum monthly mean of 60 mm happens during two periods: between January and April and between July and August (Figure-18). Homogeneously, the alluvial plains also get the most rainfall between January and April with a maximum monthly mean of 23 mm (Matter, 2001, p. 20). The average daily sunshine is 10 hours, except for the mountain with low humidity of 40% compared to that of the north coast of 60% and south of 70% (El-Baz, 2002, p. 13). The low humidity and high temperature in

³⁵ The inter-tropical convergence zone is also known as the doldrums by sailors, which is the zone that circles the earth near the equator, where the trade winds of the northeast and southwest hemispheres meet together. Its location over land varies and moves back and forth depending on sun's zenith point.

³⁶ It means in classic Arabic: the coast of the sea or wadī, and in geology it means: the plain area in the continent which follows the sea.

³⁷ Records of monthly means air temperature from January 2003 to December 2012, from the Directorate General of Metrology and air Navigation, of the Civil Aviation and Air Navigation, of the Ministry of Transport and Communication, Sultanate Oman.

central Oman contribute in high evaporative effect exceeding 12 mm per day which makes the interior a hot and dry region in (*ibid*, p. 13).

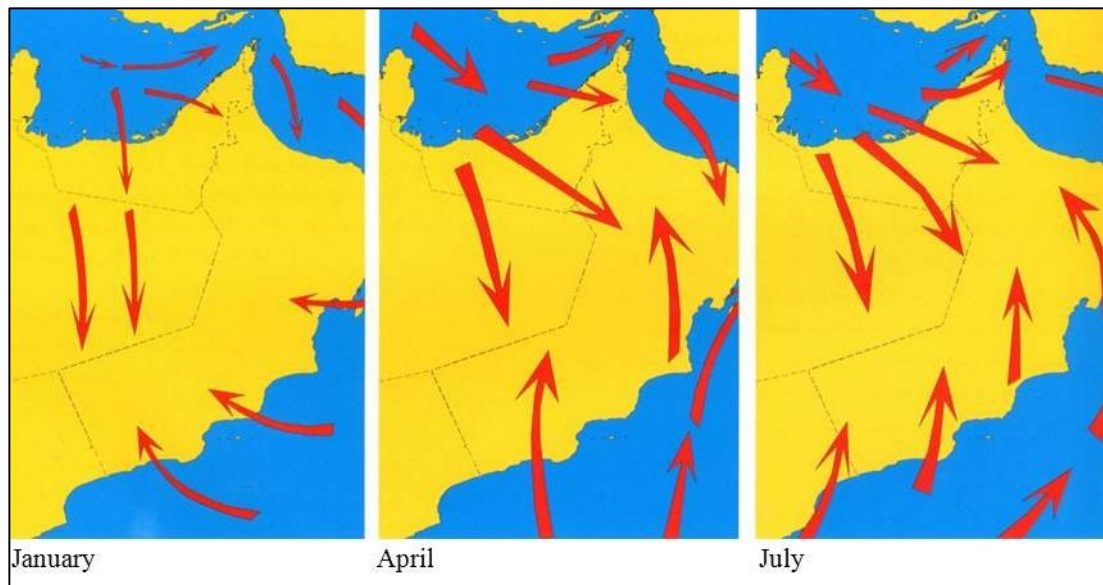


Figure 17: Wind pattern over Oman along the year, modified by author (El-Baz 2002: 14).

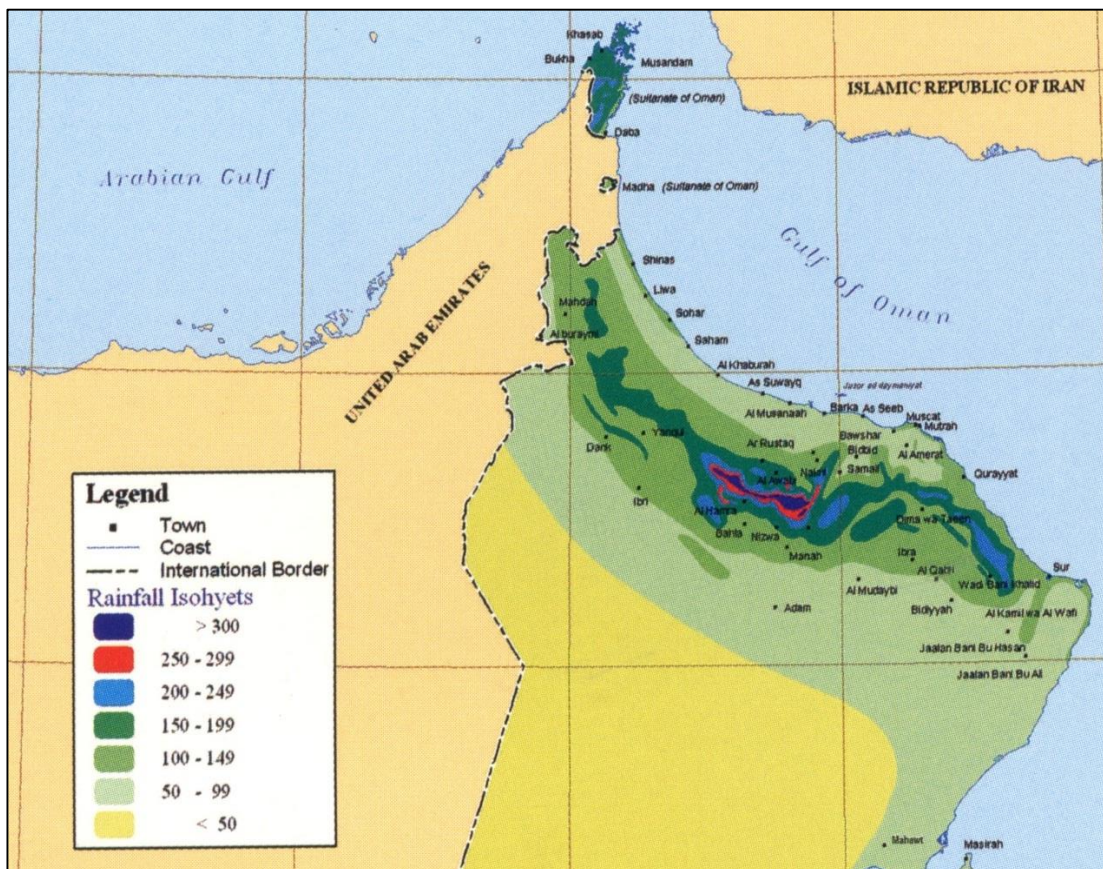


Figure 18: Rainfall map of north Oman (MRMEWR 2005: 26, map).

Environmental Pattern and Settlement location setting

From the above discussion the environmental factors in the Jawf region it is clear that Jabal al-Akhḍar is the main contributing factor and source to defining the settled landscape in the region (Figure-19). Its role, as a reference point to the production of the other factors, contributes in understanding their hierarchy and interrelation. The close correlation with rainfall provided the principal source of existence in the region: water and fertile soil generated from the wadī flow. Such environmental factors not only provided the source of living but, it also gave the region a significant landscape pattern and territorial identity. Hence, it contributes defining the natural factors and patterns influencing the formation and morphology of each settlement.

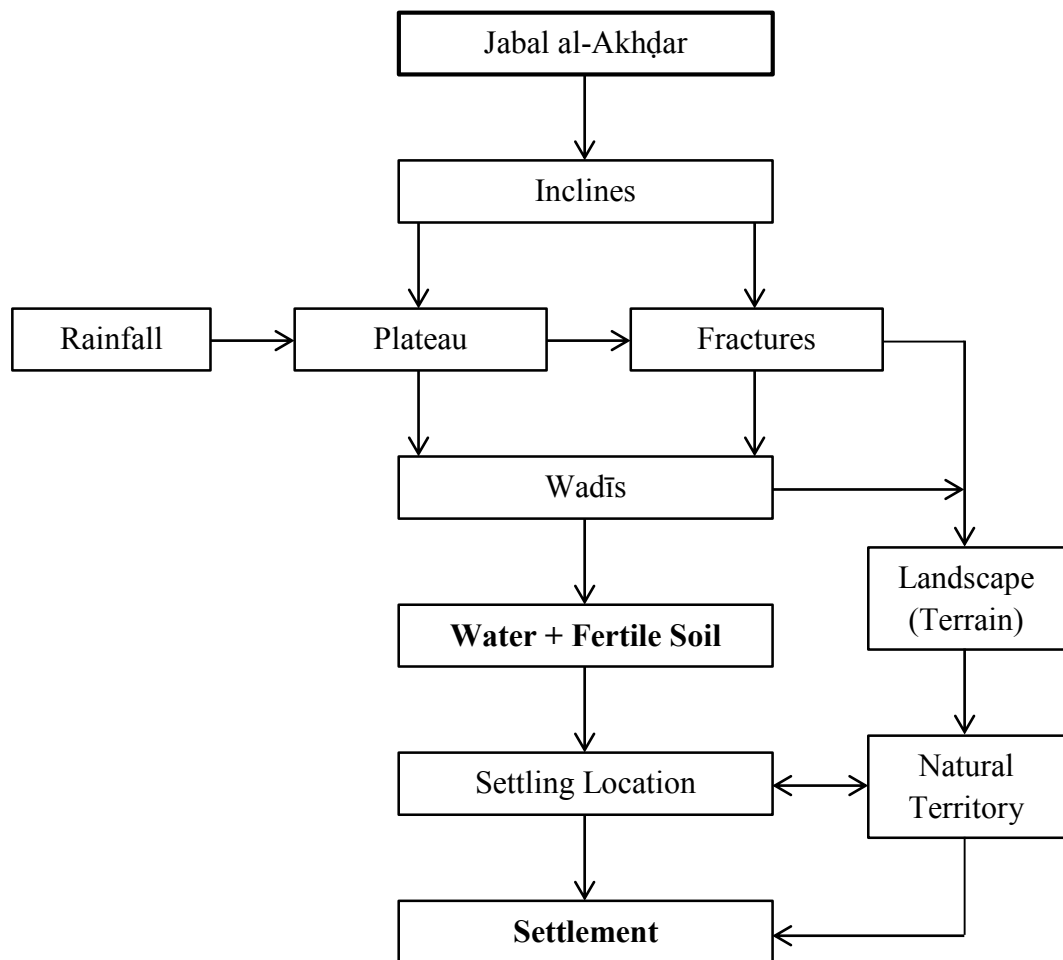


Figure 19: The hierarchy and relation of the environmental settling factors from Jabal al-Akhḍar to the settlement's location.

“The one feature which above all has determined the settlements pattern in Oman is the distribution of fresh water resources. Neither physical difficulties, such as the terrain and the paucity of the soil, nor human problems, such as cost of investment or the isolation of communities, have impeded the development of the few favoured areas where reliable water supply existed.” (Wilkinson, 1977, p. 36)

Wilkinson also argues that finding a reliable water supply was the main settling concern for the early inhabitants and their ability to adapt and develop their settlements with the challenges of the terrain. This adaptation shaped the settlement pattern and introduced various typologies along with the social and tribal influence. The established settlements including the surrounding wadī and mountains were later designated names according to their location and the tribes who settled in them, as Miles states:

“The names of many other powerful and distinguished tribes have come down to us by tradition from antiquity, and some of them have left their mark in the name of the valley, town or district where they resided; for in Oman, as in Arabia generally, they called the land after their own name.” (Miles, 1919, p. 5)

The availability of these sites goes back to the early settlement evolution in the Jawf region, which was influenced by Arab migration, the Imamate power and socio-political power dynamics provided by the tribal organisation. Some archaeological and toponymic evidence points towards Izkī as the oldest settled area in the Jawf followed by Samail and Nizwa (Bandyopapahyay, 2011, p. 32). By the advent of Islam all areas

currently inhabited had been settled, which included the larger oasis settlements of Manah and Bahla. In the Nabahina period further changes took place in settlement hierarchy but the essential distribution of settlements remained unaltered. Later in the peak of Yaʿaribah dynasty was the dawn of the foothill settlement of al-Ḥamrā and Birkat al-Mawz.

2.3: Al-Ḥamrā

Introduction

The *Wilayat* of Al-Ḥamrā³⁸ - the capital *dār*³⁹ of the ʿAbriyīn tribe – is located in the Dākhliya governorate, 220 km from Muscat ⁴⁰ (Figure-20). The al-Ḥamrā administrative district boundaries adjoin Nizwa on the east, ʿIbrī on the west, Bahla on the south and Rustāq on the north, extending from behind Jabal Shams⁴¹ to the north flank of Jabal al-Akhḍar. It stretches between the low hills and the northwest outskirts of Jabal al-Akhḍar, providing the main gateway to the main natural access to Jabal Shams. In 2010 it was inhabited by 19,509 people (Omancensus, 2010) scattered across more than 76 villages within an area of 200 km² (Al-Adawi, 2006, p. 12). This makes it the fifth largest *wilayat* after Nizwa, Samail, Bahla and Adam. Al-Ḥamrā region was previously (before the Yaʿaribah ruling 1624 C.E) known as Kudam,⁴² mentioned in some of the old state trading documents and manuscripts (twelfth century A.H. / nineteenth century C.E.) as al-Ḥawza al-Kudamiya. Later it gained its name āl-

³⁸ Also known as Ḥamrā Al-ʿAbriyīn, approximately extends between longitudes 23° 03' N and 23° 23' N, and between latitudes 57° 06' E and 57° 25' E.

³⁹ It is a local Arabic term used when pointing to a traditional settlement designated as a capital settlement for one tribe.

⁴⁰ It is the Capital of the Sultanate of Oman in Muscat governorate, located in the north coast facing the Omani sea.

⁴¹ The highest peak in Hajar mountain chain (3035 m) in Oman and in the Arab Gulf Peninsula.

⁴² In reference to a small mountain called known as Ḥurat al-Qal'a with a peak at its west end called Qarn Kudam, meaning the collision in the body, subcutaneous blood clotting from injury & heavy fighting.

Ḥamrā from the red soil and rocks in the low hill chains surrounding it from the southeast – an area known locally as al-Ḥabil (Al-Adawi, 2006, p. 14). Some of the well-known villages in āl-Ḥamrā are Baldat āl-Ḥamrā, Qaryat B.Subh⁴³, Al-ʿAriḍ⁴⁴, Misfat Al-ʿAbryīn⁴⁵, Dhat Kail⁴⁶ and Al-Qalʿa⁴⁷.

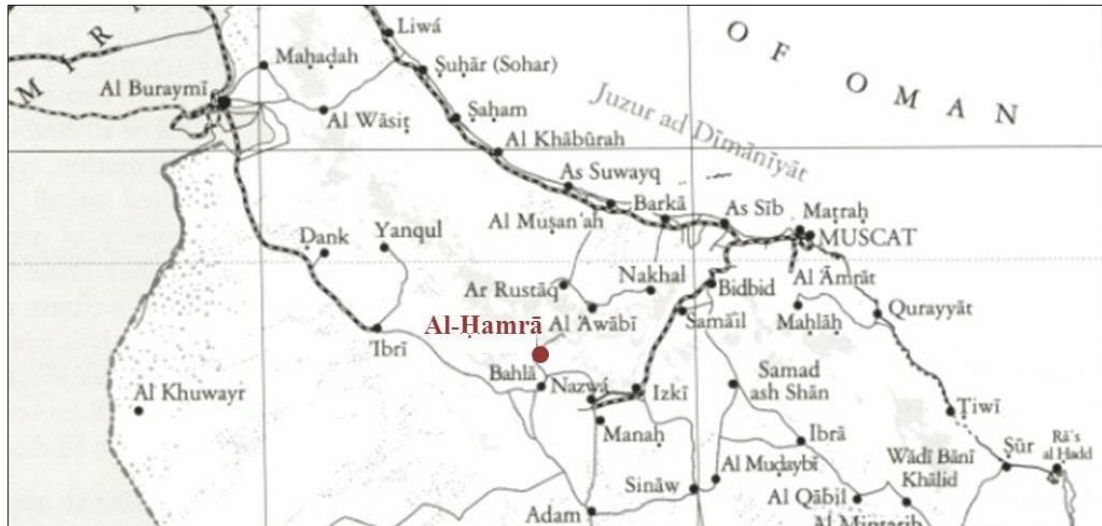


Figure 20: Location of al-Ḥamrā in ad-Dākhliya governorate.

Regional Characteristics of al-Ḥamrā

Al-Ḥamrā is positioned in the landward side of the Ḥajar al-Gharbi Mountains, embraced within a mountain fold by Jabal Shams (Figure-21). Its geographical location shows that it is surrounded by mountains on all four sides: Jabal Sharqī from the east, Jabal Shams (or Jabal al-Qannah) from the north, Jabal Gharbī (al-Akhḍar) from the west and low hill chain (al-Ḥabil) from the southeast. It is also surrounded and crossed by five main wādī channels of Wādī Ghul⁴⁸ from the west discharging

⁴³ It was established in 2nd century A.H. /8th century C.E. and was divided in to two settlements, Ḥarat al-ʿAlī and Ḥarat as-Safī (Al-Adawi, 2006, p. 16 and p.104).

⁴⁴ Known as ʿAriḍ B.ʿAdaī and was established in 4th century A.H./10th century C.E. and was famous for Jamʿa al-ʿAriḍ which was built in the time of the ʿalim A. Said Al-Kudamī. This Jamʿa was one of the biggest in Dakhlyia governorate in its time. It can fit 1000 prayers and contains 15 cylindrical columns (Al-Adawi, 2006, p. 16 and p.105).

⁴⁵ ʿAbryīn used come down from Missfa Al-Abryīn to grow, irrigate and harvest the Arable land before the establishment of al-Ḥamrā.

⁴⁶ It was called Dhat Kail because that area was used for tying horses, and its history goes back to Ḥisn al-Khawr which was used for tying horses, it was also known as *fajat al-Khail*.

⁴⁷ Known as Qaʿat al-Msalḥ and was established from 5th to 7th century A.H (Al-Adawi, 2006, p. 19).

⁴⁸ W.Ghul is a combination of two wadis, W.Anakher from N and W.al-Minthar from NE, and know to be the biggest discharges wādī in the from the west side of the settlement, which is located 2 km from the centre of the settlement.

from Jabal al-Gharbī and Jabal Shams, Wādī as-Slīl⁴⁹ from the north behind the settlement, Wādī al-Mid‘am (a combination of three discharge wādīs, Wādī ‘Amir, Wādī al-Mid‘am and Wwādī Ma‘qal) from the north discharging from Jabal Shams and Missfa, Wādī al-Milḥ⁵⁰ from the east and Wādī Sha‘ma⁵¹ discharging northeast from Jabal al-Sharqī (Figure-22). All five wādīs meet and flow towards the south as Wādī Bahla towards the oasis of Bahla, 17 km south. The big discharge flow of Wādī Ghul in the catchment area has divided the piedmont land into wādī (W) area to the southwest and arable land (A) to the northeast (Figure-22).

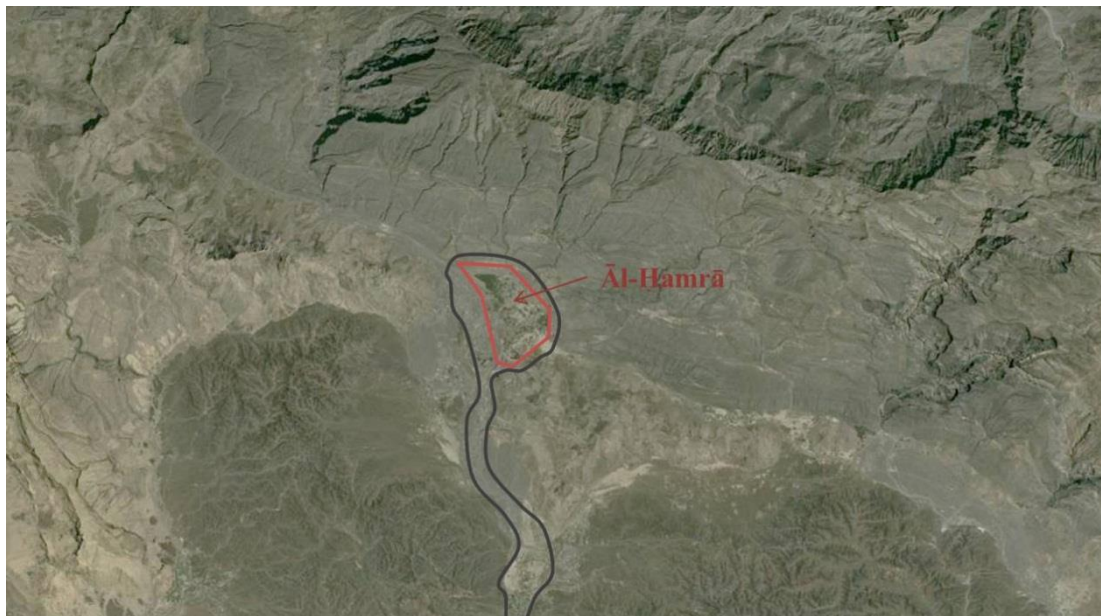


Figure 21: Āl-Ḥamrā positioned in landward side within a mountain fold.

⁴⁹ It is also known as al-Munabik, discharging from the north behind the settlement and flow from its east side.

⁵⁰ Gained its name from the presence of sediment flowing from the rocks bordering the wādī from both sides and these deposits originally are calcareous deposits.

⁵¹ This wādī passes first near Qaryat B.Subh, then Ḍhat Khail then to al-‘Āriḍh and finally combines with W.Ghul.

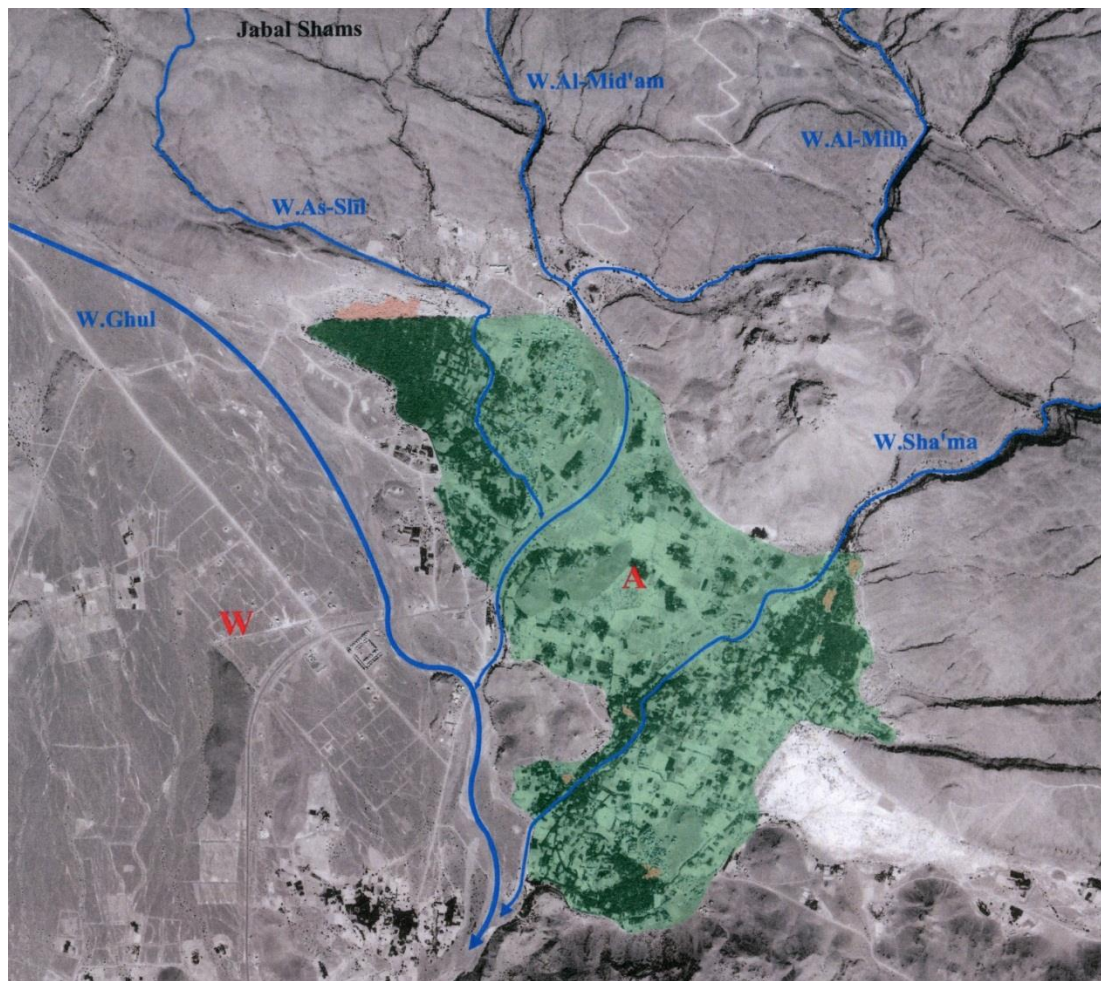


Figure 22: Regional Character of al-Ḥamrā

Although the altitude of the arable land is 655 masml and that of the wadī is 662 masml with 12 m difference in level between them, yet, the location of the oasis had an important impact in protecting the arable land. The location of the arable land (A) is significant in the sense of being embraced by the Jabal Shams to the north and the east side, and the low hill chain from the southwest side. These mountains along with the Ḥurat al-Qal'a Mountain (Qarn Kudam) on the southeast worked as a natural shield, (a) protecting the oasis from the discharge of the central wadī flow (Wādī Ghul) which was diverted away to the south towards Bahla, and (b) the sandy winds blown from the desert, and (c) providing a visual protection from the south, east and west sides (Figure-23 & 24).

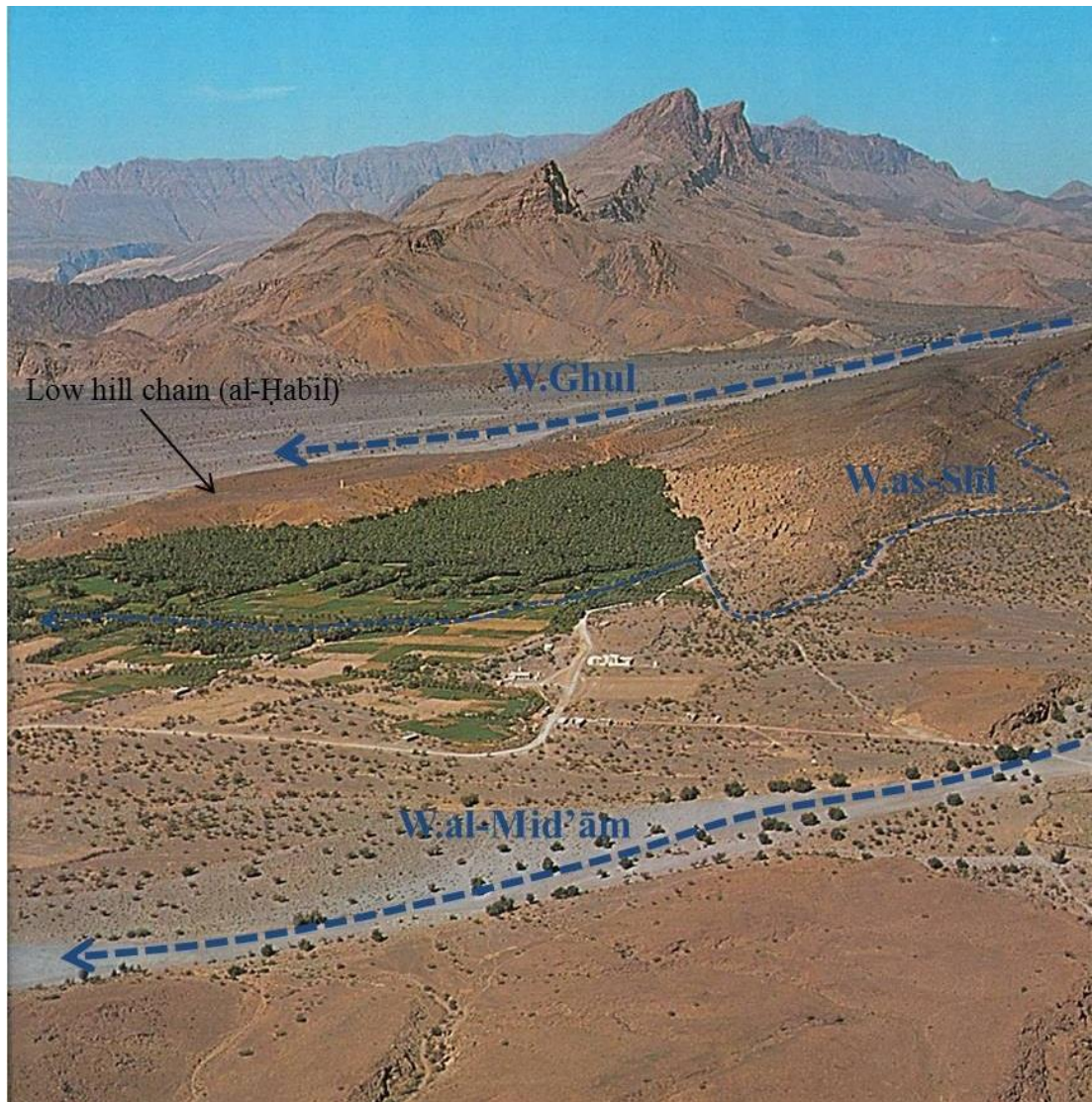


Figure 23: the natural protection of the low hill chain in the southwest side, modified by author. (after Scholz 1977:vol2, 94, Figure 38).



Figure 24: (A) arable land, (W) central joint wadī flow, (L) al-Ḥabil low hill mountain chain, (D) Small mountain near al-ʿĀriḍ and Dhat Khail, (K) Ḥurat Kudam mountain and their role in insuring the diverging of the wadī flow to the south.

Geological Structure of al-Ḥamrā

The location of al-Ḥamrā on the south flank of the foothills of Jabal Shams / Jabal al-Akhḍar divides its area into an internal zone facing the higher altitudes of Jabal Shams and al-Akhḍar, and an external or foreland zones of hills and wadīs, (Figure-12). Geologically, the zones are categorized as Super-sequence ‘A’, and Super-sequence ‘B’, respectively (Figure-13). The foothill of al-Ḥamrā (the natural base of the settlement) forms under the Natih formation (Nt) (Figure-25 & 26). The Natih belongs to the shallow marine platform carbonates, which appears as a thick grey limestone.

This formation is very rich in prealveolina⁵² fossils located in thick dark grey colour beds and characterised as cliff-forming limestone with lime mudstone on top.

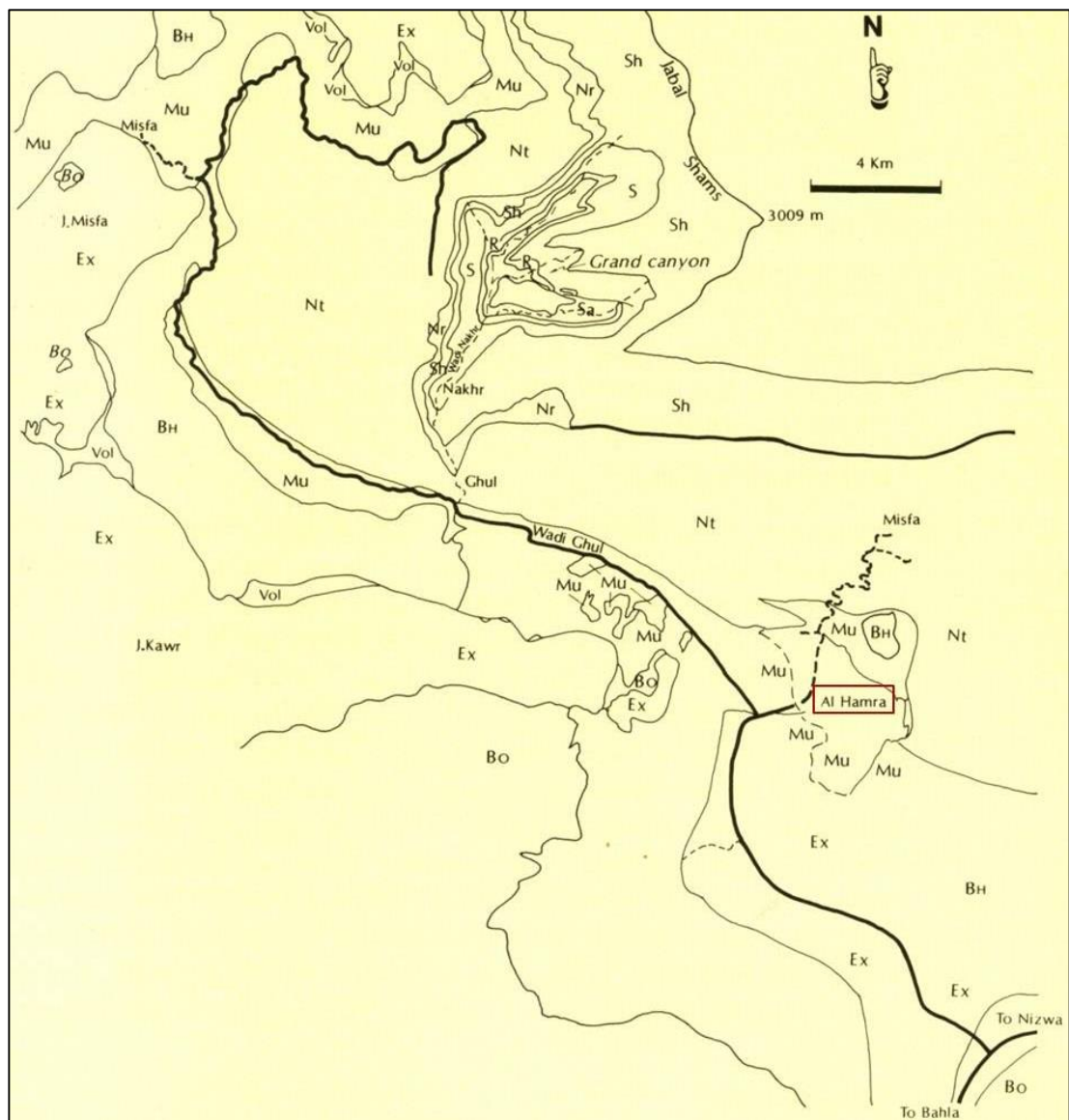


Figure 25: The geological map of al-Ḥamrā, wādī Ghul and Jabal Shams (after Hanna 1995:145).

The foreland in al-Ḥamrā contains the arable land, wādī channels and low dissected hills, which are all categorized under two geological groups, the Aruma Group (Ar) - an intervening group between Super-sequences A and B - and Super Group (B), (Figure-13). The Aruma is syntectonic sediment resulting from weathering of the

⁵² A white elliptical or elongated foraminifera that can be seen by naked eye varying in scale from under 2 mm to over 3 cm in white circular or ring-like form, which is also found in wādī Mu'aydin (Hanna 1995, pp.140-149).

ophiolite and other rocks. This syntectonic sediment formed over time results in the fertile soil of the areas. The fertile soil varies in thickness overlaying a layer of bed rock, which has contributed in defining the location of palm groves and other crops. The palm trees are grown in the deeper soil deposit areas, while the other crops can grow in a shallower soils. This has defined the location and perimeter of the palm groves, and so the access points from the settlement.

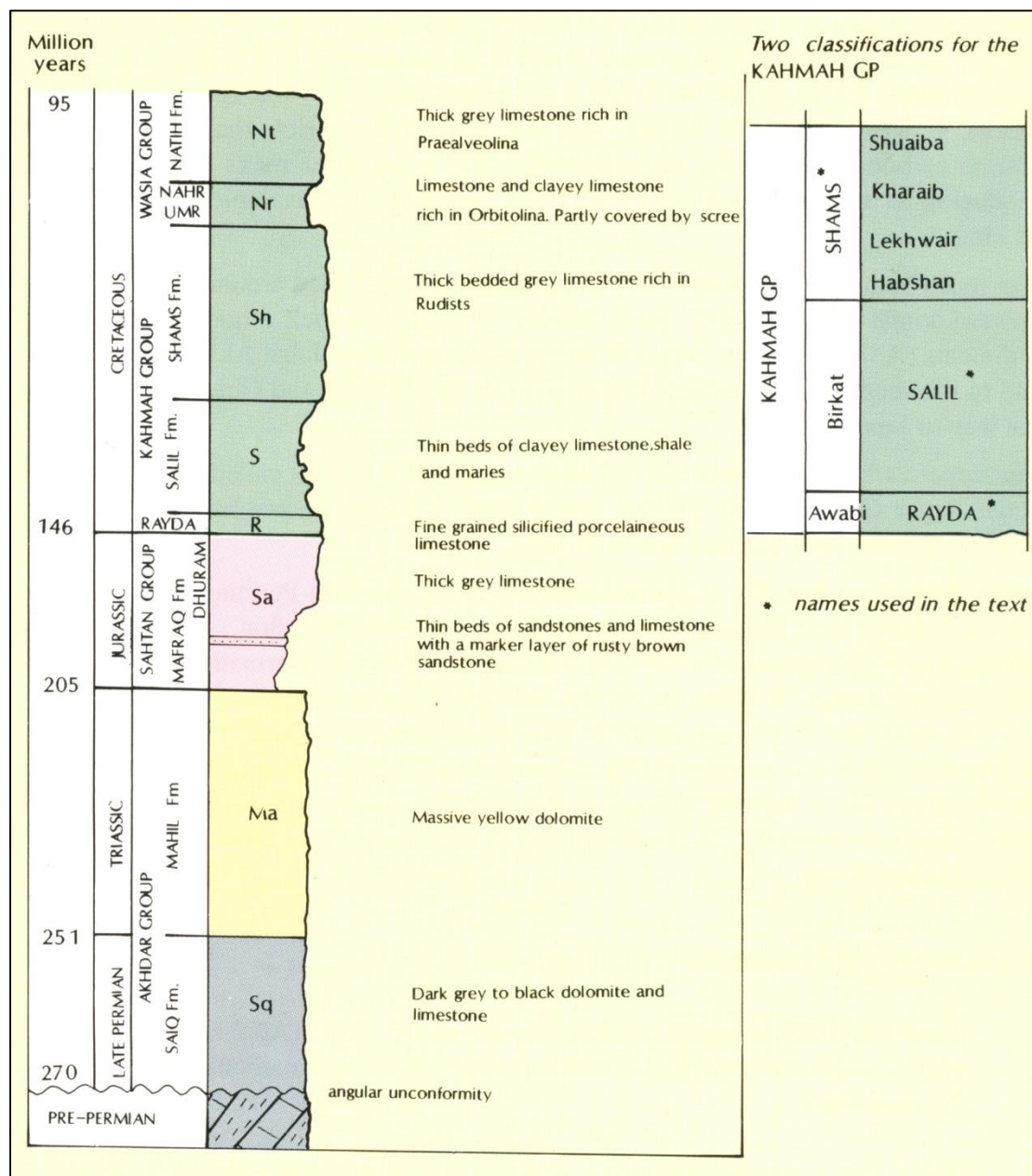


Figure 26: The division of the Hajar Super Group (A) with brief descriptions (Hanna 1995:53).

2.4: Birkat al-Mawz

Introduction

The *nīyāba* of Birkat al-Mawz⁵³ is one of the sub-districts that falls under administrative district of *Wilayat* Nizwa⁵⁴, located in ad-Dakhlīya governorate, 140 km from Muscat and 23 km from the centre of Nizwa. Birkat al-Mawz boundaries are neighboured on the east by Izkī, on west by Nizwa, on south by Manaḥ and on the north by the Jabal Akhdar. Similar to al-Ḥamrā, it stretches between the low hills and the northeast outskirts of Jabal al-Akhdar, guarding the main natural access to upper reaches of the mountain. It was previously known (i.e., before the *falaj* Khatmeen was excavated) as Birkat al-Ṭalḥ (Al-Siyabi, 2012, p. 104), (it means in classic Arabic: bananas or what remained in the pelvis and the lake from the water chagrin during drought times). It gained its name Birkat al-Mawz (meaning: Banana lake) during the Imamate of Sultan b. Saif b. Malik al-Yaʿrubī (1059 – 1090 AH / 1649 – 1680 AD) after he excavated *falaj* al-Khatmeen sourced from the discharge of the biggest wadī (wadī Muʿaidin) from the Jabal Akhdar running past that area, he ordered to continue to grow bananas⁵⁵ alongside date palms and called the area Birkat al-Mawz. It contains three main settlements, Ḥarāt as-Saybanī, Ḥarāt al-Wadī and Ḥarāt al-Maqāṣīr (Figure-27).

⁵³ It stretches approximately between longitudes 22° 55' 42" N and 22° 53' 42" N, and between latitudes 57° 39' 18.16" E and 57° 41' 50.90" E

⁵⁴ The capital of Dakhlīya governorate and the starting point of the Yaʿrubī dynasty starting from Imam Nassir b. Murshid b. Malik al-Yaʿrubī (1624 - 49).

⁵⁵ Bananas need water every two to three days in warm weather, which indicates the rich source of water reflecting the Imams decision in growing them here.



Figure 27: Birkat al-Mawz location in ad-Dākhliya governorate.

Regional Characteristics of Birkat al-Mawz

Birkat al-Mawz is positioned in the landward side of the Ḥajar al-Gharbī Mountains, embraced within a mountain fold between the outskirts of Jabal Akhḍar and the catchment area Wādī al-Muʿaidin (Figure-28). The observation on its geographical location shows that it is bounded by mountain edge of Jabal Akhḍar from the north, east and the southeast sides. Two low hills, 500 m apart, from the south, and Wādī Muʿaidin (a combination Wādī al-Muʿaidin and Wādī B.Ḥabib) define its edge from the west and southwest side. Although the altitude of the arable land is 566 msml and that of the wādī is 572 msml with 6 m in level difference, the location of the arable land (A) was significant in the sense of being embraced by the Jabal Akhḍar from north, east and southeast side, and the low hill chain from the west and south side, and the natural discharge path of the wādī in the mountain oriented southwest (Figure-29).



Figure 28: Birkat al-Mawz positioned in landward side within a mountain pocket.

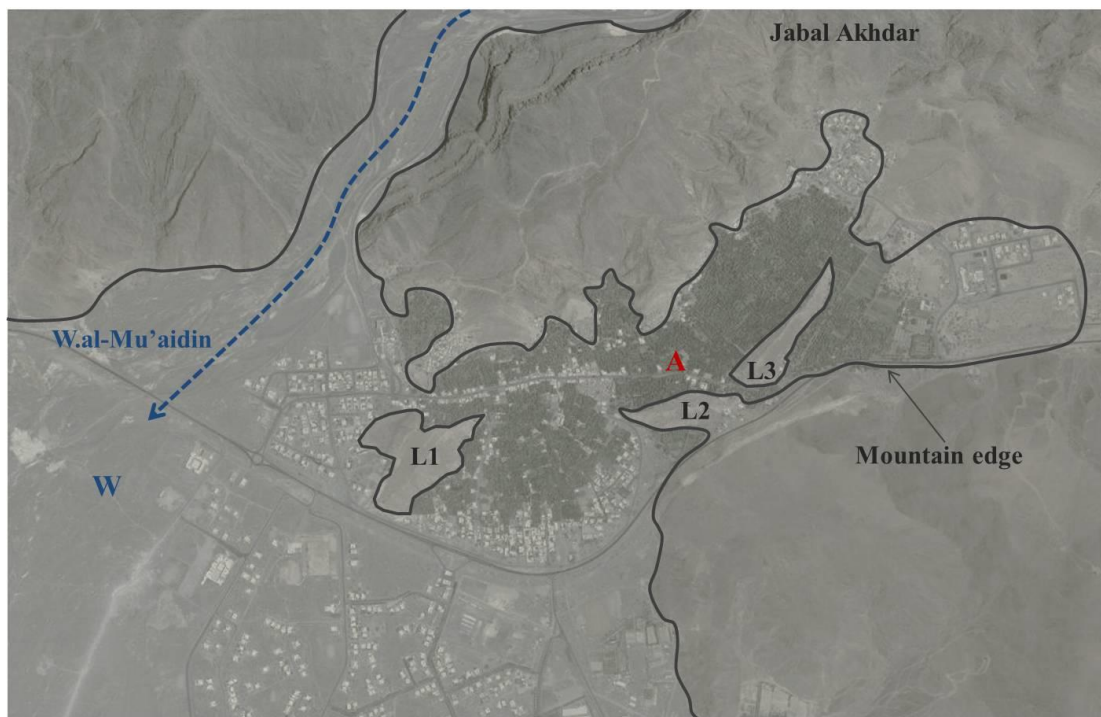


Figure 29: (A) arable land, (W) wadī catchment area, (L1) low hill mountain chain in the W, (L2) low hill mountain chain in the SE, (L3) low hill mountain chain in the E (J) Jabal al-Akhḍar mountain and its role in insuring the diverging of the wadī flow to the southwest.

Geological Structure of Birkat al-Mawz

Similar to al-Ḥamrā, the geographical location of Birkat al-Mawz on the south flank foothill fold of Jabal al-Akhḍar divides its area into internal zone (Jabal al-Akhḍar) and external or foreland zone (hills and wadīs), (Figure-12). The geological significance of this location is marked by Wadī Muʿaidin where three rock groups are exposed: Mesozoic carbonates of Super-sequence (Ac), Ḥamrat ad'Duruʿ group (HD) and the Aruma sediments (Ar) (Hanna, 1995, p. 135). The foothill geological structure of Birkat al-Mawz falls under a thin dark chert known as the Sidr Formation (Si), (*ibid*, p. 135). The thinly bedded tributes represent the final top layer known as the Nayid Formation (Na), (Figure-30). The rock used for constructing the settlement is the same as Natih having the same colour as the foothill with close colour proximity to the mud bricks used. This made the visibility of the settlement on the foothill difficult from a distance. Although this possibly could not have been intentionally considered by the inhabitants, it served them well in enhancing the defence strategy (*cf.* Chapter 3). In al-Ḥamrā, the geological character of dark grey colour of the foothill made a clear contrast and hence a clear visibility, the low foothills in the south play a major role in hiding the settlement from visual exposure (*cf.* Chapter 3).

Ḥārat as-Saybānī is constructed on top of the Sidr Formation (Si) bedrock, which is a sedimentary structure that appears in stratified formation. They are bedded in parallel layers of rock in a uniform texture and lithology (Figure-31). These layers appear in a scale of less than a few centimetres known as lamination. Their sedimentary rock structure appear under Ḥārat as-Saybanī in the form of parallel lamination⁵⁶, with varying scales from as small as 2 cm up to 30 cm in thickness and a dipping angle of

⁵⁶ Geological term referring to the sedimentary rock layers that usually appear less pronounced in a few centimetres thick.

40 to 60 degrees (Figure-31 & 32). These layers revealed existence of organic presence, burrows, preserved tracks and fossils which indicate the layers formed after deposition and so are categorised as secondary sedimentary structure (Figure-33). Further analysis of the topography will be undertaken showing its influence on the settlement formation in chapter-3.

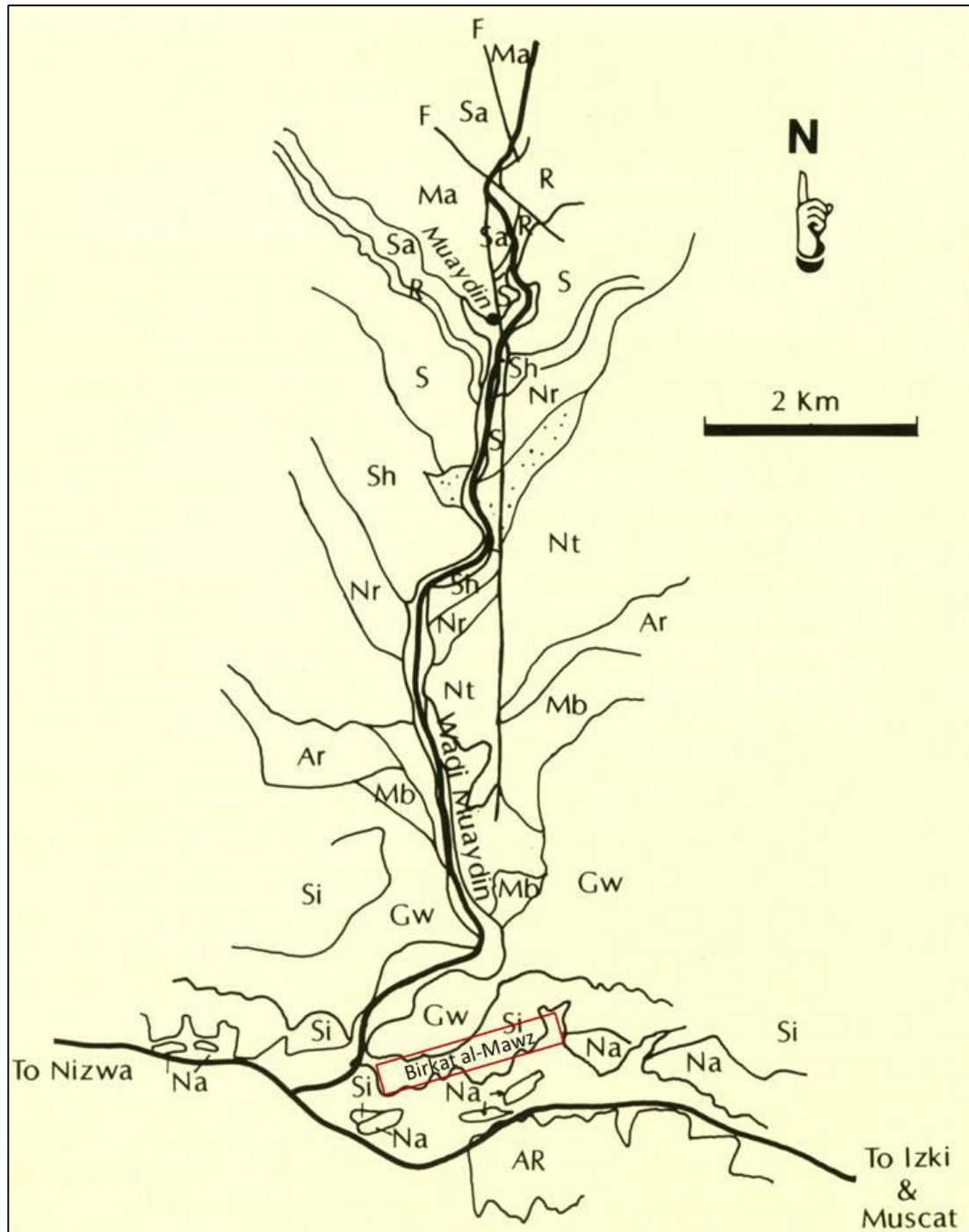


Figure 30: The geological map of Birkat al-Mawz and wadi Mu'aydin (after Hanna 1995:136).



Figure 31: The sedimentary rock layers of strata (Sidr formation), which is the geological foundation structure of ḥarat as-Saybanī.



Figure 32: The varying scale of the rock layers in Ḥarat as-Saybani.



Figure 33: The presence of fossils in the sedimentary rock layers in ḥarat as-Saybanī.

2.5: Epilogue

In this chapter, I have discussed the environmental setting of the Interior (i.e. Jawf) from geographical, topographical, hydrological and geological perspective. The location of the Jawf region, embraced by the Ḥajar Mountains, in the heart of Oman made it the political pulse and economic destination for other surrounding regions. The natural isolation of the Jawf by the topography (i.e. mountains) gave it advantage of natural resource isolation for their own benefit. This isolation gave the settlements a sense of controllability on their territory and resources. The divers' topography from mountain fold to the plain desert foreland gave the opportunity for the many settlements to gain from the wadī flow (e.g. Manah benefits from Wādī al-Abydh from Nizwa, and Bahla benefits from the wadīs of al-Ḥamrā). The wadī gorge (i.e. deep mountain fractures) in the mountains has provided routes to connect with other settlements and herding grounds.

The divers in topography have contributed in introducing topography zones; mountain region, north inner foothill and wadī zone, wadī catchment zone, and finally the desert zone. Each settlement established in each zone has gained a topographic identity, which contributed in the settlement's formation. Each zone has also been influenced geologically along with the climate resulting in to four wadī flow channels types, braided (interwoven channels), dendritic (tree-like patterns), meandering (sinuous course) and rectilinear patterns. These types had a major influence in defining the catchment areas and the sediment areas, which in return contributed the defining the land use (i.e. herding, agriculture and construction).

The rigidity and majesty of the mountains gave the settlement's inhabitants a strong sense of power and control that goes beyond the physical meaning. The mountain is considered the main factor as living source for the whole region. The incline of the mountains, textured with the fractures and plateaus, gave the opportunity for the wadī to flow dawn with fresh water and sediments for agriculture soil. This rich context of natural resources contributed in defining the landscape and natural territory which resulted in selecting the settling location and later establishing the settlement.

The discussion then moved to focus on the environmental setting of al-Ḥamrā and Birkat al-Mawz. The isolation concept has transformed from the large scale of the Jawf to the settlements scale, where both al-Ḥamrā and Birkat al-Mawz were located in a mountain pocket. The containment of both oasis by the mountain and low hills, and the defined natural wadī flow routes contributed in protecting the settlement naturally. The crossing of some of the wadīs in al-Ḥamrā contributed in a natural internal division and land use (cf. Chapter 4). While the complete diversion of wadī Mu'aidin in Birkat

al-Mawz contributed in the division of the agriculture land based on *falaj* water shares (cf. Chapter 4). Geologically, the thick grey carbonates limestone of Jabal Shams in al-Ḥamrā (i.e. Natih formation Nt) contributed as a natural base for the settlement's foundation. While the varying thickness of the syntectonic sediment of the Aruma Group 'Ar' in the agriculture field, contributed in the defining the location of the palm trees and crops. In Birkat al-Mawz in the other hand, the Nayid Formation (Na) presents the geological structure of Ḥārat as-Saybānī foothill. The Na forms in a peculiar thick light grey parallel layers used for constructing the settlement, which made the visibility of the settlement difficult from far distance. These rock layers were also useful in developing the construction technique during the settlement's development (cf. Chapter 5).

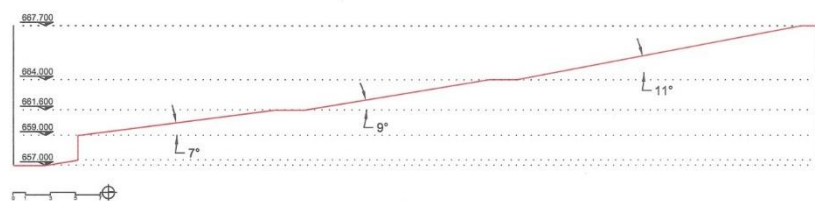
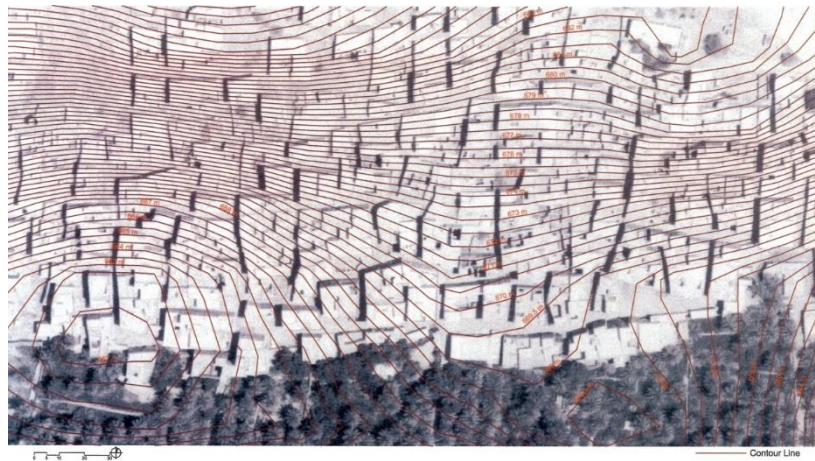
Chapter-3: Ḥarāt al-Ḥamrā & as-Saybānī: urban pattern and architecture

3.1: Introduction

3.2: Topography and urban pattern

3.3: Fortification

3.4: Epilogue



Chapter-3: Ḥārat al-Ḥamrā and as-Saybānī urban Pattern and Architecture

3.1: Introduction

The discussion on the environmental setting (*cf.* Chapter 2) reflected the physical pre-settling factors for the two ḥārat. These factors continued to influence the development of the new settlements throughout their evolution.

This chapter will analyse the settlements' components and how the formatory factors influenced them. The analysis will first address the topography and its influence on the urban pattern in the context of the rock structure, slopes and altitude, moving on to describe the impact of direction, and orientation. And finally, it will discuss the fortification system (gates, wall, tower, mosques and dwellings) and urban patterns (passages and dwelling blocks). The analysis in this chapter will support the discussion on dwellings and architecture in Chapters 5.

3.2: Topography and urban pattern

Introduction:

Kostof describes the influence of topography in shaping human settlements "... [T]he siting and spread of human settlements responds so fatefully to the sculpture of the land that it is impossible to isolate the urban experience from earth-induced affect" (Kostof, 1991, p. 53). The previous discussion on the Jawf regional geographical, topographical, and hydrological setting and geological structure have provided the

broad characteristics of the two foothill settlements (*cf.* chapter 3) and highlighted the influence of topography in shaping them.

The influence of topography has continued to influence considerations and guidelines for settlements and housing design. Abbott and Kimball (1980), for example, have described the careful attention needed on the part of the architect in designing on hill sites:

“Sloping and hill sites must be developed by intelligent and sensitive planning, integrating the existing dwellings with new. The design of hill housing requires a keener perception by the architect of the existing forms and patterns with an appreciation of the local social and environmental factors”. (Abbott & Kimball, 1980, p. 3)

The topographic characteristics of both sites will be discussed in terms of their surface rock structure, the different altitude of developed settlement phases and the varying nature of the inclines on which the settlements are situated. This will be achieved through analysis of the contours extracted from the Digital Elevation Model (DEM) AutoCAD format.⁵⁷ These contour lines were found to be most useful in understanding the topographic structure of both sites especially in reading sudden change in altitude. Although, the two ḥārat were established at the same time and both are positioned on the foothills of the same mountain (at the foot of the south flank of Jabal al-Akhḍar) guarding two important wadīs (Ghul and Muʿaidin) and routes to the mountain, there is a small level difference between them. Ḥārat al-Ḥamra in al-Ḥamrā is positioned in

⁵⁷Global Mapper v.14 is a geographic information system (GIS) data processing software by Blue Marble Geographics, which includes all GIS features of vector, raster, conversion and elevation data, (www.bluemarblegeo.com).

an altitude between 600 and 700 amasl while Ḥarāt as-Saybānī is positioned in an altitude between 500 and 600 amasl (Figure-34 & 35).

The location on the foothill of both sites is shown in a 3D aerial view from south and east in more detail through the DEM maps (Plate-5). It shows that Ḥarāt as-Saybānī is located in the south foothill of the branching hill that diverts wadī Muʿaidin. It is exactly positioned on a wash out form projecting from that hill when looking at it from the south or from aerial photo. Ḥarāt al-Ḥamrā, on the other hand, is positioned in the southern semi-projecting⁵⁸ foothill of the mountain in a long stretched right-angled triangle form. The structural shape and their positions reflect the possibility of both flexible extension and limitations (edges), which have eventually influenced their formation. The long stretch of the right-angled triangle shaped foothill is distinctive in al-Ḥamrā, while the wash out form of Birkat al-Mawz, although the largest, was repeated in a pattern extending along the southern mountain edge. This could possibly explain the location and spacing between the Ḥarāt in Birkat al-Mawz and consequently the extended nature of the *falaj* channel, except in the quarter of Ḥarāt al-Wādī, which sat at the lower garden level. The ḥarāt resulting from settlement expansion in al-Ḥamrā were contiguous to Ḥarāt al-Ḥamrā due to the availability of the extended triangular site.

⁵⁸ The foot-hill is part of the mountain but there is a big mountain fracture behind it causing a small wadī to flow called wadī as-Silīl.

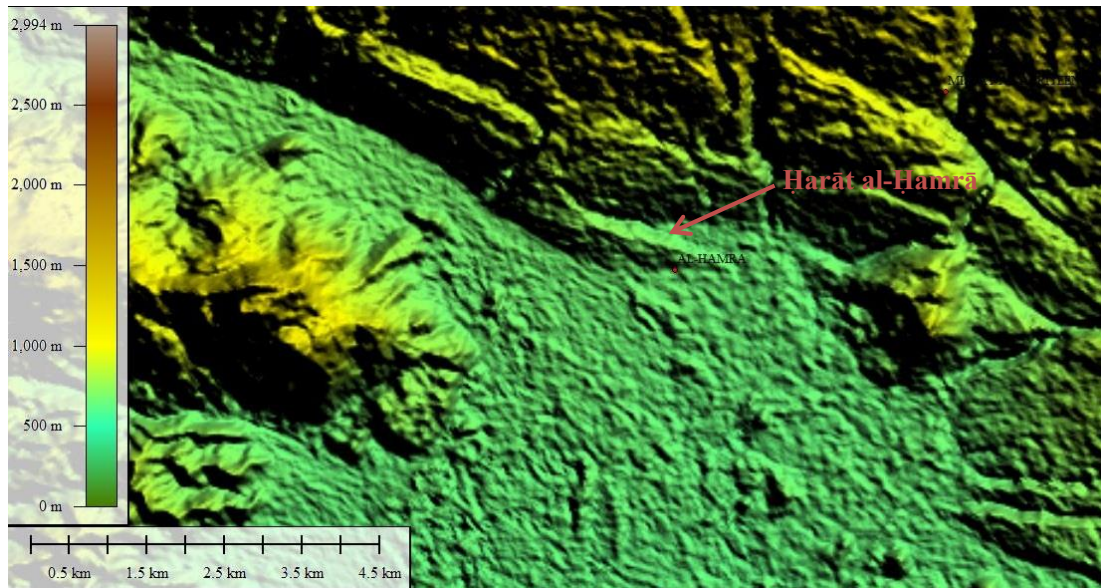


Figure 34: The Digital Elevation Model (DEM) map of al-Ḥamrā territory generated by the Global Mapper v.14 software.

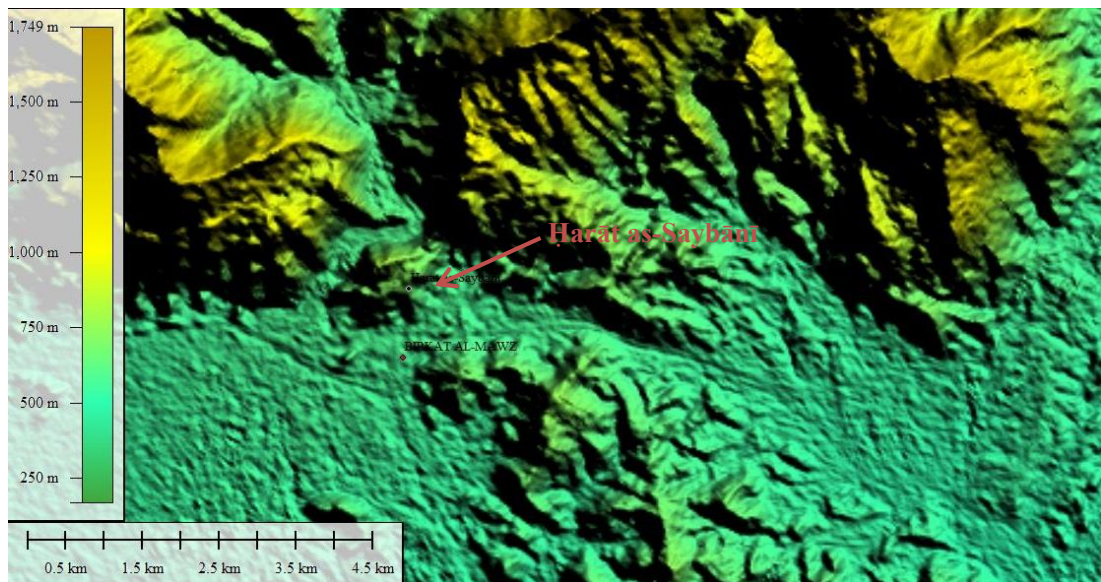
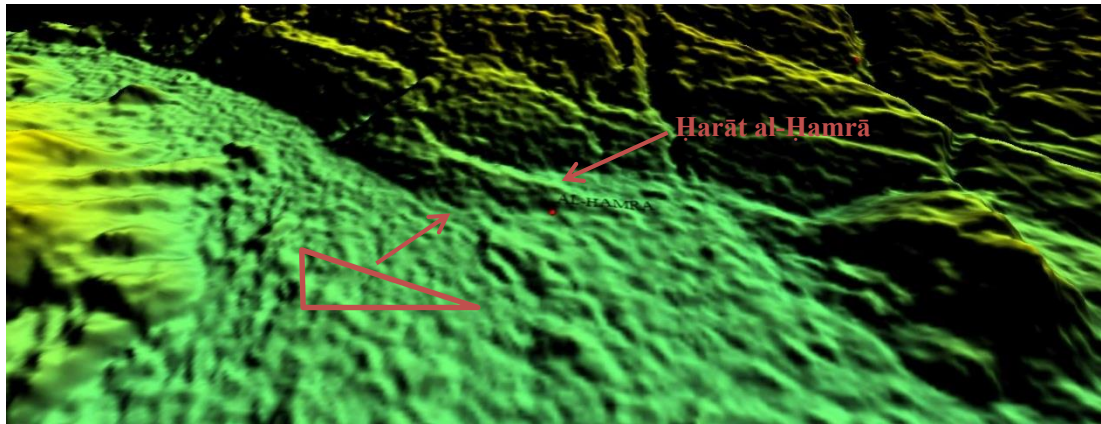
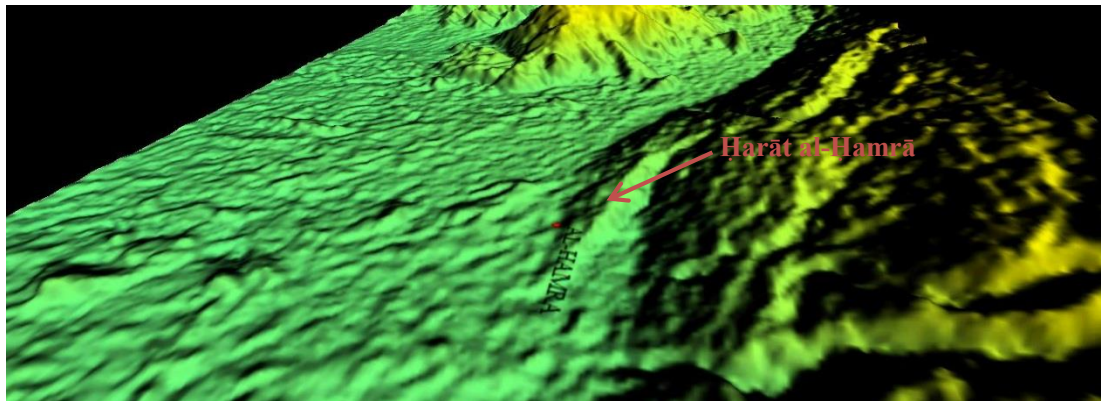


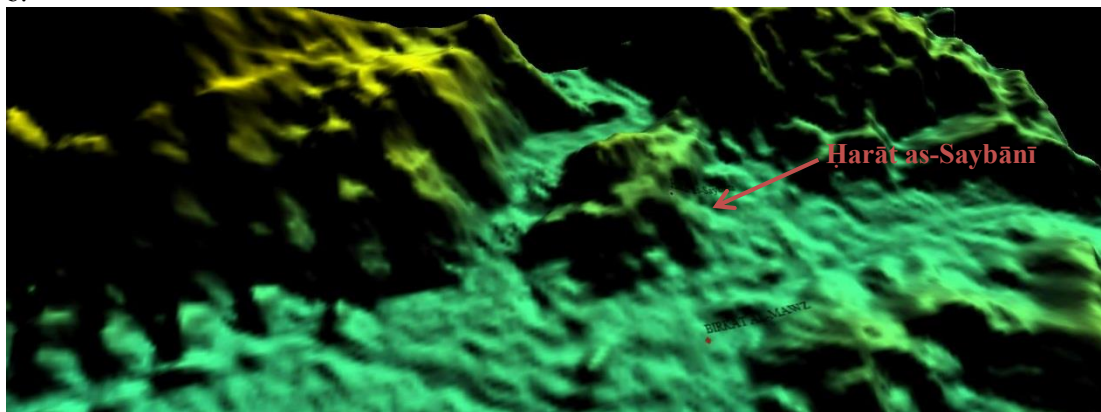
Figure 35: The Digital Elevation Model (DEM) map of Birkat al-Mawz territory generated by the Global Mapper v.14 software.



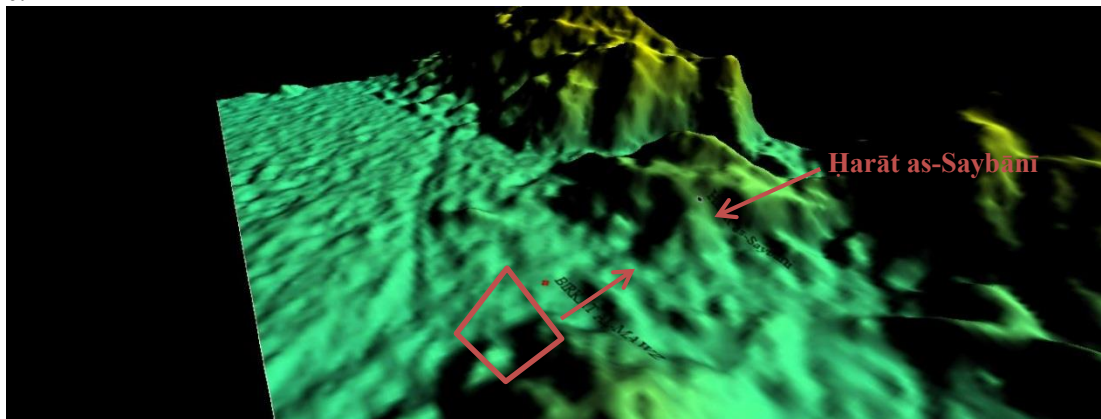
a.



b.



c.



d.

Plate 5: Digital Elevation Model (DEM) of both territories, a. bird view of al-Ḥamrā from the south, b. bird view of al-Ḥamrā from the east, c. bird view of Birkat al-Mawz from the south, d. bird view of Birkat al-Mawz from the east.

Converting the DEM into contour lines (in AutoCAD format) and overlapping those with the aerial photos of the two sites illustrate the terrain direction and the change in levels. The converted contour lines of 50 cm level difference were overlapped on top of a 1993 aerial photo of the territory of al-Ḥamrā and a 1975 aerial photo of the territory of Birkat al-Mawz (Figure-78 & 79). The highest altitude in Ḥarāt al-Ḥamrā at its north edge is 680 m amsl and the lowest altitude by the south edge is 661 m amsl with 19 m in level difference and 120 m distance between them (Figure-80). In Ḥarāt as-Saybānī, the highest altitude by the old structures in phase-1 is 606 m amsl and the lowest altitude by the south edge in phase-8 is 571 m amsl, with 35 m in level difference and a distance of 180 m (Figure-81). The distance between the highest and lowest altitude in Ḥarāt as-Saybānī is greater than that of al-Ḥamrā, indicating that Ḥarāt as-Saybānī had a steeper slope than al-Ḥamrā.

The contours reveal more than just the altitudes. In the case of Ḥarāt al-Ḥamrā, the contour lines are spaced wider apart in the central lower part of the Ḥarāt (phase-1 & 2) and less so on the flanks (lower east and west), while they are closer at the upper centre and becomes dense to the east and even more so on the opposite western side (Figure-36 & 37). While in Ḥarāt as-Saybānī the contour lines reveal a level change from highly denser lines at the top (north edge) to gradually less dense while descending to the upper centre, and further descending to widen up at the lower centre, and finally to be the widest at the south edge (Figure-38 & 39). This highlights the relatively flatter nature of the Ḥarāt al-Ḥamrā site (about 7 degrees) in the lower part along the *falaj* channel and steeper (starting from about 9 degrees and increase to 11 degrees) in the upper parts (Figure-40). Similarly, in Ḥarāt as-Saybānī, the slope tends to be steeper at the top (about 45 degrees) and becomes less steep (decreasing from

about 23 to 17 to 15 to 6 degrees) while descending to the bottom (south edge), (Figure-41).

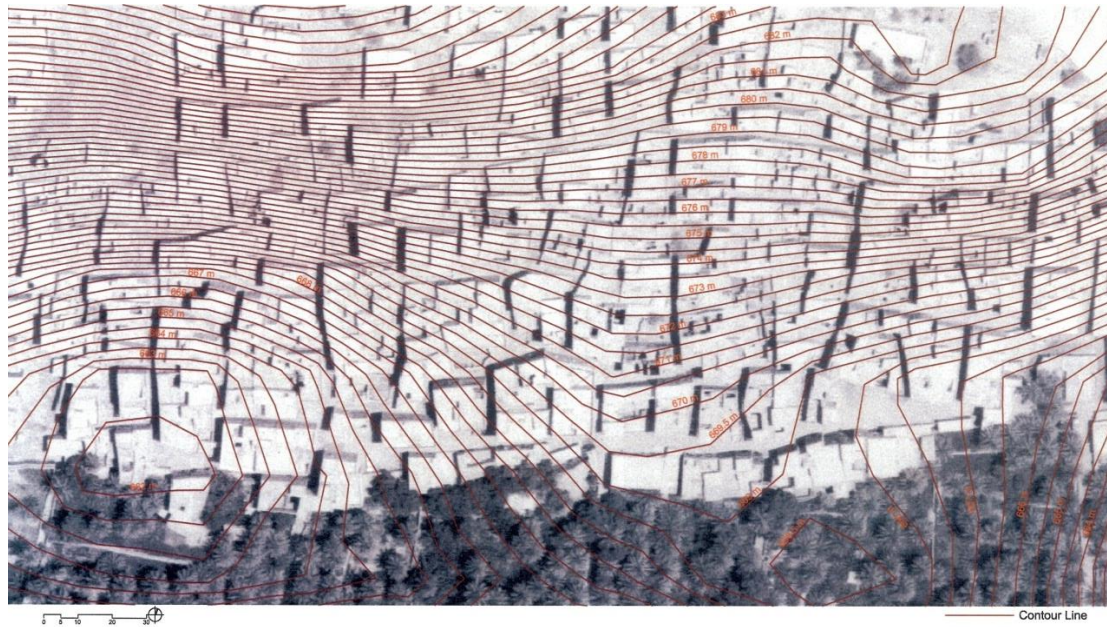


Figure 36: The overlap of the contour lines illustrating the topography levels of Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).

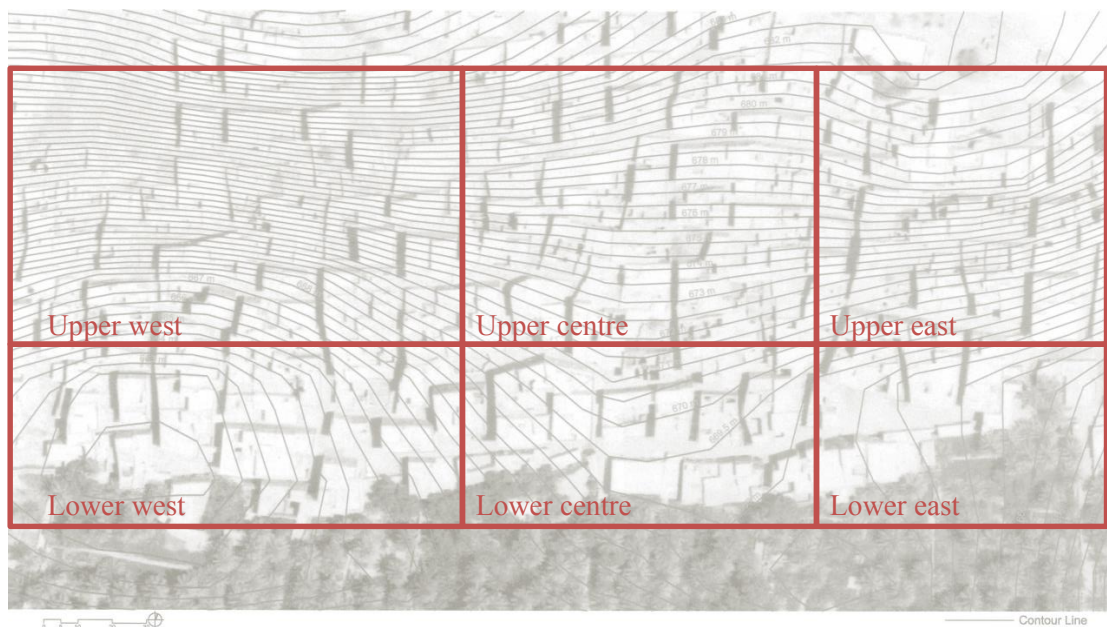


Figure 37: The contour lines density pattern in Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).



Figure 38: The contour lines density pattern in Ḥarāt as-Saybānī site in Birkat al-Mawz on top of its aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).



Figure 39: The contour lines density pattern in Ҳарāt as-Saybānī site in Birkat al-Mawz on top of it aerial photo (after a 1975 Aerial photo of Birkat al-Mawz from NSA of scale 1:10000, 2011).

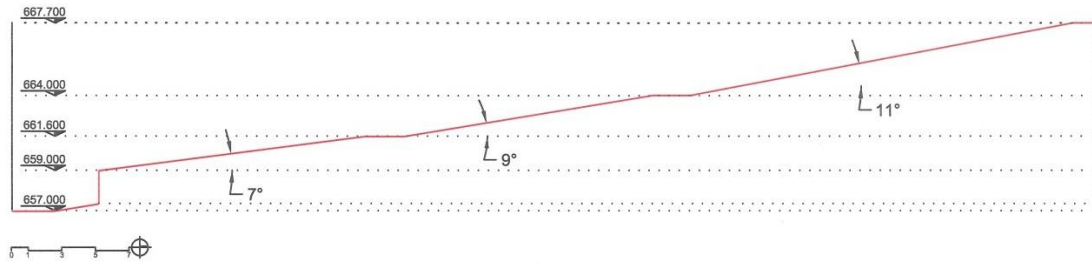


Figure 40: A vertical section (north to south) across the site of Ḥarāt al-Ḥamrā in al-Ḥamrā showing the topographical levels and the slope angles along with the changing level points.

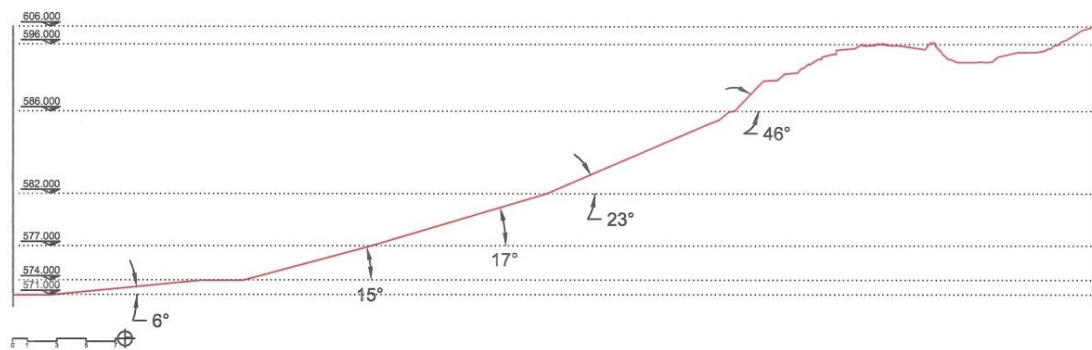
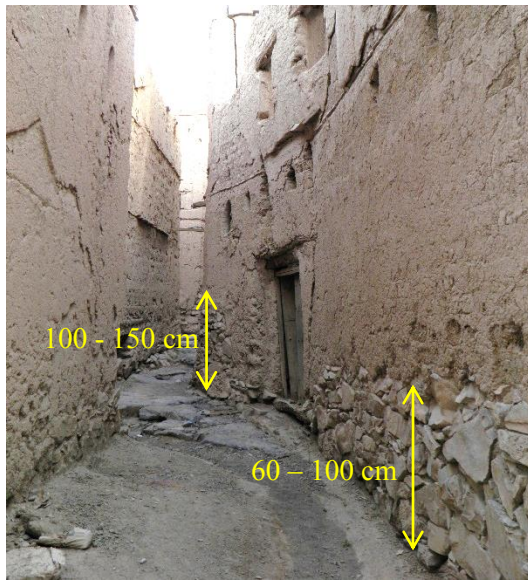


Figure 41: A vertical section (north to south) across the site of Ḥarāt as-Saybānī in Birkat al-Mawz showing the topographical levels and the slope angles along with the changing level and angle points.

The steep topography presented by the contours and the rocky surface becomes clearer in relation to the dwellings in the context of their construction technique, distribution, scale and patterns. Onsite observations and terrain sections (Figure-40 & 41) on both sites reveal that although the construction material was extracted from each Ḥarāt site, these were applied in deferent techniques as a result of the incline of the site. In Ḥarāt al-Ḥamrā, the construction material in all dwellings is stone foundations, some stone but mainly mud brick walls and date palm roofing components. However, the lower dwellings in the less steep slope tends to have bigger scale foundation stones increasing in height from 60 cm to one meter, and its height increases up to about 1.5 m when rising up the slope to the central level. The horizontal branching passages and communal spaces are positioned at points to benefit from flat contours and change in the incline, respectively, which contributes to the increase in the dwelling stone

foundation height (Figure-40). They tend to rise in the area of steeper slope to about two meters with average size of stones employed increase further in the subsequent steeper (upper level) to form a full height stone wall. This is evidence of a harmonious relationship with topography, in that, the less steep the slope, the larger the stones with less height, and the steeper the slope, the higher the stone foundation wall becomes and the smaller the scale of stone (Plate-6).



a.



b.



c.

Plate 6: Stone foundation of the dwellings of Ḥarāt al-Wisṭā in al-Ḥamrā, a. the lower dwellings with low height stone foundations and large scale stones, b. the central level and more steeper slope dwellings with increase in the stone foundation height, c. the upper level dwellings with full height stone walls.

This relation has also appeared in Ḥarāt as-Saybānī site but in the opposite direction of that of Ḥarāt al-Wisṭā in al-Ḥamrā, from the top to the bottom of the slope with more influence of the natural surface stone structure of the slope rather than the horizontal passage, marking the change in the slope steepness, and presenting a different foundation construction technique (Figure-41). The construction material is similar to that of Ḥarāt al-Ḥamrā. However, the surface structure of stone and the varying steepness of the slope have presented distinctive challenges to foundation construction at different locations. First, the older structures behind the tower (phase-1) lying in a valley hidden behind the tower, were constructed entirely of very neat layers of dry stone construction, with likely low ceiling heights (the walls standing are approximately between 90 - 180 cm high). These stone layers varied in thickness from approximately 1 cm to 15 cm, which gave such easiness and flexibility of construction on the natural stone surface of the valley (Plate-7). These also showed the use of stone foundation for earth in-filled levelling terraces in areas of steeper slope. It seems that the stone foundation construction technique developed from the top level (less steep slope) to the lower southeast (steeper slope), from half buried stone walls (SD1) to natural stone surface structure as a preliminary anchoring foundation for the structure (SD2), to stone terrace foundation (SD3), (Plate-8). These structures constructed of dry stone layers, while primitive in form, reflect sophisticated construction knowledge and aesthetic sense on the part of the early inhabitants and their understanding of the physical environment, evident from the construction technique and the architectural features.

The foundation of the structures in the second steep slope (phase-2) has followed the same technique of using the existing natural stone surface as a preliminary anchoring

for the structures, which clearly explains the distance between the structures (Plate-8). However, the dwellings in the next level (phase-3) followed the same foundation construction techniques of phase-1 but has developed to be anchored on the steep large rock layer and combined all three techniques together - half buried stone walls, preliminary anchoring foundation on top of the natural stone surface structure, and the stone terrace foundation - in each individual structure. Starting with being anchored on the steep large rock layer and partly half buried from the upper level of the slope and descending in the lower level in the form of terrace foundations (Plate-9).

Structures of the next level (phase-4) has followed the same technique used in phase-3 but have developed further these techniques by using the terrace foundation wall of the previous dwellings in the upper level as a reference point to attach the foundation wall (at the upper level), introducing double-walls between them and continued with the terrace foundation in the lower levels (Figure-45). The terrace stone foundation and wall attachment relation reveals the reason of having full height front (south lower level) and back (north upper level) stone walls in most of the dwellings. The reduction in the slope steepness in the lower level reveals a reduction also in the stone foundation height (Figure-42). However, the height of the stone foundation on the east and west side in most dwellings does not necessarily depend on the height of the terrace foundation wall or stone bearing wall in the lower level (Figure-43), while in al-Ḥamrā the height of the lower level (south side) the foundation wall depends on the height of the upper level north one (Figure-44).



a.

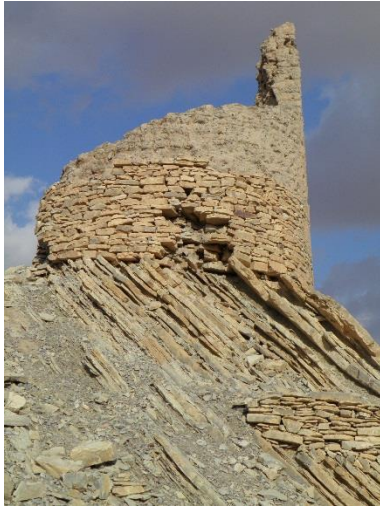


b.



c.

Plate 7: The early structures behind the tower (phase-1) showing the stone foundation and construction technique: a. half berried walls from the back side, b. using the natural stone surface structure as a preliminary anchoring foundation for the structure, c. the construction of terrace foundation.



a.



b.



c.

Plate 8: The stone foundation and construction technique (phase-2): a. using the natural stone surface structure as a preliminary anchoring foundation for the structure for the tower, b. using the same technique for other structures, c. the large scale of some natural stone surface structure which is still used as an anchor foundation for dwellings.



a.



b.



c.



d.



e.



f.

Plate 9: The stone foundation and construction technique (phase-3): a. the combined technique using the natural steep stone surface structure as a preliminary anchoring foundation at the upper level for and terrace foundations at the lower levels, b. side views of the terrace foundations, c. half berried foundation wall from the back side of the dwellings, d. the development from half berried to terrace foundations, c. clear view showing the development of the technique, f. combination of the three techniques in the upper communal male meeting hall.



Figure 42: The gradual reduction in the terrace stone foundation height in the less steeper levels of the slope.



Figure 43: The varying height levels of the stone foundation walls influenced by the steepness of the slope and the advanced construction technique of the dwellings in Ḥarāt as-Saybānī.



Figure 44: The stone foundation walls in the dwellings of Ḥarāt al-Wiṣṭā maintain the same height level with reference to the height of the upper stone foundation in the upper level.

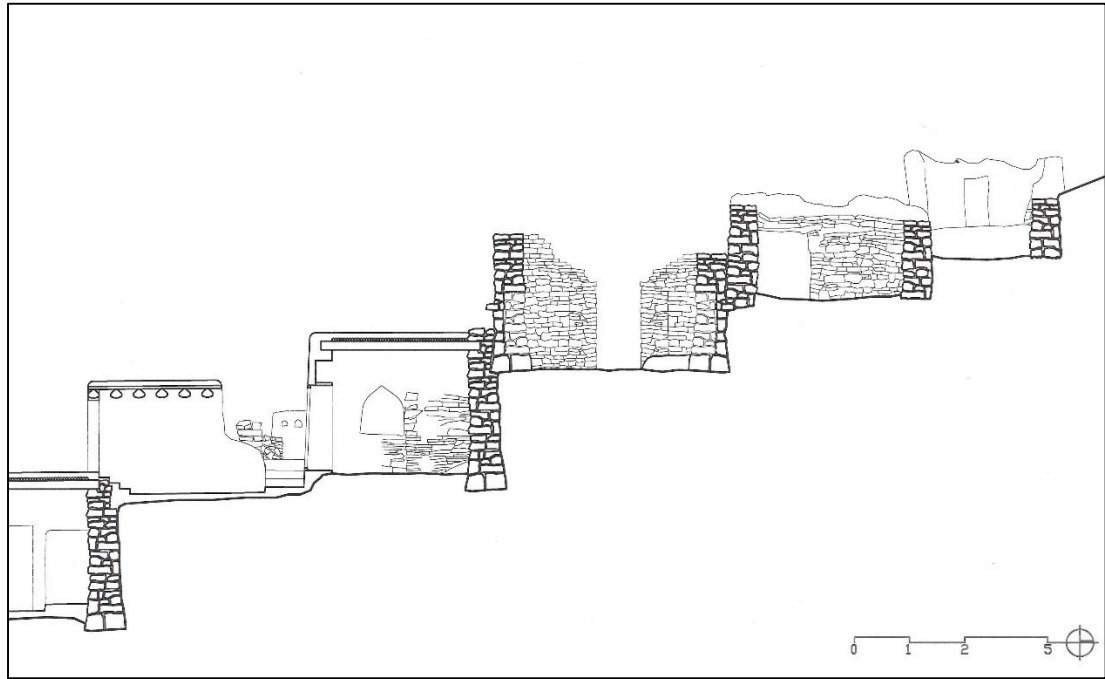


Figure 45: Cross section through phase-3 & 4; showing the terrace and double stone wall technique.

Al-Ḥamrā Topographic influence

There seems to be a harmonious relation between the scale of the dwellings and slope steepness, especially where the big dwellings are found to be constructed on the less steep slopes (the lower part of the Ḥarāt). On both sites, the average scale dwellings mostly form within the steep slope levels (the central part of the Ḥarāt), and the smaller dwellings are constructed in the steeper parts (the upper part of the Ḥarāt). In the case of Ḥarāt al-Ḥamrā, the natural ‘gridded’ fracture pattern of the stone surface (Figure-46), when looked at combining aerial photographs with contour lines, illustrates not only the steepness of the slope (Figure-37) but also unveils its influence on dwelling scale and pattern. It also shows the fractured surface influenced in defining the edge of individual dwellings and dwellings cluster. The main vertical north-south fractures along the slope resulted in north-south passages (south-north) while the branching horizontal fractures (east-west) became the transverse ones, their intersection denoting the transition points with the steeper north-south passages (Figure-46).

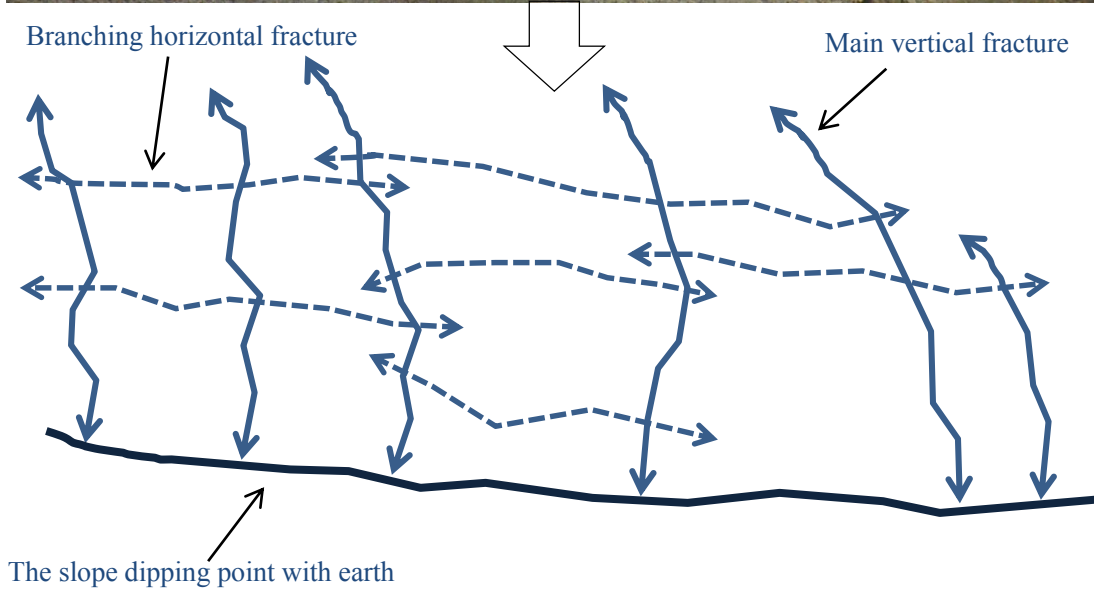


Figure 46: The natural grid fractures pattern of the stone slope surface structure in al-Ḥamrā.

Within the lower part of Ḥarāt al-Ḥamrā along the *falaj* channel, although less steep in the slope angle, has the lower central part (phase-1) in a higher level than the lower eastern and western parts (Figure-36 & 37). It rises to the level of about 669.5 m which is about two meters higher than the east part and about six meters higher than the west part, which possibly gave it the advantage of being chosen for the early established dwellings. The influence of the topography of this less steep part is the resultant widest horizontal level, creating a more favourable, smoother slope for construction purposes. First, the individual dwellings are large scale of two to three floors with back-to-back

dwelling clusters with wide vertical passages between them of approximately between 2.5 m and 3 m in width (Figure-47). Additionally, these early dwellings marked the dipping line of the rock slope with the earth as a reference point for the lower south rock foundation wall which reflects the early inhabitants' advanced construction technique in using the rock slope as a preliminary natural anchor for their dwellings which also reflects their respect for the surrounding environment and existing resources. The influence of the less steep slope also becomes clear where the lower main horizontal passage is in its widest (approximately between 5.5 m and 6.5 m). This may be evident in giving flexibility of choosing the establishing location for the early dwellings which is the less steep slope and the slope dipping point as the limit of the lower south rock foundation wall which also explains why the early dwellings are not aligned from the south side along the lower main passage.

The wide north-south passages may however be a result of the natural widening of the rock fracture which is less wide further uphill. The following developed dwellings and transvers horizontal passages in the upper level are linked homogeneously with the topographic level (i.e. the level 671 m). These horizontal passages are filled with earth in some parts which also indicates that not only the terrace filling technique was mostly practiced in the horizontal passages but also reflected a measure of social importance in relation to the privacy hierarchy.

The width of these horizontal passages varies between approximately two and three metres, the impact of which is evident in their role in the social function and hierarchy. When one considers the tribal pattern (Figure-76, *cf.* Chapter 4) and social cohesion (Figure-79, *cf.* Chapter 4), along with the topographic influence, their combined impact becomes in shaping the urban pattern of lower central part becomes evident.

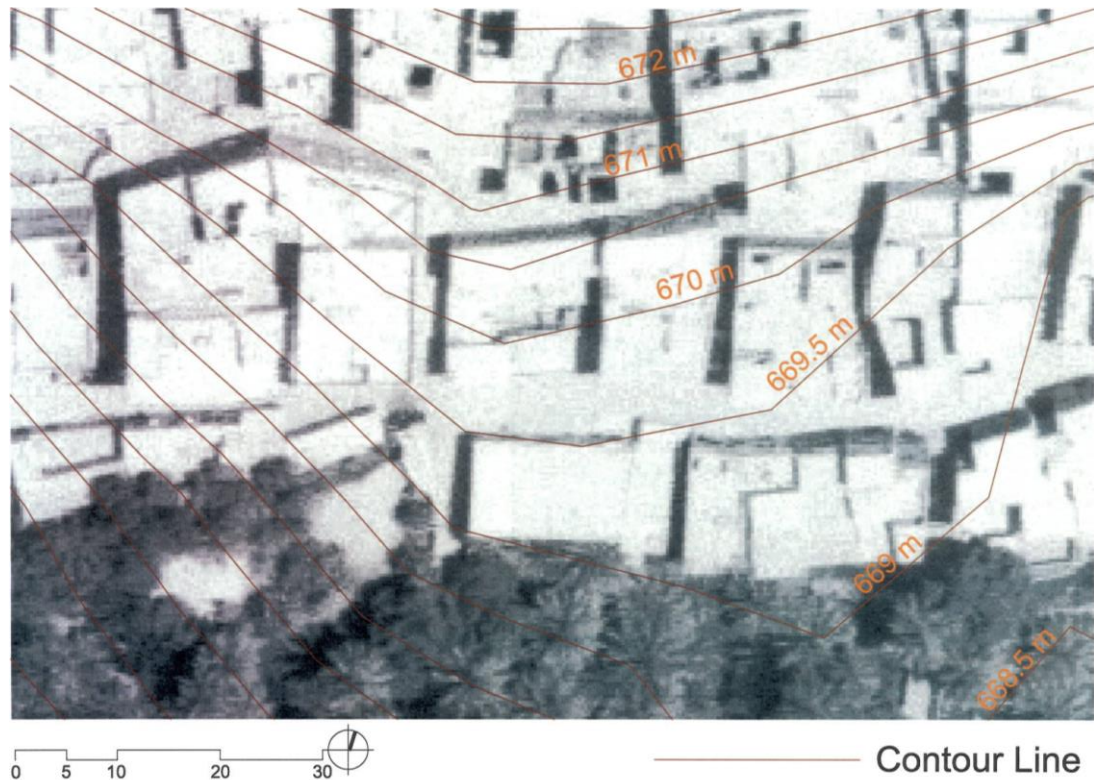


Figure 47: The contour lines pattern in the lower centre part of Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).

The change in topographic levels in the descending direction in the lower east part of the Ḥarāt resulted in yet another influence on its formation than that of the lower central part. The level descends towards the east, which is clearly reflected in the topographic alignment of the dwellings in the lower part along the *falaj* channel and the east gate, to some extent. However, the change in the topographic levels has influenced the alignment of the dwelling clusters to align towards the gate. These two alignments influenced by topography resulted in creating a triangular open space shape at the lower east part of the ḥārat. Moreover, the influence is reflected in the closeness of the dwelling clusters which are more cohesive due to the narrowness of the vertical passages which are approximately one meter. Further, this wide gradual descent level decadence gave the opportunity of the alignment and attachment of the mosque, Quranic school (*madrasah*), ladies communal bathing structure (*mujaza*), male

communal meeting hall (*sabla* al-Wiṣṭā) and the gate (*ṣabāḥ* ʿArish as-Sidrah) all together in one place. This feature is not found anywhere else in the ḥārat, which possibly indicates that the former inhabitants gave importance to this part of the ḥārat, given its closeness to the *souq* and considered it being more communal in nature than the other lower parts.

Looking holistically at this part with its gradual topographic incline, the triangular open space form, the dwelling clusters on both sides and the gate at the far east, connections begin to unveil. The open triangular space tends to reflect two radiating directions from the gate: one leading to the lower wide main communal passage and the other leading to the upper semi-private passage. This radiation also tends to reflect the hierarchy in the scale of dwelling clusters from east to west, and also the width of the passages between them. Finally, this gradual dropping level also fulfils the direction and smooth flow of the *falaj* channel.

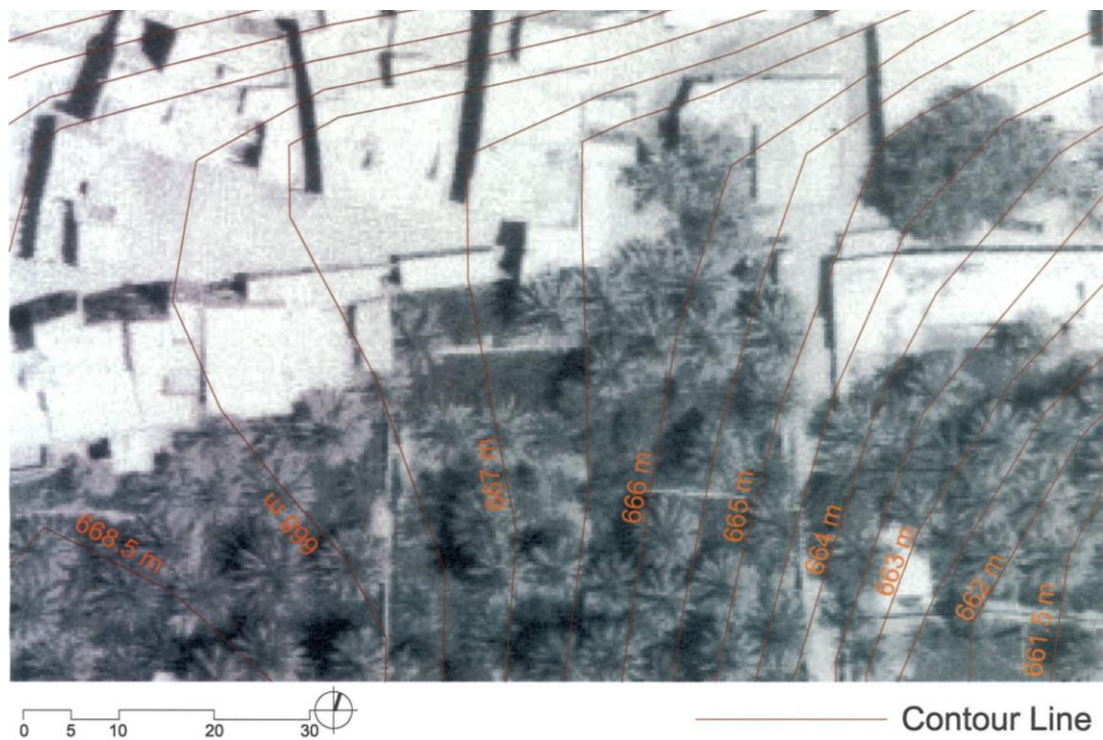


Figure 48: The contour lines pattern in the lower east part of Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).

The lower west part of the ḥārat has a similar descending topographic level as that of the lower east part but directed toward the west and to some extent steeper. The influence on this part was not only from the topographic incline, but also from the change in the dipping points of the natural grid fractures of the rock surface. First, the development of average scale individual dwellings between the levels of 664.5 m and 668 m compared to the ones in the central and east lower part dwellings. Additionally, the development of the large scale dwellings between the levels 664 m and 662 m, anchored on the natural rock slope and, diverted the passage around it. Moreover, the change in the passage level at two points, by a descending passage facing the gate (*ṣabāḥ* al-Mughrī) and few stone steps rising up to the other horizontal passage leading to the west edge gate (*ṣabāḥ* al-^cĀlī). Further, the influence on the dwellings and passage levels also resulted in the formation of two open spaces, one between the levels of 664 m and 665.5 m, and the other in the lower passage level at level 662 m. Furthermore, there seems to be an alignment between the dwelling clusters and the topographic levels which resulted in the emergence of a wide passage of about 6.5 m at the far west. Additionally, the sudden change in the passage level resulted in the dwellings above the *falaj* channel to be in leaner pattern resulting in providing communal access to the *falaj* through undercrofts of dwellings. Again, the change in the topographic level of the lower passage will have contributed in all the entrances of the dwellings aligned to it to face it, which reflected a sense of a semi-private passage. Finally, the topographic descent from 668 m to 662 m has clearly evident in defining the location of the west gate to be at the lowest descending level.



Figure 49: The contour lines pattern in the lower west part of Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).

The impact of the change in steepness of the slope is clearly reflected in the upper central part of the harāt (Figure-50). First, the scale of the dwellings are smaller and the dwelling cluster blocks are larger in scale and in dwelling numbers compared to that of the lower level. Additionally, the north-south passages are aligned with the topographic levels reflecting a strong harmony. Moreover, the smother the steepness of the levels the narrower the passages become, and the change in the direction of the topographic levels the wider the east-west passages become to form an open space. The smother the steepness the levels are the smaller the dwelling scale and form in a clustered linear pattern, and the change in the direction of level steepness the bigger the dwelling scale and form with large dwelling cluster. In addition, the large dwelling cluster blocks resulting from the change in the direction of the horizontality of the levels has influenced two types of irregular dwelling cluster formation. The first irregular form tends to appear with the dwelling projections and recesses within the dwelling cluster block resulting with irregular edge pattern. While the second irregular form appears within the cluster resulting from the natural fracture grid surface structure giving a more organic form of the block. However, it is important to emphasise that

the irregular form of the dwelling clusters are also influenced by the neighbouring clusters. Moreover, the extension of the dwelling cluster through dwellings that developed later – and were a product of different social forces – may have also contributed to the irregularity of the block form. The combination of the tribal pattern (Figure-76) with the asymmetric topography in this part (Figure-50) tends to reflect social cohesiveness and solidarity of the ʿAbriyīn dwellings in the east part than the mixed clan groups with ʿAbriyīn in the west part, which reflects more randomness and smaller dwelling clusters. Finally, the form of the early established dwelling in the lower part of each block aligned with the topographic level, become a reference point for the following developed dwellings.

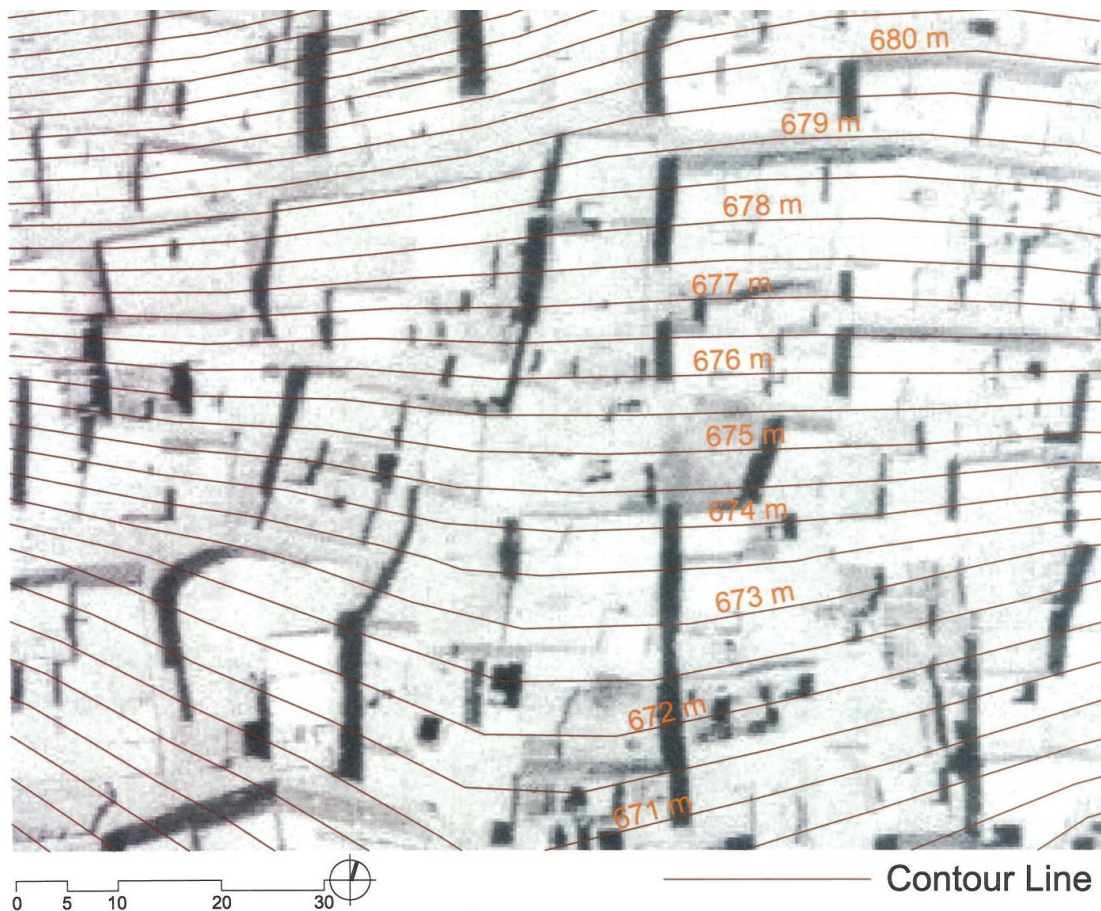


Figure 50: The contour lines pattern in the upper central part of Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).

The increase in the steepness of the slope in the upper east part of the ḥārat continues with similar influence to that of the upper central part but with slightly different results (Figure-51). First, the alignment with dwelling cluster block in the lower east part (Figure-48) was a reference line edge influence for the lower dwellings of the upper east part to align with. The slope in this part of the ḥārat is steeper than the lower part which changes in the slope direction towards the southwest. The influence of the east-west topographic level resulted in small scale dwellings, forming longitudinally in leaner pattern, while the change of direction of horizontality in the lower part resulted in large dwelling cluster blocks, similar to that of the upper central part (Figure-50). The alignment of the passages along with the dwelling clusters reflect a regularity in its formation and a strong sense of cohesiveness and organisation in its patterns. Again, the increase of the closeness of the topographic contours tends to reflect the hierarchy in the scale of dwelling clusters from east to west, which is similar to that of the lower east part. The wide horizontal open space passage is always associated with the small access door to the *souq* at the east edge which reflects a social function transition from communal passage in the *souq* to private ones for the dwellings. Finally, the increase in the change in the slope steepness has contributed to the development of the linear north-south cluster pattern of dwellings on the eastern edge.

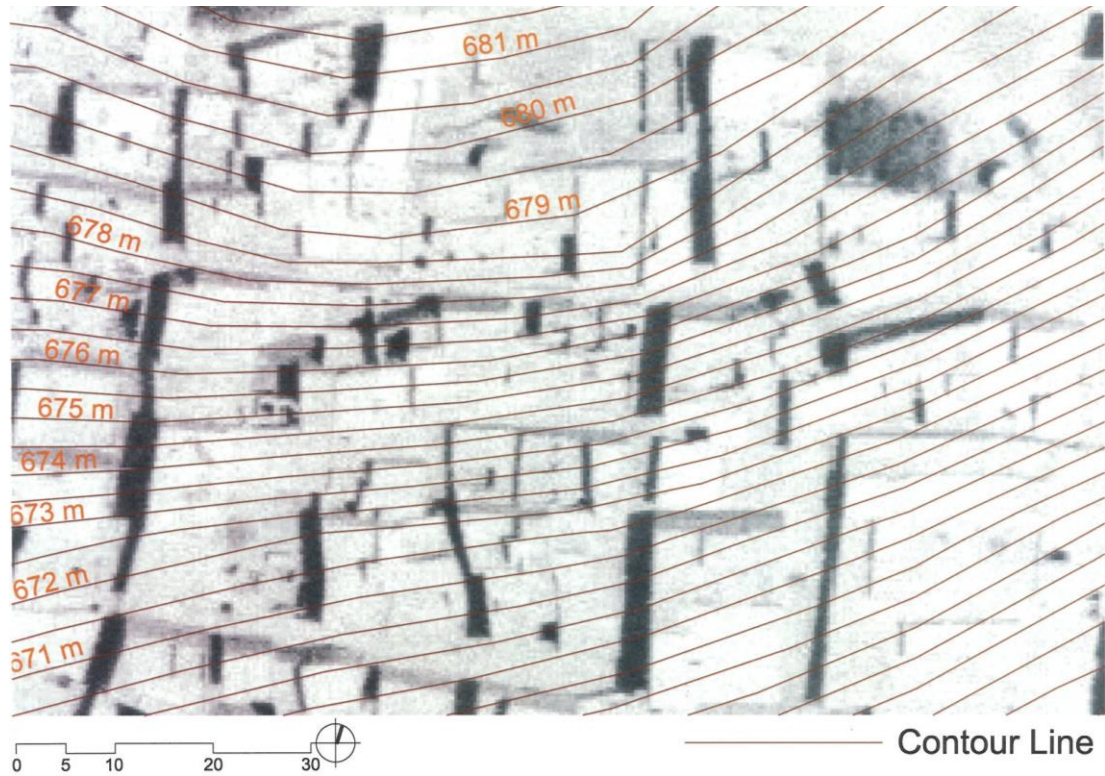


Figure 51: The contour lines pattern in the upper east part of Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).

The increase in the steepness of the slope in the upper west part of the ḥarāt continues with similar influence to some extent to that of the upper east part but with different results (Figure-52). First, the scale and proportion of the individual dwellings and dwelling clusters tends to vary as does the number of floors from that of the upper east part. Next, the horizontal passages not only vary in scale and length creating open spaces in some parts and narrow passages in others, but also appear in an irregular pattern. Additionally, the dwellings forming the clusters not only vary significantly in their number but also in their irregular formation which is clearly not influenced by the topographic levels or rock fracture patterns but more to do with tribal and social factors which is discussed in the next chapter. Moreover, the dwelling clusters in this part also tends to be smaller in proportion in comparison to the other clusters in other parts of the ḥarāt. The dwellings in the west and north of this part form in a linear north-south and east-west cluster pattern respectively forming the west and north edge

of the ḥarāt. Finally, the formation of the passages, individual dwellings, and dwelling clusters tends to reflect a sense of randomness and break down the strong cohesiveness and unity of the upper central and east part of the ḥarāt. This is possibly due to the change in the tribal pattern to more mixed clan groups alongside the ʿAbriyīn (Figure-76).

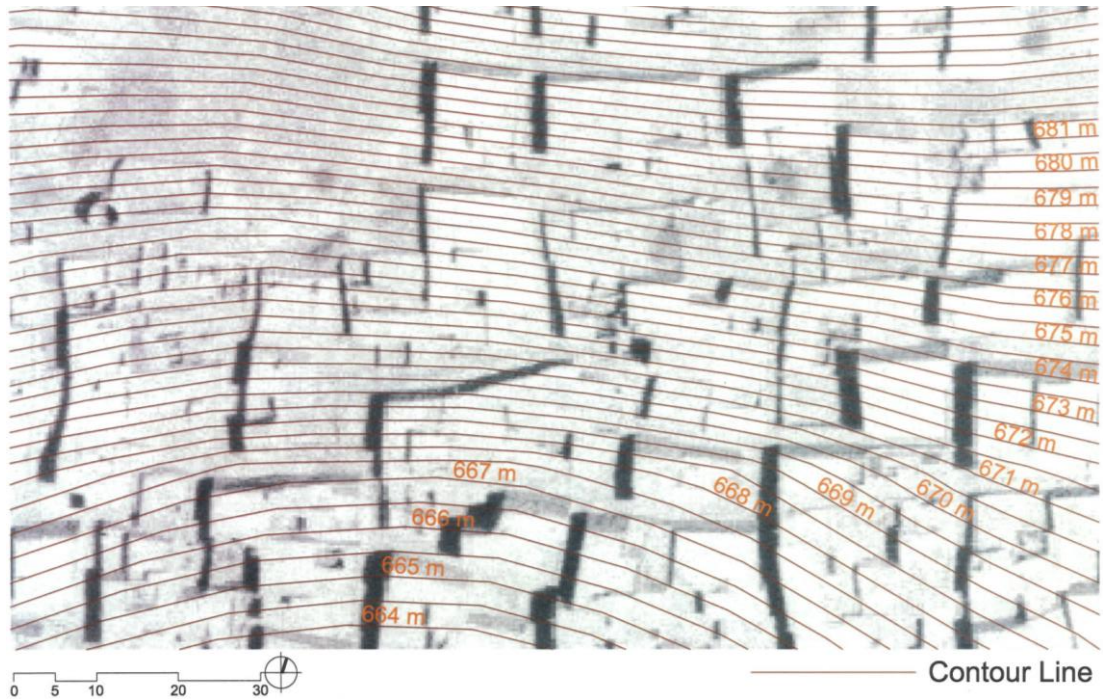


Figure 52: The contour lines pattern in the upper west part of Ḥarāt al-Ḥamrā site in al-Ḥamrā on top of it aerial photo (after a 1993 Aerial photo of al-Ḥamrā from NSA of scale 1:20000, 2011).

The early discussion on the influence of the topographic levels and rock fracture pattern in each part of the ḥarāt has reflected the main topographic physical influence on the urban pattern resulting in the combined relation between them. However, the change in the slope steepness and rock fracture has reflected a transformation in the ḥarāt urban pattern. This physical transformation from lower level to upper level and from less steep to steeper slope also reflects a transformation in scale, form, pattern and direction of the individual dwellings and clusters. It has also contributed in the social hierarchy of the passages from communal to semi-private to private passages. Similarly, the hierarchy of the open spaces from large longitudinal spaces at the lower

part to smaller open spaces in the upper parts also reflects a social hierarchy in function and privacy.

The change in the direction of the open spaces from east-west in the upper and lower central and east parts to north-south in the west indicates a later period in the ḥārāt formation. The long east-west passages in the upper and lower east part has contributed towards developing a regularity in the dwelling cluster formation and a strong social connection within the north-south passages. The projection of the linear dwelling cluster on both east and west edge is evidence of the consistency in the ḥārāt development. The result of the social and tribal transformation was also homogenous with that of the physical transformation from closeness to solidarity and from the cohesiveness of ʿAbriyīn to less cohesive with the mixed part of ʿAbriyīn and other clan groups. The scale of the dwellings clearly transformed from large individual dwellings in the lower less steep levels to back to back dwellings in steep levels to cluster dwelling on the steeper levels to leaner clusters in the steepest levels.

Ḥarāt as-Saybānī topographic influence

In the case of Ḥarāt as-Saybānī, the aerial photo overlaid with the contour lines illustrate the steepness and levels (Figure-38) and unveils the influence of the steepness on dwelling scale and pattern. It also shows the rock structure influence in defining the location and edge as a reference point for the individual dwellings and the dwellings cluster blocks from all four sides. The large rock layer projection from the slope surface clearly indicates the east-west passages, which also form the transitions between the steeper levels (Plate-9). This rock projection also indicate to be the east-west passages between the dwelling cluster blocks.

The upper part of the north edge behind the tower (phase-1) in Ḥarāt as-Saybānī – higher at the centre (606 m) than at the east (594 m) – is influenced more by the slope rock structure and its direction than the steepness of the slope (Figure-98 & 99). The SD1 building at the top is large in scale due to the flattened topographic surface (platform like) than those in the steeper slope which are of average scale and tend to form a linear pattern (Figure-103, *cf.* Chapter 4). However, the lower part of the north edge (phase-2) has been influenced slightly differently due to the change in the rock surface structure, its scale and distribution. The large parallel rock layer projections on the surface in the north behind the tower and in the south contributed towards a natural defensive edge. The scattered distribution of the parallel rock layer projections on the surface contributed in the location of the structures and their scale, which was used as natural preliminary foundation (*cf.* Chapter 4).

The developed structures in the less steep slope of the upper central part of the ḥārat (Figure-39) tend to respond more to the natural rock layer formation. It is clear that their pattern is derived by the large south edge rock layer of the north edge part of the ḥārat, which is considered as a reference line. The wall alignment between the dwellings indicate how the dwellings in the lower topographic level used the upper ones as reference point. This consistency not only indicates their construction technique but also the social cohesion between the constituent Banī Riyām tribes. The steepness and alignment with the topography has also influenced the dwellings develop in regular forms.

The developed structures in the lesser steep slope of the lower central part of the ḥarāt (Figure-39) tends to align with the topographic levels in some parts, but mostly developed through the terrace construction technique. The dwellings developed in a larger scale than the previous ones and formed interlocking relationship, which is possibly due to the presence of a single tribe in each dwelling cluster (e.g., Banī Tubah, Fuhud and Awlād Thānī, and so on). While the less steep slope of the south edge continued with similar social and physical features to that of the previous part but with larger scale dwellings. However, their alignment was defined more by the two (upper and lower) *falaj* channels resulting in wider passages, making the lower channel more communal than the upper one.

It appears that while the slope of both site al-Ḥamrā and as-Saybānī although vary in steepness but the physical influence on their formation principally came from the nature of the surface stone structure (Figure-53). Additionally, the whole natural form of each rock slope and its limits also contributed in the dwelling clusters' density, cohesiveness and regularity. Moreover, the steepness of the topography and their level of smoothness also influenced the scale and form of regularity. The degree of flatness of the slope and natural surface stone structure has also influenced the development of the stone foundations.

The results of the topographic influence on the physical features of the ḥarāt have also contributed towards a great social impact. The early dwellings established in the central lower level part in al-Ḥamrā played a point of social gravity for the later

dwelling formations to cluster around them, which in turn gave them their social power. It reflected this dwelling formation as the core pattern for the ḥarāt (*cf.* chapter 4).

The importance of the settlements' origins has remained even after the complete formation of the ḥarāt. The development in the dwellings clusters formation and their regularity emphasises the strong solidarity in the urban cohesiveness of a tribe. The challenge of the steep slope only made them socially closer and more regular in their development. However, this coherence in urban behaviour gradually started to break down with the joining of the clan groups in the upper west part of the Ḥarāt. However, within such developments the early inhabitants managed to benefit efficiently from the topographic structure that served their social life. This will be discussed further in chapter 5.

In Ḥarāt as-Saybānī, the early dwellings were established at the top of the slope because they had little option otherwise in their site location due to the rock formation; consequently, it reflected a strong social cohesion between the mixed tribes of Banī Riyām. Similar to al-Ḥamrā, the steepness of the slope made them spatially and socially closer and more regular in their urban pattern. The inhabitants of as-Saybānī have also managed to maintain that strong social ties with the change in the topographic level through the dwelling interlocking pattern. However, the change in the slope steepness and the joining of Banī Riyām tribes resulted in larger scale dwellings with a social influence that gave the latter settlers more power than the early ones. This was possibly due to their location along the *falaj* channel where dwellings were clusters of the same family and wealth. However, the early inhabitants managed to benefit

efficiently from the topographic structure along with advanced construction technique that served their social life. This will also be further be discussed later in chapter 5.

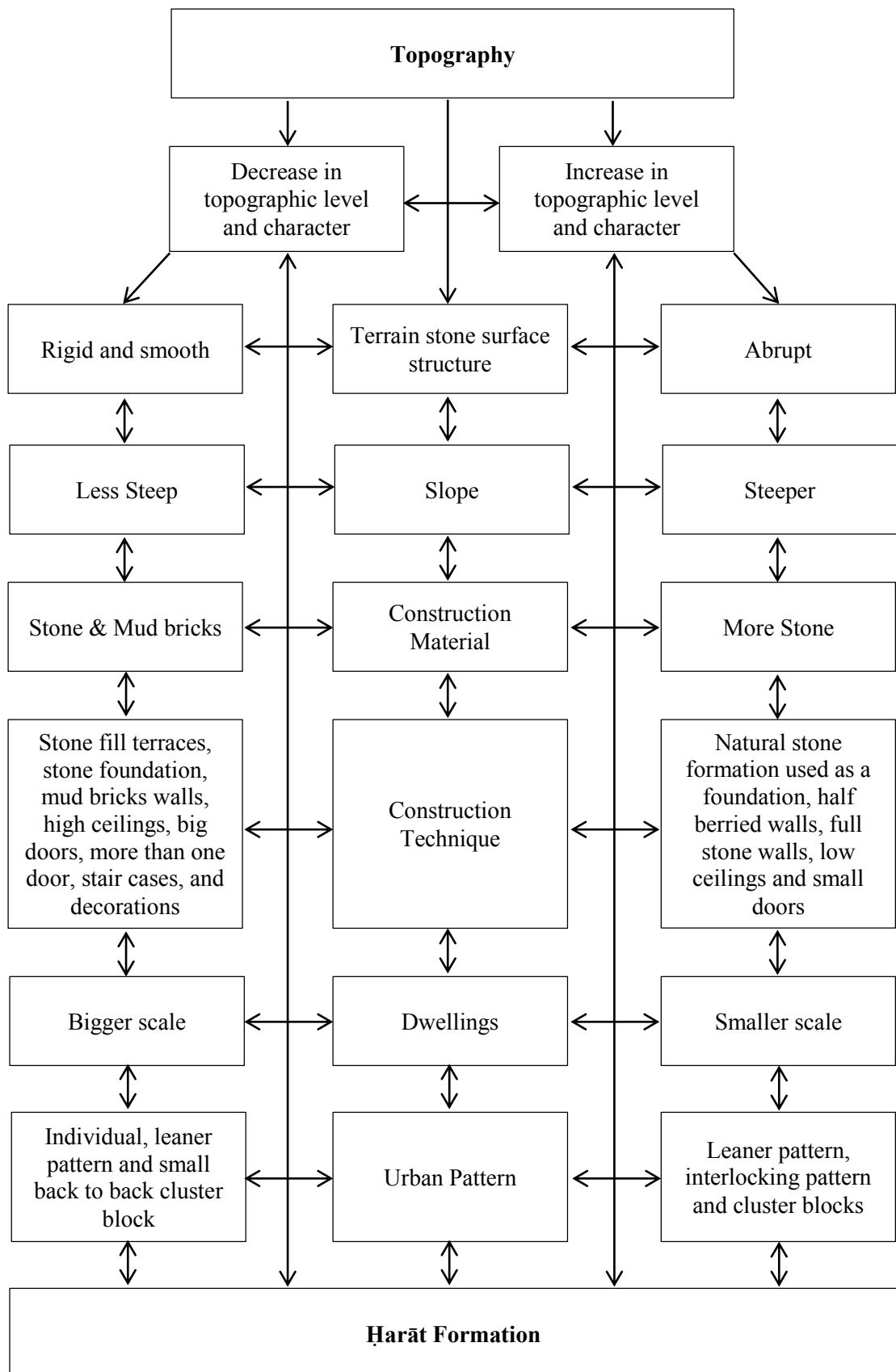


Figure 53: Summary diagram of the topographic influence to the Harāt formation.

3.3: Fortification

The time when these settlements were establishment is known in local tradition as, the time of fear (*ayām el khawf*) in the 17th century CE, which indicates the necessity of developing their *ḥarāt* defensively (Figure-54). But to understand these influences, we must first highlight the defensive zones associated with the settlement. The onsite observation and analysis of geographical setting (*cf.* chapter 2) reveals that there could be two types of defensive zones: the outer zone surrounding the settlement before reaching it and the inner defensive zone within the oasis settlement itself.

In al-Ḥamrā, the outer defensive zone sub-divides into five areas. The *wadīs* form defensive zone-1 which contribute in providing openness for clear observation from any distant threats to the territory and a natural passage for any traveller approaching or leaving the *ḥarāt*. The low hills make up defensive zone-2, which protects the settlement from the *wadī* flow and flash floods and create a visual block for the outsiders. The towers on top of these hills form defensive zone-3 which are posts for scanning the surrounding landscape around the settlement. The external mosques are social defensive zone-4 which represents the first outer ring of communal structure for any stranger or visitor approaching the settlement. And finally, Husin Mall ad-Dākhil forms defensive zone-5 at the centre of the date palm gardens (Figure-55 & 56). These five defence zones emphasise the significant harmony the early inhabitants managed to achieve between the natural and their built environments. It reflects how the inhabitants used the existing *wadī* as a reference for their visual defensive horizon and as passage of control, while the apex of low hills employed the towers and the north lower edge provided alignment with the *falaj* channel and the mosques.

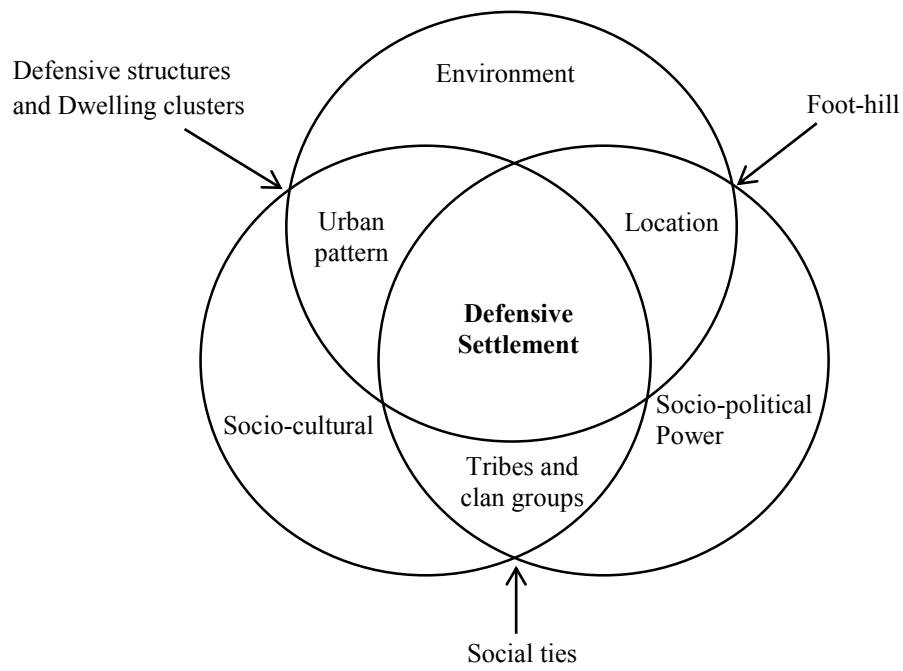


Figure 54: The inter-relation factors to form a fortified settlement.

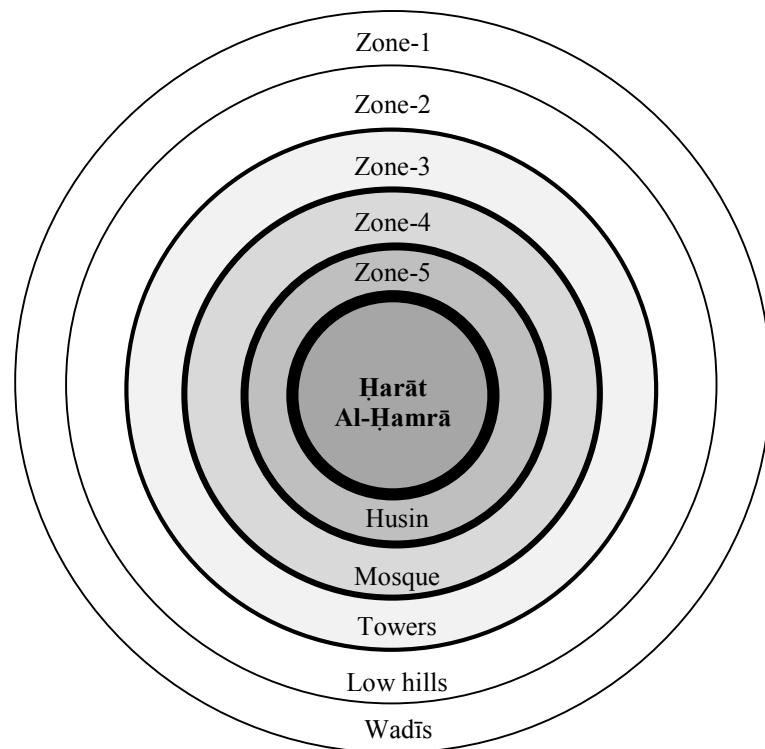


Figure 55: The five outer defensive zones around the territory of Ḥarāt al-Ḥamrā.

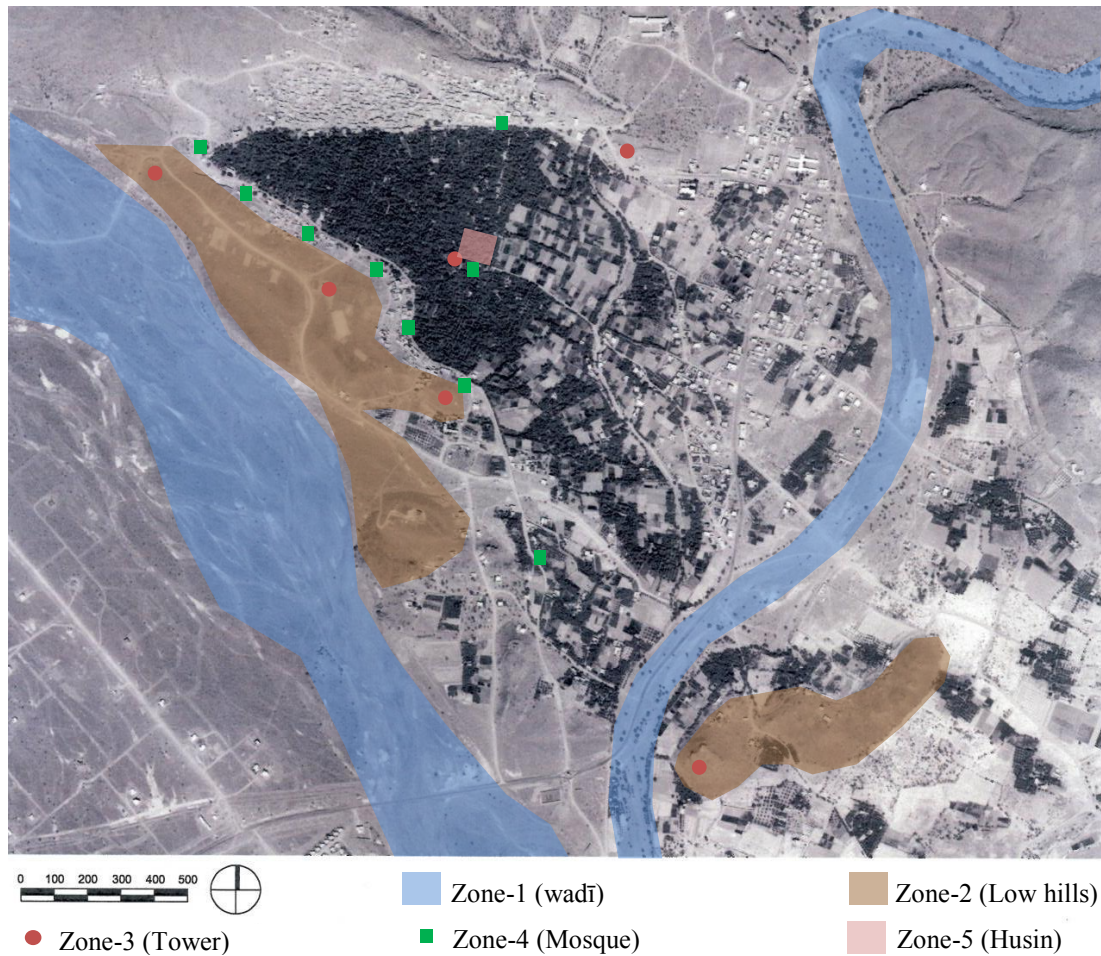


Figure 56: The outer defence zones before reaching Ḥarāt al-Ḥamrā.

In Birkat al-Mawz, the outer defensive zones are similar to that of al-Ḥamrā, but has extra and to some extent distinctive defensive sub-zones (Figure-57). It has seven defensive zones starting with the wadī Muʿaidin as defensive zone-1 which discharges from Jabal al-Akhḍar and provides openness for clear observation against any distant threats on the territory and a natural passage for any traveller approaching or leaving the mountain (Figure-101). Zone-2 is formed by Husin Bait al-Rudaidah at the point where wadī Muʿaidin leaves the mountains close to the point where *falaj* al-Khatmeen surfaces next to the Yaʿribah mosque. The wall (defensive zone-3) extends from Husin Bait al-Rudaidah and connects the low hills, enclosing the oasis to principally protect it from the floods of the wadī. The low hills as defensive zone-4 protects the settlement territory from by diverting the wadī's flow and block the view block against any

outsiders. The towers on top of these hills are defensive zone-5, which are posts for scanning the landscape surrounding the settlement. The mosques as social defensive zone-6 are the first outer communal structure for any stranger or visitor approaching the settlement. And finally, the three sniper positions as defensive zone-7, which are hidden in the upper hills behind Ḥarāt as-Saybānī (Figure-58 & 59). These defence zones not only reflect similar combined harmony between the natural physical existing environment and their built environment to that of al-Ḥamrā but also a statement of control and political power. The location of the Ḥusin, the close proximity tower and sniper posts all is an echo of political territorial and power.

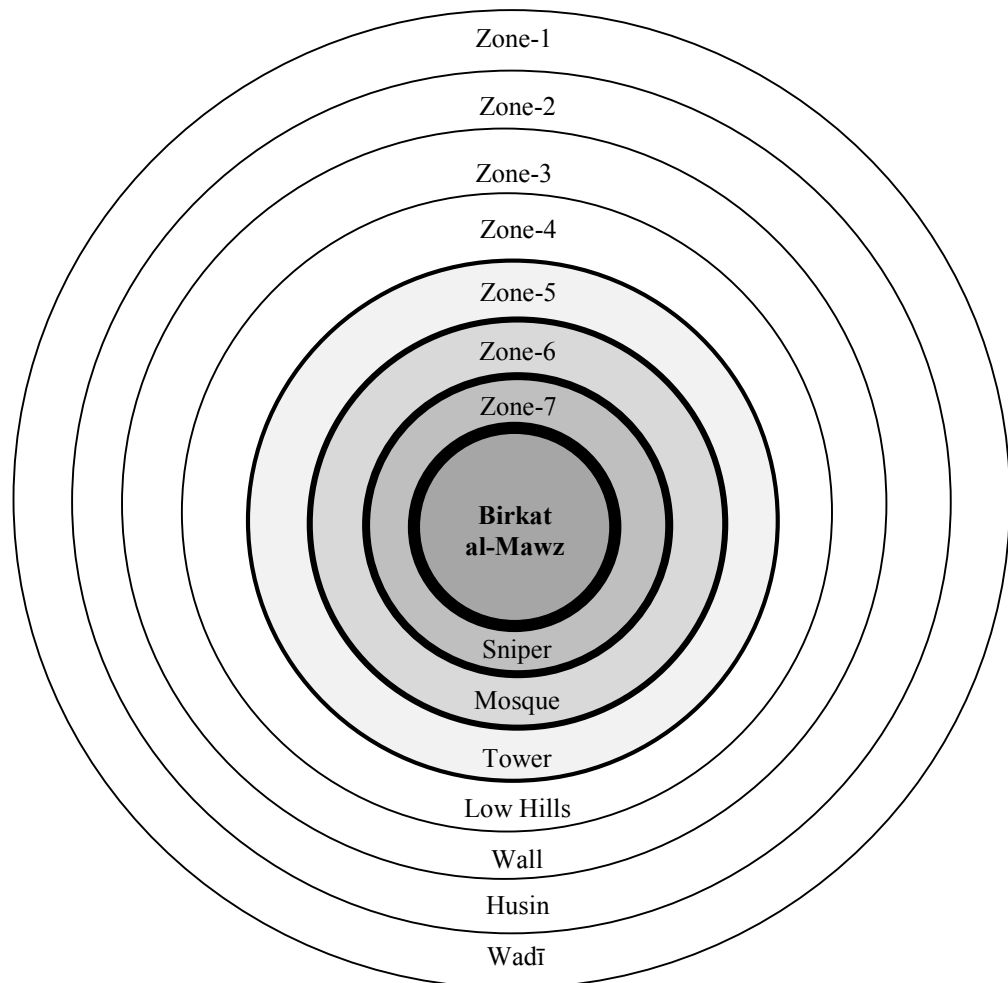


Figure 57: The seven outer defensive zones around the territory of Ḥarāt as-Saybānī in Birkat al-Mawz.

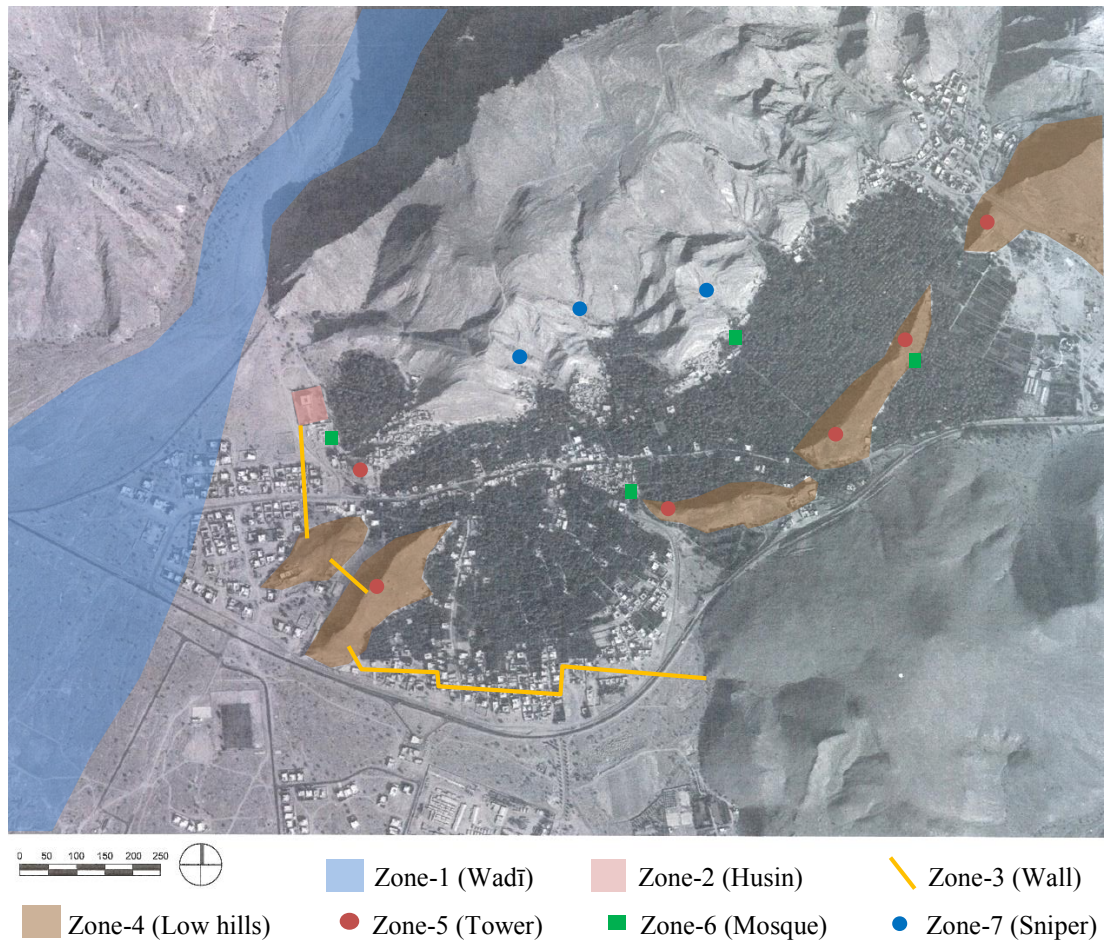


Figure 58: The outer defence zones before reaching Ḥarāt as-Saybānī.



Figure 59: The sniper posts (defensive zone-7) hidden in the upper hills behind Ḥarāt as-Saybānī in Birkat al-Mawz.

The outer defensive zones for both settlements show similarities but vary slightly in number and type. They clearly reflect the early inhabitants intention to not only protect the ḥarāt, but also their living resources of water and agricultural land. However, its relation to the inner defensive zone in each ḥarāt is slightly different, as is its impact on the urban pattern. In the case of Ḥarāt al-Ḥamrā, the inner defensive features have five main elements. Its location on the rocky foothill is considered the first inner defensive feature and the most important one, which gives it a strong position overlooking the oasis. The outward facing dwellings have contributed in making the inhabitants monitor anyone passing through the rocky passages. The clustered pattern of the smaller dwellings on the north, east and west edges of the ḥarāt contributed to creating a secured boundary without walls. The passages social and functional hierarchy from the lower main, to the north-south passages to the east-west passages resulted in a transition from communal, to semi-communal, and to semi-private respectively.

The location of the mosques, gates and *sbal* (pl. *sabla*, male communal meeting hall) at the lower main passages are also considered inner social defensive structures. They also share the factor of being male social meeting points. The open space in front of the east and west gate ensures clear visibility for anyone approaching the ḥarāt. The location of the *falaj* access points facing the north-south passages for the women secure and direct accessibility. The location of the towers at the upper east and west corner of the ḥarāt contributes as communication posts with the other surrounding towers. The discharge of the storm water along the north-south passages to the *falaj* channel without affecting the dwelling structures.

The hidden indirect secondary access points through narrow east-west passage with a door on the east and west edge of the ḥarāt is only known and used by the inhabitants. Finally, the establishment of the *souq* outside on the east side of the ḥarāt ensures the women can collect water from the *shariʿa*⁵⁹ of the *falaj* on the west side and the *souq* can be open all day for traders and merchant convoys without affecting the privacy of the ḥarāt.



Figure 60: The inner defensive features of Ḥarāt al-Ḥamrā.

The location of the Ḥarāt al-Ḥamrā with its inner defensive features in connection to its outer defensive zones starts to unveil. The two towers on the east and west corner of the ḥarāt are equally distant from the Shariʿa tower in the far west and the al-Mogubrah tower in the far east of approximately 575 m. The three strategic east, central and west gates lead directly to the three towers (i.e. Shariʿa tower, al-Mogubrah tower and Muṣala al-ʿEid). The slit curve of the north-south and east-west passages ensures privacy through blocking direct view lines and the projections and recesses of the dwelling clusters also provide cover for a defender (the inhabitants) as well as breaking the line of sight of the attacker. The north-south passages and gates are

⁵⁹ Derived from the word *sharaʿa*, meaning the location of the first surfacing flow of the *falaj* on the channel.

aligned with the external agricultural passages to give direct access and security for the inhabitants. Finally, the outer and inner defensive features and zones together contribute in protecting the water resources and agricultural land to secure their livelihood. The protection of the agricultural land not only ensures the inhabitants safety and economic prosperity but also gives protection to the mountain routes connecting with their allies and other friendly clans in mountain settlements.

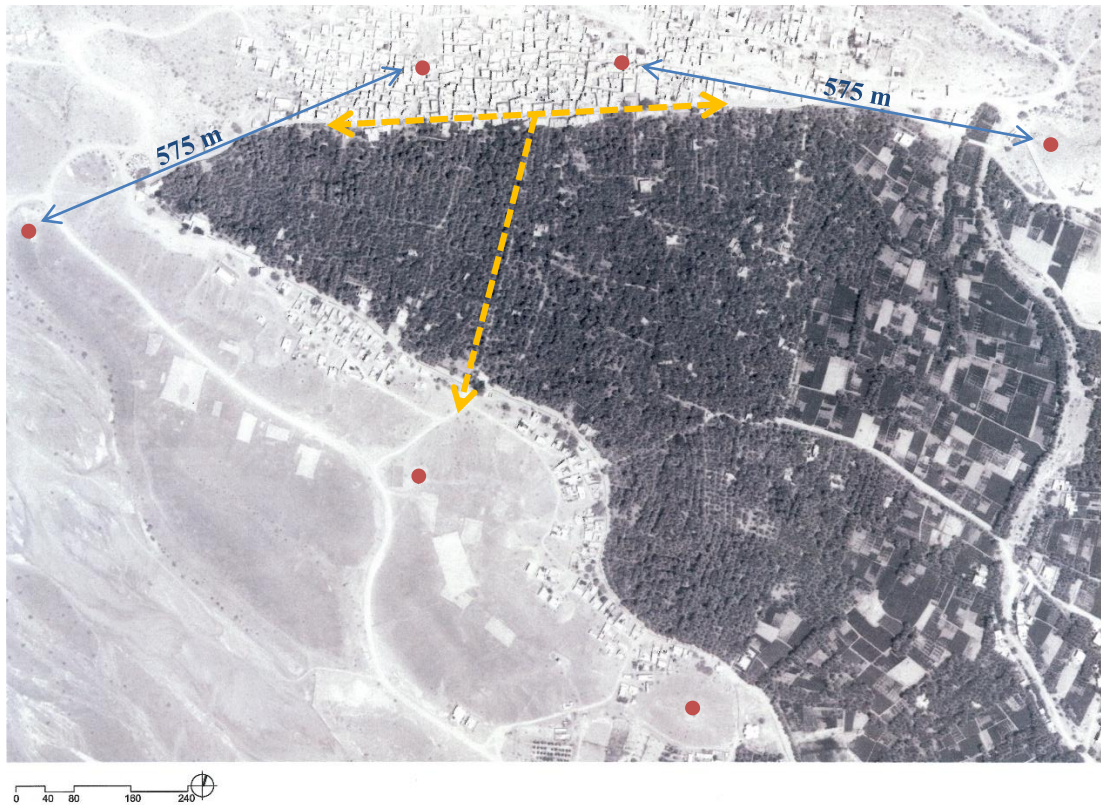


Figure 61: The connection between the inner and outer defensive features and zones in al-Ḥamrā.

In the case of Ḥarāt as-Saybānī, the inner defensive features could be addressed under eight main elements. Similar to al-Ḥamrā, its location on the steep rocky foothill is considered the first inner defensive feature and the most important one, which makes it a strong place of refuge and a place to build a settlement overlooking the oasis. Moreover, the natural rock structure is also considered a natural defensive feature which contributed by giving altitude to the edge dwellings and the stone walls. The guard posts are in the rock structures hidden behind the tower and the slope. The

location of the single tower at the apex of the hill of the ḥarāt contributes as a communication post with the other surrounding towers. The location of the communal open space associated with the mosque, gates and *sbal* at the lower level are also considered an inner social defensive zone, which again share the quality of being male social meeting points.

The passages social and physical hierarchy change, from open space to the north-south passage, to the zigzag passages, to narrow dwelling passages, provided a transition from communal, to semi-communal, to semi-private to private respectively. The stone wall formed a defensive boundary on the north edge behind the tower. The hidden, indirect secondary access points on the eastern and western edges of the ḥarāt were only known and used by the inhabitants. The linear pattern of the dwellings along the north, south, east and west edges contributed in creating a secured boundary without walls. Similarly, the north-south and east-west hidden passages through the dwellings were only known by the inhabitants. The only connection that could possibly be detected between Ḥarāt as-Saybānī's location and its inner and outer defensive features is the tower at the top of the hill projecting into the sky. The location and high altitude of the tower contributed towards providing a visual connection with all surrounding towers and the ability to scan the whole oasis. This is due to the challenging topography with scattered low hills. However, the inhabitants did manage to ensure the security of the oasis with the inner and outer defence zones. But more importantly, they managed to secure the natural passage of wadī Mu'aidin to Jabal al-Akhḍar, which ensured the protection of their clan group settlements and whole resources and agriculture land in the mountain.



Figure 62: The inner defensive features of Ḥarāt as-Sybānī.

3.4: Epilogue

In this chapter I have highlighted and discussed the influence of the topography and fortification on the territory of Ḥarāt al-Ḥamrā and Ḥarāt as-Saybānī. In particular, the purpose was to identify the influence of the topography on the ḥarāt formation in the context of the foothill configuration, the natural rock structure, its incline and altitude. The fortifications were discussed to define the influence of the location, urban pattern and tribal power in producing a defensive settlement in the context of the inner and outer defensive features and zones.

The general structural shape of the foothills reflect the possibility of flexible extension and limitations at the same time which eventually influenced settlement form and pattern. It also reveals the relationship between the degree of change in the steepness of the slope and its surface characteristics, which is clearly reflected in the foundation construction technique. In Ḥarāt al-Ḥamrā, the harmonious relationship between the steepness of the slope and the scale and height of the stone foundation starts from the less steep slope with larger stones and less height, and develops to smaller stones and more height when ascending up the slope. However, in Ḥarāt as-Saybānī the challenging steep hill revealed the early inhabitants' understanding of appropriate construction techniques from half buried stone walls, to natural stone surface structure (stone platform) as a preliminary anchoring foundation for the structure, to stone terraced foundations.

The natural slope of the rock surface at both sites had a significant impact on the ḥarāt formation. In the slope of Ḥarāt al-Ḥamrā, the natural grid structure formed by the rock fractures clearly contributed to the urban pattern. The early inhabitants used the

fractures as reference points to define the extent of the individual dwellings and dwelling clusters. They used the main north-south fractures as north-south passages, while the branching east-west fractures as east-west passages between the dwelling clusters. In Ḥarāt as-Saybānī, however, the natural projecting rock surface was the principle factor in the ḥarāt urban pattern. The distribution, direction and scale of these rock layers had a direct impact on the dwellings scale, form and cluster size.

Although the physical influence of the topography was clearly presented through both the ḥarāt urban patterns, it unveiled significant social impact. In the case of al-Ḥamrā, the density of the dwelling clusters in Ḥarāt al-Ḥamrā reflected a stronger social cohesion and solidarity in comparison to that of the extended Ḥarāt around it. In Birkat al-Mawz, however, the harmony of the dwelling clusters, their mass and scale at Ḥarāt as-Saybānī reflected not only social cohesiveness and solidarity but also a prominence in its social power. The smoothness of the slope and the *falaj* channel in Ḥarāt al-Ḥamrā has also contributed in defining the communal structures along the lower main passage which the main public passage. The sudden change in steepness and with two levels of *falaj* channels in Ḥarāt as-Saybānī also resulted in the emergence of two communal passages, the lower to be socially communal and the upper to be semi-communal strictly for the inhabitants.

The establishment of a defensive settlement was crucial to the early inhabitants which was influenced by the geographical location. It played a major role in the location, urban pattern and tribal power through establishing inner and outer defensive zones. The physical environment of each geographical location of each site has contributed in defining the hierarchy of the outer defensive zones and the inner defensive features

of the Ḥarāt. The early inhabitants' knowledge of the land reflected in their efficient and effective use of the coherent relation between the mountain and the low hills in embracing al-Ḥamrā through the outer defensive zone. The defensive zones in al-Ḥamrā revealed a sense of hierarchy and each element is not only a defensive zone by itself, but also relies and refers to the others. The inhabitants rely on the low hills to divert the wadī flow and block the view from the outsiders. The guards on the towers also rely on the wadī for clear visual openness, the tower relies on the altitude of the low hills. In turn the *falaj* also relies on the foot of the low hills for the channel alignment, and the mosques aligns with the channel. By comparison in Birkat al-Mawz, the disconnection between the mountain and the low hills and between the low hills themselves has contributed to having gaps and blind defensive spots which resulted in developing new outer defence zone types. This has not only resulted in the increase in the number of towers but also in connecting the low hills defensively through stone walls and having sniper posts in hidden in the mountain behind the settlement.

Chapter-4: Al-Ḥamrā & Birkat al-Mawz: tribal pattern and settlement structure

4.1: Introduction

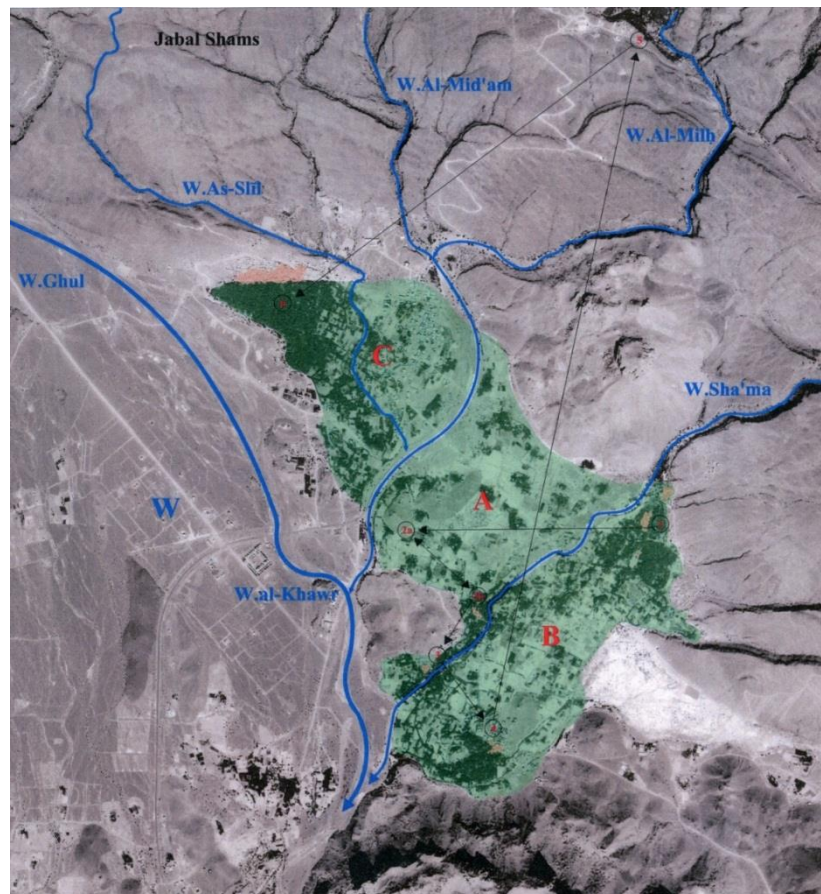
4.2: al-Ḥamrā

4.3: Ḥarāt al-Wiṣṭā tribal pattern and structure

4.4: Birkat al-Mawz

4.5: Birkat al-Mawz tribal pattern and structure

4.6: Epilogue



Chapter-4: al-Ḥamrā and Birkat al-Mawz tribal pattern and settlement structure

4.1: Introduction

This chapter aims to describe first the prehistory of both settlements before discussing the tribal pattern and its relationship to the ḥārat structure. It will first map the archaeological evidence of early human settlements followed by the historical geographical settling in each territory. It will then discuss the origins of ʿAbriyīn tribe in al-Ḥamrā and Banī Riyām confederation in Birkat al-Mawz and the history of the excavation of the *falaj* al-Ḥamrā in al-Ḥamrā and al-Khatmeen in Birkat al-Mawz. The tribal history is addressed in a detail account in the context of tribal origins, migrations, dispersal and unit. It will highlight the spatial distribution of the tribes that resided in Ḥarat al-Wiṣṭā in al-Ḥamrā (still partly inhabited) and as-Saybānī in Birkat al-Mawz prior to its abandonment in the mid-1980s. Followed by, a discussion on the early residing tribe, the early core urban pattern established, and emphasis on their social, architectural and locational features.

The discussion will then move to describe the ḥarat structure of al-Wiṣṭā and as-Saybānī in the context of residential types, communal structures (i.e. *sabla*, public bathing structures, *falaj* access points), mosques, shops and defensive structures (i.e. gates, towers). This chapter will also include the mapping of the tribal distribution in each Ḥarāt which will define the human social settling character through tribal cluster formation, and so the cohesiveness of the faction of each tribe and its influence on the ḥarāt formation. The discussion of the tribal pattern and harāt structure in this chapter will contribute towards understanding the impact of evolving human habitation on

harāt development. Hence, this will support the analysis and discussion on the architecture and urban pattern of the dwelling in Chapter-5.

4.2: al-Ḥamrā

Archaeology of early human settlements and movements in al-Ḥamrā

Humans have always established a sense of territoriality and legacy, and this was marked by the Rock Art carved and painted in Jabal Al-Akhḍar mountain region in central Oman. In the case of al-Ḥamrā, seven Rock Art sites have been identified along the wadī edge (Preston, 1976, pp. 17-38), (sites 26-32, Figure-63). The most interesting among them was a bas-reliefs of Coleman's Rock site (32, Figure-63), known locally as Ḥasat bin Salt⁶⁰ (Clarke, 1975, p. 114). It included four figures with the largest up to 2 m high (Rice, 1994, p. 262), possibly dated to the Bronze Age (Al-Adawi, 2006, p. 18), (Figure-64). The Rock Art in Wadī Ghul site (27, Figure-63) in Husin Wadī Ghul, is possibly older than the 2nd half millennium BCE (Al-Adawi, 2006, p. 59). Another rock art consisting of animal forms of camels, donkeys or horses were marked on the edge of Wadī Sha'mā, site (28) near Qaryat B. Ṣubḥ, dates back to the 2nd and 3rd millennium B.C., reflecting early human activity in that area (*ibid*, p. 104).

⁶⁰ It is not known why it is called Hasat bin Salt, but the inherited story say: When bin Salt migrated from the south, he jumped on this rock and marked the art on it by his face (Al-Adawi, 2006, p. 18).

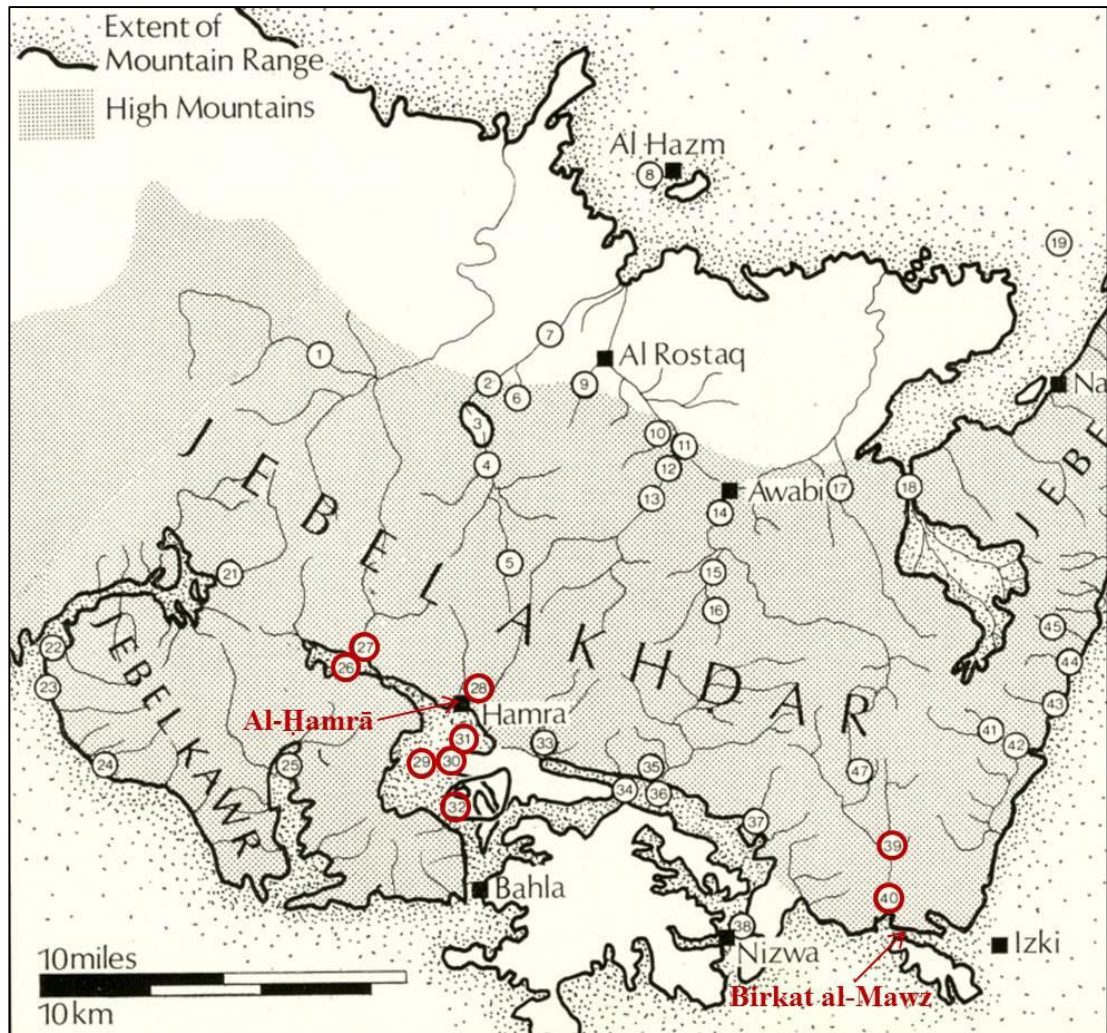


Figure 63: Rock Art sites in al-Ḥamrā and Birkat al-Mawz: (26) Ghul wadī al-Nakhur, (27) Ghul wadī Ghul, (28) wadī al-Mid'am, (29) Ghamur Bilad Sait Exotics, (30) Jabal al-Qal'a, (31) Dhat Khail, (32) Jabal al-Qal'a, (39) Mu'aydin in wadī Mu'aydin, (40) Tawī Sadh in wadī Mu'aydin, (after Preston 1976: 18-19, Figure-1).

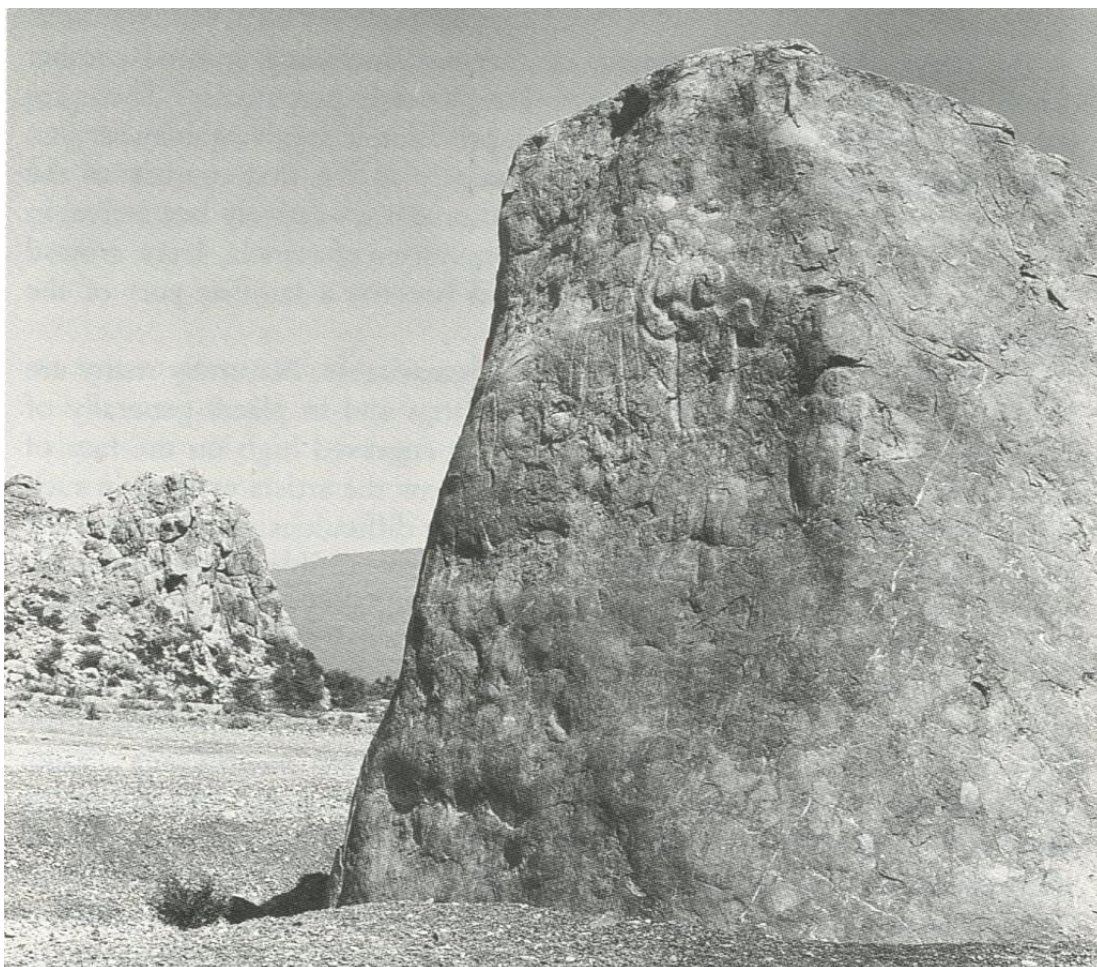


Figure 64: The bas-relief Rock art of Ḥasat bin Salt in al-Ḥamra, site (23, Figure 6), (Rice 1994: 261, Figure 8.22).

The archaeological survey conducted by the Omani-German project⁶¹ in al-Ḥamrā area revealed that the earliest human activities were in the early 3rd millennium B.C., dated to the Ḥafit period (3,100 – 2700 B.C.) with remains from the surrounding hills (M. Najieb, et al, 2004). These remains were of three prehistoric tombs that stood aligned in one row, one of them had shard remains of a beaker that belonged to the 2nd millennium B.C., which refers to the Wadī Suq period (2,000 – 1,300 B.C.) (Haser, 2003, p. 27), (Figure-65). The findings also revealed three sites dated to Um-Nār

⁶¹ An Omani-German cooperation project called "*Transformation Processes in Oasis Settlements in Oman*", started in 1999 and was divided into three major survey phases. Phase one (1999 – 2001), covered Wadī B.'Awf and al-Ḥamra (Ibrahim. M & Gaube. H, 1999-2000) & (Haser, 2003). Phase two (2004 – 2005) covered Ibrā and Ṭiwī in al-Sharqiyah governorate (Schreiber, 2005). Phase three (2002 – 2003), covered Izkī, Nizwa and Jabal Akhdar (Schreiber, 2004) & (Schreiber, 2007).

period (2,700 – 2000 B.C.) with tombs (Figure-65), (Ibrahim. M & Gaube. H, 1999-2000, pp. pp.115-118).

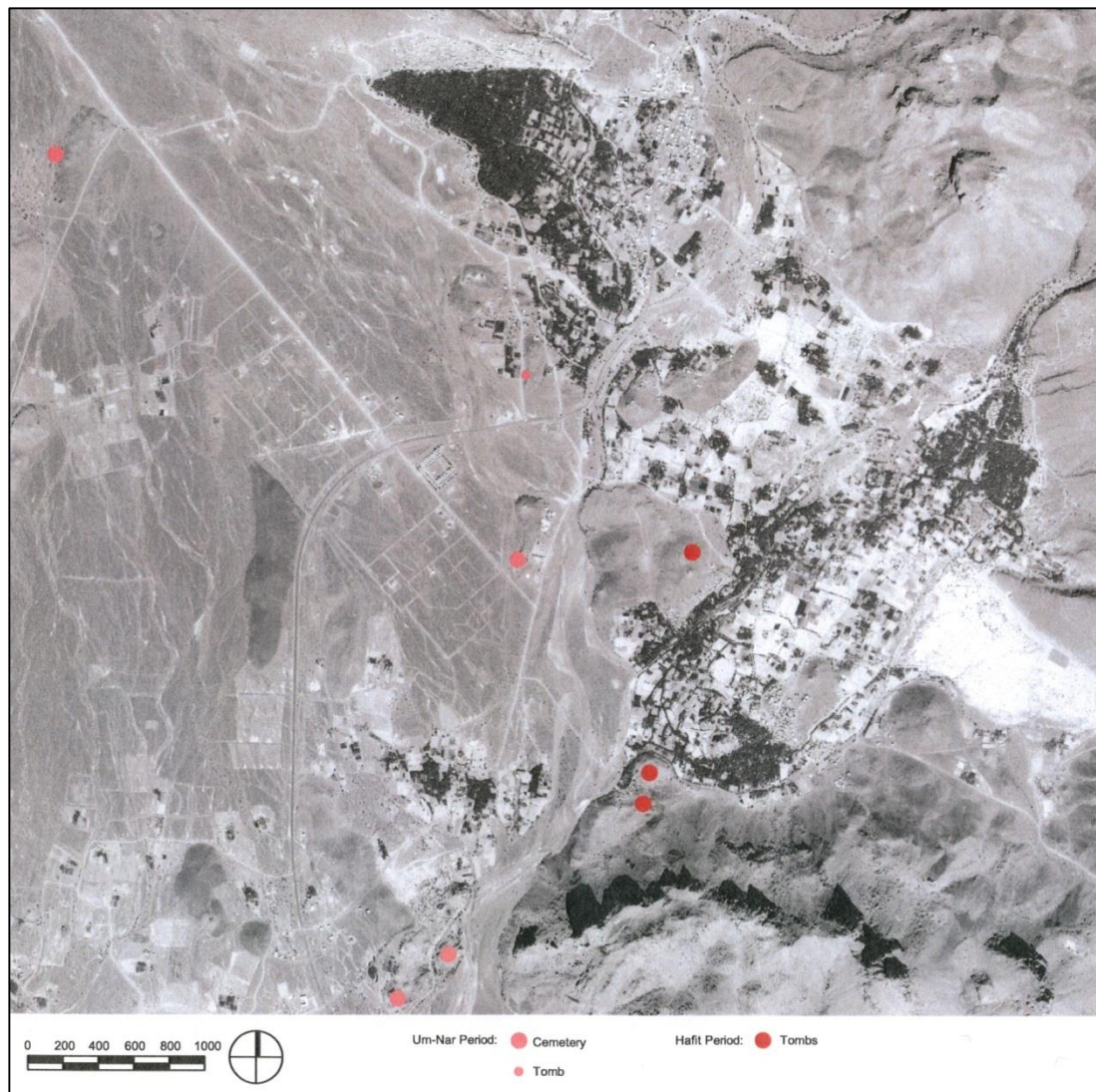


Figure 65: Location of Ḥafit and Um-Nār sites in al-Ḥamrā (after NSA, al-Ḥamrā Aerial photo, 1993).

This was followed by an increase in settlement activity in the Early Iron Age II (1100-600 B.C.), which reflects the earliest settling occupation evidenced by the presence of tombs in the area (Al-Jahwari, 2008, p. 228). These are located on the surrounding hills, situated in small groups of ten to twenty tombs (Haser, 2003, p. 27). The archaeological findings revealed two settlements in this period (Figure-66). The first were six large houses and a double row of stones contained within a large enclosure, based on the ruins found south of the current location of the traditional settlement of

al-Ḥamrā on a hill near Dhāt Khail (*ibid.*, p.27). The walls were found in two layers, the lower part was built with large stones while the upper was built with small loose piled stones, which are not connected to the lower. The later wall (younger wall) does not appear to be substantial and seems that these structures were not used as houses but for defence (*ibid.*, p.27). The second settlement, located south to al-Ḥamrā near Bilād Sayt, consists of small houses built on a hill slope, containing some walls constructed with large stones rising up to 1.2 m high (*ibid.* p.27). The following period of Late Iron Age (300 B.C.- 660 A.D.) was evident by few pottery shards and subterranean tombs located in one cairn (Al-Jahwari, 2008, p. 228).

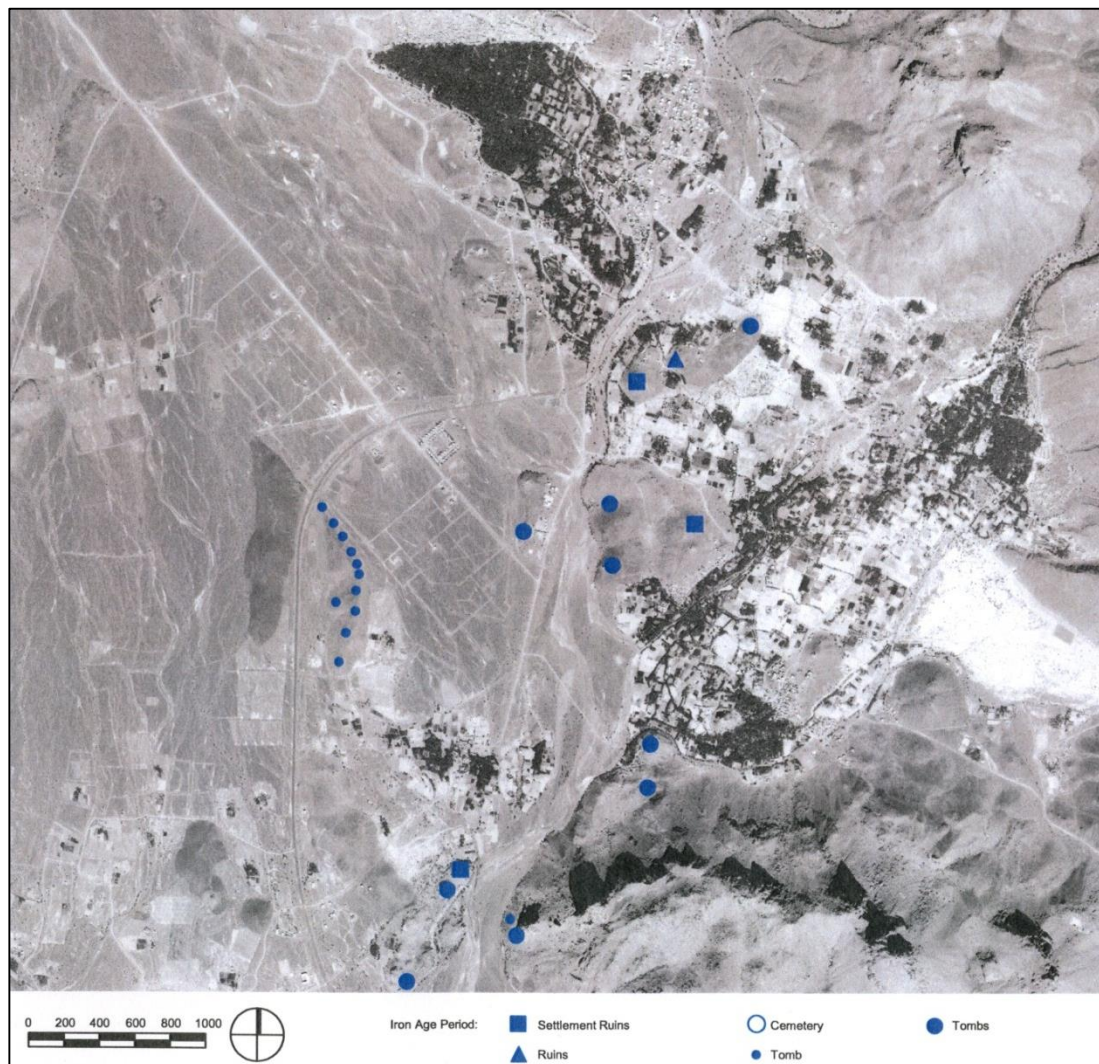


Figure 66: Location of Early and Late Iron Age sites in al-Ḥamrā (after NSA, al-Ḥamrā Aerial photo, 1993).

Human settlement re-emerged in the Early Islamic Period (660-1155 A.D.), based on the pottery found scattered near Ḥusin al-Khawr, located east to Wādī al-Khawr on a small mountain hill in the centre of āl-Ḥamrā oasis (Figure-67) (Ibrahim. M & Gaube. H, 1999-2000, p. 10). Ruins of another old settlement were also found on the slope of Ḥusin al-Khawr hill dated to the Late Islamic Period (1500-1750 A.D.), with an old mosque at the bottom of the hill. Also, a site near Ḥusin al-Khawr revealed two settlements with glazed sgraffito ware bowls of the eleventh and twelfth century A.D. (de Cardi, B., Collier, S. & Doe, D. B., 1976, p. 144), dated to the Middle Islamic Period (1155-1500 A.D.), located on the apex and slopes of the hills, indicating an increase in the settlement activity during that period (Al-Jahwari, 2008, p. 228).

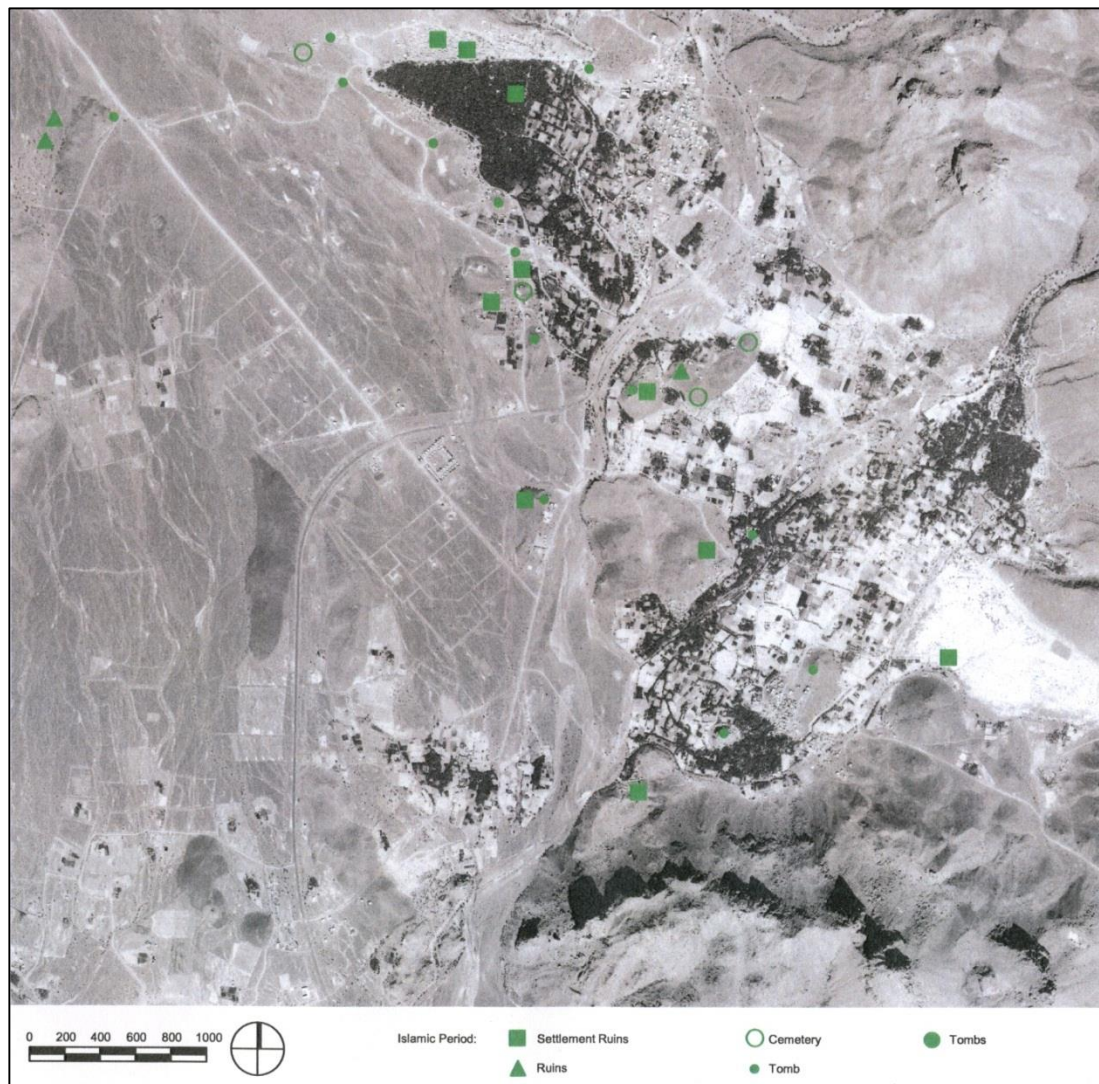


Figure 67: Location of Islamic Period sites in al-Ḥamrā, (after NSA, al-Ḥamrā Aerial photo, 1993).

All periods of the archaeological sites share the setting either near the apex of the hills or at the foothills close to the wadīs (Figure-68). There were overlaps indicating some continuity and reuse of sites – of density and location extension (Figure-68). Zone (1), shows the close proximity and high density between the sites indicating the importance of closeness controlling a small territory between hills. Zone (2), shows the same setting characteristics as zone (1) but reflecting a sense of morphological extension of controlling a bigger territory. Zone (3) shares the same characteristics as zone (2) but in an even larger territorial occupation. This locational overlap reveals a cultural continuity over a long period of time with a tendency of common settling behaviour. Sadly each archaeological site was studied in relative isolation with little attention to cultural meaning and historical context. Hodder and Hutson emphasise the importance of historical context in archaeology:

“In explaining why cultural form has a specific meaning and use, it is necessary to examine its previous associations and context, its diffusion and sequence. While diffusion and cultural continuity are social progress, the pre-existing cultural form also influences what comes after. This is because human beings can only perceive and act through a cultural medium which they both create and live within”. (Hodder, 2003, p. 11)

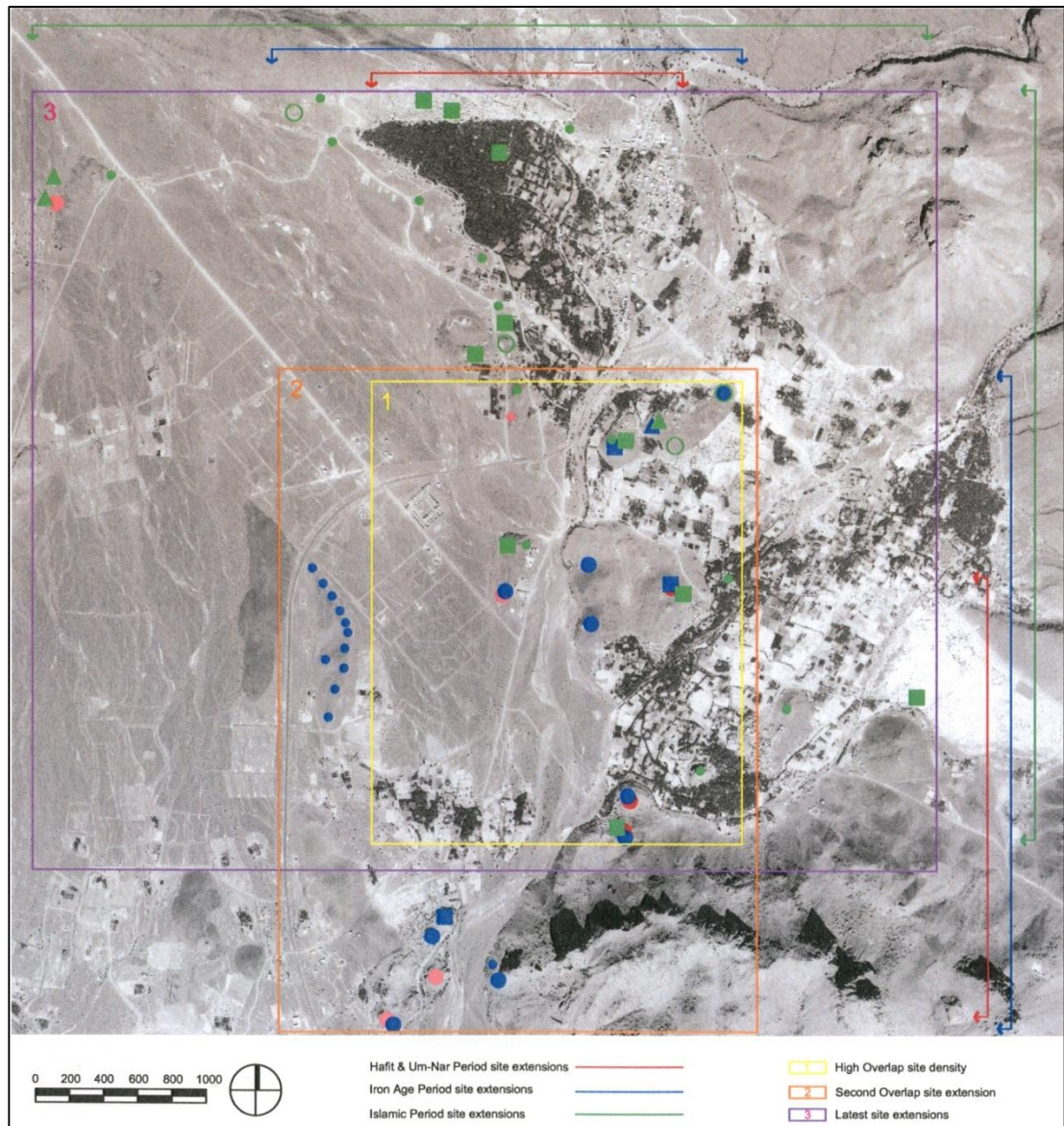


Figure 68: The gradual concentration density, overlap and extensions of the archaeological sites locations in al-Ḥamrā, (after NSA, al-Ḥamrā Aerial photo, 1993).

Historical Location Setting Morphology

Discharges from Wādī al-Mid‘ām and Wādī Sha‘ma divide the arable land naturally into three zones; A, B and C (Figure 69). According to historical records and oral history, Qaryat B. Subh – known locally as al-Qarya - was the first established settlement by the eastern edge of Wādī Sha‘ma in the Kudam area during the 2nd century A.H. / 8th century C.E. (Al-Adawi, 2006, p. 16) (1, zone B, Figure-69). Qaryat B. Subh contains three traditional settlements quarters, Ḥārat al-‘Āli, Ḥārat as-Sāfil, Ḥārat al-Zāhir and Ḥusin al-Zuwiher. The oldest is Ḥārat as-Sāfil containing one gate

from the south, a *souq* near the gate, a tall tower known as *Burj al-Khaba*, a few wells and two main passages with dwellings clustered and aligned with it (Al-Subhi, interview, 2011). Ḥārat al-ʿĀli contains two gates, one from the south and the other from the west. Ḥusīn al-Ẓuwiher was the governing point of Bahla during the *Imamate* of Nassir b. Murshid al-Yaʿrubī, but sadly today it sits in ruins with only foundations left marking its history (Al-Adawī, 2006, p. 16) and (Al-Subhi, interview, 2011).

Then came Ḥusīn Al-Khawr (2a, zone A, Figure-69) and Dhat Khail settlement (2b, zone A), which were contemporaneous. As mentioned, Ḥusīn Al-Khawr is located east to Wādī al-Khawr on a small hill in the centre of present settlement of āl-Ḥamrā. According to local folklore related by Shaikh Mohammed, the tribal leader of B. Subh, it was constructed during the 4th century A.H./10th century C.E, about 416 A.H / 995 C.E, which was used for tying the horses (Al-Subhi, 2011). Dhāt Khil, also known as fājat al-khail (‘place for horses’), contains Ḥusīn Dhat Khail with three towers (*burj* Tawī al-Bilād, *burj* al-Mad and *burj* al-Qutt), a gate, a few wells and some dwellings. Oral history tells us that the inhabitants of Ḥusīn Al-Khawr used to tie their horses in Dhāt Khil (Al-Adawī, 2006, pp. pp.49-50).

Then followed the establishment of al-ʿAriḍ (known as ʿAriḍ B. ʿUdaī), a traditional settlement in the oasis in the 4th century A.H./10th century C.E (Al-Adawī, 2006, p. 19) (3, zone A, Figure-69). It contains Ḥusīn al-ʿAriḍ, burj Ḥusīn al-ʿAriḍ, Jam’ al-ʿAriḍ, some dwellings and a well. The oasis extended then to zone B (4, zone B, Figure-69) with the settling of al-Qalʿa settlement during the 5th to 7th century A.H./eleventh and twelfth C.E. century on a foot-hill with similar characteristics as al-ʿAriḍ (Al-Adawī, 2006, p. 19). This was followed by the settling of ʿAbriyīn in al-Misfat (5, Figure-69)

who were using the available arable-land (6, zone C) for seasonal date harvesting and growing crops.

From analysing the arable land and the location of all settlements in that area, it is clear that the availability of the arable land and the low hill chain were the main factors for settling. The hill provided a visual protection from the south and west side, and an anchor for the settlement's foundation. The establishment of the settlement on the hill also provided an opportunity to maximise the arable land, which also protected the settlement from Wādī Mid'am and Wādī Sha'ma by diverting around it and Wādī Ghul crossing behind it. This shows how the natural wadī channels and the distribution of the low hills contributed in the historical morphology of the area hierarchically from (1) Qaryat B. Subh, (2) Ḥusin Al-Khawr and Dhat Khail, (3) al-ʿAriz, (4) al-Qal'a, (5) Misfat al-ʿAbriyīn to (6) al-Ḥamrā. (Figure-69).

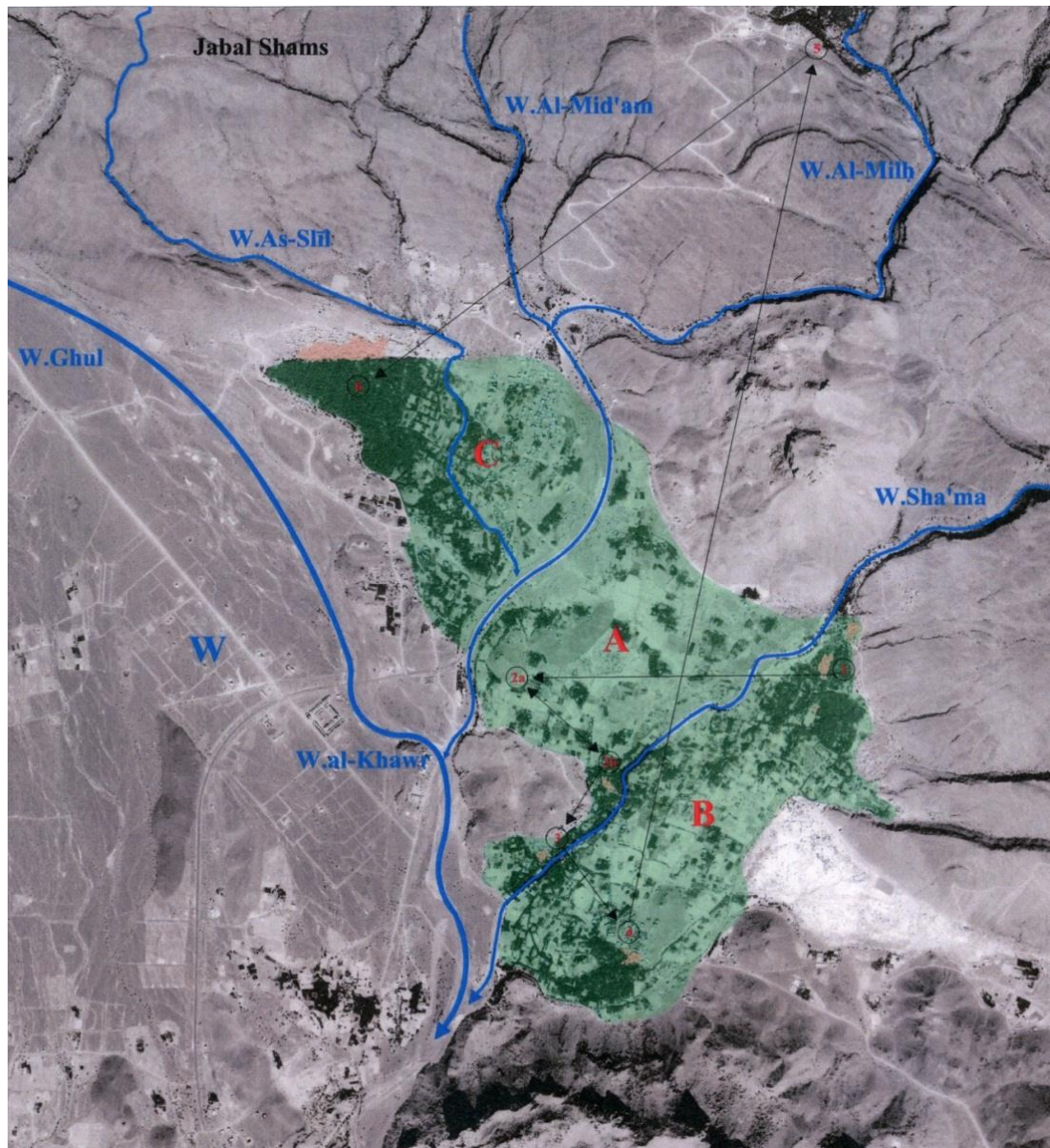


Figure 69: Historical Morphology of the area (after NSA, al-Ḥamrā Aerial photo, 1993).

The Revival of ʿAbriyīn and Emergence of āl-Ḥamrā

In order to understand the tribe's behaviour, distribution, reformation and settlement, it is necessary to determine their tribal associations during their migration to Oman and trace their dispersal pattern and factors of reformation. The ʿAbriyīn tribe descends from Azdi Qahtanī tribes who lived in Yemen in Saba and migrated to Oman through the southeast coast. Their *nisba* (origin/ surname) refers to ʿAbra b.Zahran b.Kaʿb b.Harith b.Abdullah b.Malik b.Nasir b.Azd b.al-Ghawth b.Nabat b.Malik b.Zaid b.Kahlān b.Saba b.Yashjub b.Yaʿrub b.Qaḥtan (Al-Abri, 1958, pp. pp.1-2). Wilkinson

has focused his studies on the ʿAbriyīn as an important example of a tribe that was scattered in a dispersed settlement pattern in north Oman to an important tribe who come together from small groups to a united tribe and played an effective role in the Yaʿāribah Imamate period and settled later in their own *dār*. He described their genealogical descent from Azd (Wilkinson, 1977, pp. pp.171-8) and the Imran branch *shaikhly* structure (Wilkinson, 1987, pp. pp.103-6), (Figure-70 & 71).

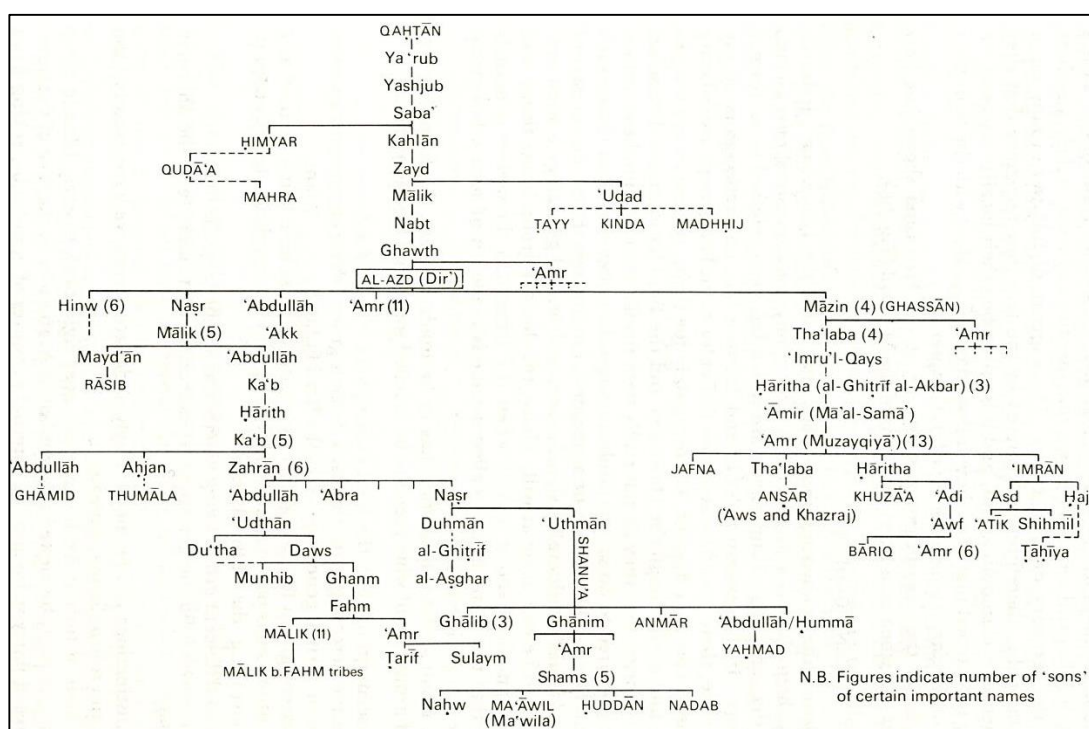


Figure 70: The Azd genealogy structure (Wilkinson 1977: 172, Figure 30).

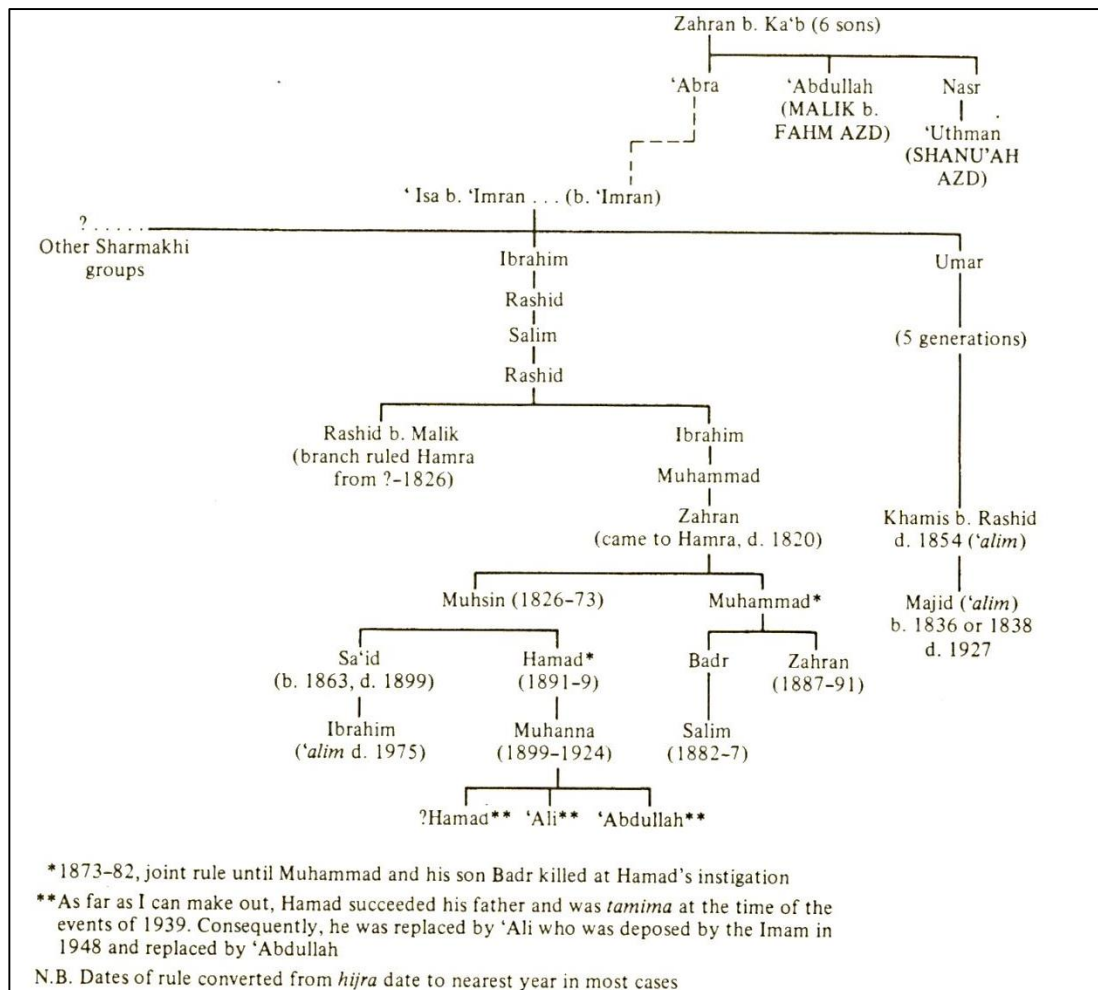


Figure 71: The Imran branch *shaikhly* structure of 'Abriyīn (Wilkinson 1987: 105, Figure 5).

The first of the 'Abriyīn in Oman is said to be in Tiwī⁶² on the coast, where a wadī was named after them (Wadī Al-'Abriyīn), which in time changed to be known today as Wadī Al-'Arabiyyīn (Al-Abri, 1958, p. 5), (Figure-72). The other attested scattered settlements were in a place called Shimiliya in Bāṭina in a village called Sur Al-'Abriyīn near a village called Ḥsifīn (*ibid*, p. 5). They also settled in Jabal Ḥuddan in a settlement they owned called Al-'Aqair from the Sharmahī clan. Some also settled in the Sirr in Al-Ḍahira in Al-'Araqi settlement, which became their principle settlement then, owned also by Sharmahī clans (Wilkinson, 1987, pp. 111-15).

⁶² A coastal village in the northeast of Oman in As-Sharqiya governorate under the administration of Wilayat Sur.

Additionally, they settled in the Wādī Nakher⁶³, Wādī Saḥtan and ʿAwābī in Ghadaf (Wilkinson, 1977, p. 205).

Although the ʿAbriyīn before re-forming were categorised as a tribe that owned individual settlements under the protection of more than one tribe and never had an exclusive *dār* (Wilkinson, 1977, p. 205), yet, they managed to settle in an organised pattern alongside their clans (Shanu'a Azd), expand their knowledge on the geographical setting in northern Oman, and establish trust and allies with other tribes which contributed in growing a sense of unity and encouraged them to reform as one tribe as and when the proper circumstances appeared.

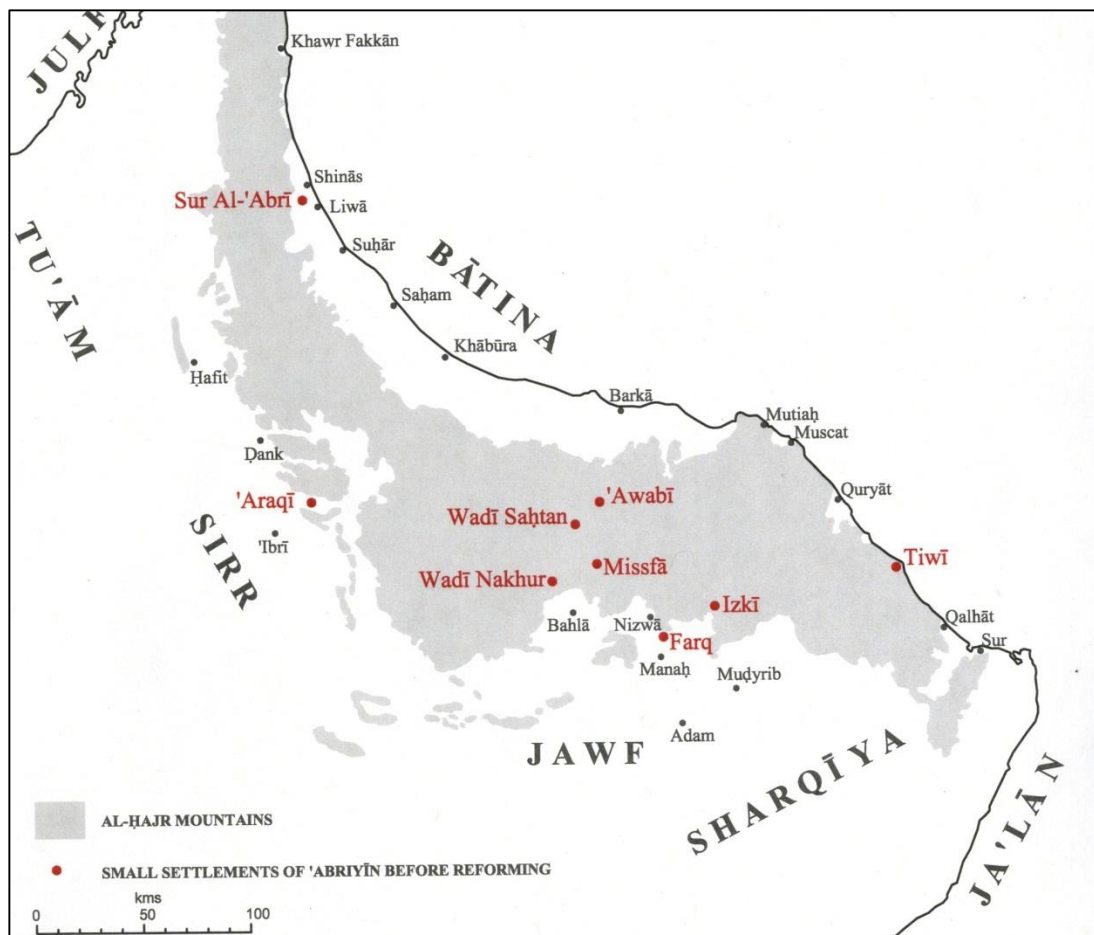


Figure 72: Dispersed small settlements of the ʿAbriyīn before reforming into one *dār*.

⁶³ Located in the west *Jawf* side of the Jabal Akhdar. Very well-known wādī in āl-Ḥamrā which its discharge flow joins with wādī Ghul.

The ʿAbriyīn were known among tribes as *awlad saif wa ḍaif* (‘the sons of swords and hospitality’), because of their skills as strong warriors who had never been defeated in war, yet friendly, peaceful people, which led many tribes to be their allies⁶⁴ and sometimes ask for their help (Al-ʿAbri, interview, 2011). Their fortunes grew at the end of the Nabāhina dynasty rule, when they helped Imam Nassir b. Murshid Al-Yaʿrubī (1034 – 1059 AH / 1624 – 1649 AD) to break the power of foreign groups who controlled the Upper Jawf and Sirr (Wilkinson, 2008, p. 18). Imam Nassir rewarded them by appointing them *walis* (governor) and *qādies* (judge), for example, appointing Shaikh Mohammed b. ʿAlī b. Masʿud b. Lahī b. Qasim Al-ʿAbrī *walī* of Al-Qarya and the area surrounding Kudam, indicating their growing impotence politically and geographically (Al-Abri, 1958, p. 8).

They continued their support for the Yaʿaribah Imamate during the rule of Imam Sultan b. Saif b. Malik Al-Yaʿrubī⁶⁵ (1059 – 1090 AH / 1649 – 1680 AD), who rewarded them by allowing them to develop a new settlement, choosing between the Kudam area (āl-Ḥamrā) or Birkat al-Mawz, from which they selected the Kudam area to settle as their new ʿAbriyīn *dār* (Al-Abri, interview, 2011). This came through a partnership agreement in the *falaj* share between the section of Awlad Ali b. Masʿud of Sharamha clan in ʿAraqī in Sirr and the Imam in 1066 AH / 1656 AD (Wilkinson, 1987, p. 112). By the second half of the 18th century, as the Yaʿaribah Imamate started to weaken, the ʿAbriyīn (led by Awlad Talib section) claimed by agreement⁶⁶ their share of the *falaj*,

⁶⁴ Such allies were B.Jabir and B.Shukail (Al-Abri, 2011).

⁶⁵ The Yaʿrub Imam who brought wealth and prosperity in his Imamte periode and as a result he constructed the Nizwa fort and reconstructed Birkat al-Mawz.

⁶⁶ They claimed their share in the falaj in settlement for 3600 Mohammadi silver coin (Wilkinson, 2008, p. 112).

and in 1742 AD they claimed the rest of the territory including Misfat al-ʿAbriyīn and the property⁶⁷ of B. Lamk in Wādī Saḥtan (Wilkinson, 2008, p. 18). So with the collapse of the Yaʿāribah Imamate, the ʿAbriyīn were independent with ownership of a major exclusive *dār* and incorporating settlements of Wādī Saḥtan and ʿAraqī. The Imam’s support and partnership agreement indicates not only their political success in winning the ʿAbriyīn as strong allies but also the Yaʿāribh interest in negotiation in expanding their wealth and interest. This was evident when the Imam gave the ʿAbriyīn to choose between Kudam and Birkat al-Mawz, both locations secure access to Jabal Shams and Jabal al-Akhḍar, which gave safe access to the trading ports at the Bāṭina coast.

In progressing with the establishment of their new *dār*, they were joined by the leading group of ʿArāqī in Sirr, Awlad ʿImran, to whom eventually the leadership passed (Wilkinson, 1987, p. 112). The ʿArāqī *shaikhly* family resided there till Zahran b. Mohammed moved to āl-Ḥamrā. Hence, the united groups of Awlad Talib and the Sirr branch marked the dawn of new era of a strong tribe with their exclusive “capital” settlement, reckoned amongst the Ghāfirī alliance. Furthermore, this joining not only put the ʿAbriyīn firmly on the political map of Oman but also showed how they built their *dār* and extensions within a short time (Figure-73).

The pre-eminence of ʿAbriyīn in establishing a *dār* and expanding their territory came with three main factors. First, a great deal of fighting with B. Shukail (in the northern Jawf) and B. Subh (the main settlers in the environs of āl-Ḥamā). Secondly, Nassir b.

⁶⁷ Property in the ʿAmq Bowl that Imam Saif b. Sultan-I (known as Qaid Al-Arḍ) developed (Wilkinson, 1987).

Murshid's confiscation of the B. Hina's⁶⁸ arms following their opposition to him, and thirdly, the wisdom and role of three ʿAbriyīn ʿulama in binding and strengthening the tribe and supporting and restoring the Imamate. Such ʿulama were *Shaikh* Majid b.Khamis, (ca.1837 – 1927), and his father *Shaikh* Khamis b.Rashid Al-ʿAbrī, (ca. 1854 – 1837), known as Ḍhu al-Ghubairā, had played an important role in promoting the Imamate. And so, āl-Ḥamrā became a political and cultural centre, especially in the time of *Shaikh* Muhsin b.Zahran Al-ʿAbrī (1826 – 1873) which extended its territory with the support of ʿAttab, to B.Kharus and B.Ghafir territories (Wilkinson, 2008, p. 18). The allies with ʿAbriyīn who did not descend from ʿAbra were B.Dhuhl⁶⁹, B.Subu⁷⁰, B.ʿAudī, B.Hutal, al-Sharyanī, al-Mayaḥī⁷¹, al-Khatrī and al-Nasrī (Al-Abri, 1958, p. 79).

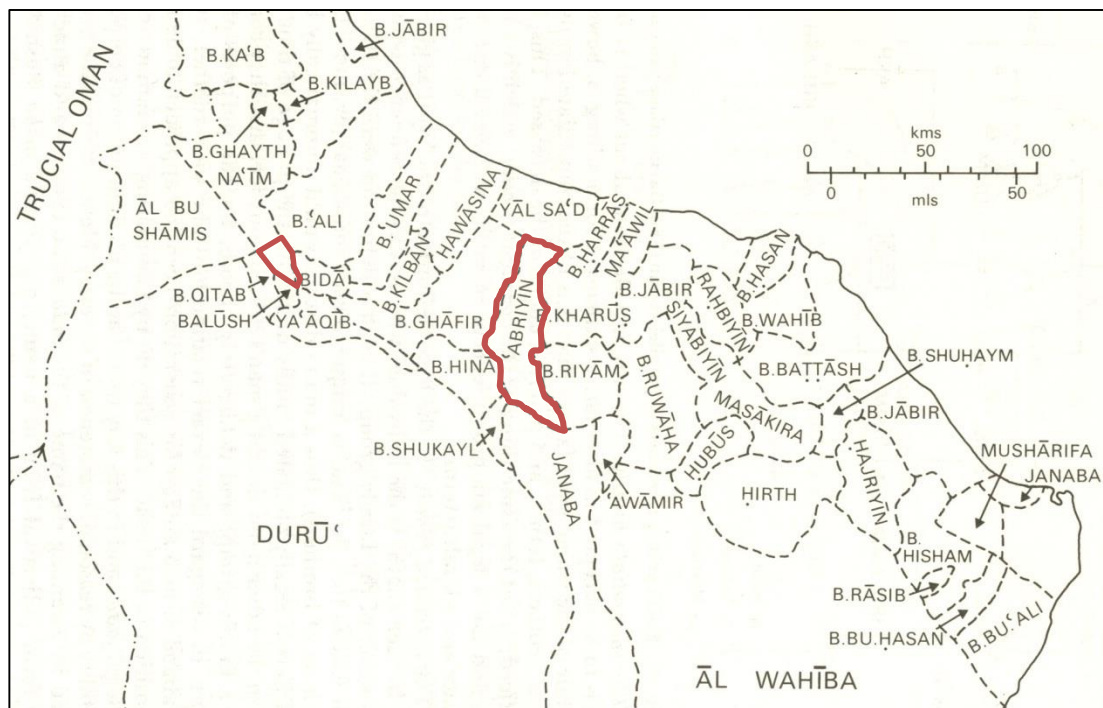


Figure 73: The tribal territories of ʿAbriyīn in central Oman, modified by author (after Wilkinson 1977: 157, Figure 25).

⁶⁸ They were one of the most powerful tribes in the beginning of the Ya'rubā Imamte and were against Nassir b.Murshid who as a result forbidden them to bear arms.

⁶⁹ A small group (of Wa'il stock) who consider themselves notably ʿAbriyīn, living in the upper part of āl-Ḥamrā. They are from ʿAwabi, B.Dhuhul b.Shayban, and according to al-Siyabi (1965,p. 47), they had a settlement called Tawi al-Sayh (Wilkinson, 1987).

⁷⁰ They came originally from Batinah, from Sawadi and W.Al-Abyaḍ (Al-Subhi, interview, 2011).

⁷¹ They descend from Maiyah b.Mus'ab from B.Riyam and B.Khuzair.

The *Falaj* and the settlement beginnings

Before the ʿAbriyīn resided in āl-Ḥamrā, the pre-existing arable land (5, zone C, Figure-69) was partly cultivated by ʿAbriyīn who settled in Misfah and Wādī Nakhur, for seasonal harvesting, and depended on scattered traditional wells (*zīgra*)⁷² for irrigation. The most well-known and reliable *zīgra* was called Ṭawī al-Zāhira al-Kabīra and Ṭawī Mall ad-Dākhil, located almost in the centre of the agricultural land (Al-Abri, interview, 2011). The location of a spring in āl-Ḥamrā was already known, however, its flow was weak, not enough to supply a settlement and irrigate the arable land because of its tendency to dry up from the first drought. Accordingly, the Imam Sultan b.Saif b.Malik Al-Yaʿrubī helped them to excavate the *falaj*⁷³ spring to increase the water flow. The excavation began on the 1st of *Jamād al-Ākhr* 1066 AH / 1st November 1656 AD in the time of *Shaikh* Khalaf b.Talib al-ʿAbrī and *Shaikh* Mohammed b.Yusif b.Talib al-ʿAbrī⁷⁴ (Al-Abri, 1958, p. 11).

During the *falaj* excavation, the first settlers to arrive were the Awlad Masaʿud b. Rashid group of the ʿAbriyīn, who comprised about 70 men, and initially settled in the centre of the garden by constructing a small defensive settlement known as Mall ad-Dākhil with a Ḥuṣin within it known as Ḥuṣin Mall ad-Dākhil (Al-Abri, interview, 2011). The settlement was first established by Masaʿud b. Rashid Al-ʿAbrī in c. 1116 A.H / 1695 C.E (Al-Adawi, 2006, p. 54). It contained three towers, six dwellings, two

⁷² This type of agriculture well employs cattle to draw water as opposed to human operated ones (tawī).

⁷³ According to Wilkinson (1977), *falaj* (pl. *aflāj*), is a generic term used in Oman for the traditional irrigation system which mean in classical Arabic to divide property into shares. In Omani encyclopaedia the term *falaj* mean the water channel that divides its way through the mountain or ground, used as a traditional irrigation system.

⁷⁴ Was from the first ʿAbriyīn leading group who agreed with the Imam Sultan b.Saif al-Yaʿrubī and first settled in āl-Ḥamrā. He was appointed walī in Sirr area by the Imam and constructed the first house in āl-Ḥamrā settlement, Bait aṣ-Ṣafāh (Al-Abri, 1958, p. 17).

wells, administrative structure, rooms for guards, two public bathing structures for ladies and surrounded by a wall with two access gates. This gave them the time to gradually excavate the *falaj* and construct their new settlement at the foothills.

The *falaj* spring was excavated gradually, first in the time of Awlad Talib b.°Ali b.Masa°ud al-°Abrī with the help of the Imam, and second, under the leadership of Shaikh Malik b.Rashid al-°Abrī in the beginning of the 13th century A.H. with a new spring flow called the Qumī⁷⁵ flow, and finally, more excavation in the time of Muḥsin b.Zahran b.Mohammed al-°Abrī who employed a man known as Ra°i Lekhshaba⁷⁶ in the seventh decade of the 13th century A.H., who succeeded in adding a new source (*sā°id al- Khashba*) and increased the flow and channel size of the *falaj* and therefore, extended the settlement and the *falaj* which has never dried up since (Al-Adawi, 2006, p. 112).

Falaj āl-Ḥamrā is an active *dāwūdī*⁷⁷ *falaj* which its main *qanāt*⁷⁸ feeds from four main *Sawā°d*⁷⁹ (pl. *sa°d*, main springs with channels feeding into the *qanāt*), *sā°id al- Ṣlīla*, *sā°id al-°wr*, *sā°id al- Khashba* and *sā°id al-Ḥadith*. It extends 2.26 km long from the mother spring to *Sharī°a*⁸⁰, with a water flow average of 50 L/s (MRMWR, 2009,

⁷⁵ Because the flow came from the hand of a man from B.Qium (Al-Abri, 1958, p. 12).

⁷⁶ This was his nickname.

⁷⁷ It is one out of three *aflāj* types - *dāwūdī*, *ghaīlī* and *°aynī* – and represents 23% of total *aflāj* in Oman. It derives its water source from deep wells and its flow continues without getting affected by drought periods.

⁷⁸ A local term means: the main underground channel from the mother spring to the first surface of water flow.

⁷⁹ The additional water sources that were excavated gradually in different times.

⁸⁰ The name of the first access point of the *falaj* which is exclusively used for collecting drinking water. The word *Sharī°a* refers to the true way or purity, is a term used to distinguish the Islamic principles in general and provincially a technical term to describe the first access point to pure water (Wilkinson, 1978).

p. 60). The *falaj* channel (*Sīqya*)⁸¹ divides into two channel, *Sīqyat al-Bilad* directed east towards the settlement of approximately 1.5 km long and *Sīqya al-Suḥma* directed southeast to the opposite side of the settlement of approximately 1.9 km long known as *al-Suḥma*. The two channels embrace the gardens as a boundary, of 1.5 km², from an altitude of 658 mamsl from both sides and irrigate the cultivated land descending gradually from that altitude to 644 mamsl (Figure-74).

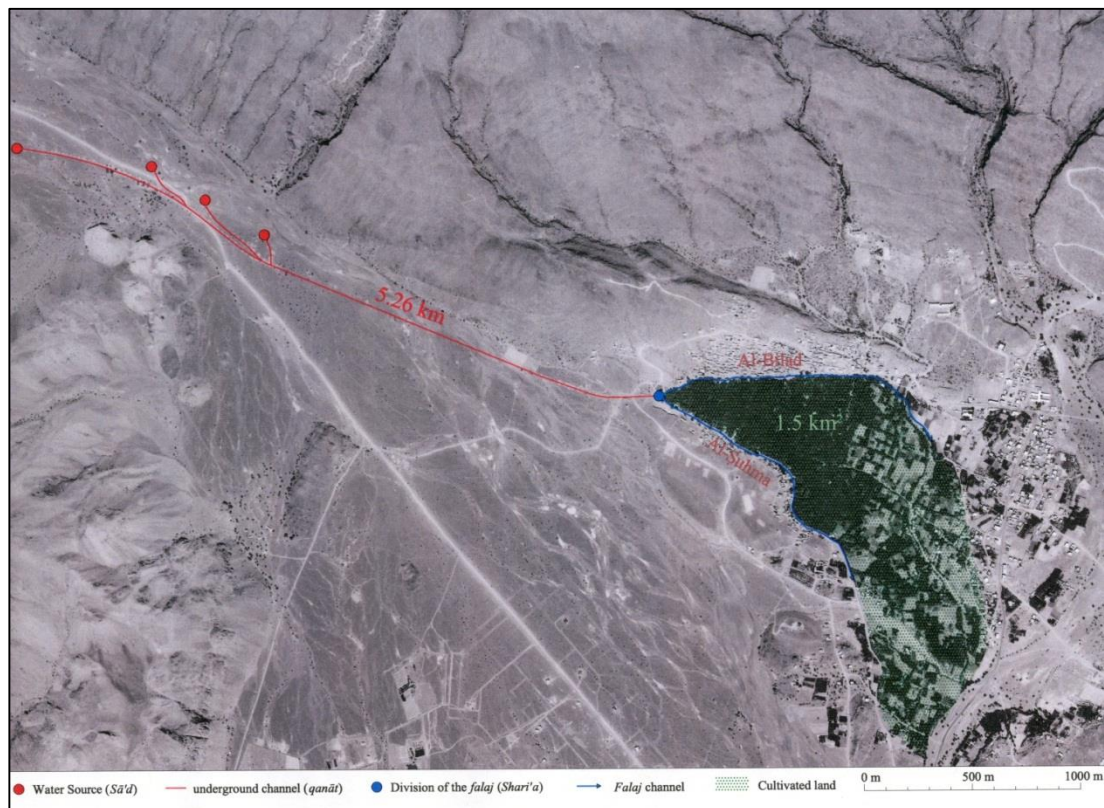


Figure 74: *Falaj* āl-Ḥamrā from the source to the oasis.

The setting and Components of Baldat āl-Ḥamrā

Baldat āl-Ḥamrā (zone C, Figure-69) - the latest and biggest settlement in the oasis - developed enveloping the orchard lands (5, Figure-69) in the centre and clustering around it. It consist mainly of Ḥārat āl-Ḥamrā, Mall ad'Dakhil, as'Suḥma, al-Munsur and Ḥail al-Shaṣ. Ḥārat āl-Ḥamrā sits at the south of the limestone outskirts of Jabal

⁸¹ It is generated and derived from the word Saqī, in classic Arabic it means to irrigate and drink. In local Omani terms, it refers to the exposed *falaj* channel.

Shams approximately between latitudes of 23° 07' 12. 38" N and 23° 07' 18. 28" N, and longitudes of 57° 16' 38. 08" E and 57° 17' 07. 71" E. It extends in a gradual elevated position on the foothill between the altitudes of 658 mamsl and 680 mamsl, edging overlooking the orchard land from the north. As'Suḥma sits along the red low foothill mountain chain of al-Ḥabil, which is edging the orchards from the south and southeast, facing Ḥārat āl-Ḥamrā in the opposite side. Ḥail al-Shaṣ - a small village and known route to Jabal Shams - is located north to Ḥārat āl-Ḥamrā. Mall ad'Dakhil sits in the centre of the orchards between Ḥārat āl-Ḥamrā and as'Suḥma. Al-Munsur sits in the south end of the orchards after as'Suḥma.

Ḥārat āl-Ḥamrā consists of: (a) the Ḥarat itself (traditional settlement quarter), (b) the ḥarat old *souq* (S), (c) al-Zāhira al-Kabīra and Mall ad-Dākhil wells in Mall ad-Dākhil, (d) the *falaj* channels, (e) the cultivated land, and (f) the towers. The Ḥārat itself divides into four sub-Ḥarat, (H1) Ḥarat al-Wiṣṭā (the core settlement and main case study), (H2) Ḥarat al-Sharqiya (located east to H1), (H3) Ḥarat al-^cĀlī (located west to H1), and (H4) Ḥarat al-Ḥaditha (located north to H1), (Figure-75). The *souq* (S) - known as *souq* al-Qadeem – was built by Zahran b.Mohammed b.Muhsin Al-^cAbrī, 140 years ago, containing 44 shops, located east to H1. Al-Zāhira al-Kabīra well in Mall ad-Dākhil was used as a communal public well – with no private water shares – and connects to two pools (P1 & P2) near the current location of Ḥarat al-Wiṣṭa for drinking. There are 11 towers in baldat āl-Ḥamrā, five surrounding the perimeter of the oasis, three in the centre of the cultivated land, and three within the Ḥarāt al-Wiṣṭā. The three towers (T) known as *Burj* mall ad-Dākhil in the centre of the cultivated land are part of Ḥarat Mall ad-Dākhil (H). The five towers surrounding are (T1) *Burj al-Shri^ca*, (T2) *Burj muṣalā al-Eid*, (T3) *Burj Dak al-Waljah*, and (T4) *Burj al-Maqbara*

and *Burj Sha'āsh'* (T5). The three towers within Ḥarat al-Wisṭā are (T6) *burj* al-Ḥjīra, (T7) *burj* al-Ḥalaw and (T8) *burj* Shwaīn. The two *falaj* channels that divides equally from one main spring *qanāt* are (F1) *falaj* al-Blād and (F2) *falaj* as-Suḥmah. The cultivated land divides into three zones, date palm gardens (G1), seasonal planted gardens (G2), and extended mixed plants gardens (G3) (Figure-75).

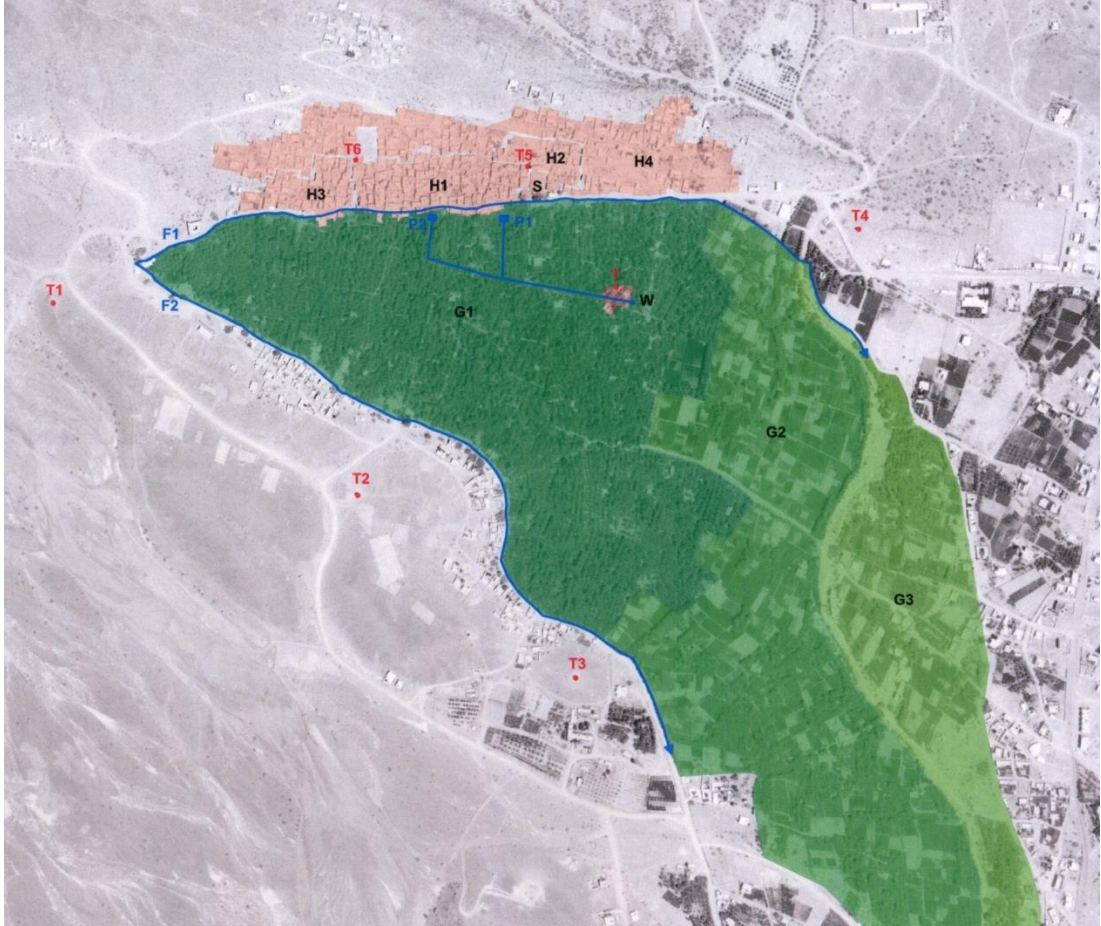


Figure 75: The components of Ḥarat āl-Ḥamrā and its sub- Ḥarat; (H1) Ḥarat al-Wisṭā, (H2) Ḥarat al-Sharqiya, (H3) Ḥarat al-ʿĀlī, (H4) Ḥarat al-Ḥaditha, (S) *souq* al-Qadeem, (P1 & P2) two water pools, (T) *Burj* mall ad-Dākhil, (T1) *Burj al-Shri'a*, (T2) *Burj muṣalā al-Eid*, (T3) *Burj Dak al-Waljah*, (T4) *Burj al-Maqbara*, (T5) *Burj Sha'āsh'*, (T6) *burj* al-Ḥjīra, (T7) *burj* al-Ḥalaw, (T8) *burj* Shwaīn, (F1) *falaj* al-Blād, (F2) *falaj* as-Suḥmah, (G1) date palm gardens, (G2) seasonal planted gardens, and (G3) extended mixed plants gardens.

4.3: Ḥarat al-Wiṣṭa tribal Pattern and Structure

Introduction

The early discussion on the ʿAbriyīn tribal history from their origins, migrations, dispersed existence leading to gradual unity, to settling in their *dār*, is present in various publications which were used as supporting material. The earliest detailed records on the ʿAbriyīn was contributed by *Shaikh Ibrahim b. Saʿid Al-ʿAbrī*⁸² (Al-Abri, 1958) in *Tubṣert al-Muʿtabirīn fī Tārīkh al-ʿAbriyīn*, who recorded the tribes genealogy, groups, clans, early settled areas after migration, unity and *ʿulama* and their relation to Imamate and political power. The second tribal information was briefly listed by Scoville’s gazetteer (Scoville, 1979 – 1995) who described briefly the ʿAbriyīn tribe as a Nizarī descent tribe, of Ibaḍī religion, belonging to the Ghāfirī political affiliation (Scoville, 1979, p. 18). He also described their dispersal pattern and areas of settlement: in Ḍāhira at ʿArāqī, in western Ḥajar at ʿAwābī, in ʿAqair at Wādī Saḥtan, at Haṭ and Zammah in Wādī Bani ʿAwf, at Wādī al-Qarn in wādī Fara, at Ṭbāqa in Wādī Bani Ghāfir, and at ʿAmq, Fashsh, Maqāmma and Mabu in Wādī Saḥtan. They also resided in al-Ḥamrā, Farq, Ghamer and Bahla in Oman Proper with estimated number of 6,500 persons (*ibid*, p. 18). He describes them:

“They cultivate dates and corn and are generally a well-behaved peaceable tribe. They are the masters of Awabi, but Bahla is their main capital and Ḥamrā their largest separate village” (*ibid*, p. 18).

⁸² Shaikh and ʿālim Ibrahim b. Saʿid b. Muḥsin b. Zahran b. Mohammed Al-ʿAbrī, born in 11th of December 1896 AH, and was appointed Qaḍī in Rustāq by his mentor Shaikh Majid b. Khamis Al-ʿAbrī during the Imamate of Salim b. Rashid Al-Kharoṣī. He was appointed *tamimah* Shaikh for ʿAbriyīn in 1924 AH for 16 years then appointed Qaḍī in Suhar, then appointed by Imam al-Khalilī walī on Ibrī. In the time of Sultant Saʿid b. Taymur he was appointed Qaḍī and president of Court of legitimacy and then President of the Court of Appeal in Muscat. In 1972 AH, he was appointed Mufti of Oman and died in 1975 AH (Al-Adawi, 2006, p. 34).

Their settlement in ʿArāqī (between Ghabbī and Bait Al-ʿAinain, approximately 6 km north ʿIbrī, on the right bank of Wadī Sanaisal) consisted of 100 dwellings for ʿAbriyīn, 90 dwellings for Banī Rashid (*nisbah*, al-Rāshdī) and 35 dwellings for Balushis (*nisbah*, al-Blushī) (Scoville, 1979, p. 249). In ʿAwābī (approximately 15 km east Rusāq and about 30 km west Nakhal, on the left bank of wadī Bani Kharuṣ) the ʿAbriyīn settlement consisted of 300 dwellings:

“The population is 2,500 souls, belonging chiefly to the ʿAbriyīn (120 houses), Banī Kharus (70 houses), Banī Ḥarraṣ and Dhahul; but there are also some Siyābiyīn, Banī Baḥrī and Banī ʿAwf.” (*ibid*, p. 364).

The importance of ʿAwābī lies in its strategic location on Wadī Banī Kharus which is the main route from the north to Jabal al-Akhḍar and the ʿAwābī fort⁸³ which defends that access. Although the control of that area was constantly in dispute between the ʿAbriyīn and Banī Riyām but the political influence of ʿAbriyīn in that territory was predominant and thus gave them control of the fort (*ibid*, p. 364). This route is called Ṭariq as-Shaṣ (after Ḥil as-Shaṣ, located north of Ḥarāt al-Ḥamrā); it is a direct mountain passage connecting ʿAwābī (Ghadaf, north) over Jabal al-Akhḍar to al-Ḥamrā to Wadī Tanuf (Jawf, south). This indicates the extension of the territorial and political power the ʿAbriyīn possessed in northern Oman, especially in the Ḥajar mountain region.

Wilkinson (Wilkinson 1977, 1987 and 2008) incorporates important information and maps of the tribal history and structure. He used the ʿAbriyīn model to illustrate how small tribal groupings coalesced under specific political conditions to form a unified tribe – and in this case become one of the most important tribes in central Oman. Much

⁸³ It is also known as Bait al-ʿAwābī which in 1900 AH the ʿAbriyīn transferred its possession to the Sultan of Oman (Scoville, 1979, p. 364).

of this information on the ʿAbriyīn tribe, it should be noted, came from *Tubṣert al-Muʿtabirīn fī Tārīkh al-ʿAbriyīn* by Shaikh Ibrahim b.Saʿid Al-ʿAbrī in 1958 AH. Another source on tribes is Carter’s study (Carter, 1982), although it only includes information on the silversmiths of ʿAbriyīn. However, he described in some detail the Bani Riyām group, which contributes in our later discussion on the tribal pattern at Ḥarāt as-Saybanī in Birkat al-Mawz. Another brief record on the ʿAbriyīn was by Chauncy in 1951 A.D, who described them to be of 2000 people, living in Bahlā, ʿAwābī and al-Ḥamrā, who were “[n]ormally peaceful..... They are fairly intelligent people” (Chauncy, 1988, p. cii).

Miles has also listed the number, distribution and briefly description of the Omani tribes (Miles, 1988). He recorded the ʿAbriyīn to be of 8000 people, describing them to be peaceable and well behaved (Miles, 1988, p. lxxxv). A study on the tribes and Imamate by George Rentz lists the tribes in connection with the Imamate and their classification in relation to settlement and affiliation to either the Ghafīrī or Hinawī political moiety, providing brief history on the tribes (Rentz, 1997). He describes the ʿAbriyīn as:

“The tribe of the ʿAbriyīn is one of the influential tribes in the border area along the western edge of the Imamate, where it shares with independent Baluchis of the Dhahirah possession of the town of al-ʿArāqī up the valley from ʿIbrī” (*ibid*, p. 89).

Some of the information collected on tribal client groups was always challenged by getting their name without *nisba* (tribal name) due to being out of the Arab tribal

genealogy (known as *mawlā*), which mostly was the case prior to the 1970s. Other ʿAbrī clans that resided with the ʿAbriyīn as Wilkinson lists them:

“... those families that which consider themselves members of the ʿAbrī clan by no means all live in the ʿAbrī dār , whilst conversely a number of groups who consider themselves ʿAbriyīn, notably the B.Subḥ and the Dhuhul of al-ʿAwabī, are not considered of the true ʿAbra descent.” (Wilkinson, 1987, p. 106).

The other tribes who resided with ʿAbriyīn are the B.Subḥ and the Dhuhul are the B.ʿAdī, the B.Khiyār, the B.Haṭāl, the Sharyānī, the Mayāḥīs, the Khawāṭr and the Nawāṣir (Al-Abri, 1958, p. 79). The ʿAbriyīn tribal groups who are considered to descend genealogically from ʿAbra area Awlād Alī b.Musʿud b.Lahī (who consists of Awlād Malik, Awlād Ṭālib and Awlād Khalaf) (Al-Abri, 1958, p. 6), the Sharāmḥa, Āl ʿAziz, Awlād Srāʿ, Al-Ghḍābiyīn, Al-Wurud, Awlād Al-ʿAthim, Awlād Nassir, Awlād Salim b.Musʿud, Awlād Rashid b.Musʿud and Awlād Khamis b.Musʿud whom all are known as Awlād ʿAmrān (Al-Hinai, 2010, p. 402). It becomes clear when looking at all the above ʿAbrī tribal groupings how complicated the socio-political structure is within a tribe in Oman, and yet managed to settle in one *dār* in unity and harmony. They resided in their new *dār* with factions united under one common tribe name, ʿAbrī.

Al-Ḥamrā oasis consists of other constituent harāt and areas that were mentioned earlier in the historical morphology description of each area. Ḥarāt Qaryat B.Subḥ (also known as al-Qarya) is resided by the al-Subḥī tribe, Ḥarāt Qulʿat al-Muṣalḥ (also known as al-Qulʿah) is resided by the al-Muṣalḥī tribe, the settlements of Wādī Nakhir are resided by ʿAbriyīn and Sharamiḥa, Misfāt al-ʿAbriyīn is resided by ʿAbriyīn, and

ʿAriḍ B. ʿAudai (also known as al-ʿAriḍ) is resided by the al-ʿAdawī and al-Nāʿbī tribes. The following discussion will focus on the tribes who resided in Ḥarāt al-Wiṣṭā discussing their distribution and impact on the settlement's evolution.

Ḥarāt al-Wiṣṭā tribal Pattern

The tribes, clans and allies that inhabited Ḥarāt al-Wiṣṭā till it was completely evacuated in 2001 is listed in Table-2. The spatial distribution of these inhabitants and the structure of Ḥarāt al-Wiṣṭā is mapped in Figure-76 & 77, with the same detailed maps of the developed phases of the ḥarāt (from phase-1 to phase-6) is presented in (Figure-78 to 84). Although some of the dwelling owners could not be identified for reasons mentioned earlier, the tribal mosaic gives a fairly clear understanding of tribal dwellings and their distribution. This will be discussed in detail in terms of each tribe's distribution, location, characteristics and pattern, starting with the establishing tribe, Al-ʿAbriyīn. The settlement has been divided in phases according to its development and each phase will be discussed in the context of its social structure and tribal distribution (Figure-78).

Tribe	Nisbah	Dār	Political affiliation	Tribal origin
Al- ^ʿ Abriyīn	Al- ^ʿ Abrī	Jabal al-Akhḍr, al-Ḥamrā	Ghāfirī	^ʿ Abra b.Zahrān b.Ka ^ʿ b, Qaḥṭān
Al-Sharāmḥa	Sharmaḥī	Jabal al-Akhḍr (Wādī Nakher), al-Ḥamrā	Al- ^ʿ Abrī / Ghāfirī	^ʿ Abra b.Zahrān b.Ka ^ʿ b, Qaḥṭān
Al- ^ʿ Aziziyīn	Al- ^ʿ Azizī	Jabal al-Akhḍr (Wādī Nakher), al-Ḥamrā	Al- ^ʿ Abrī / Ghāfirī	^ʿ Abra b.Zahrān b.Ka ^ʿ b, Qaḥṭān
Al-Nāṣriyīn	Al-Nāṣrī	Jabal al-Akhḍr, al-Ḥamrā	Al- ^ʿ Abrī / Ghāfirī	^ʿ Abra b.Zahrān b.Ka ^ʿ b, Qaḥṭān
Al-Khāṭriyīn	Al-Khāṭrī	Jabal al-Akhḍr, al-Ḥamrā, Ḍunk	Al- ^ʿ Abrī / Ghāfirī	Nu ^ʿ m b. ^ʿ Abd Shams b.Ḥddān
Al-Nā ^ʿ b	Al-Nā ^ʿ bī	al-Ḥamrā, Nakhal	Al- ^ʿ Abrī / Ghāfirī	Nā ^ʿ ib b.Ibn adīn b.al-Muhra, Qaḥṭān
Al-Dhuhul	Al-Dhuhlī	al-Ḥamrā, al-Rustāq	Al- ^ʿ Abrī / Ghāfirī	Dhuhl b.Luqīṭ b.al-Ḥarith, Qaḥṭān
Al-Ḥaṭāṭla	Al-Ḥaṭālī	al-Ḥamrā	Al- ^ʿ Abrī / Ghāfirī	Qaḥṭān
Al-Shukoor	Al-Shukrī	Ḍunk	Unclear	^ʿ Adnānī
Al-Riyāmiyīn	Al-Riyāmi	Jabal al-Akhḍr	Ghāfirī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Al-Mughiryīn	Al-Mghirī	Ibrā	Ghafrī	Al-Mughīrah b.Sa ^ʿ d b.Ṣāmṭ, Qaḥṭān
Al-Bimāniyīn	Al-Bimāni	Bahlā	Ghafrī	Ḥmā b. ^ʿ Athmān b.Nasr, Qaḥṭān
Al-Ya ^ʿ aribh	Al-Ya ^ʿ arubī	al-Rustāq, Nakhal	Ghafrī	Qaḥṭān

Table 2: The tribes in Ḥarāt al-Wiṣṭā in al-Ḥamrā.

By far the most dominant tribe in Ḥarāt al-Wiṣṭā were the ^ʿAbriyīn (*nisbah*, al-^ʿAbrī), who not only owned numerous dwellings on the main street (aligned with the *falaj* channel), but also the most substantial dwellings and occupied much of the ḥarāt, except for few dwelling at the upper part (north edge) (Figure-76). They were not only the owners but also the sole and founders of it, after whom the oasis was named, Ḥamrā al-^ʿAbriyīn⁸⁴. Their early constructed dwellings of the *shaikhly* ^ʿAbriyīn (discussed earlier) on the lower edge of the foothill gave them the advantage of choosing the location to construct large dwellings, which gave them the socio-political power.

⁸⁴ This toponymy was similarly found in the other constituent settlements in al-Ḥamrā such as; Missfat Al-^ʿAbriyīn for the Al-^ʿAbriyīn, Qaryat B.Subḥ is resided by the al-Subḥī tribe, Qul^ʿat al-Muṣalḥ is resided by the al-Muṣalḥī tribe, and ^ʿArid B.^ʿAudai is resided by the al-^ʿAdawī.

Oral history and historical records kept by the *ʿulama* indicates that during the excavation of *falaj* āl-Ḥamra, and the temporary settling of ʿAbriyīn in Mall ad-Dākhil, they decided to start constructing their *dār* and relied on the two pools they constructed (P1 & P2, Figure-75) which were supplied with water by Al-Zāhira al-Kabīra and Mall ad-Dākhil wells (W, Figure-75). They chose to construct their settlement on the *ṣafāh* (term used in Oman to refer to the smooth rigid layer of the mountain rock, in this case the rock at the foothill of Jabal Shams), which acted as a strong foundation for their settlement (Al-Abri, interview, 2011).

The first dwellings to be constructed were Bait aṣ-Ṣafāh (D1) (Figure-79) by *Shaikh* Mohammed b.Yosuf b.Talib b.Rashid Al-ʿAbrī (Al-Abri, 1958, p. 20), Bait al-Qadīm (D2) by *Shaikh* Salim b.Khamis b.ʿAmar b.ʿEissa Al-ʿAbrī (*ibid*, p. 22), Bait aṣ-Ṣabāḥ (D4) by his brother Rashid b.Khamis b.ʿAmar Al-ʿAbrī, and the dwelling (D3) northeast of Bait al-Ṣafā by his other brother Ali b.Khamis b.ʿAmar Al-ʿAbrī (Al-Abri, interview, 2011), (Figure-78 & 79) & (Plate-10). The first three mosques constructed at the same time as the first dwellings – with similar layouts – were Masjid as-Suḥma (also known as Masjid as-Ṣarooj)⁸⁵ in as-Suḥma near the *Shariʿah* of the *falaj*, Masjid *as-Salaf*⁸⁶ (M1) southwest Bait aṣ-Ṣafāh, and Masjid *al-Hadith*⁸⁷ (M2) (the oldest mosque in the Ḥarāt) southeast Bait al-Qadīm (Figure-78 & 79). These two mosques (M1 & M2) marked the edge of the early establishing ḥarāt from the west and east side and consists of public bathing, ablution and drinking points for males (Plate-11). The

⁸⁵ It was constructed by the funding of ʿAiysha b.Mohammed b.Yusif al-ʿAbrī (the wife of *Shaikh* Salim b.Khamis al-ʿAbrī, one of the establishers constructing a house in the Ḥarāt) who requested the mosque to be built by Sarooj and so it gained its name (Al-Adawi, 2006, p. 76).

⁸⁶ Was built at the same time of masjid al-Ḥadith, and there was a will found by *Shaikh* Salim b.Khamis al-ʿAbrī instructing to give any remains of his land and water share legacy to the mosque, and also his wife ʿAiysha did the same with the remain of her dates legacy for the mosque (Al-Adawi, 2006, p. 78).

⁸⁷ Was built by *Shaikh* Salim b.Musʿud Al-ʿAbrī with similar layout design as masjid aṣ-Ṣalaf but without the small minaret (*booma*) (Al-Adawi, 2006, p. 75).

evolution of the ḥarāt following the dwellings and the two mosques were the communal structures of two gates *Sabāḥ as-Sāfil*⁸⁸ (G1.1) and *Sabāḥ an-Nu^cb*⁸⁹ (G1.2). There are three female communal bathing structures of *mujazat al-ghraifah* (P1.2) and, *mujazat aṣ-Ṣafāh* (P1.1), and the private one is *mujazat al-Jufrah* (P2), (Figure-77 & 79) & (Plate-12). There were also three male communal meeting halls; *sablat aṣ-Ṣalaf* (S1.1) is associated with *maṣjid aṣ-Ṣalaf*, *sablat al-Ghārbī* (S1.2) and *sablat Rashid b.Masa^cud* (S1.3), (Figure-79). This early Ḥarāt (Phase-1) was established by Awlād Rashid b.Masa^cud Al-^cAbrī, which is considered the core of the Ḥarāt. This core had one main passage (east-west axis) aligned with the *falaj* channel (*sīqiyat al-Blād*) with four *falaj* communal access points (*mishrā^c*).

Although the early established dwellings (Phase-1) were owned by one family group of the ^cAbriyīn tribe (Awlād Rashid), yet, they were constructed in an individual pattern facing each other (D1, D2 & D3) except for one (D4), indicting an early existence of a shared square between them (Figure-79). The positioning of the two mosques (M1 & M2) as an early edge of the ḥarāt along the *falaj* channel defined the location of the communal structure in between. Hence, these early structures identify the early core that was established and so, the early core pattern which will be discussed in Chapter-5.

⁸⁸ *As-Sāfil* locally means the lower part or referring to the east side which is also used in some cases to name passages or *falaj* channels and named after Bait *as-Sāfil* (D30).

⁸⁹It was constructed by the Al-Nu^cb tribe and so it was named after them.

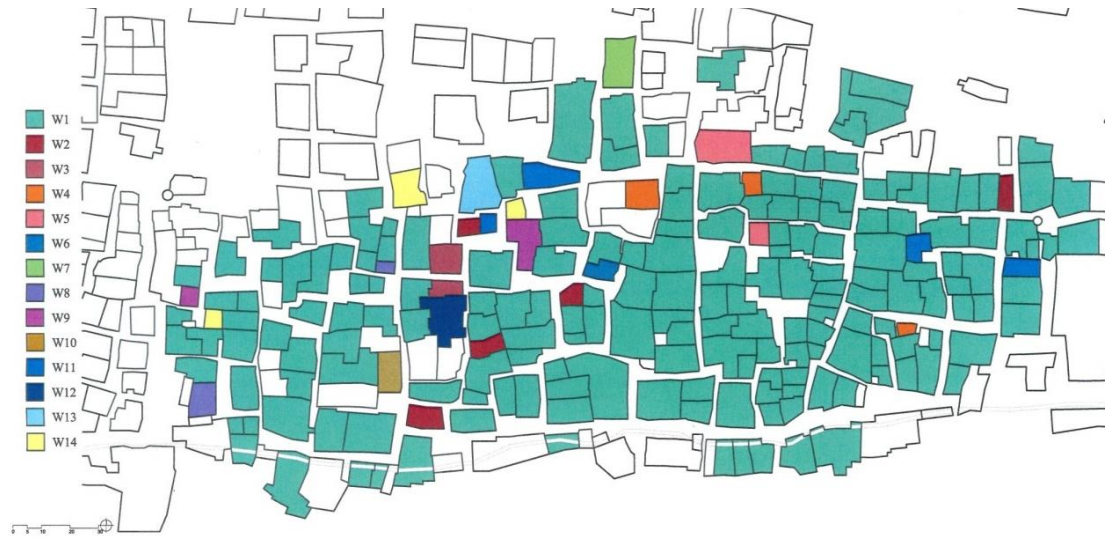


Figure 76: Ḥarāt al-Wiṣṭā spatial distribution of tribes. W1. Al-ʿAbriyīn, W2. Al-Sharāmḥa, W3. Al-ʿAziziyīn, W4. Al-Khawāṭr, W5. Al-Riyāmiyīn, W6. Al-Dhuhul, W7. Al-Ḥaṭāṭla, W8. Al-Shukour, W9. Al-Nuʿb, W10. Al-Mughiriyīn, W11. Al-Nawāṣr, W12. Al-Yaʿāribh, W13. Al-Bimāniyīn, W14. No *nisbah*.

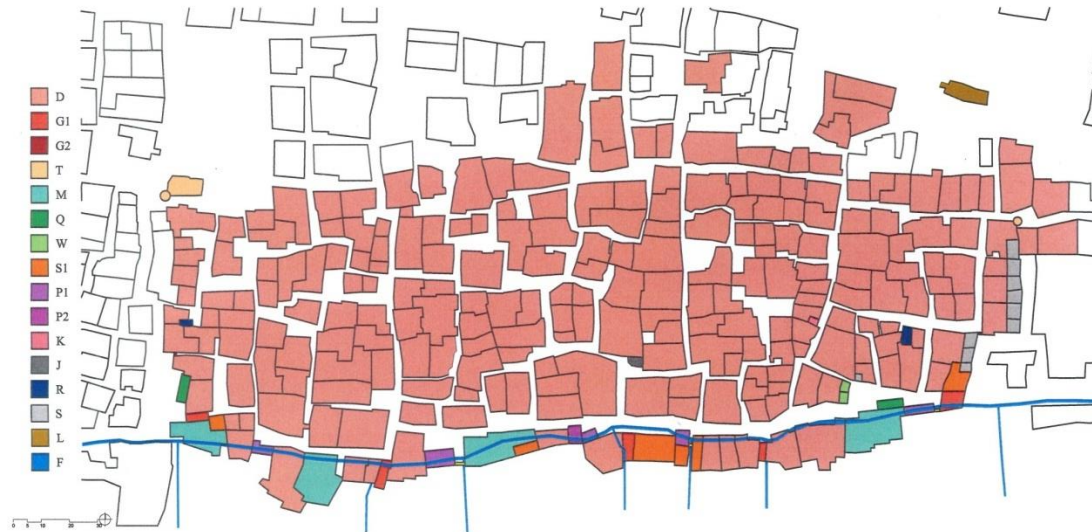


Figure 77: Ḥarāt al-Wiṣṭā structure. D. dwellings, G1. main gates (*sabaḥ*), G2. secondary access points, T. towers, M. mosques, Q. Qurān school, S. (*sabla*) male communal meeting halls, P1. Female public bathing, P2. Female private bathing (elite), K. communal storage and production of traditional vinegar (*khal*), J. communal storage for traditional well equipment (*manjour*), R. communal wheat grinding structure (*raḥā*), L. Female communal latrine, F. *Falaj*.

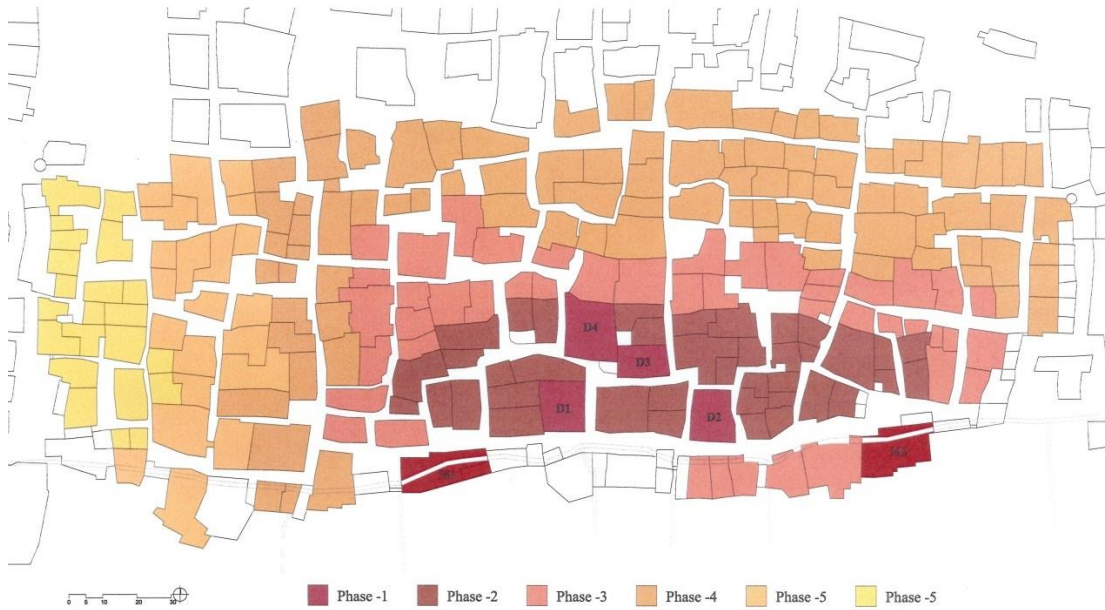


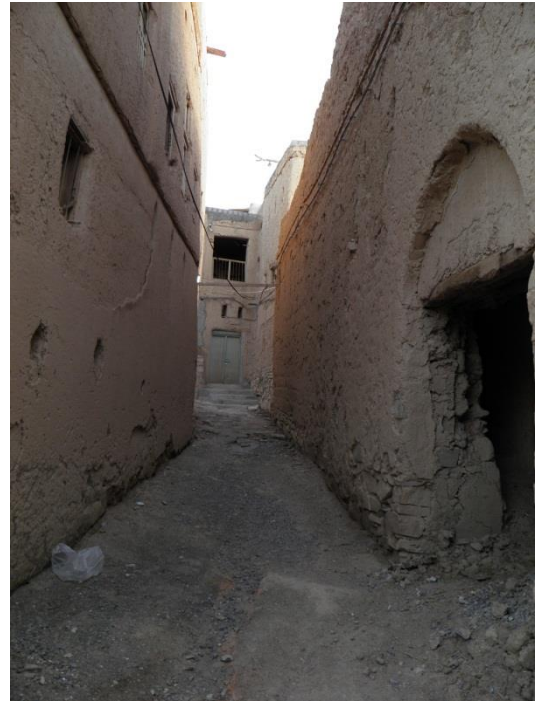
Figure 78: The colour code phasing structure (from Phase-1 to Phase-5) of Ḥarāt al-Ḥamrā with reference to Figure-46 & 47.



Figure 79: Phase-1 of Ḥarāt al-Ḥamrā (first constructed dwellings): D1. Bait aṣ-Ṣafāh, D2. Bait al-Qadīm, D3. Bait ʿAlī b.Khamis Al-ʿAbrī, D4. Bait aṣ-Ṣabāh, M1. Masjid aṣ-Ṣalaf, M2. Masjid al-Ḥadīth, S1.1. sablat aṣ-Ṣalaf, S1.2. sablat al-Ghāarbī, S1.3. sablat Awlād Rashid b.Musʿud, P2. mujazat al-Jufrah, P1.2. mujazat aṣ-Ṣafāh, P1.3. mujazat al-ghraifah.



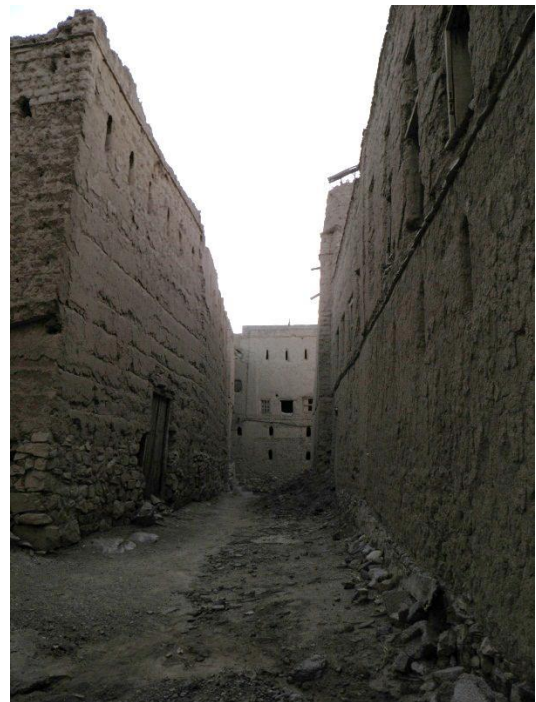
a.



b.



c.



d.

Plate 10: Phase-1 and Phase-2 dwellings of Ḥarat al-Ḥamrā: a. D1 left and D5 right, b. D2 right, D6 and D7 left, c. D4 middle, D28 left and D37 right, d. D3 left, D12 middle, D5 and D7 right.



Figure 80: Phase-1 & Phase-2 (second possible constructed dwellings) of Harat al-Hamra: M2. Masjid al-Hadith, S1.1. *sablat* as-Şalaf, S1.2. *sablat* al-Ghāarbī, S1.3. *sablat* Awlād Rashid b. Mus^ud, P2. *mujazat* al-Jufrah, P1.2. *mujazat* as-Şafāh, P1.3. *mujazat* al-ghraifah, J: communal storage for traditional well equipment (*manjour*).

Further influx of the ʿAbriyīn, initially from the same family group, resulted in the construction of phase-2 (Figure-80). The alignment of the communal structures along the *falaj* channel between the two mosques (M1 & M2) had defined the southern edge. While the establishment of the early dwellings gave a social and physical core attraction to the newly constructed dwellings to develop clustering around them. The facing relation between the dwellings (D1, D2 & D3) reflected a social relation of closeness and solidarity, due to the fact that all four dwellings are relatives of the same family. The facing of dwellings D1 and D2 reflected a sense of linearity while the connection and location between dwellings D3 and D4 reflected strong solidarity and an influence for a new direction of urban development. Hence, these social and physical factors from phase-1 contributed in the direction and extension of phase-2 as a reference point. These closeness relation introduced initially open spaces resulting from dwellings facing each other clustering around that space resulting later to a

solidarity of attachment between them. This relation tends to shift according to physical a social factors discussed earlier.



a.



b.



c.



d.



e.

Plate 11: Phase-1 mosques and gates: a) G1.1 *ṣabāḥ as-Sāfil*, b) G1.2 *ṣabāḥ an-Nuʿb*, c & d) M1 *masjid aṣ-Ṣalaf*, e) M2 *masjid al-Ḥadith*.



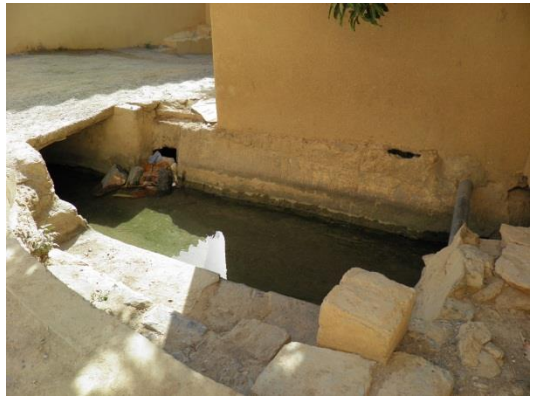
a.



b.



c.



d.



e.



f.

Plate 12: Phase-1 & 2 female communal bathing structures and *falaj* access points of Ḥarat al-Ḥamrā: a. P1.2 *mujāzat aš-Ṣafāh*, b. P2 *mujāzat al-Juffrah* (private), c. P1.3 *mujāzat al-Ḥjirah* with a *falaj* access point next to it, d. *falaj* access point near *ṣabāḥ as-Sāfil*, e. *falaj* access point on the right of *ṣabāḥ an-Nuḥ*, f. *falaj* access point on the left of *ṣabāḥ an-Nuḥ* which is mostly used to open the branching channel for irrigation to the date gardens.

The early dwellings (D1, D2 & D3) introduced the open space between them giving opportunity for the construction of D5 facing D1 resulting in giving another construction opportunity for D6 & D7 facing D2, (Figure-80). In the same pattern, the closeness of D2 and D22 resulted in the open space between them leading to the further construction of the new dwellings to fill that space through the facing relation

introducing the north-south passages between them, and the solidarity of the attached dwelling reflecting a change in the dwelling patterns from individual to cluster blocks. While the attached dwellings (D3 & D4) continued in the same social and physical pattern of (D1 & D2) but the linearity has changed depending on the lower dwelling blocks. This change from closeness to solidity pattern explains the change in dwellings, from individual to cluster blocks, and from low to high dwellings density, and from linearity with a passage to alignment with dwellings blocks. The passage between D1 and D5 aligned with (G1.1, *ṣabāḥ as-Sāfil*) which is considered the main access to the date gardens was the main reference in locating the communal storage (*ṣuffat al-Īyal*) for traditional well equipment (*manjour*, s.*manājīr*).

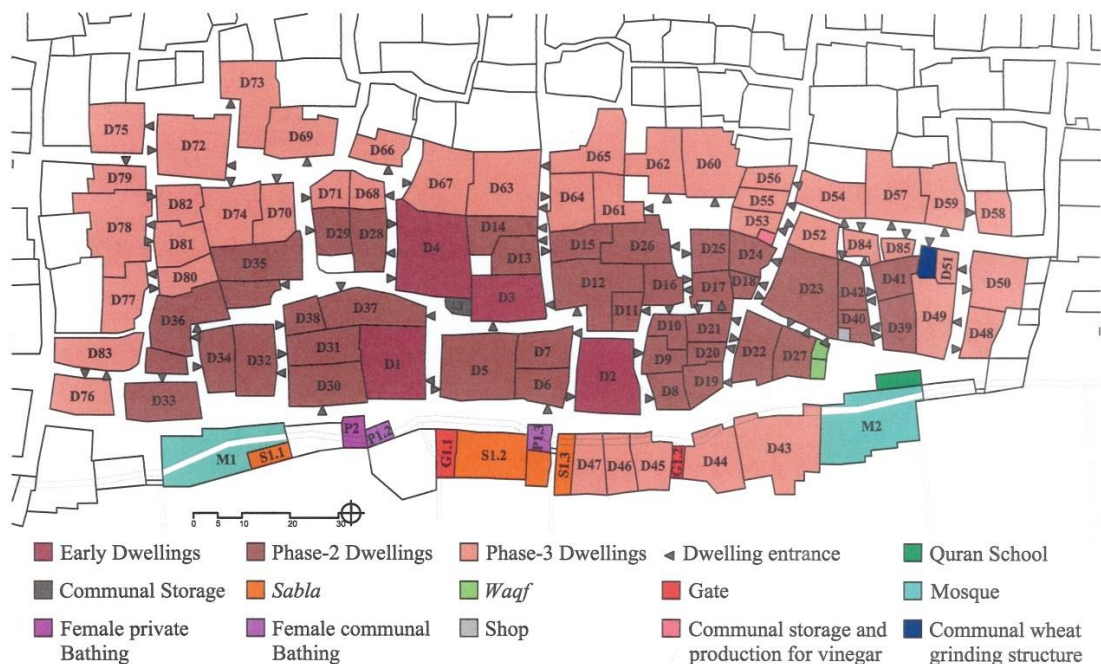


Figure 81: The extension of phase-3 of Ḥarat al-Ḥamrā, following after phase-1 in figure-49 and phase-2 in figure-50.

The development of Phase-3 (Figure-81) had a significant impact on the ḥarāt social and physical structure. It continued with the influence of the closeness and solidarity concept resulting in new urban patterns. First, it introduced a new urban pattern of attached aligned dwellings along the main lower passage (D43, D44, D45, D46 & D47).

Then, the extension of the passages changed from short north-south passages (phase-1 & 2) to long east-west ones (e.g. between D52 & D54 or between D72 & 82). Additionally, the scale of the dwellings reduced (e.g. D53, D51, D68 & D80) but the scale of the clusters increased. Moreover, it introduced open spaces (between D69, D70, D71, D72 & D74), and enclosed spaces (between D53, D55, D60, D61 & D62).

The orientation of the cluster blocks started to change from east and west (phase-1 & 2) to the north-south which resulted in the beginning of long passages in the ḥarāt. A new social pattern appeared with the joining of al-Sharāmaḥ (*nisbah*, al-Sharmaḥī) group of ʿAbriyīn in (D71, D76 & D80) who previously resided with the ʿAbriyīn in Wādī Nakhur and Misfāt al-ʿAbriyīn, and the Āl ʿAziz (*nisbah*, al-ʿAzizī) in (D75 & D79), another ʿAbrī group, and the Nuʿb (*nisbah*, an-Nāʿbī) who resided in D73 and contributed in the excavation of the *falaj* which gave them a good share (*raddah* an-Nuʿb) and constructed G1.2, *ṣabāḥ* an-Nuʿb, which was named after them. The Nuʿb previously resided in Rustāq, al-ʿĀriḍ and later Birkat al-Mawz. Also the Nawāṣir (*nisbah*, al-Nāṣrī) group of the ʿAbriyīn who resided with the ʿAbriyīn in D66 seeking security and livelihood who previously resided in a village in al-Ḥamrā called al-ʿAiyshī, the Ḍuhul (*nisbah*, al-Ḍuhlī) in D66 who previously resided in Rustāq and ʿAwābī⁹⁰, and the Yaʿāribah (*nisbah*, al-Yaʿrubī) in D78 who were allies with ʿAbriyīn from Rustāq and Nizwā since the Imamate of Nassir b.Murshid (Figure-76 & 81). Additionally, the extension of the *masjid al-Ḥadith* M2 through the attached Qurān school and the *waqf*⁹¹ shops opposite to it, attached to D27. Finally, the extension of the communal structures; (a) shifting its location from being aligned with the *falaj*

⁹⁰ ʿAwābī was historically known as al-Sawnī (Al-Hinai, 2010, p. 275) and B.Dhuhl owned 10 percent of *falaj* ʿAwābī shares (Wilkinson, 1987, p. 337).

⁹¹ This *waqf* was used to store dates which is distributed to the poor and for the *ifṭār* in *masjid al-Ḥadith* during the holy month of Ramaḍān.

construction of a small access door (between D50 & D91), the east gate (G1.3, *sabāḥ* ʿ*Arish as-Sidrah*)⁹⁴ and the male communal meeting hall above it (S1.4, *sablah* al-Wiṣṭā) which is named after Ḥarāt al-Wiṣṭā. The extension on the south edge to the west introduced a third gate (G1.4, *sabāḥ al-Mughrī*) which was named after the dwelling next to it (D145, Bait *al-Mughrī*), and another female communal bathing (P1.1, *mujazah*). Additionally, the extension shaped the passages clearly to be identified in the context of length and width reflecting a hierarchy in function and privacy. Moreover, the influence of closeness and solidity in the extension transformed the dwelling pattern from individual to cluster block to cluster with a bigger cluster (e.g. from D58 individual to a cluster block of D58, D88, D89, D92, D94 to be embraced within a bigger dwelling cluster of D59, D57, D54, D86, D90, D97, D103, D107, D113, D104 & D169).

The influence also reflected a small scale densely ordered dwellings pattern on the half east of the Ḥarāt, and reflected a bigger scale but less dense dwellings with some sense of randomness in the other half of the west side. Furthermore, this phase had a social extension in its structure from similar tribes of phase-3 such as; the Sharāmḥa in (D117 & D166) and the Nawṣir in (D95, D103, D140 & D67). But, this phase witnessed more tribes especially in the northwest extension which might contributed the sense of randomness discussed earlier. These tribes are the B.Riyām (*nisbah*, al-Riyāmī) who resided in (D100 & D123) who were allies with the ʿAbriyīn under the same political affiliation of B.Ghāfir. Also the Khawāṭer (*nisbah*, al-Khāṭrī) who resided in (D127 & D137) who were seeking security and livelihood with the ʿAbriyīn and considered notable ʿAbriyīn like the Nawāṣer. Moreover, the Mughāriyīn (*nisbah*, al-Mughairī)

⁹⁴ It was named after the tree *sider* near the *sabāḥ* in the *souq* which was used frequently for *souq* and male social meetings.

who resided in D147 who original resided in Ibrā, and the Shukur (*nisbah*, alShukrī) who resided in D156 who resided in ʿAdnānī origins. There was only one dwelling resided by Āl Bumān (*nisbah*, al-Bimānī) who resided in D142 who original resided in Bahlā. There were only two dwelling (D143 & D163) of owners with no *nisbah* whom are considered client group that work for the ʿAbriyīn.



Figure 83: The extension of phase-5 of Ḥarat al-Ḥamrā, following after phase-1 in figure-49, phase-2 in figure-50, phase-3 in figure-51, and phase-4 in figure-52.

The formation of the north, east and south edges by the leaner dwellings pattern in phase-4 has derived the extension of the Ḥarāt to the west forming phase-5 (Figure-83). This phase developed dwellings aligned vertically facing phase-4 forming a new passage in the lower half (between D178 & D146) then opening to a space clustered by individual (D183) and block dwellings (D180, D181, D182, D184, D185, D186, D187 & D172). The construction of the large dwellings (D174, D176 & D177) in the lower horizontal passage (west extension of the main lower passage) is a continued tradition of the social structure (from phase-1) of *Shaikhly* ʿAbriyīn living near the

falaj channel. This extension also shed the dawn on a new mosque (M3, *masjid al-^cAqid*)⁹⁵ and a fourth female communal bathing structure (P1.5, *mujazah*). It also introduced a new type of communal structure, a female communal latrine (north of D115 & D116) known locally as *al-Ḥdidah*, which is a first to be witnessed in a Ḥarāt structure in the *Dākhliyah* governorate. This phase also highlighted a new type social connection between dwellings and cluster blocks reflected in (D176 & D177), a bridge connecting between them from the first floor, both of one family. It also emphasized the influence of one dwelling D183 on the form of a whole dwelling block (D185, D186, D187 & D172). Finally, the orientation of one dwelling D175 defining the end of passage and so the edge of the ḥarāt which was similar to D33 in phase-2. This phase was completely inhabited by ^cAbriyīn similar to phase-1 & 2.

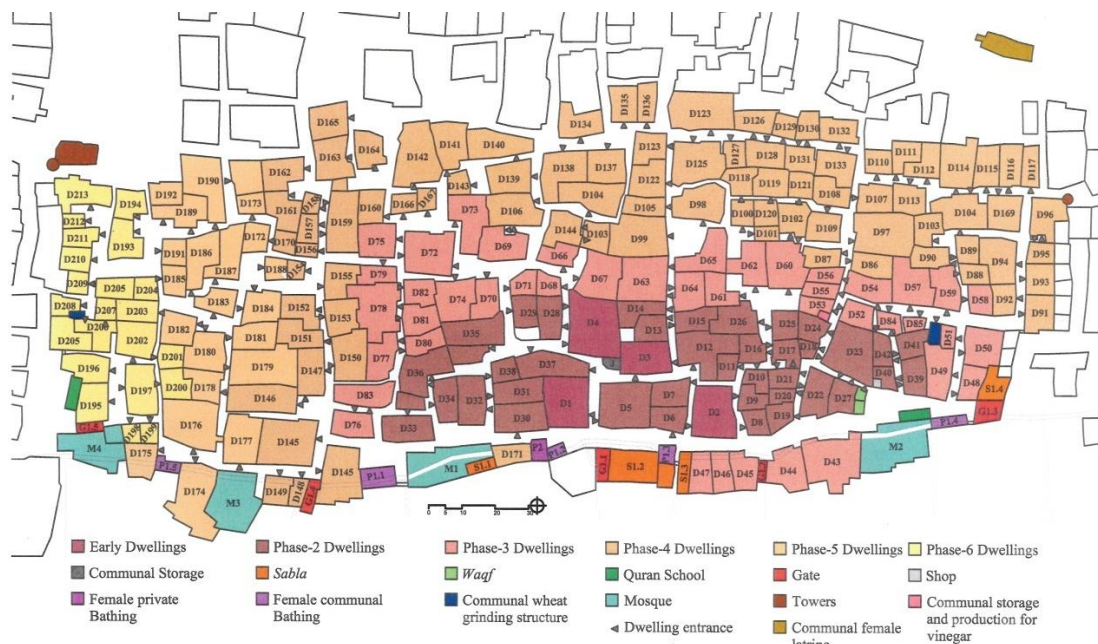


Figure 84: The extension of phase-6 of Ḥarat al-Ḥamrā, following after phase-1 in figure-49, phase-2 in figure-50, phase-3 in figure-51, phase-4 in figure-52 and phase-5 in figure-53.

The following extension after phase-5 that defined the west edge of the ḥarāt is phase-6 (Figure-84). This phase was the last jigsaw piece that completed the ḥarāt edge and

⁹⁵ Constructed by Shaikh Salim b.Mus^cud Al-^cAbri under his dwellings so he can pray there by the end of his life, and so it was named *al-^cAqid* meaning locally the under or below (Al-Abri, 1958, p. 29).

so its whole shape. This was marked by the constructing of the mosque (M4, *masjid al-^cĀlī*)⁹⁶ and the west gate (G1.5, *sabāḥ al-^cĀlī*). The dwelling pattern formed in a large scale (D195, D196 & D197) near the mosque with a wide vertical passage between them, then changed to compacted small dwelling cluster block (D202, D203, D204, D205, D206, D207 & D208), and then another block extending in a leaner pattern (D209, D210, D211, D212 & D213) forming the northwest edge. Also another small access door similar to that of phase-4 appeared on the west edge (between D208 & D209). This edge is anchored by the second defensive tower (*Burj Shuwain*)⁹⁷ which was named after the person who constructed it, Shuwain. The last social extension of the Shukur in D195 and the Nu^cb in D209, and one client group in D207 with no *nisbah*.

Tribe	Phase Developed	No. Dwellings	Location
Al- ^c Abriyīn	1 - 6	187	The whole Ḥarāt
Al-Sharāmḥa	3, 4	4	Centre and east edge
Al- ^c Aziziyīn	3	2	North
Al-Nāṣriyīn	3, 4	4	North and east edge
Al-Khāṭriyīn	4	2	North edge
Al-Nā ^c biyīn	4, 6	2	North and west edge
Al-Dhuhul	3	1	Centre
Al-Shukoor	4, 6	2	North and west edge
Al-Riyāmiyīn	4	2	North edge
Al-Mughiryīn	4	1	West
Al-Bimāniyīn	4	1	North edge
Al-Ya ^c āribh	3	1	Centre
Client group	4, 6	3	North and west edge

Table 3: Summery of tribal dwelling distribution in the Ḥarāt.

The development of the ḥarat from phase-1 to phase-6 reflected the complete shaping of the settlement's social and physical structure through identifying all its components. The settlement from the establishing period was known as Ḥarāt al-Ḥamrā, and with the deferent phases of development, the phases-1, 2, 3 & 4 were known among the inhabitants as Ḥarat al-Wiṣṭā while the phases-5 & 6 as Ḥarat *al-^cĀlī*, but, together

⁹⁶ *Al-^cĀlī* locally means the upper part or referring to the west side which is also used in some cases to name passages or *falaj* channels.

⁹⁷ It was constructed through the funding of Muhana b.Khamis Al-^cAbrī in 1809 A.H. in the ruling time of Sayid Sa^cid b.Sultan Al-Busa^cidī (Al-Adawi, 2006, p. 44).

known to present day as Ḥarāt al-Ḥamrā. With the shape completion of the ḥarāt, it is more clear to understand its structure holistically from social and architectural prospective (Figure-84).

The five main gates on the main lower passage along the *falaj* channel, *sabāḥ al-ʿĀlī* (G1.5), *sabāḥ al-Mughrī* (G1.4), *sabāḥ as-Sāfil* (G1.1), *sabāḥ an-Nuʿb* (G1.2) and *sabāḥ ʿArīsh as-Sidrah* (G1.3) respectively from west to east can be categorised according to their location into two, external and internal (Figure-83 & 84). The two edge gates of *sabāḥ al-ʿĀlī* in the west and *sabāḥ ʿArīsh as-Sidrah* in the east are aligned with the *falaj* oriented west-east are considered external gates, while the other internal gates (*sabāḥ al-Mughrī* *sabāḥ as-Sāfil*, *sabāḥ an-Nuʿb*) are more perpendicular to the *falaj* channel and so to the main lower passage and the date gardens. All these gates are associated with *falaj* access points for the inhabitants and branches to irrigate the gardens, and aligned with vertical (north to south) routs branching from the main lower passage (east to west axis). Some of these gates are associated with *sablas* (s. *sabal*: male communal meeting halls) such as; *sablat al-Wiṣṭā* (S1.4) on top of *sabāḥ ʿArīsh as-Sidrah*. The distance between *sabāḥ al-ʿĀlī* gate and *sabāḥ al-Mughrī* is equal to that of *sabāḥ an-Nuʿb* and *sabāḥ ʿArīsh as-Sidrah* of about 65 m apart. Similarly, the secondary access points (with small doors), one in the east edge (between D50 & D91) near the *souq* and the other in the west edge (between D208 & D209) are both equally distant from the nearest main gate by approximately 24 m and to some extent in the same alignment to each other (Figure-43 & 44).

The two mosques of phase-1 (M1 & M2) are equally distant from the centre of possible open square existed (between D1, D2, D3 & D4) by 65 m. Similarly, the two gates

(G1.3 & G1.4) are also equally distant from that square by approximately 100 m. Furthermore, the two gates (G1.1 & G1.2) are equally distant from the two near mosques (M1 & M2) from both sides by approximately 32 m. Moreover, the two edge gates are equally distant to their nearest mosque of the distance of about 40 m. These remarkable distance equality between these structures emphasize the fact that there was a clear organised pattern to some extent in the ḥarāt development.

The communal structures can be categorised according to their location into two, those who function base on the *falaj* which are aligned by the main lower passage, and those who function depending on the inhabitants (related to agriculture and food production) which are part of the dwelling cluster blocks. Although the main establishing dwellings and mosques were known, however, it seems that the *falaj* channel played a significant role in defining the main passage, the main communal structures and so the social structure of the ḥarāt. First, the construction of the big dwellings of the important ʿAbī families along the lower passage near the *falaj*. Secondly, the construction of most of the communal structures along the *falaj* gave a social gathering attraction for males (through prayers in the mosque & *sablas*), for female through the communal bathing structures, and for all through the main gates which leads to the gardens and other livelihood sources. Thirdly, providing *falaj* access points which attracts all the inhabitants especially the ladies for daily *falaj* chores (wash cloths and dishes, bathing the children & getting water for cleaning the dwelling and watering the domestic animals). Finally, the inhabitants continues meetings for the water share and flow cycle for irrigation, and channel maintenance which is a of social tradition. Such structures, social activities and attractions contributed in defining the main lower passage as the principal public social passage in the ḥarāt. This feature and other factors on the

formation of the ḥarāt in relation to its urban pattern will be further discussed in chapter-5.

4.4: Birkat al-Mawz:

Archaeology of early human settlements and movements

Most of the archaeological excavation missions took place around Birkat al-Mawz, in Jabal al-Akhdar, Nizwa and Izkī. The only archaeological evidence documented in the vicinity of Birkat al-Mawz area are the two Rock art sites (39 & 40, Figure-63) identified in Wadī Muaʿaydin (Preston, 1976, pp. 18-19). These sites could not be clearly dated but contains inscriptions in South Arabian dating back at least 1500 years (*ibid*, p. 17). Some ruins of structures in dry stone masonry at the apex of the hills around Birkat al-Mawz bear similarity to settlements of ancient origin (*cf.* Chapter-5). Numerous fossils were also found around the hill apex area of the main settlement, Ḥārat as-Saybanī (Bandyopadhyay S., 2011, p. 14).

Historical Geographical Setting Morphology

From the geographical setting it is evident that the arable land area was originally limited and the inhabitants had to establish their settlement on the foothill to maximize the cultivated area up to the foothill edge. Before the excavation of Falaj al-Khatmeen by the Imam Sultan b.Saif b.Malik al-Yaʿrubī, the area was possibly inhabited which the Imam had to re-colonise first (Wilkinson, 1987, p. 112). The settlement was developed starting with first securing a dependable source of water. It is possible that Birkat al-Mawz area was inhabited previously with few defensive structures (BM-A) at the apex guarding a small settlement behind it (BM-A1 to BM-A4). It probably

performed the same role as the more recent settlement of overlooking and guarding the wadī gorge – the route to the Jabal Akhdar – a territory under the control of the B.Riyām tribe⁹⁸ in Jabal Riyām (Figure-86 & 90). This was evident from the fact that B.Riyām joined and supported Imam Nassir b.Murshid on his way back from ʿDank which gave him full access to the routes through Jabal al-Akhdar (Bathurst, 1967, p. 62). This support resulted in the Imam gaining proceeds from the aqueduct of Birkat al-Mawz, resources which were used to build Nizwa fort⁹⁹ (ibid, p. 77). The structures behind the hills in Birkat al-Mawz share similarity and simplicity in scale, form and traditional construction technique (*cf.* Chapter 5). The inhabitants of these structures - which are more likely to be shawawi groups (goat herders) - may have survived on a small cultivated land (C1, Figure-85) and a well.

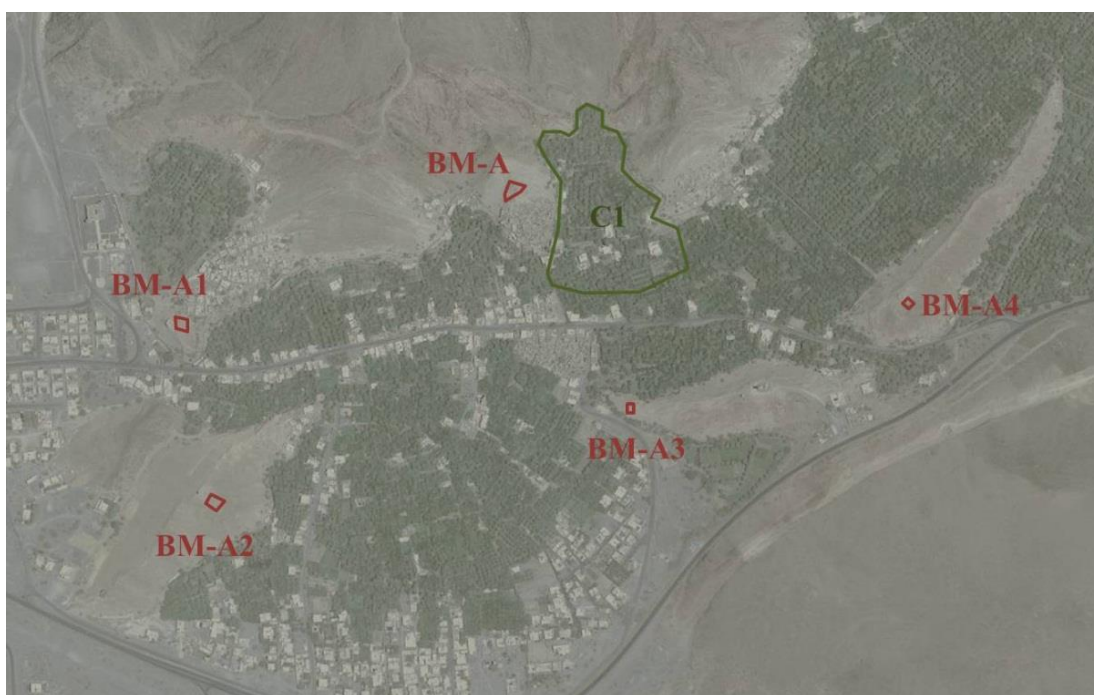


Figure 85: The location of the possible pre-existing defensive structures (BM-A to BM-A4) and cultivated land (C1), (after google maps).

⁹⁸ One of the main powerful tribes who settled in the core of Jabal Akhdar on the western side (known as Jabal Riyām) and controlled the Jawf region (Wilkinson, 1987, p. 386).

⁹⁹ The Imam decided to build the new fort in al-ʿAqr in Nizwa to replace the one constructed by al-Ṣaḥḥ b. Mālīk in the ninth century. The construction of the new fort was in response of two main reasons, first, to the expelling of the B. Bu Said in al-ʿAqr who intended to rebel against him, and they sought refuge with the Imam main enemy, Saif b. Mohammed al-Hinaī in Bahla. Second, Mani b. Sinan in Samail broke the pact with the Imam by accepting the B. Bu Said (Bathurst, 1967, p. 59)

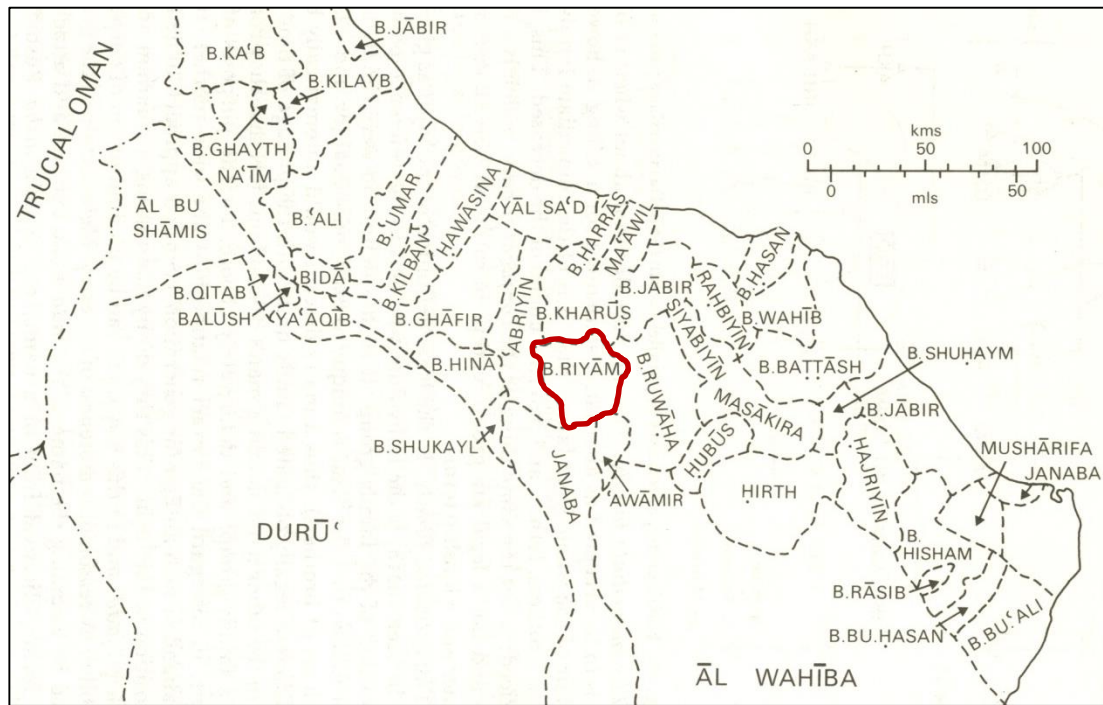


Figure 86: The tribal territories of Bani Riyām in central Oman, (after Wilkinson 1977: 157, Figure 25).

The *Falaj* and the settlement beginnings

The Imam Sultan b.Saif b.Malik al-Ya^crubī started to redevelop the area by excavating a new *falaj* channel in the gorge of Wādī al-Mu^caidin. Local oral history recounts that when the Imam decided to excavate the *falaj*, he relied on the inhabitant of Jabal al-Akhḍar, who were known to be experts in *falaj* excavation in that time (MRMWR, 2009, p. 31). During the excavation through the wādī and before finishing, a collapse in the *qanāt* gallery construction resulted in seven deaths, and the workers abandoned the excavation and fled back to Jabal Akhḍar. The Imam followed them to a place between Qaryat al-Mu^caidin and a place called al-Qaṣud, with seeds of *sidr*¹⁰⁰ in his hands, which he spread while calling them. They agreed to continue excavating the

¹⁰⁰ Local name for tree in Oman aslo known as *nubq*, and later after the spreading of the seeds by the Imam, a *sidr* tree grow which is known till today as *sidrat* Imam.

falaj under the condition of having a share in it, and the Imam agreed to give them one share while retaining two shares for him. After the successful excavation and water flow, the *falaj* was divided into three equal channels to fulfil the agreement (*ibid*, p. 31).

Oral history and old records also relates that the reason for naming the *falaj* as al-Khatmeen refers to another *falaj* in Manaḥ of the same name (MRMWR, 2009, p. 31). The success in excavating a new *falaj* for the oasis of Birkat al-Mawz resulted in reducing the flow of *falaj* al-Khatm in Manaḥ. The inhabitant of Manaḥ requested compensation from the Imam for their affected *falaj* flow. The Imam fulfilled the Manaḥī people's request and excavated a new *falaj* for them and all the water shares are for them (*ibid*, p. 31). And so the *falaj* in Birkat al-Mawz came to be known as Falaj al-Khatmeen for two reasons, first, referring its effect on *falaj* al-Khatm, and secondly the word *khatm* also means the blocking or holding (*ibid*, p. 31).

Falaj al-Khatmeen is an active *dāwūdī falaj*; its main *qanāt* feeds from one single *saʿd* only, *saʿd al-Ridāda*. It extends 2.45 km from the mother spring (19 m deep) to the *Sharī'a*, with water flow average of 800 L/s (MRMWR, 2009, p. 32). The *falaj* channel divides into three channels based on the three share agreement with the Imam, two channels combine in one and flow east towards and beyond the settlement in the upper part of the oasis for approximately 2.93 km, and the other channel flows to the lower part of the oasis for approximately 1.5 km directed south and southeast. The upper channels embrace the agricultural land as a boundary between the mountain edge and cultivated land, while the lower channel crosses through the cultivated land. These two channels irrigate approximately of 0.9125 km², starting from an altitude of 577 mamsl

from both sides and irrigates the cultivated land descending gradually from that altitude to 562 mamsl (Figure-87).

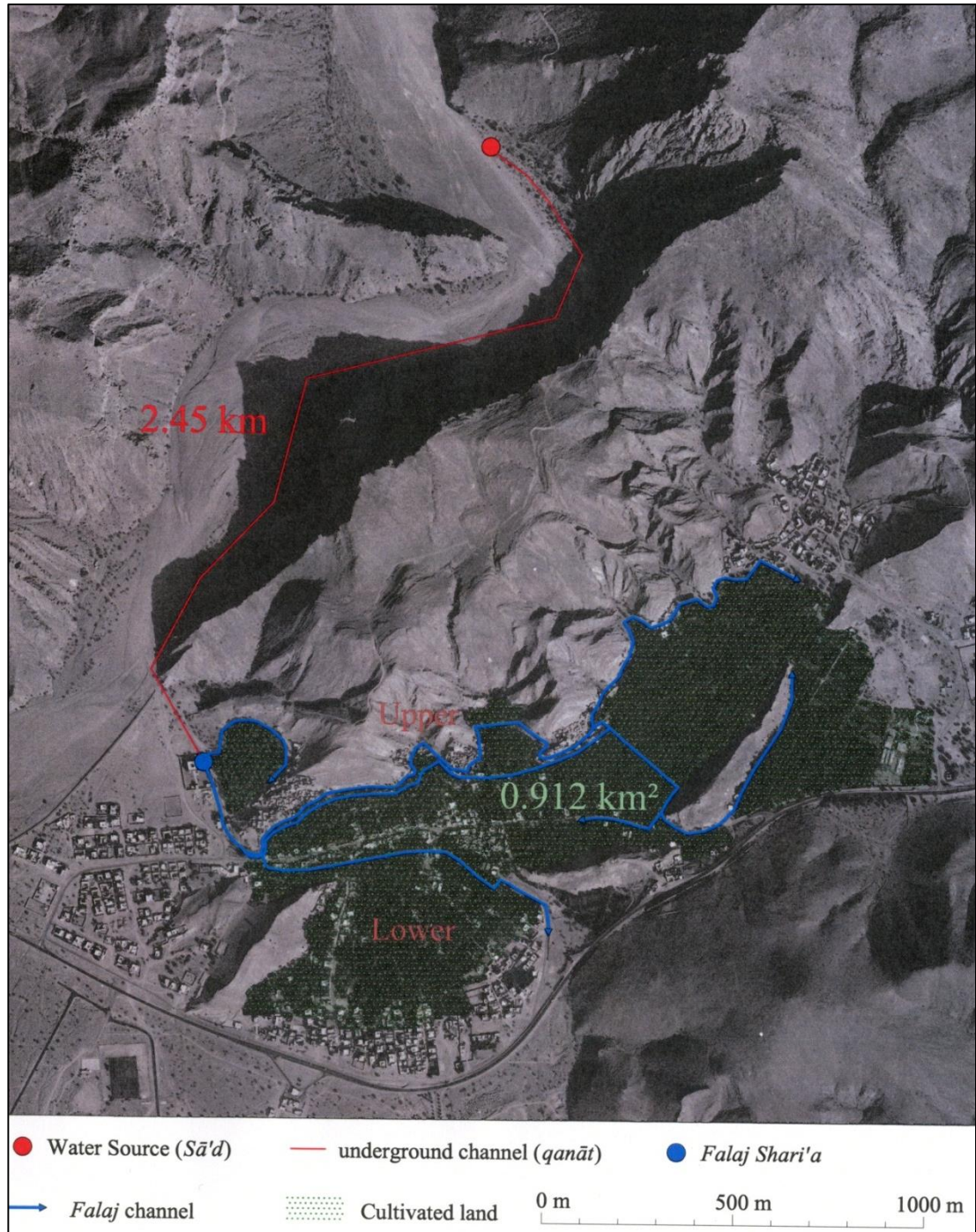


Figure 87: *Falaj* al-Khatmeen from the source to the oasis.

The Revival of B.Riyām in Central Oman

The Riyāmī tribe descends from Azdī Qahtanī tribes who migrated to Oman under the Qudaʿa group from the south from Yemen along the coast. Their tribal *nisba* (origins of name) refers to Riyam b.Qamar b.al-Umarā b.al-Ḥarith b.ʿAbd al-Mudān b.Raʿīn b.Zaid b. al-Ghawth (Al-Hinai, 2010, p. 268). The classical descent of B. Riyām tribal tree from Mahra and Qudaʿa has been studied thoroughly by Carter in 1982 (Figure-88 & 89). Miles also described the B. Riyām origins and territory:

“[t]he Kamar ‘Moon’ tribe was a large and important one in South Arabia in remote times, and gave its name to the Kamar Bay, and also, it is supposed, to the Comoro Island on the east coast of Africa; the tribe now is represented in Oman by the Bani Ryam, who occupy Jabal Akhdar...” (Miles, 1919, p. 5)

Their early settlement extended to the south in Jabal al-Qamr in Ḥafār and Jabal al-Akhḍar in the north. It appears that their centre mainly in the early time was in Jaʿlān in a port called Ruḍa (known today as Sur). Their power started to develop in central Oman after the civil war at the end of 9th century AD and began to claim control of settlements at the outskirts of Jabal Akhaḍar (Wilkinson, 1977, pp. 245-6). Their power grew thereafter as an independent tribe with the weakening and collapse of the Yaḥmad confederation in the 12th century (Wilkinson, 1977, p. 237).

The Descent of Mahra

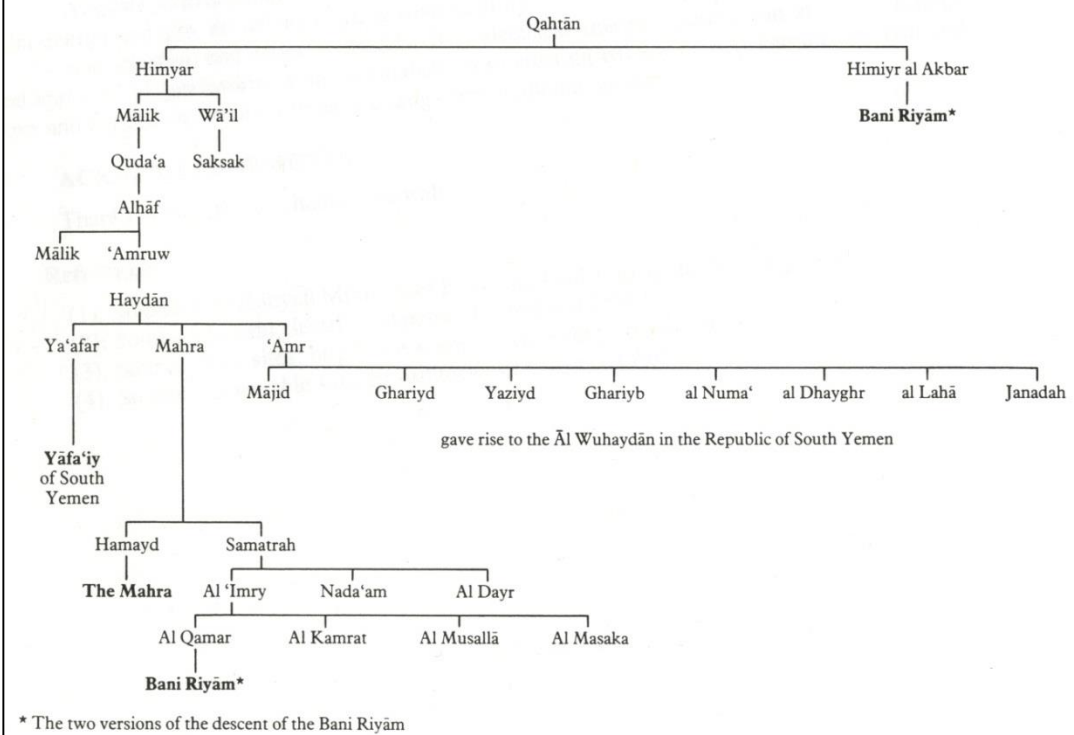


Figure 88: The B.Riyām descent from Mahra (Carter, 1982, p. 59).

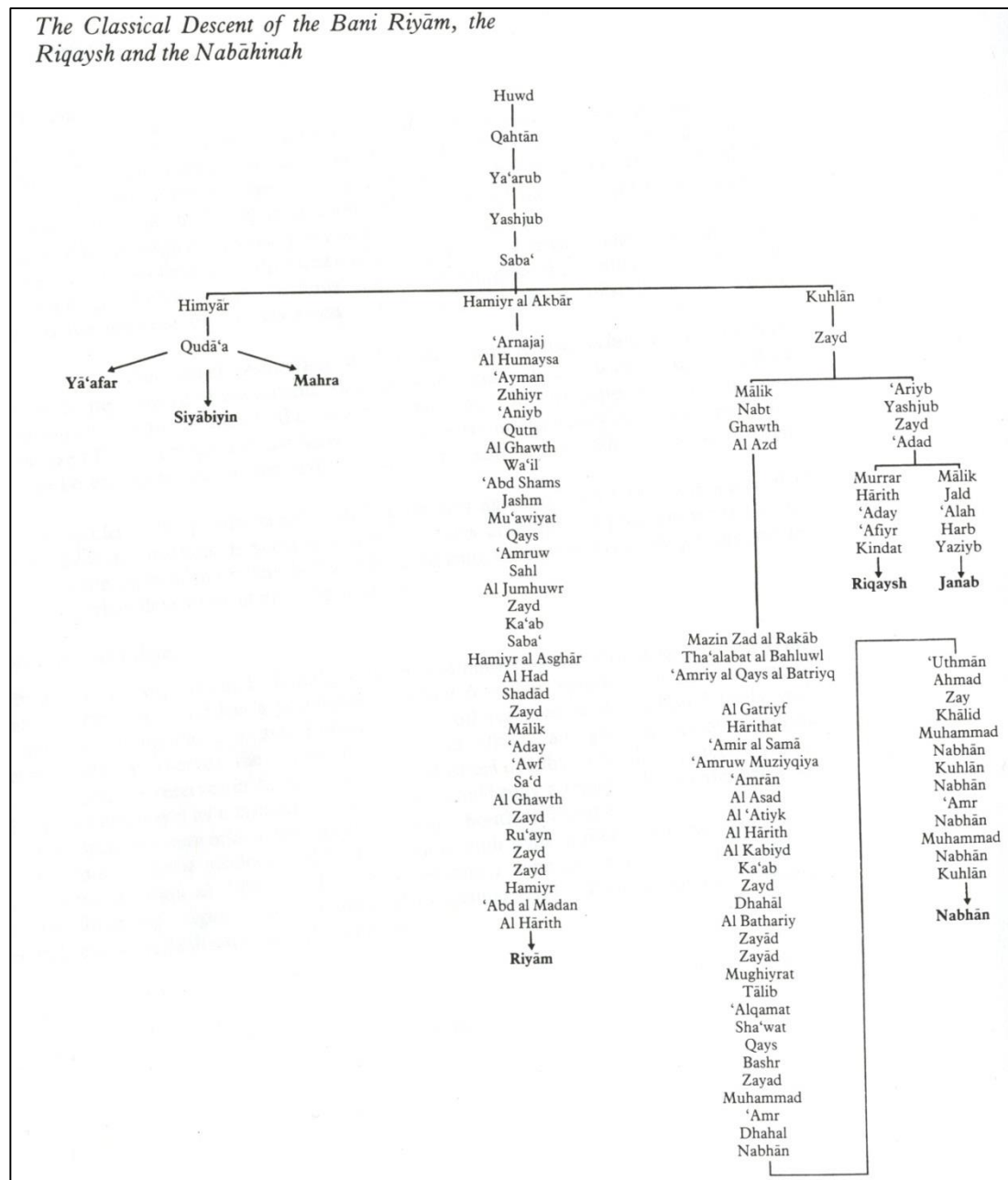


Figure 89: The classical descent of B.Riyām (Carter, 1982, p. 116).

They became the most influential tribe in the Ghāfrī moiety, settled and controlled Jabal Akhḍar as a signature of their political and territorial power. Their territory in the Jabal extended to the entire western side and the *Jawf* region and that area was known then as Jabal Riyām (Figure-90). The tribal descent groups under B. Riyām are those of the lineage of Awlād Rashid amongst whom there are the Munir and the Masarir. Also the Banī.Tubah, the Fuhud and Şukuwr, whom are considered the true

and direct descent of B.Riyām (*cf.* Chapter 5). The tribal descent groups settled in the foot of Jabal Akhḍar at Tanuf, Birkat al-Mawz and Izkī.

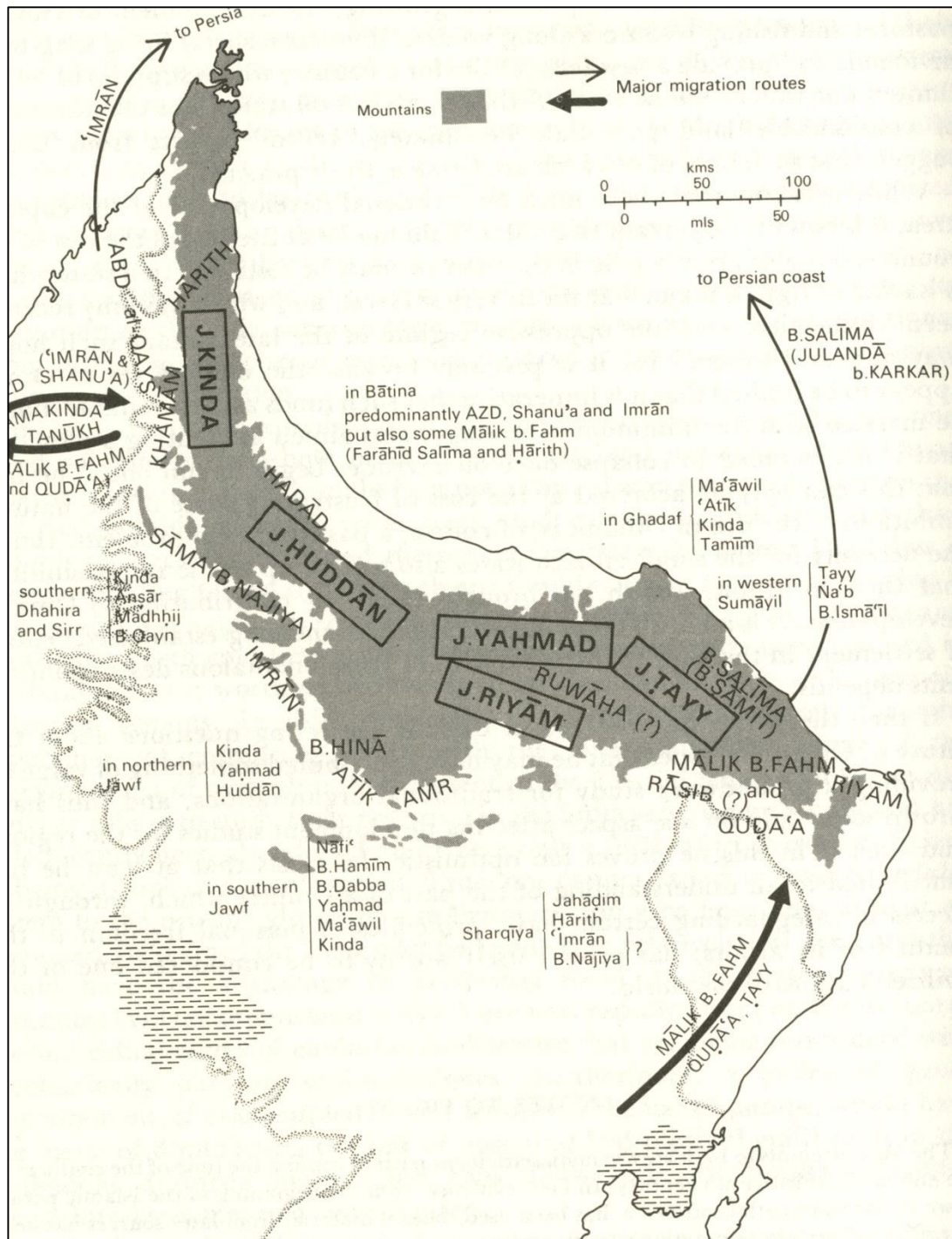


Figure 90: The Hajar Mountain divided into tribal section and showing the territory of B.Riyām in J.Riyām (Wilkinson 1977: 244, Figure 33).

The Setting and Components of Birkat al-Mawz Oasis

Birkat al-Mawz oasis consist mainly of Ḥārat as-Saybānī (second case study, BM1), Ḥārat al-Wadī (BM2), Ḥārat al-Maqaseer (BM3), *falaj* al-Khatmeen, Bait al-Ridaida (BM-BR), Masjid al-Yaʿariba (BM-Y), the cultivated land (MB-G1, BM-G2, BM-G3 & BM-G4), the *souq* (BM-S) and the towers surrounding it (Figure-91). Ḥārat as-Saybānī sits at the south of the limestone outskirts of Jabal Akhḍar, approximately between latitudes of 22° 55' 32. 15" N and 22° 55' 27. 62" N, and longitudes of 57° 40' 22. 63" E and 57° 40' 26. 56" E. It extends in a gradual elevated position on the incline between the altitudes of 572 mamsl at the bottom and 588 mamsl at the apex, defining and overlooking the agricultural land from the north (Figure-92 & 93).

Ḥārat al-Maqasaīr sits on a small platform in the foothill at altitude 584 mamsl, , located about 190 m to the east of Ḥārat as-Saybanī. Ḥārat al-Maqaseer gained its name from overlooking the more than one *maqsura* (the low date palm gardens), (Figure-94 & 95). Ḥārat al-Wadī sits at the centre of the oasis, about 110 m south of Ḥārat as-Saybanī (Figure-96 & 97). Ḥārat al-Wadī gained its name from the flow of the wadī behind it, which at times reached up to its back walls. The *souq* sits on the north side of Ḥārat al-Wadī and forms part of it with its own gate. Bait al-Ridaida¹⁰¹ is considered to be the beginning of the oasis since it sits and marks the *Sharī'a* of Falaj al-Katmeen followed by Masjid al-Ya'ariba, all aligned with the *falaj* channel by the edge of the mountain. There are two towers within the ḥārat and six towers surrounding the oasis. The surrounding ones are *Burj* al-ʿAqaba (BM-T2), *Burj* al-Ṣāfiḥ (BM-T4), *Burj al-Sharī'a* (BM-T1), *Burj* al-Ḥail (BM-T6), *Burj* al-Khazina (BM-T7) and *Burj* al-Wadī.

¹⁰¹ Ridaida is derived from the word rudaid, meaning in classic Arabic: continues flow or inflection of water.

The towers within the ḥārats are *Burj* al-Maqaseer (BM-T5) in Ḥārat al-Maqaseer, *Burj* al-Subabra (BM-T3) in Ḥārat as-Saybanī (Figure-91).

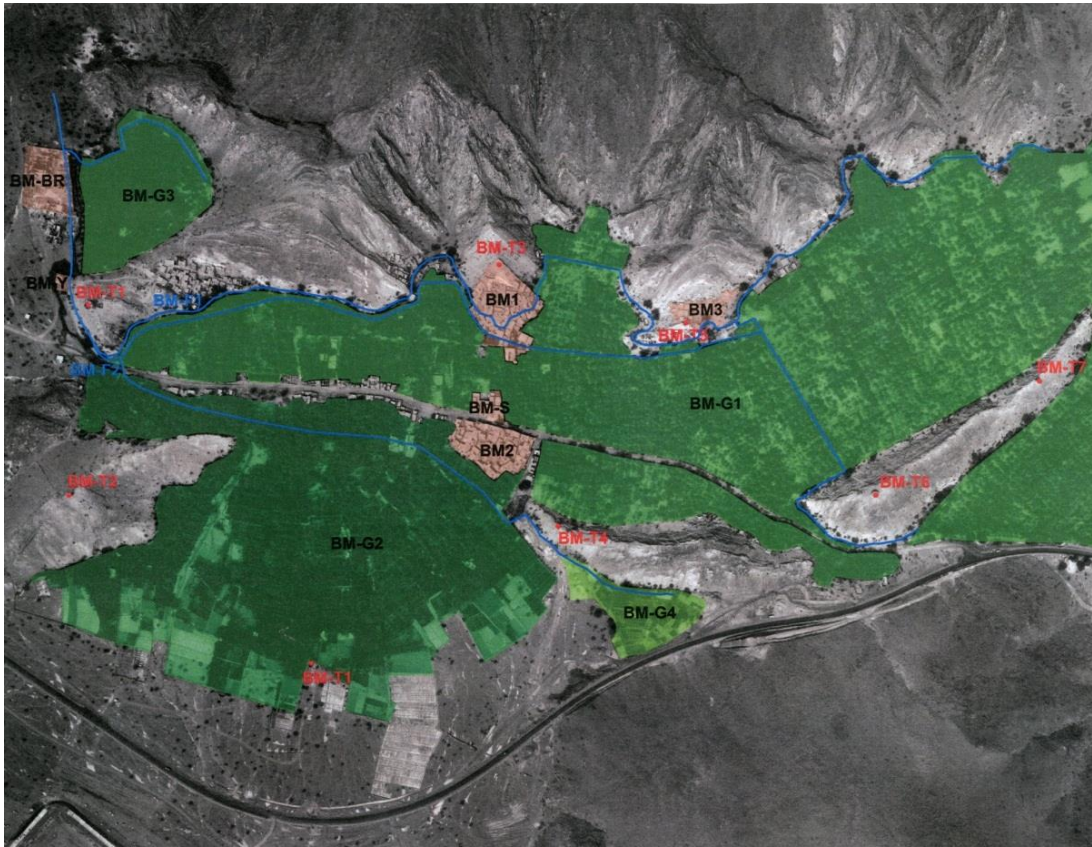


Figure 91: The components of Birkat al-Mawz oasis (after 1975 Aerial photo of Birkat al-Mawz from NSA, 2011).



Figure 92: Ḥarāt as-Saybānī in Birkat al-Mawz.



Figure 93: Ḥarāt as-Saybānī aerial photo (1975 Aerial photo of Birkat al-Mawz from NSA, 2011).



Figure 94: Ḥarāt al-Maqāseer east of Ḥarāt as-Saybanī in Birkat al-Mawz.



Figure 95: Ḥarāt al-Maqāseer aerial photo (1975 Aerial photo of Birkat al-Mawz from NSA, 2011).



Figure 96: Ḥarāt al-Wadī, view of the *souq* from inside the Ḥarāt.



Figure 97: Ḥarāt al-Wadī aerial photo (1975 Aerial photo of Birkat al-Mawz from NSA, 2011).

4.5: Ḥarat as-Saybanī tribal Pattern and Structure

Introduction

The earliest records on the B. Riyām was contributed by Wilkinson in 1977, who described them as one of the first tribe who migrated to Oman and settled latter in the Jabal al-Akhḍar and the dawn of their power was at the end of the Yaḥmad confederation in the 12th century AD. He describes their villages located at the entrance of the Wādīs discharging from Jabal al-Akhḍar with Tanuf being their capital village (Wilkinson, 1977, p. 12), and their economy relying on growing fruits and exporting them (*ibid*, p. 28). He described their early settlement and control in Jabal al-Akhḍar region reflecting the naming of the territory: Jabal Riyām in the *Jawf* section (south limb) of the mountain, while the Ghadaf section (north limb) as Jabal Yaḥmad (Figure-90) belonging to the Yahmad confederation. He considered the Banī Riyām and ʿAbriyīn to be one of the virtual tribes of the interior (*ibid*, p. 68). He also discussed the unclear *tamimah* (principle tribal leader) division and definition in descending from their own eponymous ancestor (internal *Shaikh*) or from an incorporated clan (external) between the ʿAbriyīn and Banī Riyām, were he argues:

“ Such division is obviously artificial, for the incorporation criterion is clearly vague, whilst the use of the word *tamima*, for say, the Shaikh of the ʿAbriyīn as well as the Bani Riyām indicated an overlap in the role and status of tribal and supra-tribal leaders. In reality, the ʿAbriyīn Shaikh is so designated because the tribe is large and powerful and the ‘government’ has *tamm*, recognised/confirmed, his position (this may be a rationalisation of the use of the word), whilst the Nabāhina family, which controls the Bani Riyām and more or less headed the Ghafri confederation in recent times, is not really seen

as a Shaikh at all by the tribesmen (the Shaikhly clan is from Alwad Rashid) but more as an amir”. (Wilkinson, 1987, p. 124)

The second tribal information was briefly listed by Scoville’s gazetteer (Scoville, 1979) who describes briefly the Banī Riyām tribe and their territory’s geographical structure and its great natural importance. She also emphasised on the important role of Jabal al-Akhḍar in providing important routes, such routes is the one called Ṭarīq as-Shaṣ connecting ʿAwābī to Sīq to Sharjah (where it descends to wadī Muʿaidin and so to Birkat al-Mawz) to wadī Tanuf (Scoville, 1979, p. 162). She highlights that most of Jabal al-Akhḍar is inhabited by Banī Riyām and Ḥubus tribes (*nisba*, al-Ḥabsī). They reside in Banī Ḥabīb, Sīq (north of Birkat al-Mawz), Sharjah and Musairah, and Muʿaidin and Missfat in wadī Muʿaidin (near Birkat al-Mawz) (*ibid*, p. 163).

Carter’s study (Carter, 1982) indicates that the Mahra group to which the Banī Riyām originally belonged, were the first ʿArabs to migrate to Oman from the eastern part of Ṣafār (Jabal al-Qamar) into the north Oman. They first settled in Izkī proper (following the steps of the eponymous Malik b. Fahm) which includes the villages of Muṭṭī (or Imṭy), Qārrut al-ʿĀli (*shimāliyah*) and Qārrut al-Sāfil (*al-Janubiyah*). He briefly describes them as follows:

“Ghāfirī Ibādis settled around the Jabal Akhḍar were the main towns are Izkī, Birkat al-Mawz, Tanuf and Nizwā”. (Carter, 1982, p. 114)

The complex tribal structure relies on the fact that there are some tribes who lived in the settlements of Banī Riyām but do not follow them. This however reflected positively in their political power as Carter argues:

“The multiplicity of descent groups which have either joined the Banī Riyām or became their followers reflects the strong nature of the leadership they received from the Al-Nabāhinah Shaikhs. This in turn provided them with the power base which enabled them to wield such influence on the Ghāfirī side of Omani politics”. (*ibid*, p. 114)

He also highlighted that Awlād Rāshid were the main section of Banī Riyām, but also listed the possible descent groups (Table-4), which are considered part of Awlād Rāshid (Table-5), and the core followers of the Banī Riyām (Table-6). The complexity of the Banī Riyām structure becomes clear from these tables. It also explains their ability to control such large a territory as Jabal al-Akhḍar mountain region (from Ghadaf to Jawf, and from Sir to wadī Banī Rawāḥa) with the support of their tribal groups, descent groups and followers. Leading such a large and complex tribal structure and being the ‘lord’ of Jabal al-Akhḍar fell in the hands of what locals called an *amir*.

Tribe	Nisbah	Dār	Political affiliation	Tribal origin
Awlād Muniyr	Al-Riyāmi	Jabal al-Akhḍr	Ghāfirī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Banī Tubah	Al-Tubī	Jabal al-Akhḍr	Riyāmi /Ghāfirī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Mughtasiyīn	Al-Mughtsī	Jabal al-Akhḍr	Riyāmi /Ghāfirī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Al-Dawāhinah	Al-Dayḥānī	Jabal al-Akhḍr	Riyāmi /Ghāfirī	Riyām b.Qamar b.al-Umarā, Qaḥṭān

Table 4: The possible descent groups from Awād Rāshid of Banī Riyām.

Tribe	Nisbah	Dār	Political affiliation	Tribal origin
Awlād Thānī	Awlād Thānī	Jabal al-Akhḍr, al-Sharijah	Originally from Salāhammah of Banī Hinā!	Ṣalīm b.Sharik b.Malik b.°Amr, Azd
Al-Masārīr	Al-Musrurī	Izkī, Ja°lān Banī Bu Ḥasan	Ghāfirī	°Uthmān b.Naṣr, Qaḥṭān, originally to be Sulaimāniyīn
Bahlāniyīn	Al-Bahlānī	Jabal al-Akhḍr, Smāil	Ghāfirī	Rawāḥa b.Laqiṭa b.°Amr, Qaḥṭān, tribal group of Banī Rawāḥa
Al-Fuhud	Al-Fahdī	Jabal al-Akhḍr, Nizwā	Ghāfirī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Al-Ṣukuwr	Al-Ṣukrī	Jabal al-Akhḍr	Riyāmi /Ghāfirī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Al-Halāhila	Al-Hilālī	unclear	unclear	Found in waḍī Ḥājir
Nabāhinah	Al-Nabhāni	Nizwā	Ghāfirī	Al-°Atiq b.Asad b.°Omran, Qaḥṭān

Table 5: The descent tribal groups who are considered part of Awlād Rāshid.

Tribe	Nisbah	Dār	Political affiliation	Tribal origin
Banī Ḥaḍramī	Al-Ḥaḍramī	Izkī	Ghāfirī	Rawāḥa b.Laqiṭa b.°Amr, Qaḥṭān, tribal group of Banī Rawāḥa
Al-Kunuwd	Al-Kindī	Nizwā	Ghāfirī	Kindah b.°Afair b.°Audai, Qaḥṭān
Banī Baḥrī	Al-Baḥrī	Waḍī Banī Kharus, Jabal al-Akhḍar (Qaryat al-°Alyā)	Ghāfirī	Branching tribe from al-Yaḥmad b.Abdullah, Qaḥṭān
Banī Sulaimah	Al-Sulaimī	Muṭṭī and Muṭraḥ	Ghāfirī	Qaḥṭān
Banī Kharuṣ	Al-Kharuṣī	Jabal al-Akhḍr, Nizwā, waḍī Banī Kharuṣ	Ghāfirī	Kharuṣ b.Shārī b.al-Yaḥmad
Ghabābrah	Al-Aghbarī	Jabal al-Akhḍr, Izkī	Ghāfirī	Decends from Banī Hilāl
Al-Mṣālḥa	Al-Mṣlḥī	Al-Ḥamrā, Tanuf, Nizwā and Bahlā	Hinawī	Abdullah b.Zubair b.al-°Awām, Nizarī
Al-Sawālim	Al-Sālmī	Sharwiyah at Mintrib, Bidiyah and Nizwā	Hinawī	Nizarī
Al-Wuruwd	Al-Wardī	Samad, Izkī	Hinawī	Yaḥmad, Qaḥṭān
Al-Fuzārah	Al-Fuzarī	Wahibah	Hinawī	Nizarī
Al-Ruājīḥ	Al-Rajḥī	Nizwā, Bahla and Nakhal	Ghāfirī	Branching group descending from Banī Riyām
Al-Ṣabābrah	Al-Ṣabārī	Nizwā	unclear	unclear
Al-Ḥirth	Al-Ḥārthī	Al-Qābil	Ghāfirī	Al-Ḥārth b.Ka°b b.al-Yaḥmad, Qaḥṭān
Maḥārīq	Al-Maḥrūqī	Adam	Ghāfirī	Maḥraq b.°Amar b.Maziqā, Qaḥṭān

Table 6: The descent tribal groups as followers of the Banī Riyām.

A brief description on the Banī Riyām was also contributed by Chauncy in 1951 AH, who described them as exceeding 15,000 people, living in the Jabal al-Akhḍar:

“The Banī Riyām is the largest tribe in Oman, the population now exceeding fifteen thousand. As a whole they are civilised and peaceably inclined, and have few rifles, possibly less than a thousand. In comparison with others their intelligence is high. They live mainly in the mountain region of the Jabal al-Akhḍar, where they have over fifty villages”. (Chauncy, 1988, p. cvii)

Miles has also listed the number, distribution and brief description of the Omani tribes (Miles, 1988). He recorded the Banī Riyām to be of 14,000 people, describing them to be the earliest immigrant to Oman (Miles, 1988, p. lxxxvii). A study on tribes and Imamate by George Rentz listing the tribes in connection to the Imamate and classification in relation to settled and affiliation to Ghafīr or Hinawī tribe with brief history on the tribes (Rentz, 1997). He describes the Banī Riyām as:

“Banī Riyām hold a place of signal prominence in the Imamate and throughout the mountains of Oman as the supporters of their chief the Amir of the Green Mountains” (*ibid*, p. 98)

The data was collected in phases, which was discussed earlier at the same fieldwork time of al-Ḥamrā. The collection of this material would not be possible without the help of the previous inhabitants of Ḥarāt as-Saybānī, some are sadly no longer alive, are acknowledged at the beginning of this thesis. The interviewees were unable to identify the individual who lived in that specific dwelling due to many reasons. The identification of the original inhabitant was certain but the change in heirs and possibly sold after words made it difficult in small cases. This reason with the evacuation in the

mid-1980s, more than 25 years ago, made the memory fade and owner long forgotten except for the well know dwellings.

In the case of Birkat al-Mawz a great deal of the settlement's tribal and structural information was clearly identified, starting from early sheep-herding structures which developed into dwellings, to the evolution of the settlement and their occupiers. This came as a result of owners maintaining their estates for their future generations, instilling family and social values, and most importantly establishing strong social and tribal connections, which allowed them to live as one big family despite of their tribal complexity. Today only two dwellings remain inhabited, one by agricultural labourers and the other by one local inhabitant. As I shall discuss later, there is a great deal of homogenous relation between the Banī Riyām's complex tribal structure (tribe groups, followers, and allies), social status and the urban pattern, and to the density of the structures.

Ḥarat as-Saybānī tribal Pattern and structure

The tribes, groups, clans, sub-clans, allies that inhabited Ḥarāt as-Saybanī till it was completely evacuated is listed in Table-7. The spatial distribution of these inhabitants in Ḥarāt as-Saybanī is mapped in Figure-100, with the same detailed mapping presented in Figure-101 to Figure-103. The tribal mosaic gives a clear understanding in terms of their numbers and distribution (Figure-100). The settlement has been divided in phases (from phase-1 to phase-7) according to its development and each phase will be discussed in the context of its social structure and tribal distribution (Figure-100).

Tribe	Nisbah	Dār	Political affiliation	Tribal origin
Al- ^ʿ Abriyīn	Al- ^ʿ Abrī	Jabal al-Akhḍr, al-Ḥamrā	Ghāfrī	^ʿ Abra b.Zahrān b.Ka ^ʿ b, Qaḥṭān
Al-Nu ^ʿ b	Al-Nā ^ʿ bī	al-Ḥamrā, Izkī	Al- ^ʿ Abrī / Ghāfrī	Nā ^ʿ ib b.Ibn adīn b.al-Muhra, Qaḥṭān
Banī Riyām	Al-Riyāmī	Jabal al-Akhḍr	Ghāfrī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Banī Tubah	Al-Tubī	Jabal al-Akhḍr, Izkī, Nizwā, Samāil	Riyāmī /Ghāfrī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Al-Fuhud	Al-Fahdī	Izkī, Jabal al-Akhḍr, Nizwā, Manaḥ and Samāil	Riyāmī /Ghāfrī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Al-Ṣukuwr	Al-Ṣukrī	Jabal al-Akhḍr	Riyāmī /Ghāfrī	Riyām b.Qamar b.al-Umarā, Qaḥṭān
Al-Siyabiyīn	Al-Siyābī	BidBid & Samāil	Ghāfrī	Shihāb b.Nuwairah b. ^ʿ Amr, Nizār
Shariqiyyīn	Al-Shariqī	Jabal al-Akhḍr, ^ʿ Awābī, Nakhal	Ghāfrī	Sharq b.Sharik b.Mālik, Qaḥṭān
Al-Ḥaḍramah	Al-Ḥaḍramī	Izkī, Nizwā, Manaḥ & Samāil	Ghāfrī	Branch tribe from Banī Rawāḥa, Qaḥṭān

Table 7: The tribes of Ḥarāt as-Saybānī in Birkat al-Mawz.

The dominant tribe in Ḥarāt as-Saybānī was the Banī Riyām (*nisbah*, al-Riyāmī), who not only owned most of the dwellings, but also the largest structures, and occupied the whole of the ḥarāt except for a few dwellings in the upper part (north edge) (Figure-100). They were not only the owners but also the lords of it, they are the territory and mountain itself, which the south limb of the mountain was named after, Jabal Riyām (Figure-90). Their control on Jabal al-Akhḍar in general and wadī Mu^ʿaidin in particular, along with the early defensive structures hidden in the pockets of the foothills (discussed earlier), gave them the advantage of choosing the location and time to construct the ḥarāt. The pre-existence of these early structures gave them advantage not only to secure one of the most important routes to Jabal al-Akhḍar (wadī Mu^ʿaidin route) but also to secure the construction of their new ḥarāt. Hence, the location of these early structures and the geological structure of the foothill became a reference point for the following dwelling and communal constructions (Figure-98 & 99). The

influence of the early structures and the geological layer structure of the foothill shall be discussed in details in chapter-5.



Figure 98: The early structures of phas-1 behind the apex of Ḥarāt as-Saybānī.



Figure 99: The geological layer structure of the foot-hill of Ḥarāt as-Saybānī.

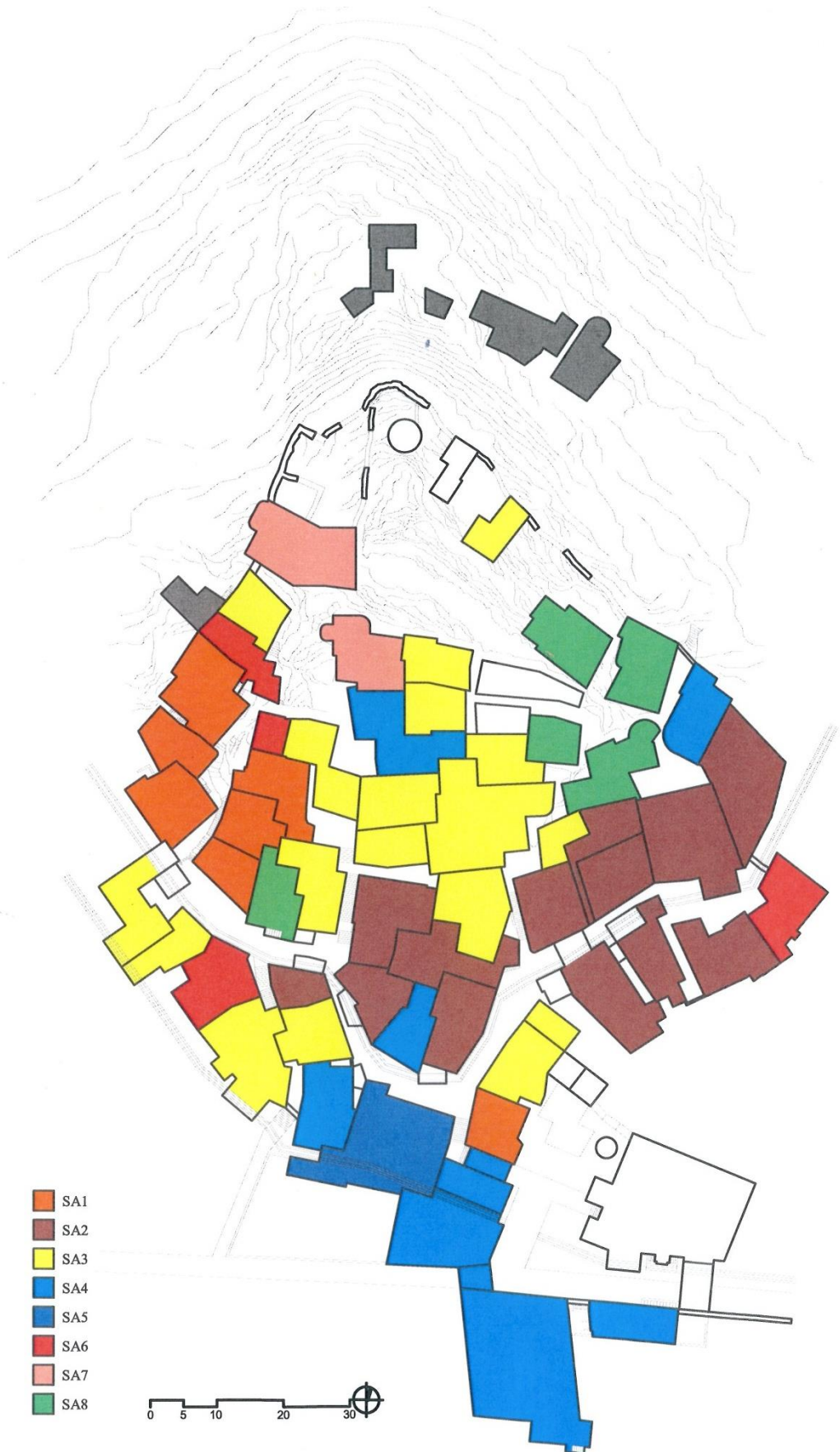


Figure 100: Tribes spatial distribution of Ḥarāt as-Saybānī. SA1. Banī Riyām, SA2: Banī Tubah, SA3. Al-Fuhud, SA4. Al-Ṣuqur, SA5. Al-ʿAbriyīn, SA6. An-Nāʿb, SA7. Al-Ḥaḍramah, SA7. As-Siyābiyīn.

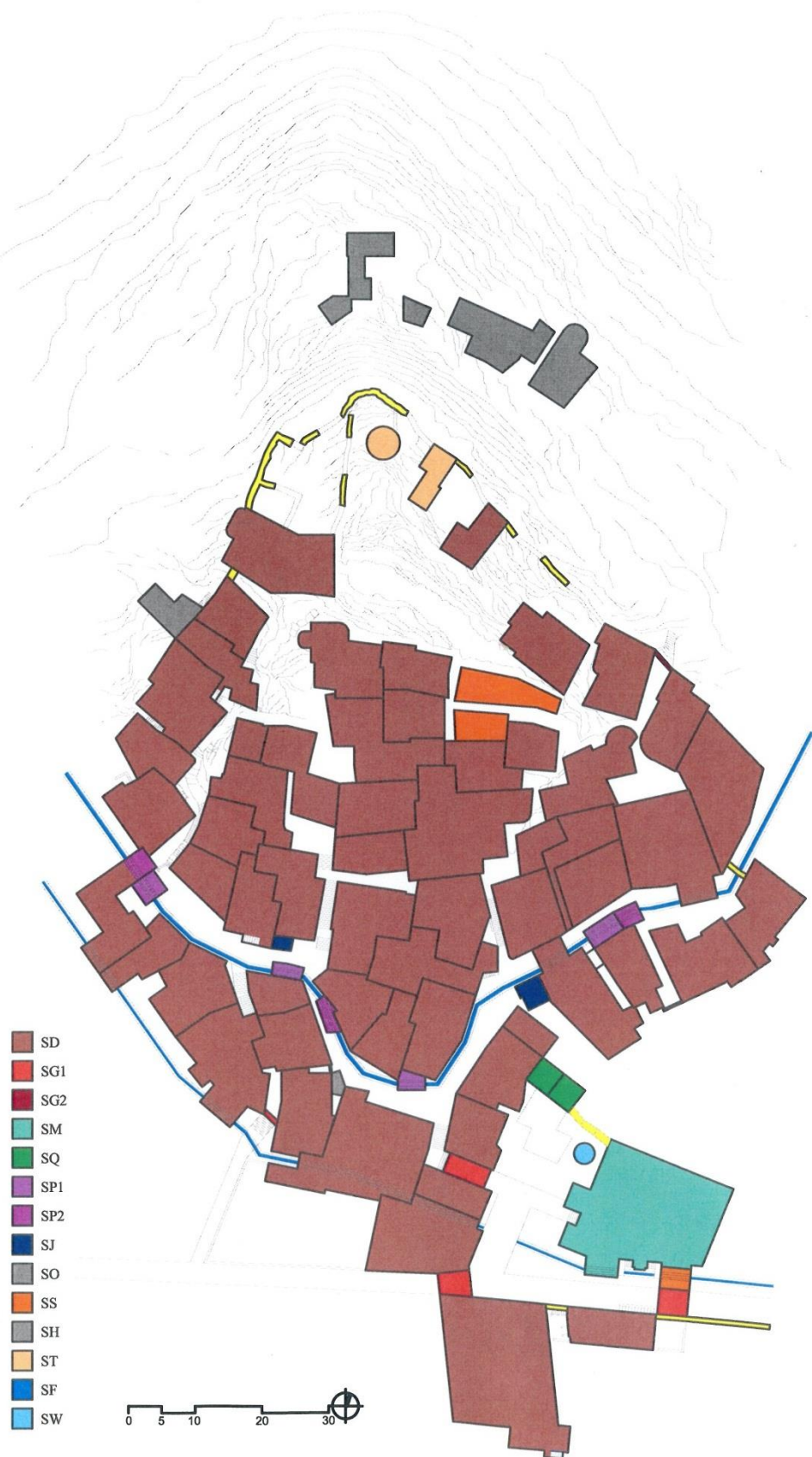


Figure 101: Ḥarāt as-Saybānī structure: SD. dwellings, SG1. main gates (*sabaḥ*), SG2. secondary access points, ST. towers and defensivt structures, SM. mosque, SQ. Qurān school, SS. (*sabla*) male communal meeting halls, SP1. Female public bathing, SP2. Female private bathing (elite), SJ. communal wheat grinding structure (*raḥā*), SH. Sheap herder structures, SO. Shop (*dikān*), SF. *Falaj* channel, SW. water well.

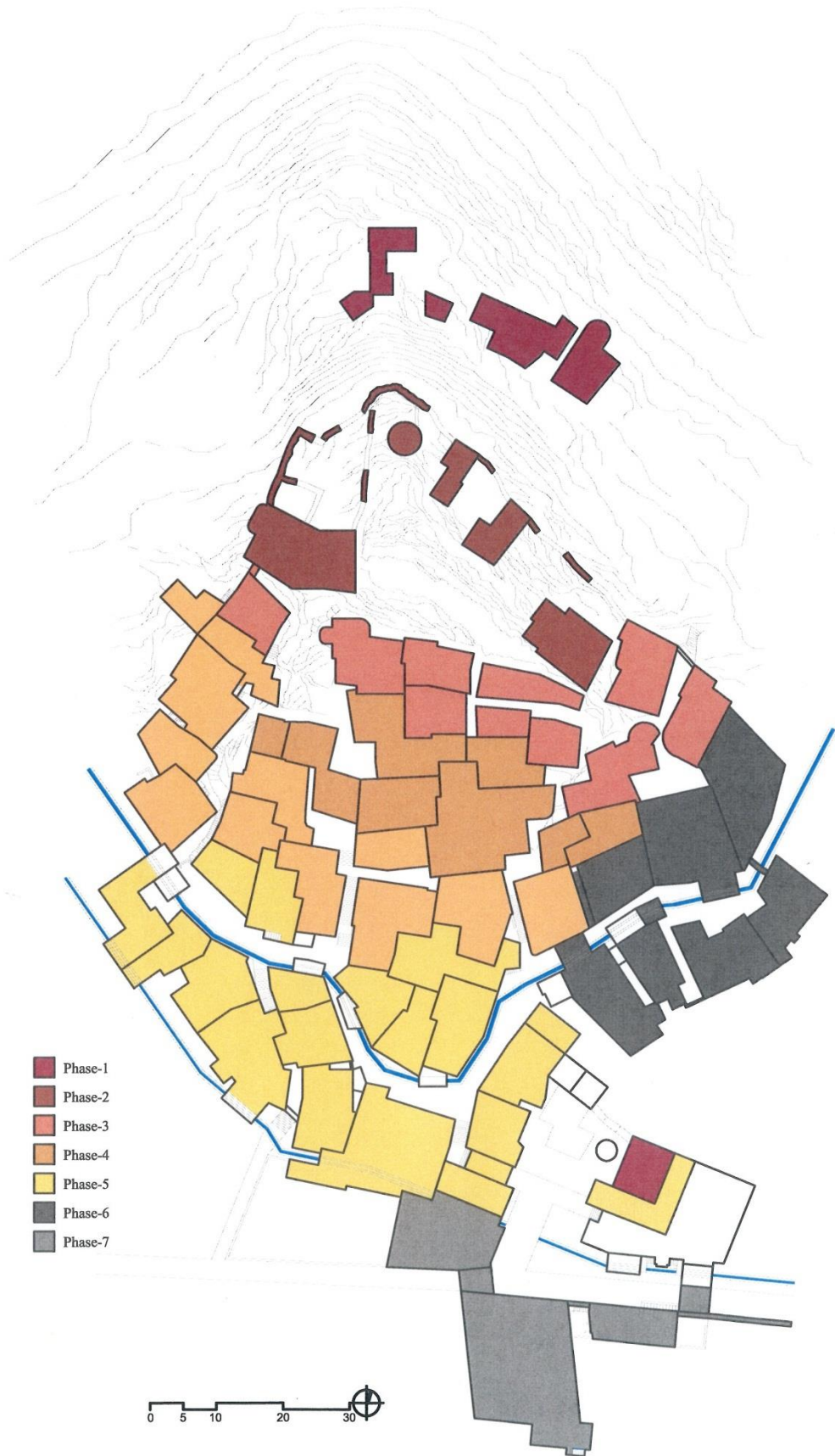


Figure 102: The colour code phasing structure (from Phase-1 to Phase-6) of Ḥarāt as-Saybānī with reference to Figure-61 & 62.



Figure 103: Detail colour code phasing and structure codes (from Phase-1 to Phase-8) of the development of Hārāt as-Saybānī with reference to Figure-71 & 72.

The local inherited oral history indicates that the oldest structures in the ḥarāt are the those located behind the apex of Ḥarāt as-Saybānī, phase-1 (SD1, SD2 & SD3; Figure-98 & 103), which appear in simple form and neatly constructed in fine dry stone masonry, and the mosque (MS1, *maṣjid al-Waljah*) at the bottom of the foothill which was originally used as an agriculture mosque (Figure-103). These structures were for the Shariqiyīn (*nisbah*, al-Shariqī) who original resided in ʿAwābī and Nakhal (Qaryat aṣ-Ṣafāh¹⁰² and Qaryat al-Missfāh¹⁰³), and in some villages in Jabal al-Akhḍar (wadī Ḥabib and Qaryat al-Muṣairah), and in Nizwā (al-ʿAlāyah). This indicates the general movement down from the Jabal al-Akhḍar of semi-nomadic *shawawi* groups who in this case settled close to Ḥarāt as-Saybānī. They worked as goat herders (one branch of Shariqiyīn known as Awlād Ghbaish) (Carter, 1982, p. 116). These early structures were known locally as *siyab* (pl. *saibah*), which means, ‘of homogeneous form’ or ‘herding’. These structures, not visible from a distance, share similar form and construction techniques to those existing in the surrounding hills of Birkat al-Mawz (BM-A1 to BM-A4, Figure-85). It seems that these *siyab* functioned originally as guard posts to watch over territory and changed with the development of the ḥarāt to be used by the Shariqiyīn. Hence, the hidden location and the simple structures hosted different functions over time. Their simplicity of form gave flexibility of function in relation to human needs and expansion.

The beginning of extending the ḥarāt (Phase-2, Figure-103) was marked by the construction of the tower (DS4, *Burj aṣ-Sbābrah*). *Sbābrah* (pl. *sabir*; ‘the ability to withstand hardships, the defender, the bird of prey (eagle) and lion’; Plate-13). Such

¹⁰² It is located near Qaryat Hijār (approximately 17 km south of ʿAwābī in the wadī George) which is also known as Hijār Banī Kharuṣ (Al-Hinai, 2010, p. 291).

¹⁰³ Also kown as Missfāt Al-Shariqiyīn, located east of Qaryat Hijār.

meanings emphasise the general role of the tower as a defender of the Ḥarāt and the plural (*sbābrah*)¹⁰⁴ usage by the inhabitants suggests invincibility. The tower was associated with another structure (SD5), likely to have been for the guards. With time a wall developed embracing Phase-2 on the north forming a defensive zone with a natural defensive edge on the south by a large rock layer dipping at about 45 degree slope (Plate-13). Within the zone, a big walled space on the west edge with internal wall remains indicate the existence of additional structures (SD6 & SD7), which followed the simplicity of form but were more developed in terms of scale. The walled space (SD6) developed to extend to (SD8), the east edge was marked by (SD9). The access to this defensive zone was only through (SD8) or from a narrow passage in front of (SD9). It seems that with time the defensive structures have changed function into dwellings at a later time.

The dwelling SD8 was resided by Banī Ḥaḍramī (*nisbah*, al-Ḥaḍramī) who were a branch of Banī Rawāḥa¹⁰⁵ and originally resided in Izkī (in villages known as Qārut, Imṭī and Sīmā), and Nizwā (in Farq and Karshā), in Manaḥ (in ʿIzz), and in Smāil (in Manāl in wadī al-Gharbī), (Table-7). The dwelling SD7 was resided by Fuhud (*nisbah*, al-Fahdī) who were a descent group of Banī Riyām who are considered part of Awlād Rāshid (Table-5). They resided in Izkī (in a village called Qaryat souq al-Qadim), Jabal al-Akhḍar (in Sīq), Nizwā (in al-ʿAlāya, Karshʿ and Farq), Manaḥ (in ʿIzz) and Samāil (in Sufālah). The dwelling SD9 was resided by Al-Siyabiyīn¹⁰⁶ (*nisbah*, al-

¹⁰⁴ Some inhabitants pronounce it as *Ṣabābrah* (pl. *ṣaber*), which means in classic Arabic; showing patience and holding, which reflects the same principle of defending.

¹⁰⁵ Banī Rawāḥa resides in wadī al-Gharbī in Manāl (locally known as wadī Banī Rawāḥa), who descends from Rawāḥa b. Qaṭiʿa b. Lahīʿa, and their tribal groups are: Banī Hishām, Rawāshid, Kawāmil, Banī Hamim, Bahlāniyon and Ḥḍramiyīn.

¹⁰⁶ Al-Siyabiyīn has many tribal groups of Awlād al-ʿAthum, Awlād Najeem b. Abdullah, Awlād Ali, al-Buzaiqiyīn, Awlād ʿUmrān, Awlād Thaī, al-Thawālith, al-Maʿābil, al-Mahalil, al-Ghaithiyīn and Khaṣbān (Al-Hinai, 2010, p. 352).

Siyābī) who are descent of Shihāb b.Nuwairah b.ʿAmr who also resided in Bibbid, in Nizwā (in al-ʿAqr) and Manaḥ (in ʿIzz) by their tribal group Burṭumānī and Samāil (in Safālah).

Phase-2 has reflected a significant shift in the Ḥarāt social, physical and functional development. First, the change from simple, half buried, and hidden structures to a visible, walled and clearly defended zone of structures. Secondly, the defensive shift from hidden surveillance to a visible one, which is clearly stated by the tower. Thirdly, the social patterns change from one tribe (i.e. Shariqiyyīn) to three tribes (i.e. Banī Ḥaḍramī, Fuhud and Al-Siyabiyyīn), which reflect the beginning of social unity and settling solidarity between the tribes. The change in the construction technique, which moved from using stone only in phase-1 to a composite stone and mud bricks in phase-2 (Plate-13) shows the conscious use of existing rock formations as an anchor for the structures, explains the distance between the individual structures and others while descending from the tower to the east (from SD5 to SD7 to SD9), (Figure-103) and (Plate-13). The emergence of controlled access points in phase-2, with associated entrance steps, as well as, considerable attention to accessing this hilly terrain through levelling and staircases is also significant in phase-2, especially in (SD8 and SD9). The dwellings also show development single storeyed in phase-1 to two floors in phase-2 (i.e. SD8 and SD9). Finally, the rock layer structure in phase-2 is more visible, with dips and steeper angles, which influenced phase-2 formation (Plate-13).



a.



b.



c.

Plate 13: Phase-2 of Ḥarāt as-Saybānī, a. the tower and the boundary wall constructed behind it, b. natural rock formation used as an anchor for the structure foundation, c. the large rock layer forming the south edge of phase-2.

The dipping level of the large steep rock layer at the south edge of phase-2, which extends between SD8 and SD9, marked the beginning of the extension into phase-3 (Plate-13). This phase presented the first communal meeting hall (SD10, *sablat al-Fowq*¹⁰⁷, for summer use) creating a narrow passage between it and the sudden drop in rock layer to the north (Figure-105). Followed by the dwelling SD11 which was resided by Fuhud, and then attached from east by the dwelling SD12 which was resided by Banī Ḥaḍramī (Figure-100 & 103). The west edge of phase-2 is extended further south from SD8 by another Fuhud dwelling SD13 in approximately the same alignment with (SD10, SD11 and SD12).

The construction develops further by the introduction of the second communal meeting hall (SD14, *sablat al-Fowq*, for winter use) which is then neighboured from north by SD10 (*sablat al-Fowq*, for summer use) and attached from the west by (SD11 & SD15) by another Fuhud dwelling (SD15) which the three marked the first possible north-south passage between the structures in the Ḥarāt (Figure-104). The development continues at the east access point of phase-2 (between SD9 & SD10) with the emergence of dwellings SD16, SD17 and SD18 for the Siyābiyīn, and SD19 for the Ṣukur. The Ṣukur are also considered part of Awlād Rāshid of Banī Riyām who originally resided in Jabal al-Akhḍar (in Sīq). While the Siyābiyīn dwellings are facing each other sharing an irregularly formed open space at different levels connected by stone steps. From this open space radiates the most important passages in all directions and introduces the main access to that phase between SD17 and SD19 with a long curved set of stone steps descending towards the northeast (Plate-14).

¹⁰⁷ *Al-Fowq* in classic Arabic means; up, and the local inhabitant mean the upper level in the Ḥarāt.

Phase-3 highlights further shifts in the ḥarāt social, physical and functional development following phases 1 & 2. Beginning with the change of closeness from close individual structure solidarity in phase-2 to be closely attached and clustered structures in phase-3. Next, the influence of the rock layer structure has changed from natural stone foundation in phase-2 to constructing retaining foundation terrace walls in phase-3. Then, the influence of the large steep rock layer at the south edge of phase-2 is not only introducing the first natural linear east-west passage but also the first linear dwelling and communal pattern (SD10, SD11 and SD12), (Figure-105) and (Plate-14). Additionally, the establishment of the early *sablah* (SD10 and SD14) indicates the persistence of the early inhabitants to settle for long term. In time, the emergence of the open space and cluster pattern (SD16, SD17, SD18 and SD19) which reflects the similar closeness relation discussed previously in al-Ḥarāt al-Ḥamrā, but with Siyābiyīn of one family in as-Saybānī. Moreover, the change from access points in phase-2 (SD8 and in front of SD9) to a main access gate (between SD17 and SD19) with neatly constructed stairs in phase-3. The clear social pattern that started to develop from phase-2 to phase-3 and form the basis of tribal solidarity and closeness with Banī Ḥaḍramī (SD8 and SD12), through the closeness to attached solid linear pattern with the Fuhud (SD7, SD11 and SD15), and space cluster pattern with the Siyābiyīn (SD16, SD17 and SD18). The joining of another Banī Riyām descent tribe, the Ṣukuwr (SD19) added a new member to the tribal pattern to the Ḥarāt. Finally, the construction and urban pattern has developed a new direction of linear clustering in the Ḥarāt formation which eventually developed further over time. These features contributed towards influencing the social, physical and functional formation of the following phases.



Figure 104: *Sablat al-Fouq* (SD10, summer use) in phase-3.



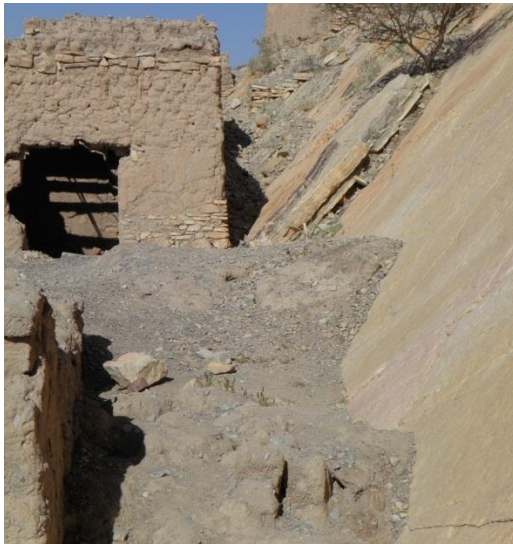
Figure 105: A view from the tower showing the linear dwelling pattern of phase-3 aligned with the large rock layer south edge of phase-2.



a.



b.



c.



d.



c.



d.

Plate 14: Phase-3 of Ḥarāt as-Saybānī, a. the passage between the two *sbalas*, b. the vertical passage between SD10 and SD11, c. the horizontal passage aligned with large rock layer, d. the steps connecting the different levels in the open space, e. the passage between SD17 and SD19 leading to the main access gate, f. the neatly done rock steps to the main gate of phase-3.

The features of phase-3 have significantly influenced the formation of phase-4, which continued as a linear attachment but at a new, lower topographic level. This was initiated with the construction of the two back-to-back Fuhud and Şukuwr dwellings (SD20 & SD21), (Figure-100 & 103). The Fuhud dwellings extend with the concept of closeness relation with the dwellings (SD22 and SD23), which each of their form indicates the construction to be developed in two different periods of time, which will be discussed later (cf. chapter-5). The development of the Fuhud dwellings (SD24 and SD25) continue with similar back-to-back relationship but on a descending topographic condition, which possibly indicates differing periods of construction.

Phase-4 has emphasised a significant impact on the ḥarāt social, physical and functional features following the development of phase-3. Beginning with the emergence of a one-tribe dwelling cluster (the Fuhud block) resulting from its social closeness (Figure-70), it joined with a Şukuwr (SD22) dwelling that indicates encouragement and strong supra-clan social ties following the settling of the Şukuwr (SD19). Next, the development in the urban pattern from linear pattern in phase-3 to interlocking block pattern (SD20, SD21, SD34 and SD25) in phase-4 (Figure-103). The change in the passage form and direction is also worth noting, from narrow longitudinal and irregular open spaces in phase-3, to zigzagging small, connected spaces directed south (e.g. between SD23 and SD24, and between SD21 and SD22). Change was also in the dwelling form and scale, from small regular forms in phase-3, to big irregular formed dwellings in phase-4. Also the change from simple steps in the open spaces in phase-3 to neatly constructed stone steps in the zigzag passage in phase-4, which created small open spaces with steps leading to the entrance of the dwellings (i.e. SD20 and SD21). Furthermore, the emergence of the narrow east-west private

passages leading to a specific dwelling (i.e. SD24 and SD25), indicates the important of having the access to the dwellings from the east side, as a result of topography negotiation and marking the phase edge (Plate-15). This phase is marked with the emergence of overhead connections between dwellings to provide private (i.e. SD25) or communal (i.e. SD22) access beneath it. Finally, the emergence of dwellings (SD24 and SD22) with more than two access points connecting two different spaces or passage which might indicate the possibility of using these dwellings communally to cross and connect between the two sides.



a.



b.



c.



d.

Plate 15: Phase-4 of Ḥarāt as-Saybānī, a. the stone steps in the passages, b. the small space leading to the entrance of dwelling SD21, c. the over-head of SD22, d. the narrow private passage of SD25.

The construction of phase-5 (Figure-103) started with the development of the Awlād Thanī (*nisbah*, Awlād Thanī or al-Riyāmī) dwelling (SD26) attached to the Fuhud dwelling (SD22) (Figure-100 & 103). The Awlād Thanī are considered part of Awlād Rāshid of Banī Riyām who resided in Jabal al-Akhḍr (in al-Sharijah), although some scholars indicate that they originally descended from Salāhammah¹⁰⁸ of Banī Hinā (Carter, 1982, p. 115) and (Al-Hinai, 2010, p. 397), which conflicts with the local inhabitants' opinion. Also the development of three more Fuhud dwellings (SD27, SD29 and SD31) in constructing near and attached to the Fuhud dwelling cluster block of phase-4 indicates the cohesiveness of one tribe cluster. Also the joining of Banī Tubah (*nsbah*, al-Tubī) in dwellings (SD28 and SD30) who resided in Jabal al-Akhḍar (in Sīq al-^cAin and Kamah), Izkī (Imṭī, Zikīt, Risis and wadī al-widī), Samāil (Safālah) and Nizwā (al-^cAqr), has marked their beginning in the settlement. The formation of the west edge and passage was developed by the dwellings of Awlād Thanī (SD28, SD32, SD33 and SD34) which formed an interlocking linear pattern. Moreover, the joining of the Nu^cb (*nisbah*, an-Nā^cbī) tribe with the dwellings (SD29 and SD36) and the Shariqiyyīn (*nisbah*, al-Shariqī) dwelling SD35, both in small scale indicates they had social influence in the settlement. The Nu^cb are a Qaḥṭānī tribe that descends from Nā^cib b. Ibn adīn b. al-Muhra, and they originally resided in al-Ḥamrā (in al-^cĀriḍ) and Rustāq (in al-Lājāl), and also resided in Izkī. Additionally, the Ṣbiḥiyon (*nisbah*, al-Ṣbiḥī) are a branch group of Nu^cb who resided in Birkat al-Mawz and wadī Mu^caidin (*ibid*, p. 396).

¹⁰⁸ Salāhammah meaning they are descendants of Ṣalīm b. Sharik b. Malik b. ^cAmr b. Malik b. Fahm al-Azdī of the Banī Hinā (Al-Hinai, 2010, p. 397).

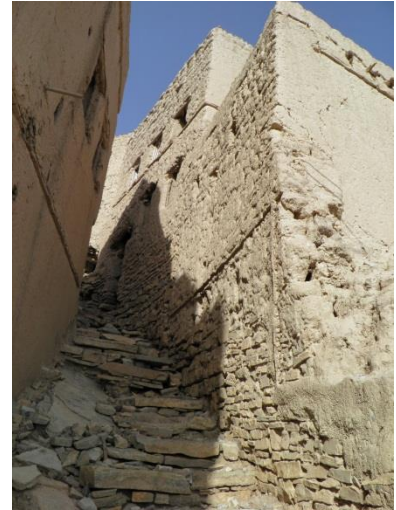
Phase-5 emphasised a significant impact on the Ḥarāt social, physical, functional and urban pattern following the development of phase-4. Beginning with the passages that has developed from zigzag mini spaces in phase-4 to straight narrow stone steps in phase-5 (Plate-15). The formation of the west edge with linear interlocking dwelling pattern and a passage which is considered to be the widest with stone steps done neatly and artistically all the way up. The joining of two Banī Riyām descendants (Awlād Thanī and Banī Tubah), and the Nu'b which reflects the extending strong social tribal ties among them, and the emergence of a new tribal dwelling block and passage (Awlād Thanī). The development of the scale, form and the interlock pattern, especially in the west edge (i.e. Awlād Thanī). The development of the dwellings floor levels from two floor levels in phase-4 to increase to three floor levels in phase-5 (e.g. SD33, SD30 and SD29). Then the emergence of private *sabla* within the dwellings (i.e. SD30 and SD33) which had socio-political dimension in the settlement. The development of two access points connecting two passages (e.g. SD24) in phase-4, to two access points connecting between the passage and outside the ḥarāt (e.g. SD28, SD29, SD33 and SD34) in phase-5. The emergence of the decorated doors, ceilings and walls in phase-5 dwellings (e.g. SD30 and SD33) which also indicates the wealth and social status of the owners. And finally, the development of a new type of dwellings of large scale located by the edge of the *falaj* associated with communal ladies bathing structures (SD28 and SD33) which reflects the wealth of some tribes.



Figure 106: The extension of the west edge of phase-5 by the linear interlock dwelling pattern of Awlād Thanī.



a.



b.



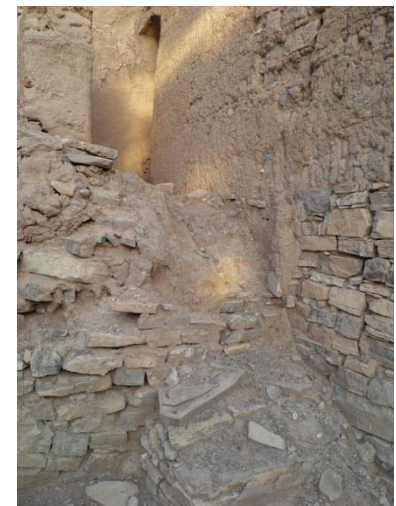
c.



d.



d.



e.

Plate 16: Phase-5 of Ḥarāt as-Saybanī, a. the neatly done stone steps on the west passage, b. the straight stone steps on the west passage, c. the decorated ceiling in SD33, d. the carved decorated door of dwelling SD34, d. the private *sabla* with its own access in dwelling SD33, e. the second access point leading to outside the Ḥarāt from the back of dwelling SD33.

The significant development of the social, physical and urban features of phase-5 has influenced the continuous extension of phase-6 in alignment with the *falaj* channel (Figure-103). The formation of the west edge in the previous phase, along with the two *falaj* channels (upper and lower), had encouraged an eastward extension with the development of the dwellings, SD37 to SD42, owned by Awlād Thanī, Fuhud, Nuḥb, Banī Tubah and Siyābiyīn (Figure-100). This extension transferred the extension to take place between the two channels through the development of dwellings, SD43, SD44 and SD45, for the Fuhud and Şukuwr, which resulted in a passage leading to a new gate (SG1) near the lower channel. Over time, a similar extension took place along the channel with dwellings SD46 to SD54 for Awlād Thanī, Fuhud, Banī Tubah and ʿAbriyīn, which resulted in another passage leading to gate, SG2. This gate, *Sabaḥ ad-Dākhil*, led to the mosque and the extended women's communal and private bathing structures (*mujaza*) (attached to SD38, SD42, SD50, SD46 and part of SD38). Moreover, the increase in the number of inhabitants and development also resulted in the mosque's (SM2) extension to increase its capacity.

The development of phase-6 along the *falaj* channels has marked a new dimension in the ḥarāt social, physical features and urban pattern after phase-5 (Figure-103). First of all, the development of the dwellings along the upper *falaj* channel resulted in the emergence of a wide passage aligned with the curving channel. Additionally, the emergence of the ladies communal bathing gave the passage a private and communal purpose. Moreover, the new passages descending from the upper channel to the gates (aligned with lower channel) defined the south edge of the ḥarāt. Furthermore, the form of the dwellings along the channel was significantly influenced by the channel curvature, which gave them a unique clustered formation (e.g. SD42, SD46, SD50 and

SD51). Additionally, the two side access points (SD43 & SD45) re-emerged again in the dwellings that has developed south of the upper channel but in two different levels than that of phase-5 (SD24) (Figur-103). The development of the two interlocking attached dwellings (SD43 and SD44) extending above the passage compared to the one over-head of a single dwelling (SD22) in phase-3 is also evident of the social solidarity in sharing the passage beneath. Finally, the establishment of a new male communal meeting hall (*sabla al-Ghurfa*) attached to dwelling (SD52, *Bait al-Kabir*), Plate-17) indicates the increase in the settled inhabitant and need for a bigger *sabla*.



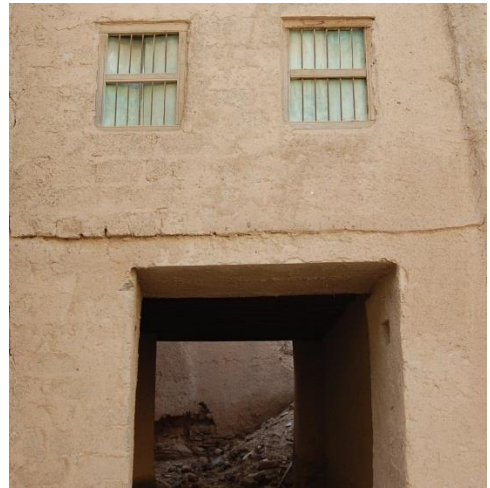
a.



b.



c.



d.

Plate 17: Phase-6 of Ḥarāt as-Saybānī, a. the passage leading to gate SG1, b. the male communal *sabla* in SD52, c. the structures aligned with *falaj* channel, d. the gate (SG2, *sabāḥ ad-Dākhil*).

The construction continues to introduce phase-7 that had added social, physical and urban features to the settlement (Figure-103). The formation of the west and south edge in the previous phase along with the two *falaj* channels (upper and lower) has encouraged the extension to resume further east forming the east edge of the Ḥarāt. This was achieved through the development of the continuous extension of the dwellings of Banī Tubah (SD55, SD56, SD57, SD58, SD60 and SD61) and the Nuḥb (SD59) dwellings along the *falaj* channel toward the east homogenously with that of phase-6 (Figure-100 & 103). With these dwelling came the development of more ladies communal (attached to SD56) and private (also attached to SD56) bathing structures and a communal wheat grinding structure (attached to SD55).

The continuous development of phase-7 along the *falaj* upper channel on the east side has reflected on the ḥarāt social, physical features and urban pattern after phase-6 (Figure-103) & (Plate-18). The extension of the dwellings towards the eastwards has contributed to the formation of the ḥarāt east edge. The two side access points re-emerged in the dwellings that developed south of the upper channel at two different levels than that of phase-6, of which the lower access point leads directly to the gardens. The lower linear dwelling pattern from the upper channel consist of private passages (i.e. SD55 and SD56) from the dwelling opposite to them, which gave direct access to the agriculture fields. The boundary wall re-emerged in the lower dwellings (SD55, SD56 and SD59) from the *falaj* channel. The over-head rooms emerged again by the dwellings (SD55 and SD60) on top of the *falaj* channel to provide water access to all inhabitants. Finally, the emergence of linear dwelling pattern of one tribe (Banī Tubah) than the dwelling cluster block of the same tribe in phase-5 and 6 which indicates the social and urban development of one tribe in deferent settling stages.



a.



b.



c.



d.



e.

Plate 18: Phase-7 of Ḥarāt as-Saybānī, a. Private narrow passage of SD56, b. Over-head of SD60 above the *falaj*, c. decorated wall in SD57, d. remains of SD55, e. The dwellings SD58 and SD56.

With the development of phase-7 and the completion of the formation of the east edge, the last extension of the ḥarāt was directed towards the space near the mosque (MS1, *Masjid al-Waljah*) introducing phase-8 (Figure-103). The extension of this phase was through the development of two Ṣukuwr dwellings (SD62 and SD63), which resulted in the construction two new gates (SG3, *Sabāḥ al-Gharbī*) and (SD4, *Sabāḥ al-Sharqī*) with a *sabla* for the Ṣukuwr on top of the later one accessed rather from the mosque or from direct stairs (Plate-19). Additionally, there was the development of a Qurān School (SQ) with a possible passage that existed behind it (between SD48 and SD55). Finally, the enclosure of the open space of phase-8 with a wall extending from the Qurān school to the mosque and another extending from the dwelling, SD63 to the gate, SG4.

According to oral history, the passage at the upper *falaj* channel starting from SD46 to the east is called *Sikkat al-Qāwa*, based on the previous existence of a *Qāwa* tree in that passage. Additionally, the passage SD51 to the west is called *sikkat al-Limbajah*, which is similarly named after a *Limbajah* tree that once existed there. The older dwellings in the upper part of the ḥarāt (from phase-1 to phase-5) are known as the Ḥarāt al-Fouq, alluding to the altitude but also the distinct development of an older settlement. Moreover, there were dwellings with well-known names by the inhabitants such as; ‘Abriyīn dwelling (SD52, Bait al-Kabir) which had the male communal meeting hall (*sablat al-Ghurfaḥ*) attached to it, and Banī Tubah dwelling (SD30, Bait al-Rās), which indicates the social importance of these dwellings in the Harāt. Furthermore, the Ṣukuwr dwelling SD63 in phase-8 is known as Bait al-Ḥadith based on being the last constructed dwelling in the ḥarāt. Finally, the gardens surrounding the ḥarāt were also known by names by the inhabitants. The area and gardens east to

phase-1, 2 and 3 is known as al-Gininah, while the gardens behind the mosque (SM1) is known as al-Waljah which the mosque was named after.



a.



b.



c.



d.

Plate 19: Phase-8 of Harāt as-Saybānī, a. *Masjid al-Waljah* SM1 and *ṣabāḥ al-Sharqī* SG4, b. *ṣabāḥ al-Gharbī* SG3 and sablat al-Ṣukuwr, c. Dwelling SD62, d. Dwelling SD63 attached to the gate.

The earlier discussion on the ḥarāt structure and the summary of tribal distribution in Table-8 clearly shows that the Fuhud (*nisbah*, al-Fahdī) were the most dominant tribe with 17 dwellings, which started from phase-2 and continued into phase-6. This was followed by the Banī Tubah (*nisbah*, al-Tubī) with 13 dwellings who resided in phases 5 to 7. Then the Banī Riyām (*nisbah*, al-Riyāmī) with seven dwellings who mostly resided in Phase-5. The factor in common between these three tribes is that they resided in most of the older settlements surrounding Birkat al-Mawz in Izkī, Nizwā, Samāil and villages of the Jabal al-Akḍar), especially the Fuhud, which might explain their substantial presence in Ḥarāt as-Saybānī. Most of these tribes who congregated in as-Saybānī had already resided with each other before in other settlements in the Jawf region which emphasise their strong social ties, culture and common interest. Although some of these tribes are direct descendants of Banī Riyām (Table-4), some are considered part of Banī Riyām (Table-5), and some are considered followers (Table-6), yet, these social and pre-settling factors contributed in the formation of Ḥarāt in a strong interlocking pattern reflecting the tribal unity of the Banī Riyām.

Tribe	Phase Developed	No. Dwellings	Location
Al-ʿAbriyīn	6	1	The south edge of the Ḥarāt
Al-Nuʿb	3, 5, 7	4	The east and west edge of the Ḥarāt
Banī Riyām	5, 6	7	The west and southeast edge of the Ḥarāt
Banī Tubah	5, 6, 7	13	The centre and east edge of the Ḥarāt
Al-Fuhud	2, 3, 4, 5, 6	17	In the centre, and the north and south edge of the Ḥarāt
Al-Ṣukuwr	3, 6, 8	7	In the centre, and the east and south edge of the Ḥarāt
Al-Siyabiyīn	2, 3	5	The east edge of the Ḥarāt
Al-Ruqishiyī	1, 5	5	The north edge of the Ḥarāt
Al-Ḥaḍramah	2, 3	2	The west edge of the Ḥarāt

Table 8: Summary of tribal dwelling distribution in the Ḥarāt as-Saybānī.

When looking at the structure of Ḥarāt as-Saybānī in a holistic prospective observing the distance connection between these structure, it reveals symmetric dimensions

(Figure-107). First, the distance between the gates (SG1) and (SG2) is equal to that between (SG3) and (SG4) of approximately 30 m. Additionally, the distance from the branching north-south passage (leading to gate SG2) to the east and west edge are equal of approximately 72 m. Moreover, the distance of three north-south passages starting from the large horizontal rock layer (in phase-2) to the passage of the upper *falaj* channel of approximately 45 m. Furthermore, the distance from the curving *falaj* channel (between SD51 and SD52) to the east and west edges and the edge of the large horizontal rock layer are equally distant of approximately 65 m. And finally, the length of the *falaj* channel from the west edge (SD33) to the east edge (SD61) is equal to the ḥarāt north boundary parameter (extending from SD33 to SD61) of approximately 140 m. Hence, these equalities in spacing might be a coincidence driven by the topographic structure of the territory or it could possibly consider the fact that the inhabitants intentionally done it during the development of the ḥarāt. However, one must consider that fact that these tribes joint in this ḥarāt after they resided earlier in older settlement which gained them proper construction knowledge which makes the topographic challenge in as-Saybānī easily handled.

The observation into the distribution of the structures through the different development phases could possibly mark some structure categories. Beginning with the access points to the ḥarāt, they could be categories as main gates (SG1 to SG4) and secondary access points (access between SD17 and SD19, and the access through the dwellings along the west edge). The main gates could be further sub-divided into external gates (SG1 and SG2) and quasi-internal ones (SG3 and SG4). The location, formation and function of the passages also remarks on a sense of hierarchy in their social function. The passage along the upper *falaj* channel and the north and south

branching passages from it were the main semi-public passage and their branches are secondary. The secondary passages could be sub-divided into public passage leading to the gates, and semi-private passage leading to the dwellings. The latter could be further sub-divided into private passages or open spaces and passage leading to single private dwellings (*cf.* chapter-5).

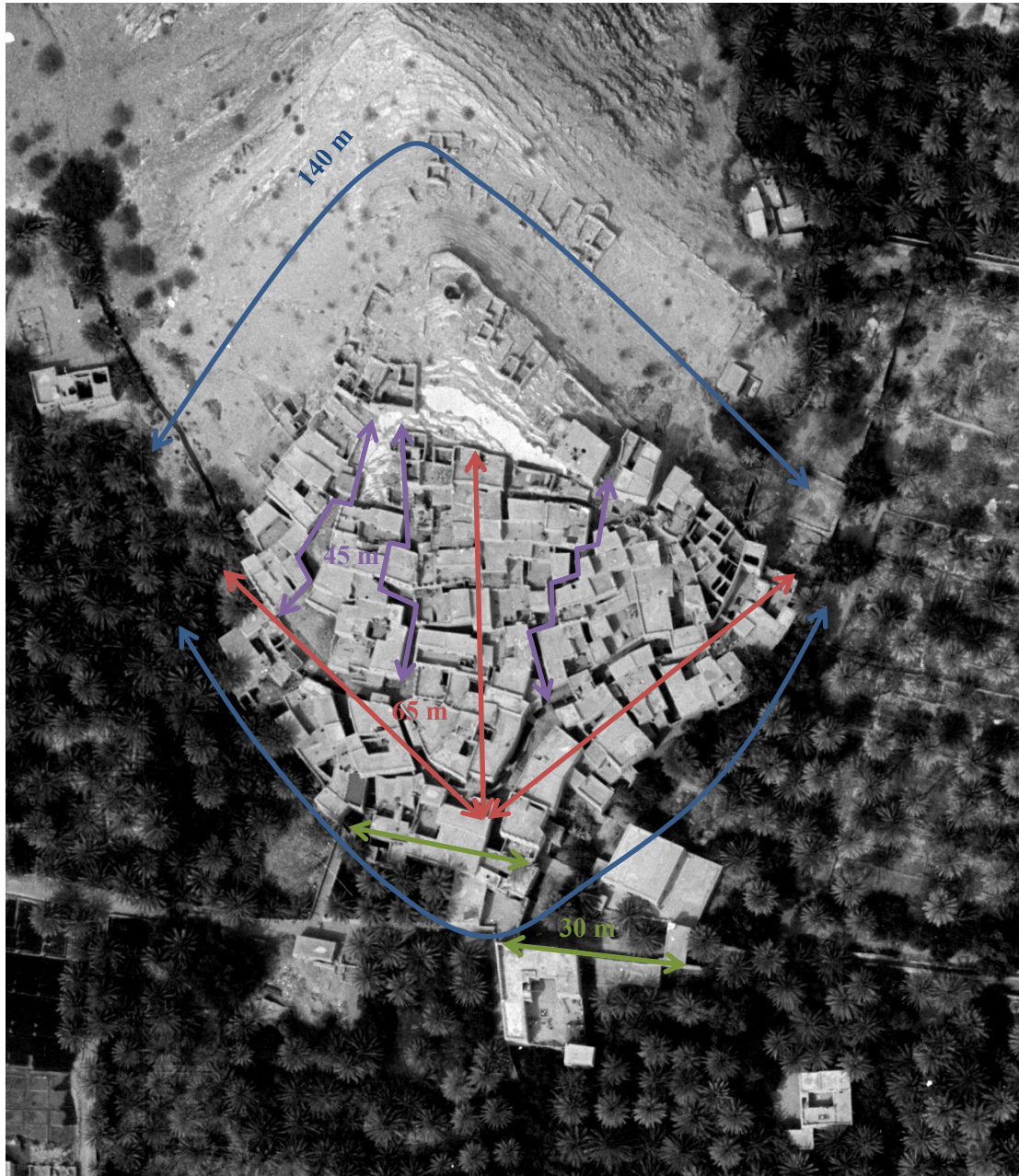


Figure 107: Equalities of spacing in Ḥarāt as-Saybānī (1975 Aerial photo of Birkat al-Mawz from NSA, 2011).

4.6: Epilogue

In this chapter I have discussed the early human settlements in both territories through the archaeological evidence of all periods discovered. In the case of al-Ḥamrā, these evidence revealed a site overlap, closeness and re-use of the existing structures of different periods which indicates the continued reuse of pre-existing sites or structures and is treated as a resource. While in the case of Birkat al-Mawz, the only evidence found of prehistoric habitation are the rock art in the gorge of Wadī Mu^ʿaidin, indicating the importance of the wadī to the early settlers. Over time reliance on this key environmental factor persisted, which became part of the inherited culture influencing their habitation at the apex and slopes of the hills and near to the wadīs.

The discussion on the geography of the two sites contributed towards better understanding of the evolving settling locations and their physical characteristics. The early settling of the ^ʿAbriyīn in Missfāh and Nakher and their use of the arable land along with the important mountain routes connecting their villages in Jabal Shams, all contributed as pre-settling factors for the emergence of Ḥarāt al-Ḥamrā. Similarly, the settling of all Banī Riyām tribes in the older settlements around Birkat al-Mawz and their control of Jabal al-Akhḍar with Sīq being their capital along with their small structures behind and on top of the hills surrounding Birkat al-Mawz contributed as pre-settling factors for the emergence of Ḥarāt as-Sybānī. Hence, the closeness of earlier settlements of these tribal groups within a similar geographical environment plays an important role as a pre-settling factor as encouragement and choice of their settling location.

The discussion that followed on tracing both tribes origins, migration pattern and final settling contributed towards understanding their tribal behaviour. Being one of the first

tribes to migrate to Oman – as was the case with Banī Riyām – and early settling in the Jawf region gave them the advantage of expanding and controlling the Jawf and Jabal al-Akhḍar regions, and most importantly, being allies with the ruling Nabāhinah *amirs*, who were the original settlers in that region of Oman. The rise in their power following Nabāhinah rule resulted in their settling in the whole Jawf region. This was helped by their support of the Yaʿāribah Imamate and their well-known intelligence gathering reputation among tribes. In the case of the ʿAbriyīn, it is clear that their gradual revival and socio-political background through time contributed in building up their power and thus resulting in their settling down in their own *dār*. This power was presented through making allies during their dispersal and settling pattern, the knowledge of the *ʿulama* within the tribe, their reputation as strong warriors, and also their support to the Yaʿāribah Imamate. All of this resulted in them gaining wide knowledge of the geography of northern Oman, and self-confidence and independence.

The establishment of al-Ḥamrā started with first relying on the agricultural wells along with the joining of the ʿAbrī branches, and the excavation of the *falaj*, with Yaʿāribah help, all of which explains the speed of the settlement's evolution. This was marked first by their settling in the centre of the orchards and eventually to their final settlement which was first marked by small number of dwellings. Similarly, the Banī Riyām also initially depended on a well near the mosque and later with the help of the Yaʿāribah excavated their *falaj*, which gave rise to their settlement. It underscores the political importance of both settlements in Yaʿāribah eyes based on their important location as gateways to Jabal al-Akhḍar and beyond, to the routes connecting the Ghāḍaf region and eventually the coast.

The tribal spatial distribution and structuring through the different development stages of both ḥarāt reflected a clear understanding of the social processes, but also physical features, which influenced its formation. The six developing phases of Ḥarāt al-Ḥamrā demonstrates how a core pattern formed a reference point which transformed through phases. This transference developed with the increasing closeness of relations and solidarity within the tribe, which impacted on the urban pattern. This pattern develops from individual closeness, to facing relation dwellings, to dwelling cluster blocks, to linear dwelling patterns till the complete formation of the ḥarāt, although the pattern may in some cases have a sense of randomness caused by tribal factors. However, the development in the dwelling patterns results in the development of the passages and the communal structure. This formation in al-Ḥamra started from the *falaj* channel and extended north, while in Ḥarāt as-Saybānī it was from north towards the *falaj* channel. The seven developing phases of as-Saybānī emphasised the influence of the topographic structure of the territory on the development of the construction technique, the urban pattern and passages. The topographic structure became a reference point for the construction development from hidden half barred structures, to visible close individual structures, to linear dwelling pattern, to back to back dwelling cluster block, to interlocking dwelling blocks till the complete formation of the ḥarāt. These dwelling forms and block patterns possibly suggest the development of individual spaces within one dwelling in different times caused by need and necessity for family extension, the challenge of topography and affordability.

Finally, the discussion of the tribal spatial distribution in both ḥarāt prior to their evacuation in the context of its tribal mosaic with the developing phases reflected its impact on the social, functional and physical evolution of each ḥarāt. Both tribes the ʿAbriyīn (Awlād Rashid b. Musʿud) and Banī Riyām (Fuhud, Banī Tubah and Awlād

Thānī) were the most dominant tribes but their impact on the ḥarāt evolution was to some extent different. The ʿAbriyīn in Ḥarāt al-Ḥamrā chose the establishing location near the *falaj* channel and developed from there dominating the main passage, designated *sablas* and communal structures, which all developed from the main reference point of the whole ḥarāt evolution. While in Ḥarāt as-Saybānī, the Banī Riyām resided in the early phases after the Shiriqiyīn (of Jabal al-Akhḍar) with the Ḥaḍramah (of Banī Rawāḥa) and Siyābiyīn (originally from Bidbid) which both are considered followers. Although the Banī Riyām were dominant but the communal *sabals* were of Siyābiyīn (*sablat al-Fouq*) and the other *sabla* (*sablat al-Ghufah*) is part of a ʿAbriyīn dwelling, which Banī Riyām claims both to be communal. Without a doubt, the private or semi-private *sablas* of Banī Riyām (SD30 and SD33) could have been used as communal *sabla* for them, based on the fact that their Ṣukuwr *sabla* was developed in the last phase above gate (SG4). These debated however may suggest the possible social ties between the tribes and transformation of function with Ḥarāt evolution.

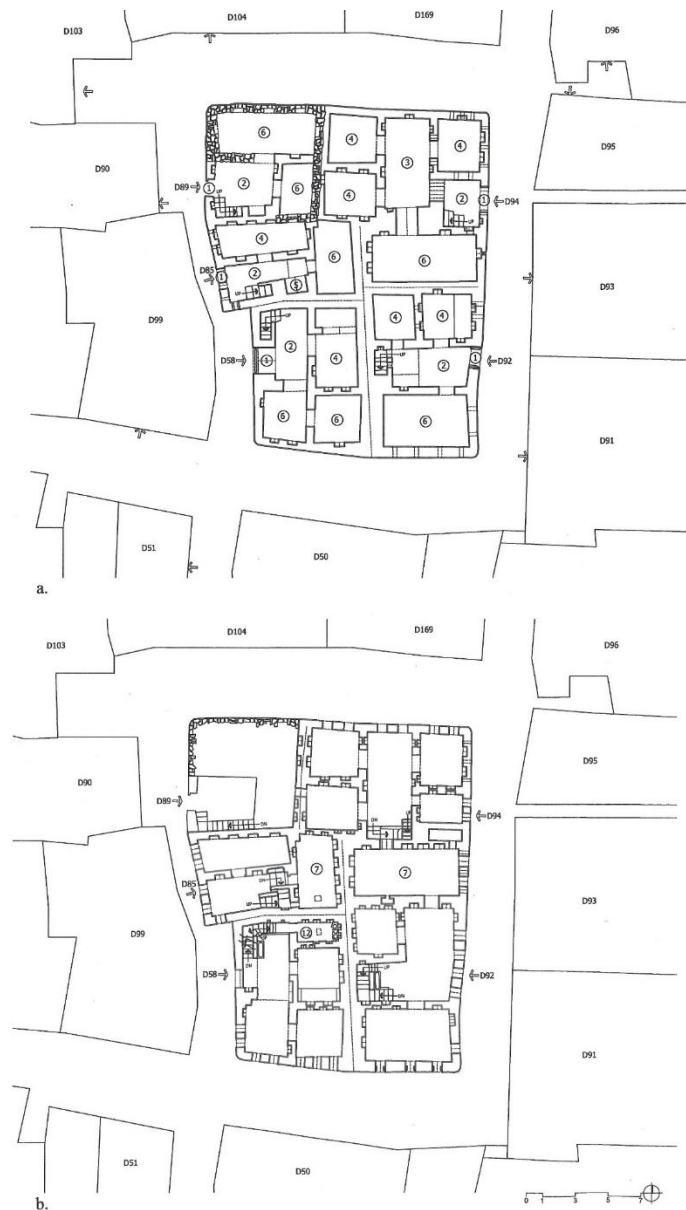
Chapter-5: Al-Hamrā & Birkat al-Mawz: Dwellings and architecture

5.1: Introduction

5.2: Description of space organisation in an Omani foothill dwelling

5.3: Topography, dwelling levels and space structure

5.4: Epilogue



Chapter-5: Al-Ḥamrā & Birkat al-Mawz Dwellings and architecture:

5.1: Introduction

The discussion on the topography and geological structure along with the outer and inner fortification zones and features (*cf.* Chapter 3), have constructed an understanding of their physical and social impact on the Ḥarāt formation. These factors continued to influence the individual dwelling formation in accordance with their location and altitude. Within the fieldwork scope of this research, the HMP documentation project on Ḥarāt as-Saybānī in 2011 made it possible to have a complete survey on all the dwellings, but in al-Ḥamrā, it was clearly not possible due to the scale of the Ḥarāt, shortage of time and doing it alone. Hence, the objective in Ḥarāt al-Ḥamrā was to survey selective dwellings reflecting different types, scale, location and social status. Many dwelling in al-Ḥamrā have remained locked or have collapsed to ruins, which could not be accessed.

This chapter will continue to discuss how the topography and surface structure influenced dwelling types, their orientation, levels, space organization and structure, and the passage widths and intersections associated with them. These will be discussed in the context of change in topographic level, the hierarchy and connection between spaces and the access points to dwellings. The discussion will then continue to address the dwelling types emerging in the context of their location and social status. It will then move to address the passage widths and intersections and their influence on dwelling formation. This will contribute to the understanding of the dwelling's architectural features and space organisation and so its environmental and social impact on the inhabitants' life and harāt formation.

5.2: Description of Space organisation in an Omani foothill

Dwellings

Before comparing the dwellings of both Ḥarāt, it is important to first introduce in general the space organisation in a traditional Omani foothill dwelling in ad'Dākhliya region. The dwelling that was chosen from Ḥarāt al-Ḥamrā is recognized to be one of the largest dwellings surveyed, called *Bait Al-Fouq* (owner: ʿAbdullah b.Saʿid Al-ʿAbrī, D72, Figure-51; numbers in parenthesis in the following two paragraphs refer to figure legend), which stands in a good condition till today. *Bait Al-Fouq* acquires its name (*Fouq*: the high or upper) from its location, its altitude and height, which stands higher than any dwelling in the Ḥarāt (Figure-108).

In general, the dwellings in the ḥarāt vary widely in height, some of them rise up to three or four floors and some are humble single storeyed houses. And for some exceptional dwellings, they tend to have basement level. The initial observation and analysis of the dwelling forms revealed that dwellings in Ḥarāt al-Ḥamrā have only small or no courtyards at all. They present a compact house type with an interior staircase and ventilation shafts in adaptation to the area's extreme summer temperatures for which even the classical courtyard house is inadequate. As for the divisions of the levels of the dwelling according to function, ground floor is principally used for storage, first floor for family living and second floor is for living if any and the roof level was the kitchen.



Figure 108: Bait al-Fouq in Ḥarāt al-Ḥamrā showing its outstanding height compared to the surrounding dwellings.

The ground floor had a dark, cool and humid atmosphere that was used for different types of storage and to keep their animals as in cows, goats and chicken. *Bait al-Fouq* had two main doors: one from the east and the other from the west. The main entrance (1), a wide double-leaf door set within a recessed arch, leads to a space called *dahrīz*, and is classified into two parts as follows:

1) The first *dahrīz*, which is the first room after entering through the main door (Plate-20; 2). This space is considered to be an intermediate space leading to two more spaces: one, through a door to a bigger *dahrīz* (Plate-20; 3), and second, to a staircase that directs to the upper level. The space below the staircase is shaped by the supporting arch and is known locally as the *ʿakad*. This space is used as storage mostly for firewood for cooking. In some of the bigger dwellings, there can be another staircase that leads to a room larger in size compared to others, and it is six to twelve risers high

on the first flight of steps leading to a landing giving access to a mezzanine-level room (Plate-20; 6). This room functions as a *majlis* or *sablah* to welcome male guests and it is locally known as *sablah*. Most often, this room is found complete with niches, shelves, weapons display and men's clothing items. It can also be found decorated sometimes with artefacts made out of wood and copper. Moreover, there were often big wooden chests (*mundooos*) that were decorated with copper nails and curved wooden stands for the *Holy Quran*. Within the space of the *majlis* there is a niche called *al-qāmra*, a small lockable shelving with doors, ornamented with big steel nails. The locking device for the *qāmra* (*murjam*) allowed it to be used by men to store money and important papers within it. At the same level of the *sablah*, there was another room called *sārḳ* (Plate-20; 8) with smaller openings than the *dahrīz* that could be reached from any staircase, which was used as a winter room. The *sārḳ* could be found at the mezzanine level of most large dwellings.

The second *dahrīz* (Plate-20; 3) was accessed from the first *dahrīz*, and this space was bigger than the first one with and more rectangular in proportion. This space contained tall niches with intermediate shelves for storing household items. From this space, many doors led to smaller rooms which are called *Ṣuffah* (sl. *ṣfif*) (Plate-20; 4), which are as follows: *Ṣuffah* for keeping the cows which is known as *Darss* (Plate-20; 5) or *Ṣorjah*, for storing the dates which is called *Al-Nathed*, and *Suffah al-khars* to store food with large clay jars (*khars*). To clarify the nomenclature of rooms, the ones on the ground floor were called *ṣuffah*, and those on the first floor were called *ghurfah*.

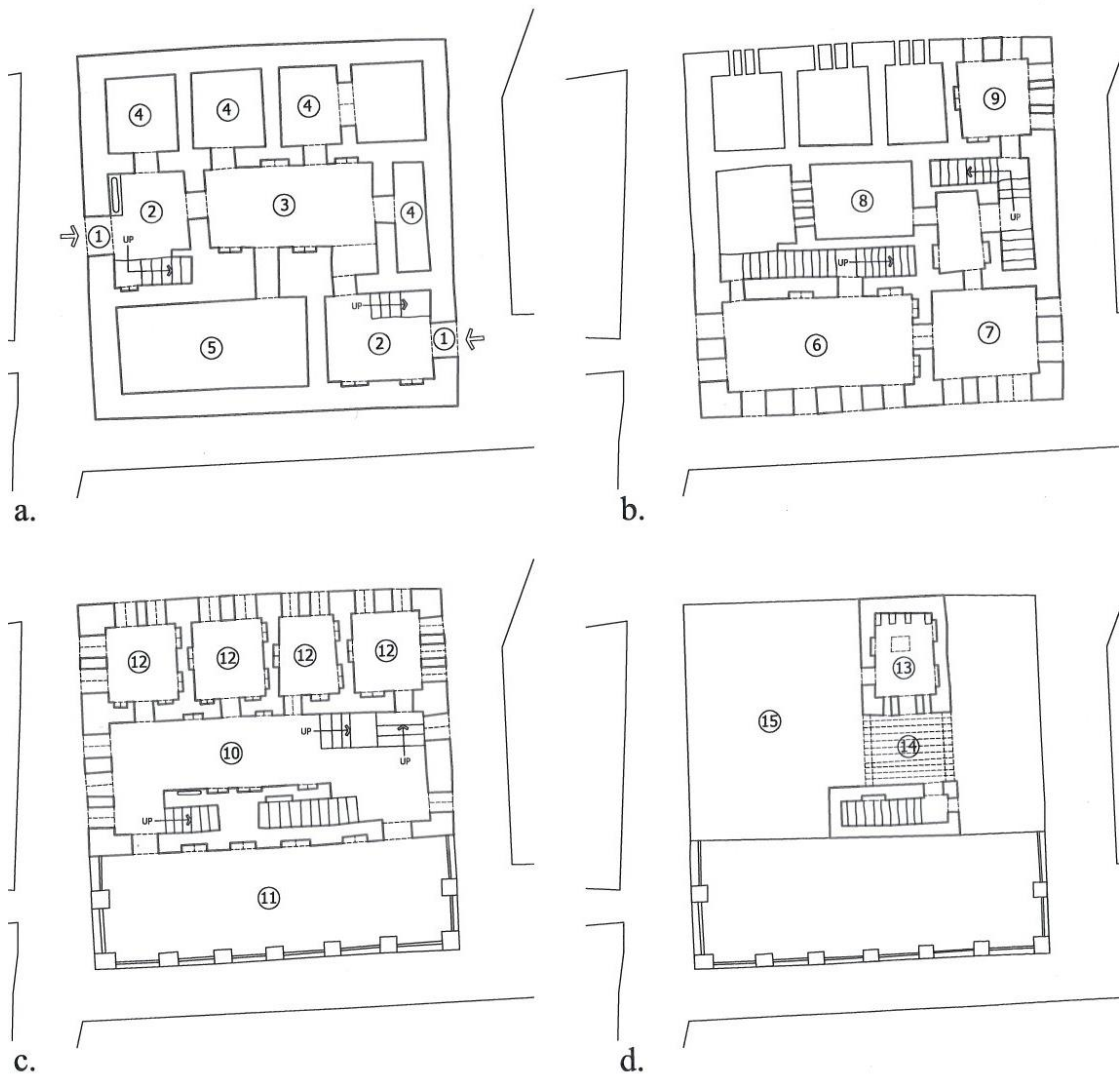


Plate 20: Floor plan of *Bait al-fouq*; a. Ground floor; b. Mezzanine level; c. First floor; d. Roof level; 1. main entrance door; 2. First *dahreez*; 3. Second *dahreez*; 4. *suffah*; 5. *darss*; 6. *sblah*; 7. small *sablah*; 8. *sark*; 9. guest room; 10. *arshah*; 11. terrance; 12. *gurafah*; 13. kitchen; 14. shade; 15. roof

As for the division of spaces on the first floor, they were categorized as follows:

1) *Al-^oarshah*, which was the first space after arriving at the top of the stairs and is considered to be a wide corridor (Plate-20; 11). This space was mostly used as a living space for the family and to have coffee and their main traditional meals. Additionally, it was used as a *majlis* for welcoming female gusts. In some of the dwellings the *arshah* leads to a terrace (Plate-20; 11). The terrace was sometimes prepared from the construction stage to be an additional room in the future as a possible extension according to the family's needs.

2) As for the rooms (*ghurf*), they featured a series of high level pointed-arched niches (Plate-20; b). The niche was divided by wooden shelves into three tiers, called *ruff* or *roozna* (Figure-109; 12). The first from the bottom was often a big window (*mişbāḥ*), the second was a smaller window and the third top was a small opening (*mrāq*). This variation in opening size provided good ventilation and daylight into the room. There were normally three rooms, but sometimes two or even more. When there were three rooms, the first room was for the father alone, the second was for the mother and women and the third was used by the boys, an arrangement followed the Islamic instructions for separating the boys from the girls. If it were to be two rooms, then the boys shared their father's room. Within the *‘arshah* there were pointed-arched recesses in the wall, one of which often contained a small rectangular trough rendered with *sarooj*,¹⁰⁹ placed about one meter above floor level. About one and a half meter above the trough there was a long piece of wood which usually had three or more hooks to hang the porous spherical clay water jars (*jaḥla*), suspended from the piece of wood by rope made from palm trees (*leef*). At the open mouth of the *jaḥla*, was placed a clay cup (*kabul*), which the drinker used as a cup and if he had poured more than what he needed, he would pour the rest in the trough which could be used for other purposes later.

¹⁰⁹ *Aljus* or *Sarooj*, which is prepared by mixing the mud soil with water then left to dry till three quarter of water, is absorbed. Then they shape out of it round shape which will be aligned on the date tree trunk which is called *Juthua* (pl.4). while they are positioned horizontally on the ground and so they will be put on fire for one whole night. After burning it, they take the round shapes which will be found in two colors, brown and white. The brown ones are *Sarooj* while the white ones are called *Noorah* which is used in traditional medicine in repairing broken bones. They take the *Sarooj* and mix it with more water till it is ready for construction. This type of mud or *Sarooj* is mostly used on the exterior render of the foundations of the house because it protects the building from corrosions aspects. The *Sarooj* is considered to be an expensive material because the process of preparing it requires buying date tree trunks which is called *guthua* from any farmer who has cut down his date tree. The *sarooj* was considered an expensive material because of the high expense of the *jutha*. The charge for *jutha* was one *kersh* which is equal to 10 rials nowadays. The *guthua* was used in this process because it can last on fire for more than one day. The best two palm date trees that were preferred to extract *juthua* from the *farth* and *khusab*.

From the *‘arshah* there was a staircase that directed the person to the roof where the kitchen was, and in the big dwellings there could be covered space which was used as living room. The kitchen was located on the roof for many reasons: to limit damage in case of a fire, but also to get rid of the smoke from the fireplace and the black marks the smoke left behind (*halak*). The fireplace had a small rim base on the kitchen floor to place the cooking pots on (*tafiyah*). There was an opening close to the centre of the kitchen ceiling (*farkhah*) that had two main functions: to provide daylight (also found in the room, *ghurfah* and *‘arshah*), but also to ensure that the sun's penetration acted as a sterilizer. The other function of the *farkhah* was to provide ventilation as it allowed enhanced air movement. It was important to highlight that some dwellings had the kitchen on the first floor terrace, performing a similar function.

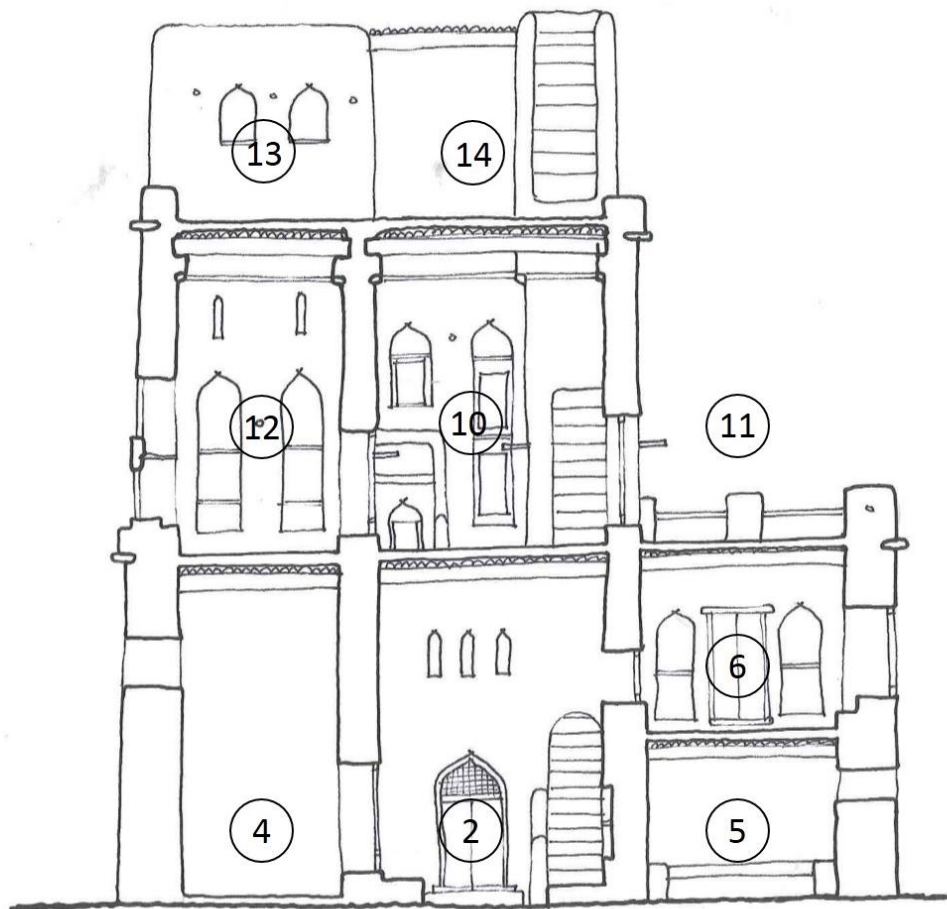


Figure 109: A section cutting through the *Bait al-Fouq* (D72) from north to south from the first entrance; 2. *dahreez* at the entrance; 4. *suffah*; 5. *darss*; 6. *majlis*; 10. *arshah*; 11. *terrace*; 12. *ghurfah*; 13. *Kitchen*; 14. Overhead shade.

5.3: Topography, dwellings level and space structure

The dwellings in Ḥarāt al-Ḥamrā and Ḥarāt as-Saybānī, although established in the same period, varied according to respective topographic influences and social needs (*cf.* chapter 3). They also varied in scale but also in function – from three-floor large dwellings to single storeyed ones. The dwellings selected between the two harāt are as comparable as possible in location and altitude. The location of the selected dwellings in Ḥarāt al-Ḥamrā are shown in Figure-110 and in Table-9, while the location of the selected dwellings in Ḥarāt as-Saybānī are shown in (Figure-111) and in Table-10. These selected dwellings share similarity in location and formation types of individual dwellings, cluster dwellings, open spaces clusters and linear dwellings. The details in Table-9 & 10 reveals that Ḥarāt al-Ḥamrā has an extra dwelling functionality of animal pen house (AP). It is presented in a single story forming individually (D83) or in cluster (D63 & D89) indicating the wealth of the inhabitants in animal stock and space availability. These, however, form part of the lower level of dwellings.

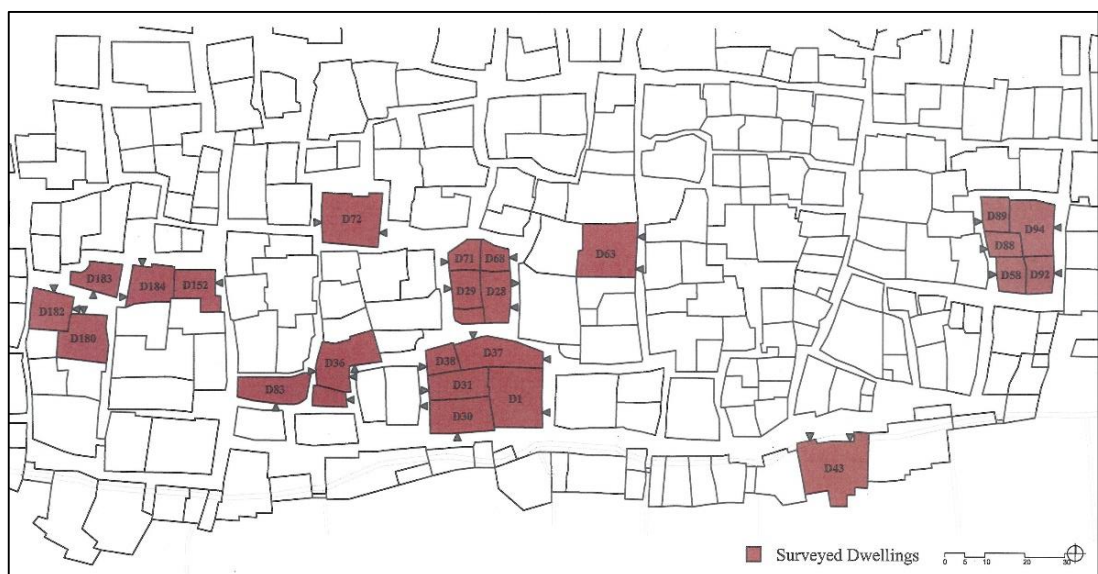


Figure 110: Plan of Ḥarāt al-Ḥamrā showing the location of the selected surveyed dwellings for comparison.

Surveyed Dwellings Details of Ḥarāt al-Ḥamrā						
No	Tribe	location	formation	No. floors	function	No. access
D1+D37	°Abrī	Lower centre	Cluster	G+1+2	R+AP	4
D28	°Abrī	Upper centre	Cluster	G+1	R+AP	1
D29	°Abrī	Upper centre	Cluster	G+1	R+AP	1
D30	°Abrī	Lower centre	Cluster	G+1+m+2	R+AP	1
D31	°Abrī	Lower centre	Cluster	G+1+2	R+AP	1
D36	°Abrī	Lower centre	Cluster	G+M+1+2+m	R+AP	4
D38	°Abrī	Lower centre	Cluster	G+1	R+AP	1
D43	°Abrī	Lower east	Leaner	G+M+1+m+2	R+AP	3
D58	°Abrī	Upper east	Cluster	G+1+M	R+AP	1
D63	°Abrī	Upper centre	Cluster	G+M+1	R+AP	2
D68	°Abrī	Upper centre	Cluster	G	AP	1
D71	Sharmḥī	Upper centre	Cluster	G+1	R+AP	1
D72	°Abrī	Upper centre	Individual	G+M+1+m+2	R+AP	2
D83	Sharmḥī	Lower centre	Individual	G	AP	1
D88	°Abrī	Upper east	Cluster	G+M+1+m	R+AP	1
D89	°Abrī	Upper east	Cluster	G	AP	1
D92+D94	°Abrī	Upper east	Cluster	G+M+1+m	R+AP	2
D152	°Azizī	Upper west	Cluster	G+M+1+m	R+AP	2
D180	°Abrī	Upper west	Space cluster	G+1	R+AP	1
D182	°Abrī	Upper west	Space cluster	G+1+2	R+AP	2
D183	°Abrī	Upper west	Space cluster + Individual	G+M+1+2	R+AP	1
D184	°Abrī	Upper west	Space cluster	G+M+1+m	R+AP	2

Note: G: Ground floor, M: Mezzanine (1), 1: First floor, 2: Second floor, m: Mezzanine (2)
R: Residential, AP: Animal pin

Table 9: Detailed list of the surveyed dwelling in Ḥarāt al-Ḥamrā with reference to Figure-106.

Surveyed Dwellings Details of Ḥarāt as-Saybānī						
No	Tribe	location	formation	No. floors	function	No. access
DS9	Siyābī	Upper edge	Space cluster + Individual	G+1	R + AP	2
DS16	Siyābī	Upper edge	Space cluster	G+1	R + AP	1
DS17	Siyābī	Upper edge	Space cluster + Individual	G+1	R + AP	1
DS18	Siyābī	Upper edge	Space cluster	G+1	R + AP	1
DS29	Fahdī	Centre	Cluster	G+M+1	R + AP	1
DS30	Tubī	Centre	Cluster	M+G+m+1+2	R + AP	1
DS46	Tubī	Centre	Cluster	G+1+M	R + AP	2
DS49	Tubī	Centre	Cluster	G+M+1	R + AP	1
DS50	Tubī	Centre	Cluster	G+1	R + AP	3
DS51	Şakrī	Centre	Cluster	G+1	R + AP	2
DS52	°Abrī	South edge	Leaner	G+1+2	R + AP	4

Note: G: Ground floor, M: Mezzanine (1), 1: First floor, 2: Second floor, m: Mezzanine (2)
R: Residential, AP: Animal pin

Table 10: Detailed list of the surveyed dwelling in Ḥarāt as-Saybānī with reference to Figure-107.

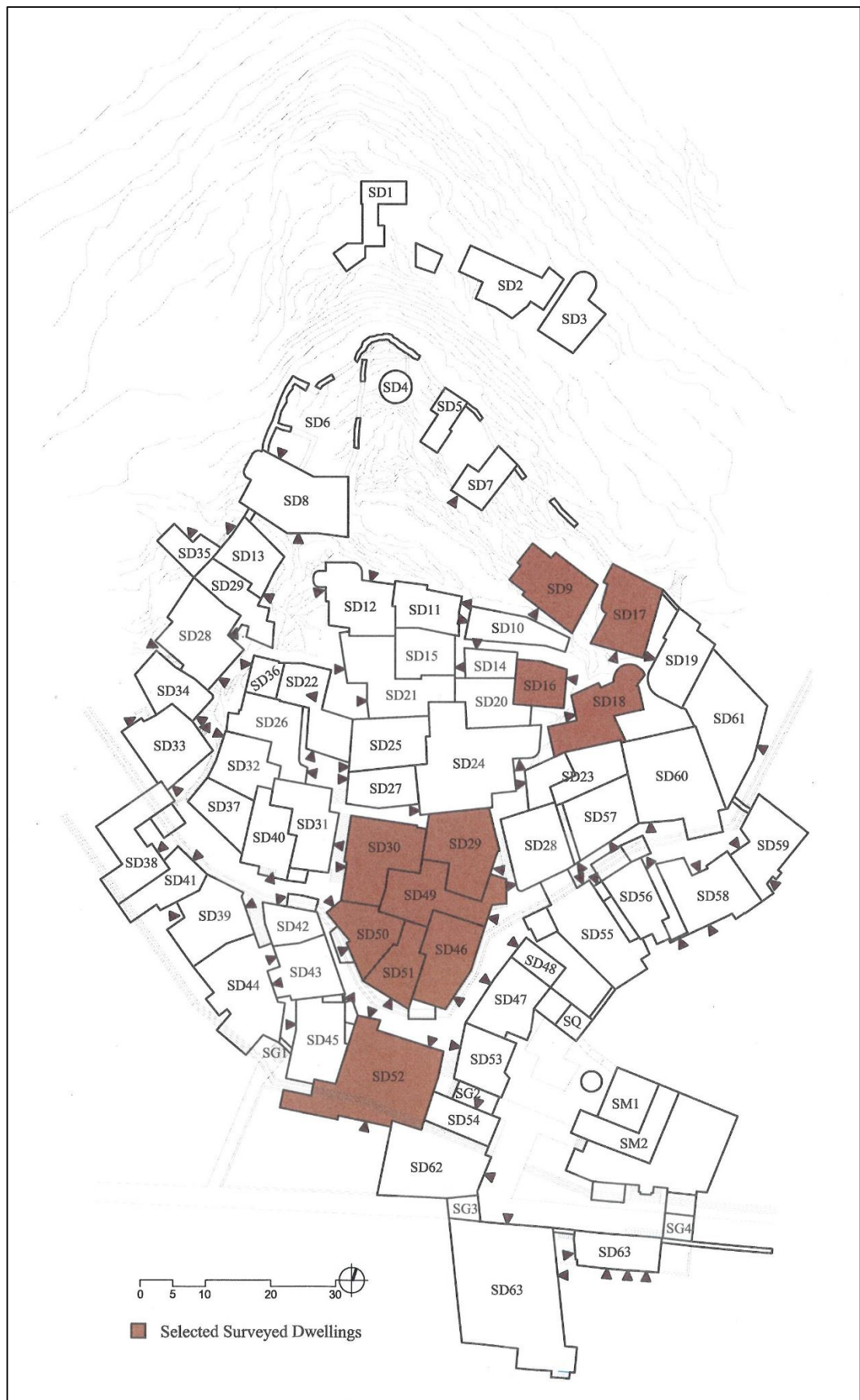


Figure 111: Plan of Ḥarāt as-Saybānī showing the location of the selected surveyed dwellings for comparison.

The selected dwelling have mezzanine levels which in many instances indicate the influence of topography. As a result, in Ḥarāt as-Saybānī the mezzanine levels were clearly a product of limitations in built-up area, while in Ḥarāt al-Ḥamrā, it was more an optional extra, reliant on the owner's wealth. Yet, both managed to reflect efficiency in space use and negotiation with topography. The tables also reveal that the open space dwelling clusters in Ḥarāt as-Saybānī (SD9, SD16, SD17, & SD18) are constructed on a natural rock foundation were without mezzanine levels. The predominant dwelling type in both ḥarāt tends to be of two floors or more with some containing mezzanine levels. The dwelling types and space organisation is compared below highlighting their main features and their social impact on ḥarāt formation.

The isolated dwelling type

The isolated dwellings compared here are the ʿAbriyīn dwelling D183 from Ḥarāt al-Ḥamrā and the Siyābiyīn dwelling SD9 from Ḥarāt as-Saybānī (Figure-110 & 111). From the locational perspective, the individual dwelling in Ḥarāt al-Ḥamrā tended to be located at the centre of the ḥarāt between other dwelling clusters, while that of Ḥarāt as-Saybānī were present on the edge of the ḥarāt (i.e., on the north edge, *cf.* Chapter 4). This locational factor played an important role in the orientation and form of the dwellings. In Ḥarāt al-Ḥamrā, the D183 was shaped in alignment with surrounding dwellings and passages (Plate-21). While in Ḥarāt as-Saybānī, the orientation and form of SD9 is more influenced by the steepness of the slope and rocky structure (Plate-24). The locational factor also extends its influence on to dwelling accessibility. There was more flexibility in choosing access points in D183, although the pre-existence of communal open space made it desirable to be accessed from that direction. The access for SD9 was predetermined by the only access passage, which was from the south side from the lowest level. From constructional and scalar perspective, individual dwellings

in al-Ḥamrā had double height ceilings, rising up to three floors, while at as-Saybānī they were mostly of lower height and of two floors.

From functional and social point of view, the ground floor was devoted to the household storage of date (*naḍid*), food (*khars*, pl. *khurus*) or (*ṣuffah*, pl. *ṣufif*), equipment¹¹⁰ and animal pens (*darss* or *ṣorjah*) for domesticates (*housh*)¹¹¹. This is also found in as-Saybānī dwellings, but the significant topographic incline in as-Saybānī contributed towards externally accessible animal pens, usually from a lower topographic level (i.e., SD9). The *dahreez* not only functioned as a transitory space, but also consist of divers architectural features of stairs (*durjah*, pl. *draj*), large arches and openings, and deferent niches which clearly indicate its use also as multi-storage space. These features indicate the multi-purpose nature of the space used by men and women ‘... to carry out daily chores, for toddlers to play, for the storage of agricultural produce and fodder, and also importantly, as the space for the women of the neighbourhood to meet during their ritual coffee meets (*duhá* and *ta^casir*)’ (Bandyopadhyay, Quattrone & Al-^cAbrī, 2013, p. 32). The transition also extends to be in the amount of light (from lighter to darker space), and in function (from general to specific) in each space, which also reflects the social transition in privacy. This ground floor spatial organisation was also found in some dwellings of Ḥarāt al-Bilād in Manah, Ḥarāt al-^cAqr in Bahla and Ḥarāt as-Sulaif in ^cIbrī. However, it is absent dwellings in al-Yemen in Izkī, where the courtyard is a distinctive feature accessed

¹¹⁰ The equipment are mostly for farming and they are normally stored by hanging them in the wooden poles projecting from the wall (*watad*, pl. *awtād*), and some are placed under the stairs niche (*‘aqid*, pl. *‘auqad*). The other equipment for handcraft are usually stored in the room niches in the upper floor.

¹¹¹ *Hoosh* is a local term which includes all types of domesticates, mainly of goats (*ghanam*) and cows (*baqar*) whom are placed in separate rooms.

directly from the main entrance and the upper floors of dwellings are accessed through large terraces (*ibid*, p. 33).

The upper floors at al-Wista (Plate-21) contain the living accommodation, which as already noted, consist of the living space (*‘arsha*) and rooms (*ghuraf*). The first floor layout was considered in terms of the staircase location to ensure more privacy:

‘...The positioning, alignment and design of the staircase ensures that the upper level is hidden from view from the entrance area on the ground floor. The rooms on the first floor are generally organised around a terrace, normally situated above the ground floor multi-purpose room’ (Bandyopadhyay, Quattrone & Al-‘Abrī, 2013, p. 33).

The dwelling scale of al-Ḥamrā is large (e.g., D183), this is evident from the introduction of a column in the middle of the living space (*‘arsha*) on the first floor (8, Plate-21). The kitchen in D183 formed part of the roof with a shaded spaces connecting it to the stairs on the second floor, while it was located in the first floor in SD9 with small ventilation openings in the wall. The double height ceiling in D183 provided opportunity for the introduction of a mezzanine level (*muqāmrah*) for a private male meeting hall (*sabla*) above the animal pen. The double height ceiling also presented openings at the top of the walls near the ceiling narrow slit-like openings in the ground floor and porthole-like openings in the first floor, both for ventilation (2, Figure-109). The dwelling D183 is also signified by having two *dahreez* (2 & 3, Plate-18 & Plate-19) on the ground floor which reflects the dwelling’s scale and the owner’s wealth. Additionally, D183 was enriched with not only painted and decorated ceilings with

varied motifs¹¹², but also mud decorative reliefs which framed the doors (Plate-22). The multi-shelfed high niches with double windows also signified another important architectural feature of Ḥarāt al-Ḥamrā dwellings; these contribute to the better ventilation of the inside space (Plate-22).

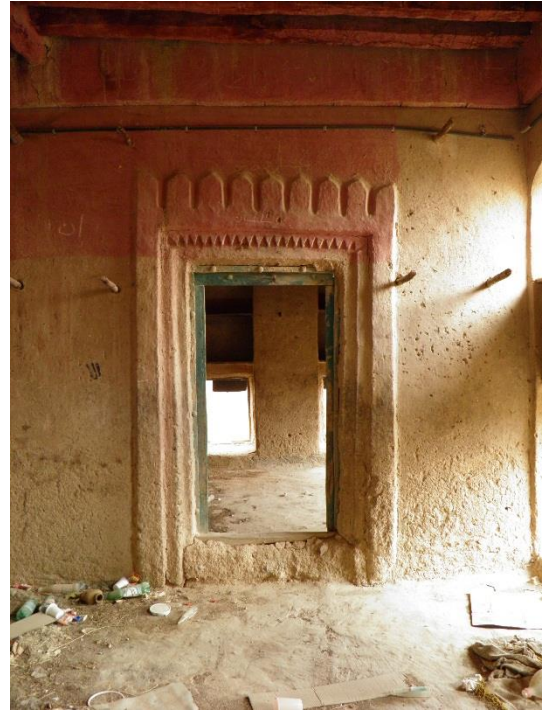


Plate 21: Floor plan of D183; a. Ground floor; b. Mezzanine level; c. First floor; d. Roof and second floor; 1. main entrance door; 2. First *dahreez*; 3. Second *dahreez*; 4. *suffah*; 5. *‘aqid*; 6. *darss*; 6. *sblah*; 7. *sblah*; 8. *‘arshah*; 9. *guraḥah*; 10. shade; 11. Kitchen.

¹¹² The paint helps to preserve the palm timber (*Jithaʿ*; pl. *juthuʿ*) from deterioration from termites. The decoration varies from simple geometric patterns, to more elaborate geometries and floral motifs to Arabic inscriptions.



a.

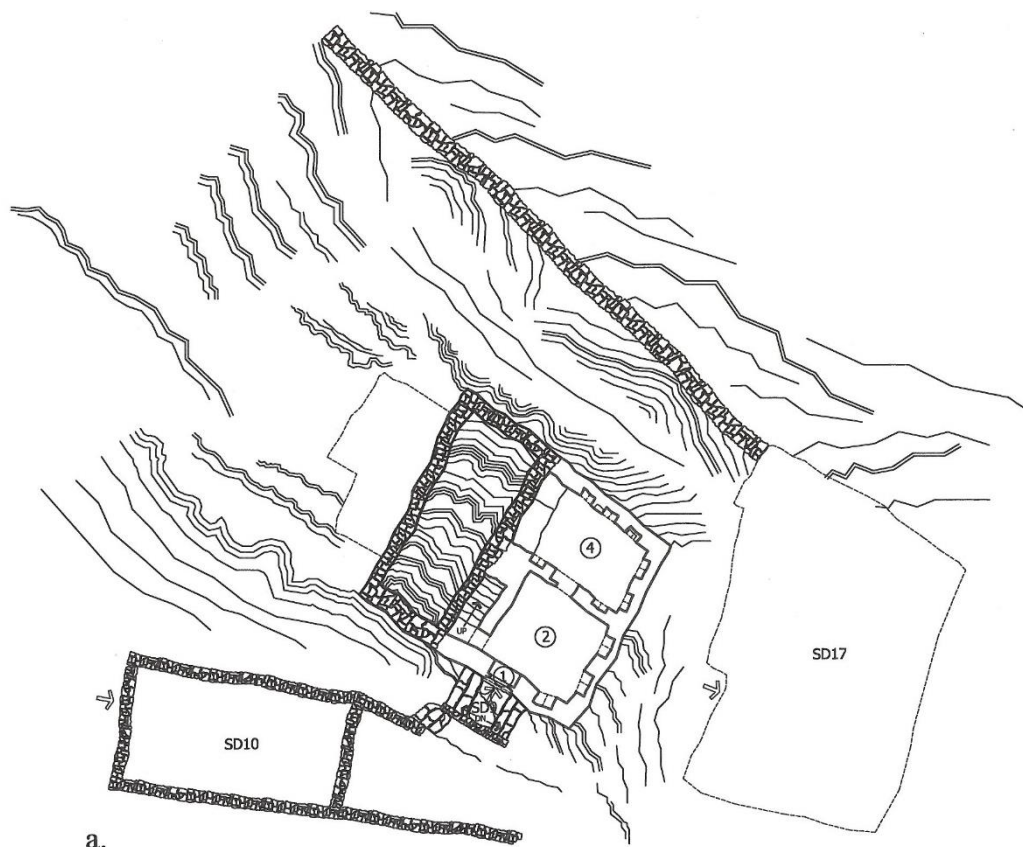


b.

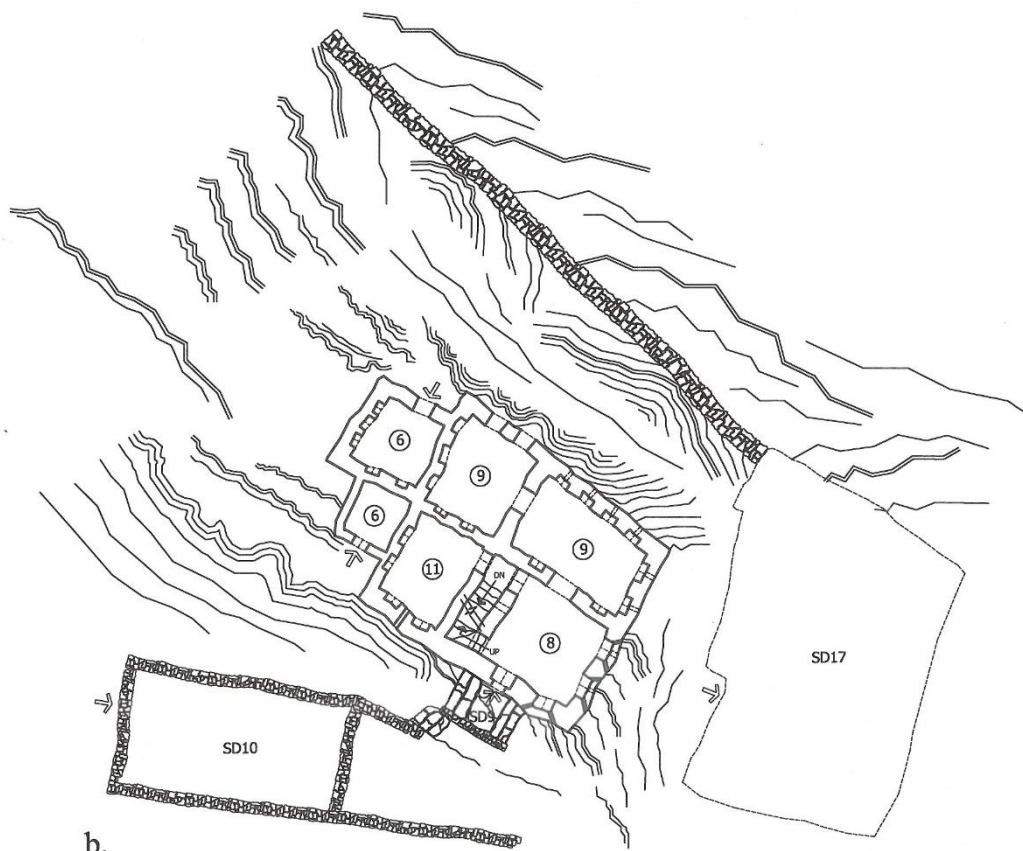


c.

Plate 22: Plate 23: Individual dwelling D183 in Ḥarāt al-Ḥamrā; a. Front elevation; b. Mud decorative high reliefs framing the doors; c. central column (*naqsha*) in the living area (*‘arsha*).



a.



b.

Plate 24: Floor plan of SD9; a. Ground floor; b. First floor; 1. main entrance door; 2. First *dahreez*; 4. *suffah*; 6. *darss*; 8. *arshah*; 9. *gurafah*; 11. Kitchen.



a.



b.

Plate 25: Individual dwelling SD9 in Ḥarāt as-Saybānī; a. Front elevation perspective; b. Animal pin accessed from outside the dwelling.

Dwelling Cluster

Dwelling clusters consist of two or more dwellings attached back-to-back or on the side forming a block of dwellings. The dwelling cluster selected for comparison are the ʿAbriyīn dwellings (D85, D89, D92 & D94) from Ḥarāt al-Ḥamrā, and the cluster of the Tobī (SD30, SD46, SD49 & SD50), Fahdī (SD29), and Ṣaqrī (SD51) dwellings from Ḥarāt as-Saybānī (Figure-108 & 109; the Ḥarāt as-Saybānī dwelling cluster is presented in two separate drawings due to the change in level). The dwellings SD29, SD30 & SD49 are in the upper level (Plate-26), while dwellings SD46, SD50 & SD51 are in a lower level (Plate-25). The dwelling cluster in Ḥarāt al-Ḥamrā had more flexibility in forming without constraints given that these were surrounded by passages, which resulted in the grid-like pattern (Plate-26 & 27). The dwelling cluster in Ḥarāt as-Saybānī is more constrained by the pre-existing dwellings (i.e. SD30 & SD49), topographic restrictions and the configuration of the *falaj* channel, which produced the fan-like pattern, producing the interlocking between dwellings (Plate-28). The scale of the dwelling clusters and the width of the passages surrounding them in al-Ḥamrā is evident from the flexibility and space availability.

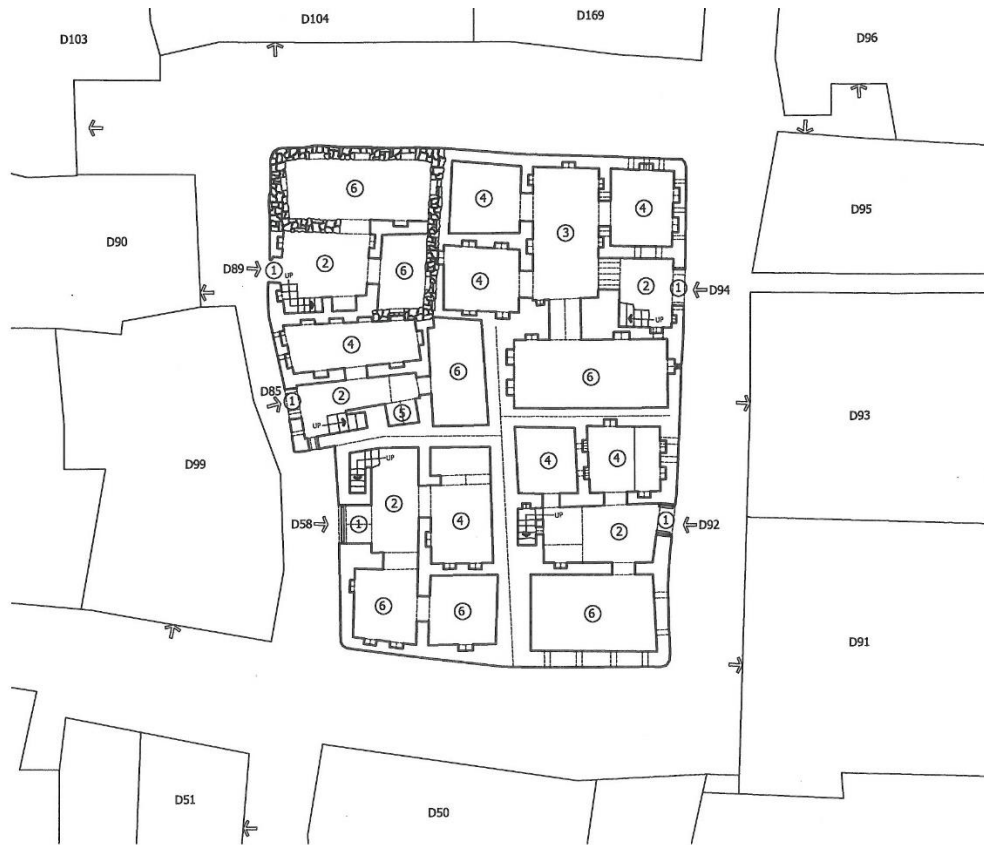
The floor levels function similarly to the individual dwellings, but the space organisation tends to distribute and connect differently. The space organisation in the ground floor of dwellings D85, D89, D92 & D94 tended to be connected through a transitory space (*dahrīz*) which also had stairs leading to the upper floor, and there were two *dahrīz*¹¹³ connected by an arch (*ʿaqid*, pl. *ʿauqud*) in bigger dwellings (i.e., D94). While the space organisation in the ground floor in as-Saybānī dwelling cluster tended to be in longitudinal of deep space transition corridor-like connected through

¹¹³ The second *dahrīz* mostly tends to be bigger and darker than the first one (i.e. D94).

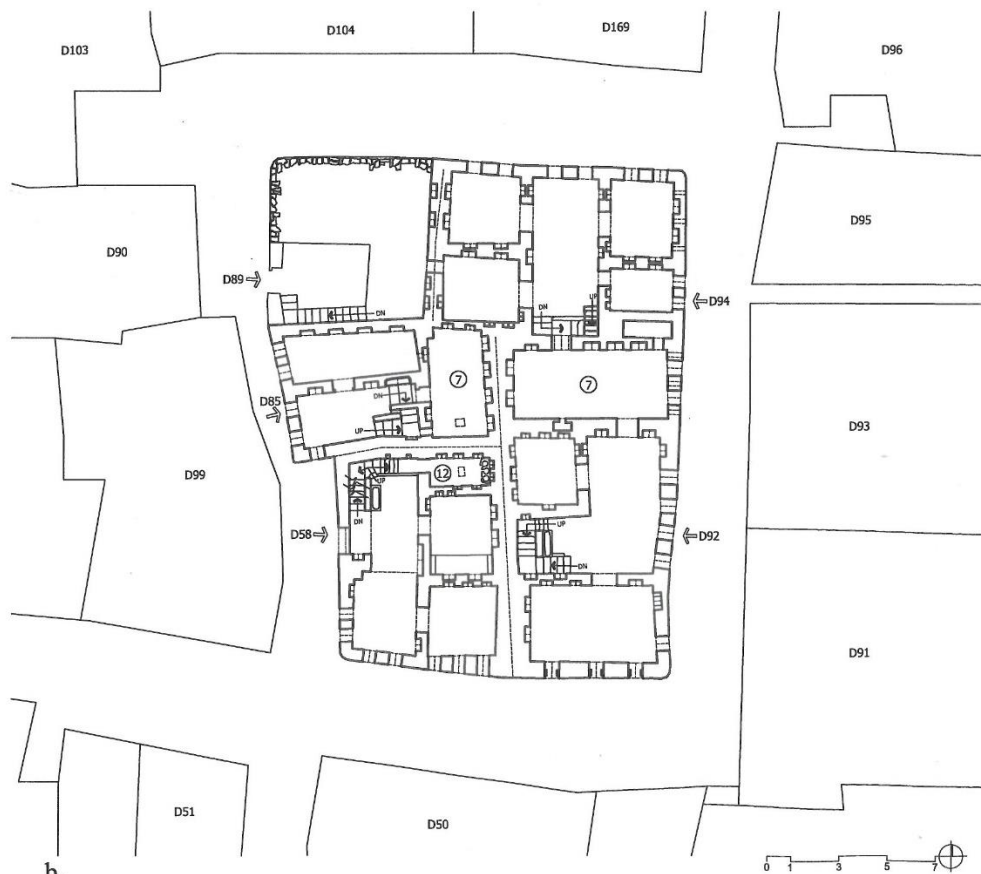
arches (i.e. SD46, SD49, SD51 & SD51), (Plate-28). The steep incline in as-Saybānī had also influenced the deep transition, were there were steps under arches characterising transitions. The resultant spatial depth in as-Saybānī had resulted in the use of roof lights shafts from internal (i.e. SD46, SD49 & SD51) or external (i.e. SD30) first floor terraces, shedding light into some of the deep dark rooms on the ground floor. The steep incline has also influenced the individual rooms on the ground floor, which resulted in enhanced height of door and arched openings as thresholds associated with steps (Figure-112).

The smooth incline in al-Ḥamrā made it possible to have a shared but private *sabla* between D92 and D94, which were both owned by the same family. While the steep incline in as-Saybānī made the *sabla* have direct access with its own stairs from the *dahrīz* (i.e. SD30), or have access from outside the dwelling (i.e. SD49) through a semi-private space, and indicating the stairs being constructed at a later time (Plate-29). The early type of *sabla* in as-Saybānī is also found in the Sawwaqiyyin dwelling cluster in Ḥarāt al-Bilād in Manaḥ (10, dwelling C, Figure-113). The stairs as discussed in the individual dwellings are also located the in the first *dahrīz* in the ground floor of the dwelling clusters. While in as-Saybānī they were found in two forms, one similar to al-Ḥamrā (i.e. SD46, SD50 & SD51), and in the other it was present in the second *dahrīz* (i.e. SD29, SD30 & SD49). The latter type resulted in the introduction of roof lights providing daylight into the dark space in the ground floor. The smooth incline in al-Ḥamrā also made dwelling cluster height approximately similar which contributed in making the women easily exchange visits from the roof, and also as a defence strategy by becoming an escape route if necessary. The steep incline in as-

Saybānī, on the other hand, created substantial height differences between dwellings making it difficult to connect through the roofs.

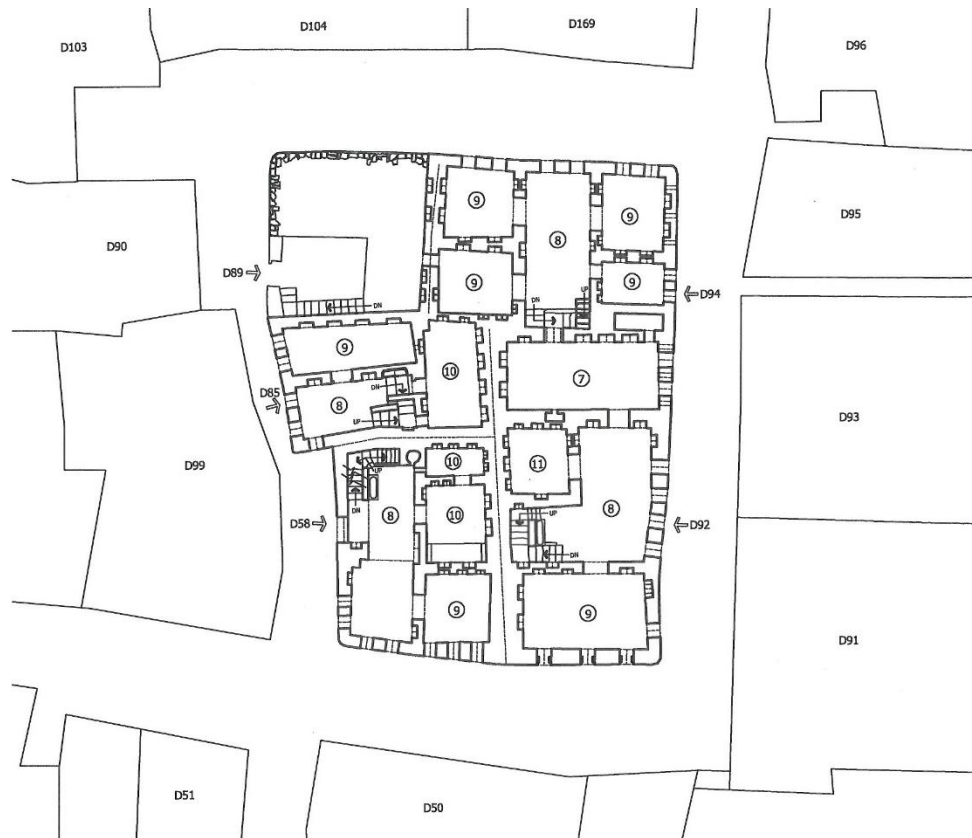


a.

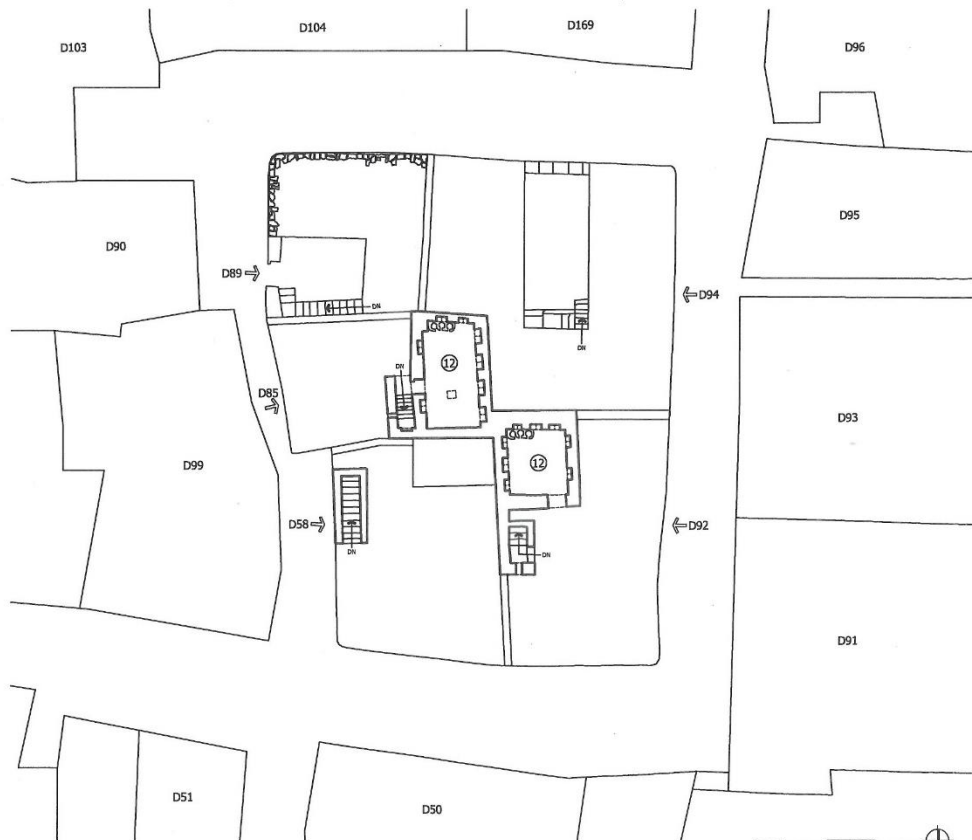


b.

Plate 26: Floor plan of dwelling cluster D85, D89, D92 & D94; a. Ground floor; b. Mezzanine level; 1. main entrance door; 2. First *dahreez*; 3. Second *dahreez*; 4. *suffah*; 5. *‘aqid*; 6. *darss*; 6.sblah; 7. *sablah*; 8. *‘arshah*; 9. *gurafah*; 10. shade; 11. Kitchen.



c.



d.

Plate 27: Continue of floor plans from Plate-19 of dwelling cluster D85, D89, D92 & D94; c. First floor; d. Roof and second floor; 1. main entrance door; 2. First dahreez; 3. Second dahreez; 4. suffah; 5. 'aqid; 6. darss; 6.sblah; 7. sablah; 8. 'arshah; 9.gurafah; 10. shade; 11. Kitchen store ; 12. Kitchen.



Plate 28: Floor plans of dwelling cluster SD46, SD50 & SD51; *a.* Ground floor; *b.* First floor; *c.* Roof and second floor; 1. main entrance door; 2. First *dahreez*; 3. Second *dahreez*; 4. *suffah*; 5. *‘aqid*; 6. *darss*; 8. *‘arshah*; 9. *gurafah*; 11. Kitchen store; 12. Kitchen; 14. Latrine.

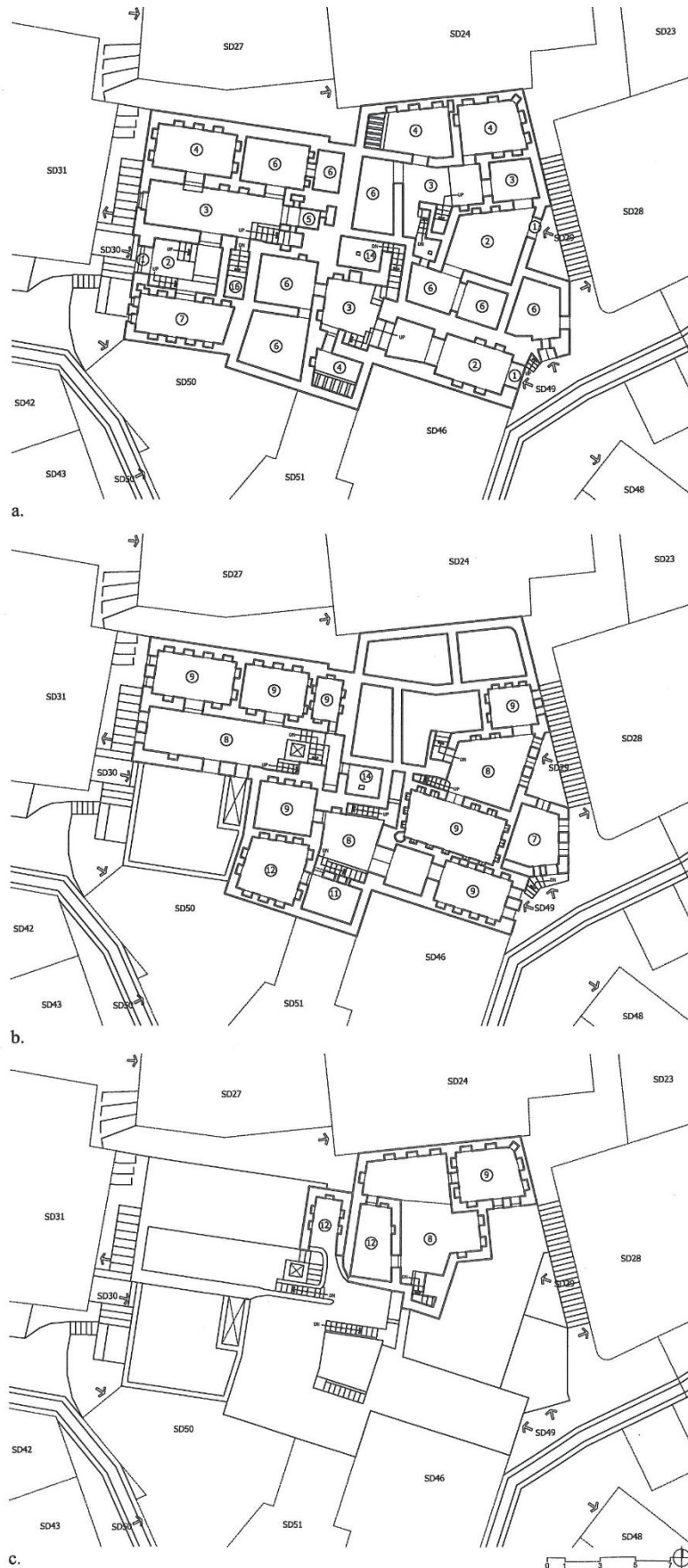


Plate 29: Floor plans of dwelling cluster SD29, SD30 & SD49; a. Ground floor; b. First floor; d. Roof and second floor; 1. main entrance door; 2. First *dahreez*; 3. Second *dahreez*; 4. *suffah*; 5. *‘aqid*; 6. *darss*; 7. *Sablah*; 8. *‘arshah*; 9. *gurafah*; 11. Kitchen store; 12. Kitchen; 14. Latrine; 16. Light shaft.



Figure 112: Section through dwelling SD30 in Ḥarāt as-Saybānī; 1. Entrance door; 2. First *dahrīz*; 3. Second *dahrīz*; 4. *suffah*; 8. *arshah*; 9. *guraḥah*.

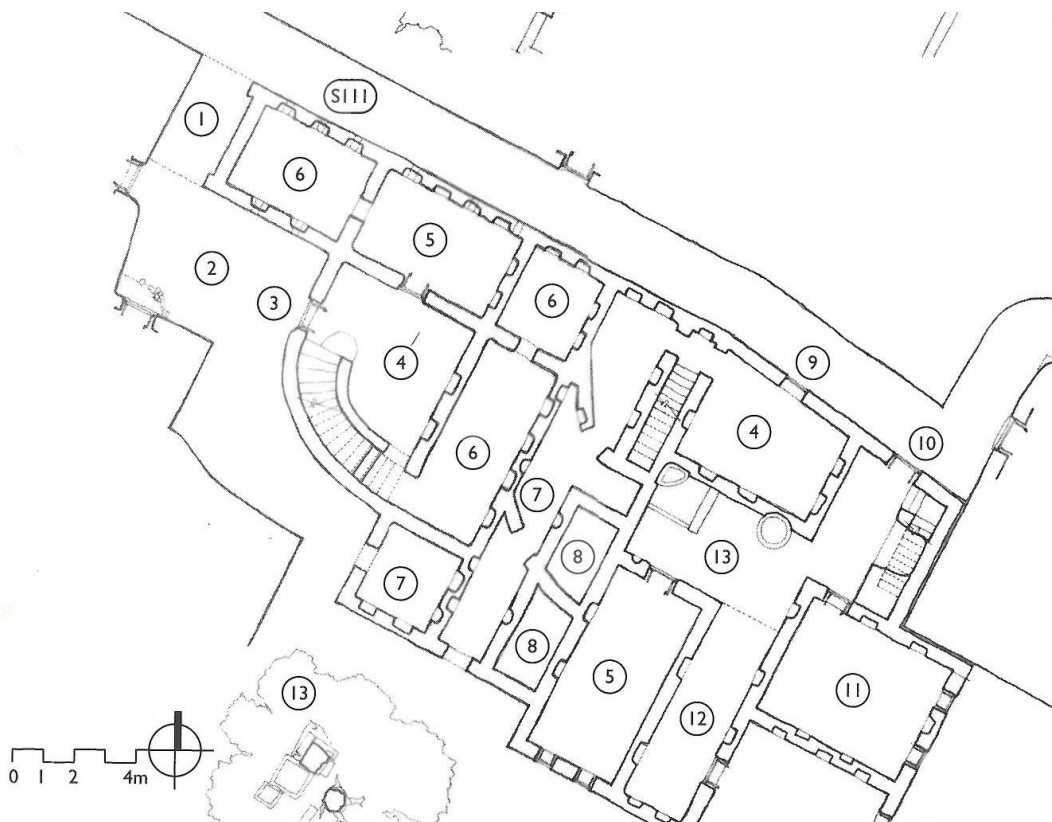


Figure 113: The ground floor of the Sawwaqiyyin dwelling cluster in Ḥarāt al-Bilād in Manah; 1. Covered passage; 2. Courtyard; 3. Entrance to dwelling A; 4. Lounge; 5. Room; 6. Store; 7. Pen; 8. Pit for latrine; 9. Entrance to dwelling B; 10. Entrance to dwelling C; 11. Sabla; 12. loggia; 13. Well and bathing area; S111; Sikkat al-Ghuwayr. (after Bandyopadhyay, 2011, Figure-42, p.122).

In comparison to other traditional settlements, the dwelling clusters in Ḥarāt al-Bilād in Manah is the most dominant type forming in a plain topography arable land (Figure-116). These dwelling clusters tend to form in regular large and dense blocks and reflecting clear tribal mosaic clusters (Bandyopadhyay, 2011, p. 133). These large clusters are the result of settlement formation around mosques¹¹⁴ and key passage ways and gates, and the reorganisation leading to the disappearance of earlier passages, giving rise to very deep back-to-back developments (*ibid*, p. 173). Bandyopadhyay describes the settlement's morphology in a sequence of shift and transformation in passages and courtyards which eventually resulted in the large dwelling clusters.

“The gradual transformation of open streets to covered passages and their eventual incorporation within private properties could be evidenced in many places in Ḥarāt al-Bilad. The covering over of an open street along the northern wall (originally an open space) ... and the gradual conversion of a communal passage into a courtyard within an Al Bu Sa'id dwelling cluster (Chapter 5: fig. 23), are examples of such transformations” (Bandyopadhyay, 2011, p. 167).

The impact on the settlement's evolution (gradual shift and transformation) has emerged from the continuous arrival and settling of major tribal groupings - the Banī Riyam, Hubus, Banī Ruwahah, ʿAwamir, Hirth, Banī Hinah, ʿAbriyīn and the Bani Kharus. This reflected in their tribe cluster dwellings, male meeting halls (*sabla*), and communal water wells (*ṭawī*) and associated facilities.

¹¹⁴ This principle in development starting with the mosque is found in most of the Islamic settlement, which is ideally guided by the first Islamic settlement in the world by the Prophet Mohammed in 662 AD. The Prophet started his planning by constructing a mosque in the centre of the city, they followed by distributing the quarters and dwellings to the immigrants, tribes and other people. Hence, this urban pattern became a planning standard for later traditional Islamic settlements (Mortada, 2003, p. 58). The mosque not only is a religious centre but also becomes the focus for more social and political activities (Bandyopadhyay, 2011, p. 178).

Ḥarāt al-^ʿAqr in Bahla oasis¹¹⁵ (comprised of three urban nuclei, al-^ʿAqr, al-Ghuzaili and al-Ḥawiya), forms a ring embraced around a hillock (Figure-117), which is crowned in its apex by the Ḥusin¹¹⁶ and the Great Mosque¹¹⁷ (Bandyopadhyay, 2005, p. 24). The *ḥarāt* (3) forms a linear arrangement with the Great Mosque (2), Ḥusin (1) and the *suuq* (4) (Figure-117). These three nuclei integrate forming dwelling clusters in a more or less homogeneous sickle-shape forming a ring around the mosque and extends in two prongs on the eastern and southern foot of the fort (Bandyopadhyay *et al.*, 2013, p. 28). This dwelling cluster formation is influenced by the foothill form of the Great Mosque and fort, hemmed by the palm groves and multi-level *falaj* channels on the lower hill side (*ibid*, p. 29).

While in Ḥarāt al-^ʿAqr in Sufālat (Lower) Nizwa which developed similarly to Bahla within a walled agriculture land, the dwelling cluster tends to integrate in a shallow linear pattern to retain and protect the agriculture land (Bandyopadhyay, 2011, p. 173). Their core settlement formation seemed to be influenced also in a similar way to Manaḥ around the oldest mosque (Masjid ash-Shawadhinah)¹¹⁸, (1, Figure-115), dating back to 14 AH / 1529 AD (Bandyopadhyay, 2005, p. 28). Bandyopadhyay describes the linear formation extending from the dense and complex clusters, core settlement (area 500, Figure-114) resulting from the existence of older tribes, complex

¹¹⁵ A large walled oasis in a defensive setup and one of the most important historic pre-Islamic settlements and listed in the World Heritage Site (WHS) in UNESCO since 1988 (Bandyopadhyay S., 2013, p. 11). The oasis was thriving with prosperity during the Nabhinah (dominant tribe) ruling from the 12th to the end of the 15th century (UNESCO, 1987).

¹¹⁶ The fort was developed in different stages of 9th, 17th and 19th centuries CE (Bandyopadhyay S., 2013, p. 48). The miḥrāb is richly decorated dating back to 917 AH/ 1511 AD crafted by Abdullah b.Qasim al-Humaini (Bandyopadhyay S., 2013, p. 31).

¹¹⁷ Historical mosque that dates back to the 12th century, and recent archaeological surveys revealed a 3rd millennium rectangular pit full of bones and items under the eastern wall of the mosque (Cleuziou & Tosi, 2007, p. 130).

¹¹⁸ The mosque is also known as Masjid al-Qiblatay and it consist of a magnificently detailed decorated *miḥrāb* crafted by ʿIsa b.Abdullah b.Yusif in 936 AH / 1529 AD (Bandyopadhyay, 2011, p. 178).

property ownership and several contiguous linear structures (Bandyopadhyay, 2011, p. 178).

It is clear that Masjid ash-Shawadhinah was the core that evolved the streets around it and the compacted dwelling clusters. The streets then extend like a spine forming the linear dwelling patterns on both sides, possibly influenced by the pre-existing agricultural formation and associated *falaj* channels to connect at the end to a main street or a gate. The extension of the Nizwa fort¹¹⁹ in the north part of the settlement also contributed in the linear formation of the dwellings extending there and redefining the north wall of the settlement. Hence, the influence in shaping the dwelling clusters may vary from one settlement to another, although they might share similar site characteristics (i.e. al-ʿAqr in Bahla and al-Bilād in Manaḥ).

The ḥarāt of as-Saybānī and al-Ḥamrā, although formed in the foothill region during the same Imamate period, the site limits and topographic influences shaped the dwelling clusters differently, and there were more localised differences too even within each ḥarāt. Given that both were the late settlement developments in the Yaʿrubah Imamate, they both developed within a relatively short time and unlike Ḥarāt al-Bilād in Manaḥ without significant shifts and transformations. Additionally, the socio-political solidarity of the tribal groupings of the ʿAbriyīn in al-Ḥamrā or the Riyami tribe confederation in as-Saybānī contributed in shaping respective social and physical patterns. This was evident in Ḥarāt al-Ḥamrā, through first the gradual joining of the ʿAbriyīn groups, secondly, the continuous extension of the settlement’s clusters, and

¹¹⁹ The fort is also known as Ḥusin al-ʿAqr and built in the Imamte period of aṣ-Ṣulṭ b.Malik al-Kharuṣī (237-272 AH / 851-886 AD). It contains therr main parts: the round tower, the rectilinear block contiguous with western edge of the tower and an agglomeration of small structures and courtyard on the southern side of the tower integrating into the settlement (Bandyopadhyay, 2011, p. 175).

thirdly, the extension of the later ḥarāt (i.e. al-^cAlī, al-Sharqiya and al-Ḥaditha) next to Ḥarāt al-Wiṣṭā. In Ḥarāt as-Saybānī, the steep incline and tribal groups of the Banī Riyām maintained strong cohesiveness through, first, the tribal mosaic represented in tribal clusters, secondly, the overlap between the dwellings spaces, thirdly, the presence of dwellings with two access points from the east and west side for communal use, and finally, the *sablah* associated with the dwellings which indicate social and political solidarity. The form of the dwelling cluster, rather regular, or complex, , sickle shape, or linear form, all reflect tribal unity and social solidarity.



Figure 114: Ḥarāt al-^cAqr in Nizwa; 1. Nizwa (or al-^cAqr) Fort; 2. Settlement fortification; 3. Gateways; 4. street 100; 4s. street 100s; 5. street 200; 6. Street 300; 6s. street 300s; 7. street 400; 7s. street 400s; 7t. street 400t; 8. Street 500, 8s. street 500s; 8sl. street 500sl; 9. Street 600; 9s. street 600s; 9t. street 600t; 10. Street 700; 10s. street 700s; 100-700: dwelling zones (after Bandyopadhyay, 2011, Figure-42, p.175).

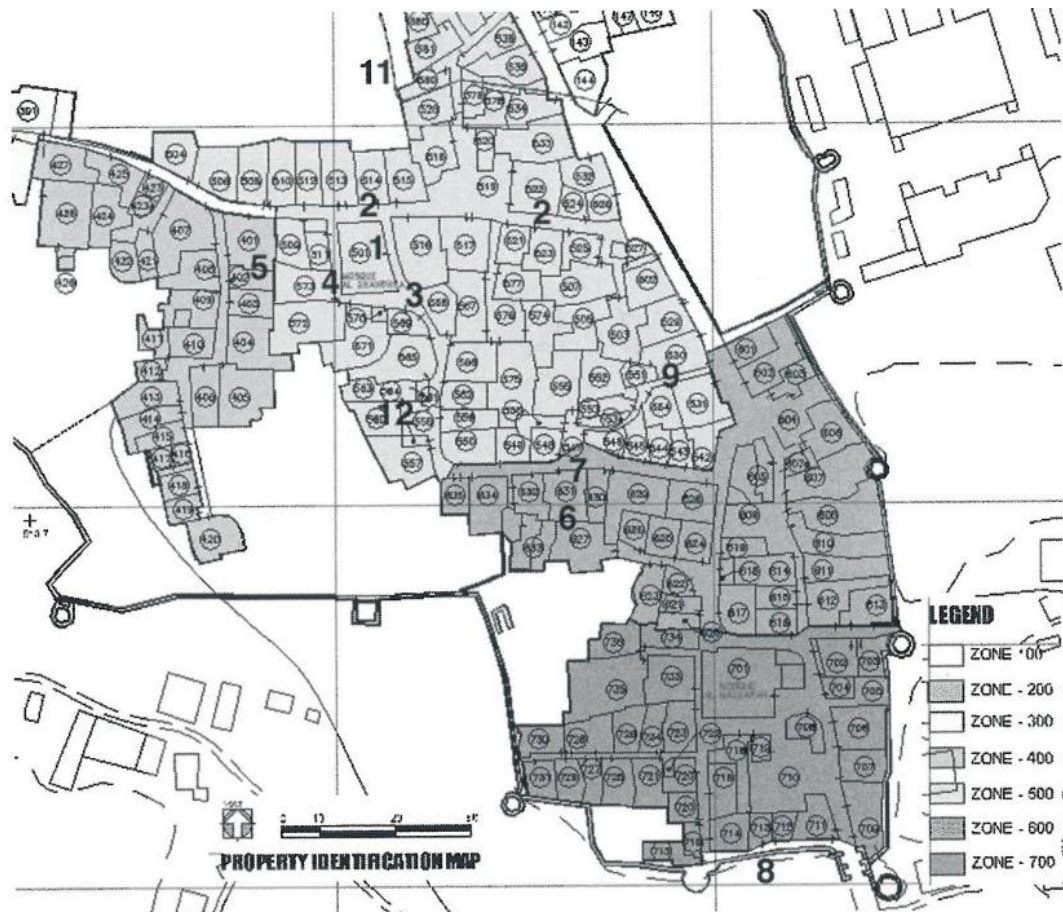


Figure 115: Masjid ash-Shawadhinah and Zone 5001. Masjid ash-Shawadhinah; 2. Street 500; 3. Street 500 s1; 4. The now-truncated north-south lane; 5. Zone 400; 6. Zone 600; 7. Street 600t1; 8. Street 700t2; 9. Street 500t2; 10. Zara'at al-Bustan; 11. The *falaj* channel, F2; 12. Madrasat al-Jalilan and the *sablah* (after Bandyopadhyay, 2011, Figure-23, p.178).

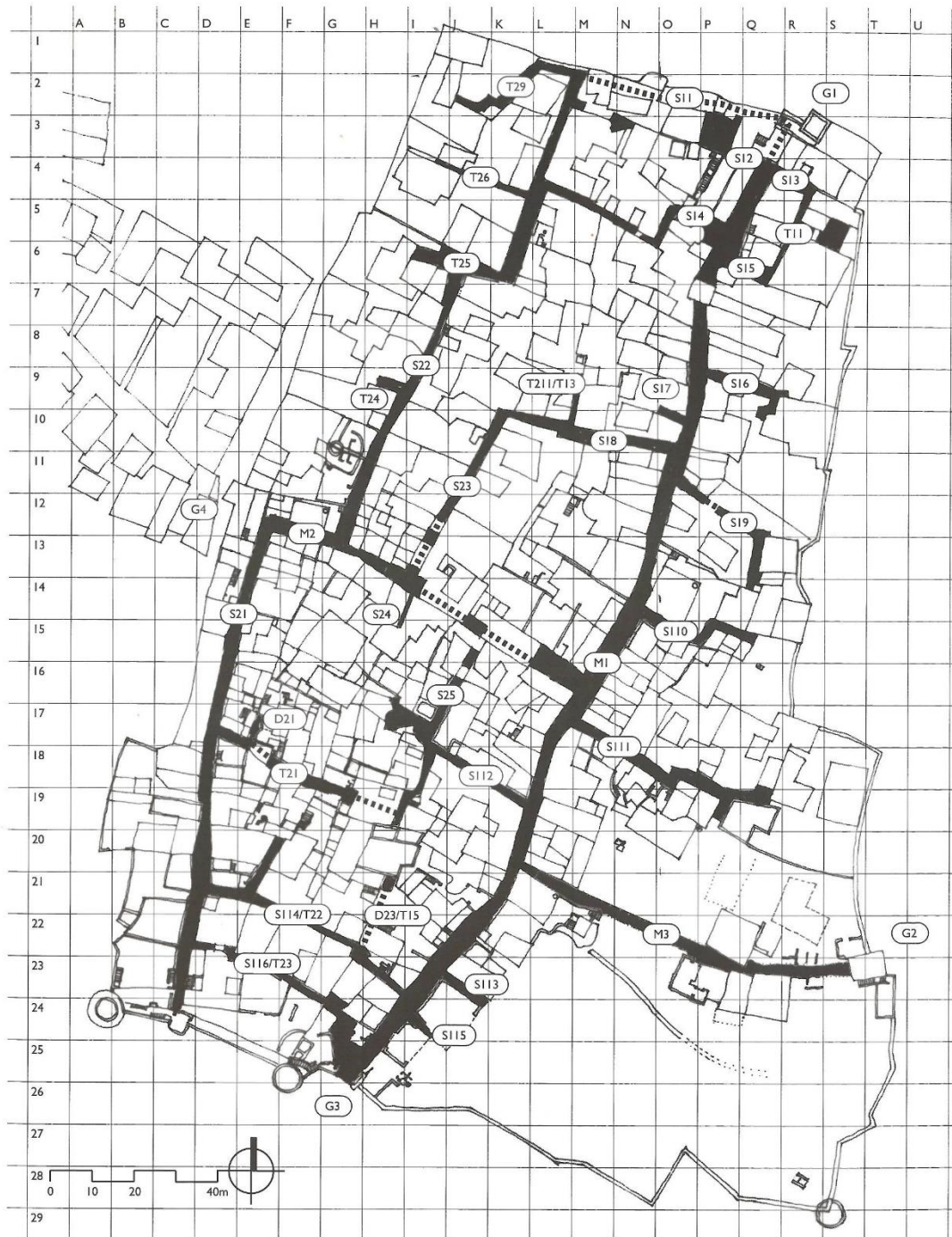


Figure 116: Hārat al-Bilad in Manah: reconstructed settlement plan showing streets and lanes Main streets: M1. Kaʿb al-Bilad; M2. Sikkat al-ʿUqud; M3. Sikkat Hārat al-ʿAyn; Streets off M1: S11. Sikkat az-Zalam (Sikkat ar-Ruh); S12. Lane leading to Sablat al-Wali; S13/S15/T11. Sikkat al-ʿAli; S14. Sikkat al-Bayadir; S16. Sikkat Abu/Awlad Rawashid/Rashid; S17. Sikkat at-Tawi/ Sikkat Hawd ad-Darb; S18/ S23. Sikkat bin Qasim; S19. Sikkat al-Karjah/ Awlad Karjah; S110. Sikkat ash-Sharah/ Sikkat Nus Sudus; S111. Sikkat al-Ghuwayr; S112/ S25. Sikkat ad-Dahmash; Streets off M2: S21 & S114/ T22. Sikkat al-Qasabah; S22. Sikkat al-Gharabah; S23/ S18. Sikkat bin Qasim; S24. Dead-end lane; T21 & S25/ S112. Sikkat ad-Dahmash. Gates: G1. Bab al-Burj/ Bab ar-Rawlah; G2. Bab Hārat al-ʿAyn; G3. Bab an-Nasr; G4. Bab ad-Daʿnayn/ Daʿnin (after Bandyopadhyay, 2011, Figure-16, p.69).



Figure 117: Bahla oasis: plan of core settlement area or al-Harah Quarter. 1. The fort; 2. Friday Mosque; 3. al-Harah Quarter; 4. The *souq* (after Bandyopadhyay, 2011, Figure-16, p.177).

Communal Space Dwelling Clusters

Communal spaces within dwelling clusters were formed through the shared use of open courtyards or open spaces between dwellings. The communal spaces in dwelling clusters selected for discussion are the ‘Abriyīn dwellings (D180, D182, D183 & D184) from Ḥarāt al-Ḥamrā (Plate-30 & 31) and Siyābiyīn dwellings (SD9, SD16, SD17 & SD18) from Ḥarāt as-Saybānī (Plate-32). Most of the communal spaces were located at the centre of Ḥarāt al-Ḥamrā, while those at as-Saybānī were at the northeastern edge. The as-Saybānī communal space was associated with the boundary wall, the secondary gate in the north and the male meeting hall (*sabla*). The smooth incline in al-Ḥamrā contributed in forming regular communal open spaces – partially earth-filled,

which also resulted in their approximate orthogonal alignment. The steep incline and rocky surface of as-Saybānī created irregular spaces connected with stone steps resulting in dwelling clusters of differing orientations and irregular passages. This emphasises the significant topographic influence on communal space in as-Saybānī. This also points out that the communal space in al-Ḥamrā also functions as a social activity space, rather as an assembly point for women's coffee breaks, or for practicing traditional crafts, or simply for men and women to carry out their daily chore. The communal space in as-Saybānī, on the other hand, were also transitory spaces connecting the passages

These characteristics of the communal space contributed in defining the accessibility to the dwelling cluster; in al-Ḥamrā the dwellings' main access were directly from the communal space, while in as-Saybānī they were indirectly accessed through different levels and connected passages. The space organization of the open communal dwelling cluster in al-Ḥamrā was similar to the individual and cluster discussed earlier, the only difference was that they consisted of large first *dahrīz*. The other additional difference was the presence of private male meeting hall (*sabla*) in each dwelling, where the *sabla* in dwelling D182 was located in the mezzanine level with a separate access from the passage and connected with the first floor. The other private *sabla* type was D184, where the *sabla* was attached to the dwelling but only accessed from outside from the passage. For example, the private *sabla* in D183 was accessed from the first *dahrīz* through stairs to its mezzanine level. The communal cluster dwellings of as-Saybānī were devoid of private *sabla* and shared a communal *sabla* instead, associated with the communal open space, indicative of the space limitations there. The communal cluster dwellings of al-Ḥamrā were large and rose to three floors compared to those of

as-Saybānī, which were limited to a maximum of two floors, possibly indicating the wealth and of the ʿAbriyīn and the geographical centrality of the ḥarāt *Vis a Vis* their *dar*. The influence of these communal spaces on the dwellings clustering around them was that the dwellings and the passages leading to them became well known. For example, the south-north passage leading to the communal space in al-Ḥamrā was known as Sikkat al-Wiṣṭā and each dwelling and its *sabla* was known by a name (e.g. D182 is known as Bait al-Aswad and its *sabla* known as *sablat* al-Kuwait). This indicates that communal spaces were landmarks in the ḥarāt urban pattern giving significance to the dwellings clustering around it.

Looking at other settlements, the communal spaces in Ḥarāt al-Bilād in Manaḥ was always associated with a communal facility or element for the public, rather than communal for all the inhabitants or for specific tribe. These regular shaped communal spaces were scattered in the *ḥarāt* included communal water wells, or a bathing structure, or agricultural well, or a *tannur* or a male meeting hall (*sablat*). Bandyopadhyay describes the importance of these communal spaces in relation to water access:

“Just as the *sbal* were designated for the use of particular tribes, so also the communal water facilities were the property of groups of dwellings, usually of the same tribal affiliation. Their wider catchments and easier access made them distinct from the private water points located within dwellings. These communal water wells also incorporated bathing – and at times prayer facilities, and are either located next to a route or within a courtyard offering easy communal access” (Bandyopadhyay, 2011, p. 152).

Similarly, the communal spaces in Ḥarāt al-ʿAqr in Bahla were also associated with communal facilities of water access points (*mishrāʿ*), or male meeting halls (*sabla*), or a *tannur*¹²⁰ or a mosque. The only difference was that they tended to form at the tip of the sickle shape-like dwelling clusters, resulting in an open space of irregular form and also function as a smooth level transition points. Other settlements, for example Ḥarāt al-Yemen in Izkī consisted of one large communal space in front of the Darmakī quarter associated with a male meeting hall (*sabla*, *sablat* al-ʿAlī) and a gate. According to local informants, the large communal space was used for making mud bricks for construction, for celebrating festive occasions of Eid hosting many events including traditional singing and dancing with sword, rifle shooting on targets and horse racing on the wide passage connecting to the space (Bandyopadhyay S., 2013, p. 39). While Ḥarāt al-Ḥujra in Fanjā even today consists of a large communal festive space near the main west gate (Bab al-Gharbī) in a defensive area referring to Persian origins, for hosting what is known locally al-ʿAzwah during Eid (Bandyopadhyay S., 2013, p. 19). The al-ʿAzwah consists of large-scale gathering of men, women and children participating in celebrating events mainly singing and dancing with the ʿAzī¹²¹, which it is named after. It also includes the events of firing cannons, traditional fighting, rifle shooting, blowing on traditional horn (al-barghoom), trading and poetry readings (al-Rawahi, 2012, p. 44). Hence, these communal spaces, beyond hosting communal facilitates or crafts or festive celebrations, consist of activities of great social and historic value for the dwellings and structures clustering around it.

¹²⁰ *Tunnor* is a local term referring to a hole in the ground used to cook meat in a traditional way especially during festive times of Eid al-Fiṭr (after Ramadan) and Eid al-Aḍḥā.

¹²¹ The ʿAzī is the man leading the ʿAzwa and the leading the singing and dancing of the men with swords by with his loud voice of recited poems of glory for Oman and His Majesty the Sultan (al-Rawahi, 2012, p. 24).

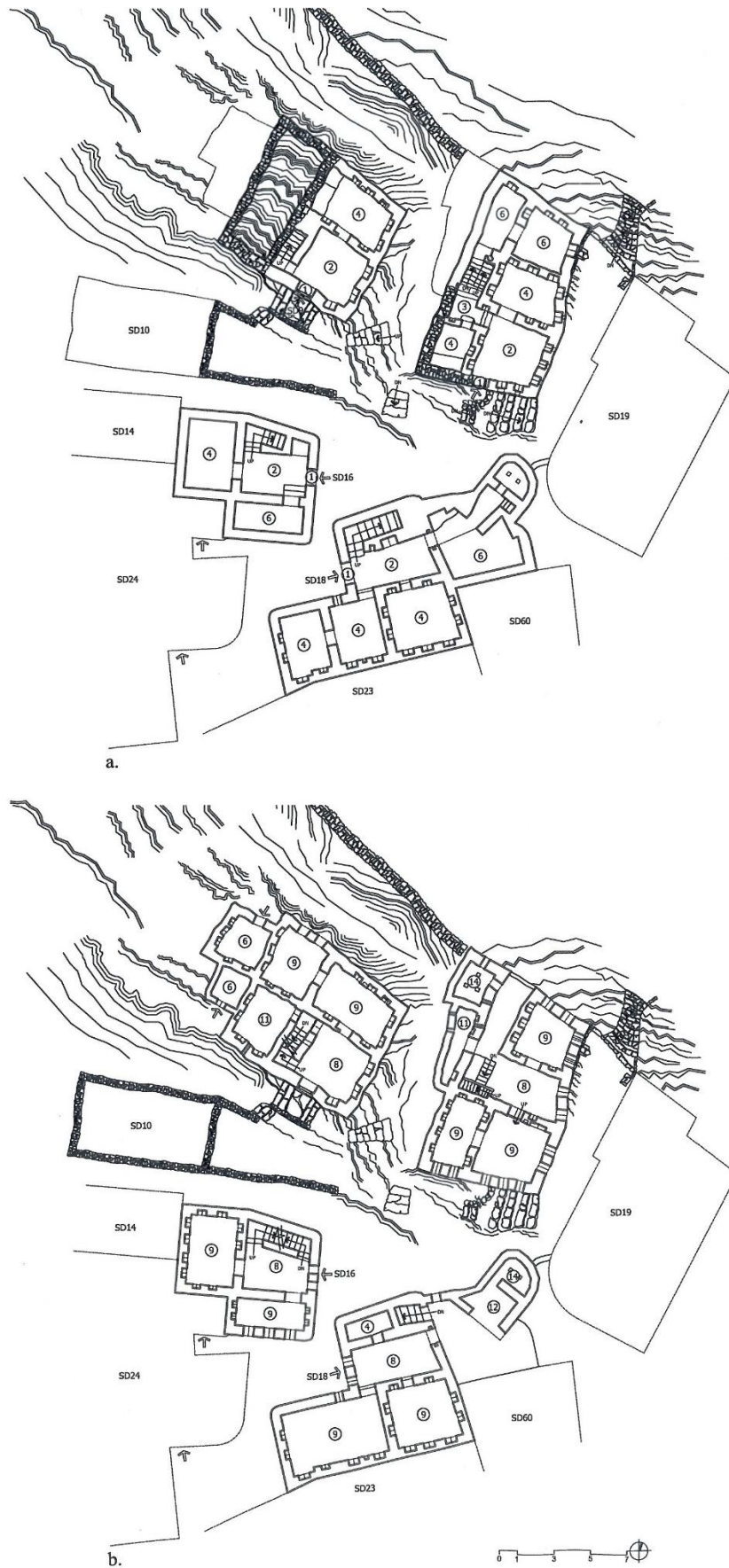


Plate 32: Floor plans of open space dwelling cluster SD9, SD16, SD17 & SD18; *a.* Ground floor; *b.* First floor; 1. main entrance door; 2. First *dahreez*; 3. Second *dahreez*; 4. *suffah*; 6. *darss*; 8. *arshah*; 9. *gurafah*; 11. Kitchen; 12. Kitchen; 14. Latrine.

Linear Dwellings

Linear dwellings are those sandwiched between two dwellings or any other structure type. The selected linear dwellings discussed are both ʿAbriyīn dwellings: D43 from Ḥarāt al-Ḥamrā (Plate-33) and SD52 from Ḥarāt as-Saybānī (Plate-34). Both dwellings were located at the south edge of their respective ḥarāt and associated with the *falaj* channel, but the *falaj* in al-Ḥamrā extended in a straight line and integrated D43 from the front and the lower channel in as-Saybānī integrated SD52 from the back. This was due to the location of the *falaj* in relation to the main passage in al-Ḥamrā, while in as-Saybānī the curved trajectory of *falaj* channel was wide and the passage narrow, which made it difficult to integrate with SD52. The smooth incline of al-Ḥamrā gave D43 the advantage of having three access points from the ground floor: two at the front and one from the back. The steep incline in as-Saybānī resulted in access points at two different levels: the two entrances in the front access SD52 from the first floor, and the one in the back provide access from the ground level.

The dwelling D43 is attached from west by another dwelling D44 and from the east side by Masjid al-Ḥadith, which gained its name from Bait al-Ḥadith (al-Ḥadith: meaning the new). While SD52 was compressed by various structures: from west by dwelling SD45, from east by dwellings SD62 and SD64 and the internal gate SG2 (*sabah* ad-Dākhil). Dwelling SD52 was the biggest dwelling in the *ḥarāt* and was the largest communal meeting hall (*sablat* ad-Dākhil) with its own devoted space for coffee preparation and so the dwelling was known as Bait al-Kabir (al-Kabir: meaning the large). The integration of the *falaj* with the D43 had introduced internal access point from the *darīz* and bathing room, while in SD52 the *falaj* bathing room was accessed from outside the dwelling. The space organization was similar to other types

discussed earlier, the only difference was that the stairs in SD52 was located at the dahrīz of the rear entrance and consist of an internal terrace on the first floor with a *loggia*.



Plate 33: Floor plans of dwelling SD43; a. Ground floor; b. First mezzanine floor; c. First floor; d. Second mezzanine floor; e. Third floor and roof; 1. main entrance door; 2. First *dahrīz*; 3. Second *dahrīz*; 4. *suffāh*; 5. *‘aqad*; 6. *darss*; 8. *‘arshah*; 9. *guraḥ*; 10. Overhead shade; 11. Kitchen store; 12. Kitchen; 13. Falaj bath; 16. Sky light.

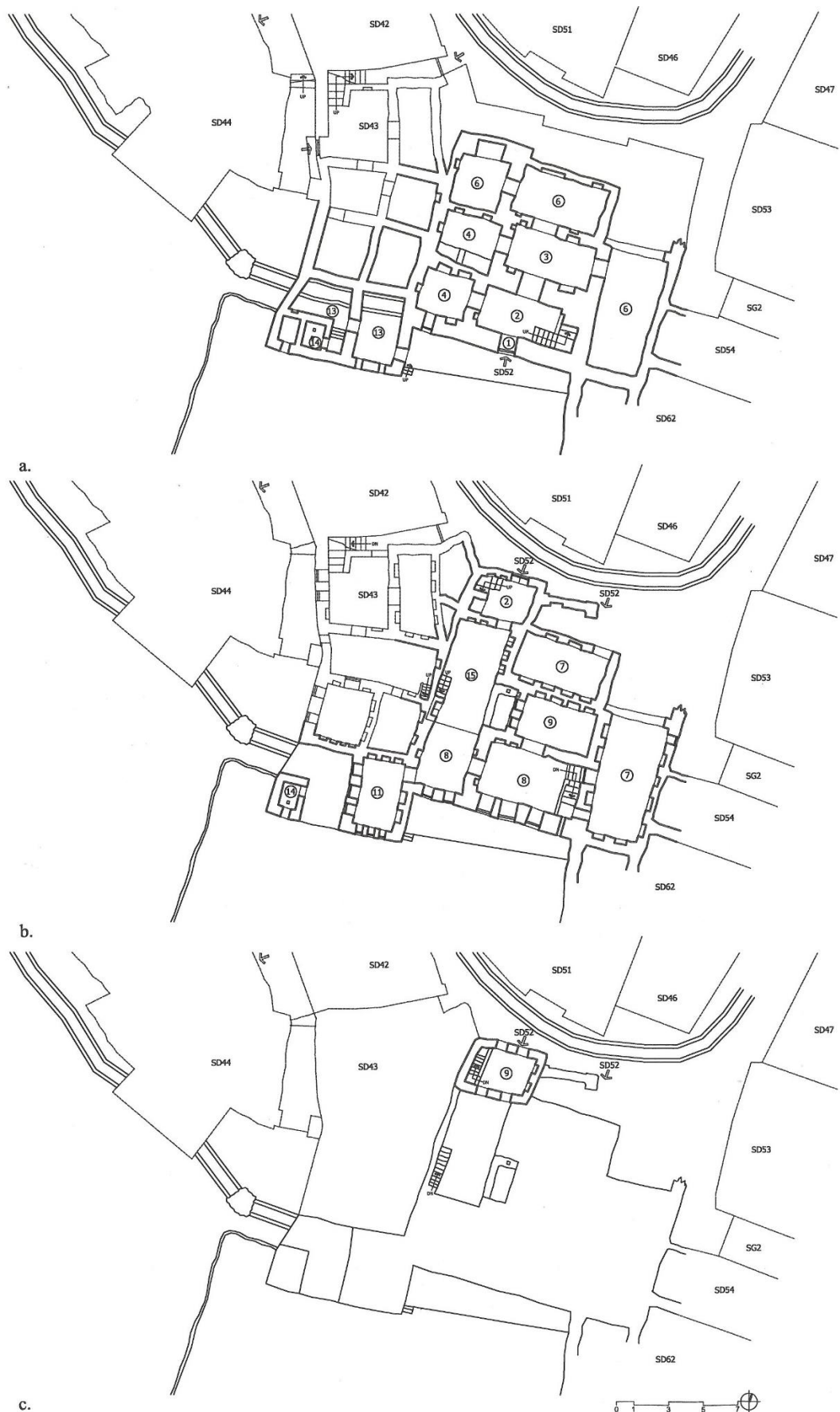
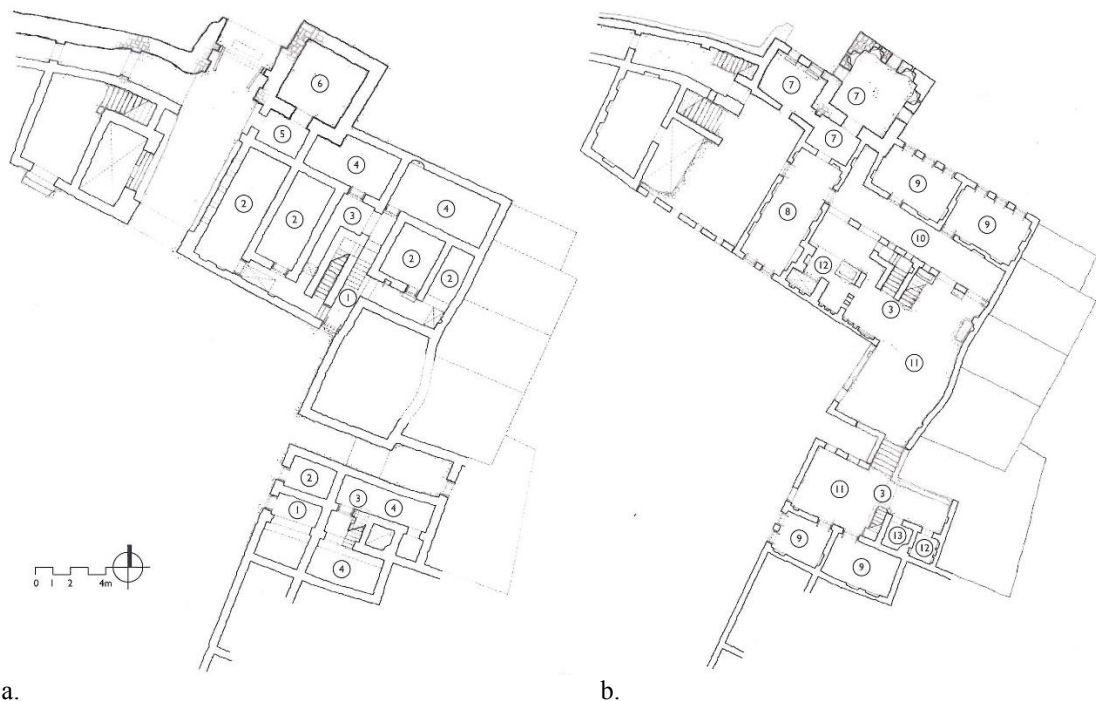


Plate 34: Floor plans of dwelling SD52; a. Ground floor; b. First floor; c. Second floor; 1. main entrance door; 2. First *dahriz*; 3. Second *dahriz*; 4. *suffah*; 6. *darss*; 7. *sablah*; 8. *arshah*; 9. *gurafah*; 11. Kitchen store ; 13. Falaj bath; 14. Latrine; 15. Courtyard.

In comparison to other settlements, the linear dwellings tended to form on the edge along the wall (i.e. Ḥarāt as-Sulaif in ʿIbrī, Ḥarāt al-Bilād in Manah and Ḥarāt al-ʿAqr in Bahla). This indicates the influence of the edge condition in shaping the linear pattern in the settlement. The only exception was in Ḥarāt al-ʿAqr in Nizwa, where the linear dwellings were integrated within the agriculture land. However, the space organization was different from one settlement to another. For example, the ʿAbdalī Shaikh’s dwelling in Ḥarāt al-Bilād in Manah was a deep complex plan where the ground floor was divided into two separate entities, connected only on the first floor through an overhead stepped bridge (Figure-118). The first floor in addition to the rooms, consisted of large open terraces, a tower (Burj al-Juṣṣ) and the male meeting hall (Sablat al-Burj). This indicated how social status contributed in the scale and space variety and organisation of the dwelling.



a. b.
Figure 118: Floor plans of ʿAbdali *shaikh*’s dwelling, a. ground floor; b. first floor; 1. Entrance; 2 & 4. Ground floor storage, pen and water well; 3. Staircase; 5. Blacksmith’s workshop; 6. Burj al-Juss; 7. Sentry room and observation space in Burj al-Juss; 8. Sablat al-Burj; 9. Sleeping rooms; 10. *Loggia*; 11. Terrace; 12. Kitchen; 13. Latrine (after Bandyopadhyay, 2011, Figure-47, p.124).

5.4: Epilogue

This chapter has introduced the dwelling space organisation normally found in Omani foothill settlements. The functions of the floor levels were similar to multi-level dwellings in other settlements but the foothill ones had additional characteristics not present in houses of the settlements of the plains. The topography played a key factor in the space organization by introducing hierarchy in depth and levels. The ground floor depth of al-Ḥamrā dwellings was organised through a first transitory space (*dahrīz*) and then another bigger and deeper second transitory space (*dahrīz*). The storage spaces were also found to be well identified functionally, *ṣuffah*, *khars*, *ʿaqid* and *naḍid*. Some as-Saybānī dwellings are similar to al-Ḥamrā organization and some others have a deep corridor-like transitory space. This deep transition was not only in space but also in room level and the level of light penetration. The ground floor in al-Ḥamrā was also double-height, which resulted in a mezzanine level for storage or for an optional mail meeting hall (*sabla*). While in as-Saybānī the steep incline introduced splitting functions into different levels.

The first floor in al-Ḥamrā dwellings were also organised through another intermediate family living space (*ʿarsha*), which connected all rooms. The first floor of as-Saybānī mostly consisted of a loggia and an internal terrace and in some cases an open terrace connected the rooms. Additionally, as-Saybānī introduced latrines and light shafts into the first floor, absent from al-Ḥamrā. The smooth incline in al-Ḥamrā contributed in roof level connections between dwellings, while the steep incline in as-Saybānī created a substantial level deference which made it difficult to connect through the roofs. Although both settlements are on foothill with different degree of incline, yet, they both negotiated efficiently to fulfil their needs.

This chapter also discussed the dwelling types generated from the topographic challenge, which included the individual or isolated dwelling, the dwelling cluster, the communal space dwelling cluster and the linear dwellings. The individual dwellings of al-Ḥamrā were found to be located at the centre of the ḥarāt in large scale and owned by wealthy households and located by choice. While that of as-Saybānī were located at the edge of the ḥarāt shaped and limited by the rocky surface structure. The dwelling cluster in al-Ḥamrā forms in a regular grid-like shape due to the smooth incline, while as-Saybānī tends to fan out shaped by the topography and curved profile of the *falaj* channel in the lower end creating an interlocking pattern between the dwellings. This resulted in internal terraces in as-Saybānī dwellings and light apertures.

The regularity of the communal space in al-Ḥamrā has also reflected in its clustered dwellings in terms of accessibility, alignment and space organisation. While irregularity in shape and level in as-Saybānī clearly indicated their function as a transition for connecting the passages at different levels, also affecting the indirect access of dwellings around it and diverse dwelling orientations. Other settlements introduced a new type of large festive communal spaces (i.e. Ḥarāt al-Ḥujra in Fanjā and Ḥarāt al-Yemen in Izkī), which were not found in foothill settlements. The communal dwelling cluster is a unique type in giving social significance not only to the dwellings but also in creating a landmark within the settlement. The linear dwelling type tended to form at edge of the settlements, rather by the *falaj* channel in the case of al-Ḥamrā and as-Saybānī or by the settlement's wall (i.e. Ḥarāt al-Bilād in Manaḥ and Ḥarāt al-ʿAqr in Bahla). One exceptional linear type is that of Ḥarāt al-ʿAqr in Nizwa where it integrated linearly through the agriculture land. The *falaj* position and

the level of incline plays an important role in the accessibility and space organisation in dwellings.

Section III: Epilogue

Chapter-6: Conclusion

6.1: The dawn of research on traditional Omani settlements

6.2: The traditional foothill settlements

6.3: Diversity and unity

6.4: Sacred relation

6.5: Areas of future research

Chapter-6: Epilogue:

6.1: The dawn of research on traditional Omani settlements

Oman became a research magnet over the past four decades as massive breakthroughs have been achieved in Oman studies, undertaken often on behalf of the Ministry of Heritage and Culture (MHC). Major excavations led by eminent archaeologists have unveiled the elusive cultural history of Oman and opened the corridor of the past back to the 3th millennium BC and beyond, to indicate the beginning of settled life in the Peninsula. Walking through the corridor of the past, important historical facts have surfaced, one of which is the successful tracing the origins of the *aflāj* irrigation system back to c. 1000 BCE, the spine of the oasis settlements in Oman. The archaeological findings soon radiated beyond to attract more research in the fields of ethnography, history, architecture and religion, and so Oman became well known for its distinctive history, religion, culture and tribal system. The MHC continued its effort successfully to collect old manuscripts from all over Oman through the department of national records and archives which has recently become an independent authority. The ministry also conducted documentation and restoration of traditional and defensive structures – forts and castles – of significance. The Journal of Oman Studies (*JOS*) has contributed in shedding light on Oman's past through the archaeological findings, traditional and defensive architecture, study of flora and fauna, and the traditional irrigation system¹²². The MHC in recent years, shifted its focus on traditional settlements by awarding projects to the ArCHIAM research centre at NTU to produce comprehensive documentation and heritage management plans (MHPs) for these.

¹²² Details are in Chapter 1: Sources are at Literature and Supported Considered disciplines, where I have discussed the research and disciplines conducted in understanding the traditional built environment in Oman.

Accomplished HMPs for the settlement are: Ḥārat as-Saybānī in Birkat al-Mawz, al-Yaman in Izkī, al-ʿAqr in Bahla, as-Sulayf in ʿIbrā and al-Ḥujra in Fanja. This first step is considered an important achievement towards protecting, encouraging and providing a data base for research on traditional settlement in Oman.

Many publications on Oman flourished from other disciplines, but sadly they tend to be more descriptive with less synthesis and interpretation towards understanding the history and culture of Oman. Most studies were in disciplinary isolation and thus lack being properly contextualised. Archaeology for example, lacked historical context and cultural meaning.¹²³ Lately, discussions in archaeology has revealed three distinct areas of debate:

“These are (1) the relationship between material culture and society – how material culture relates to people, (2) the causes of change – what causes social and economic and cultural change, and (3) epistemology and inference – how archaeologists interpret the past” (Hodder, 2003, pp. 13-14).

Other works of related disciplines also share similar challenges as archaeology to understand the Omani culture. The outstanding work of Wilkinson in exploring the tribal system and water exploitation in Oman, and Cleuzious and Tosi’s work on tracing the early Arabian civilisation in Oman, sits at the apex of achievements in Omani studies. However, the author agrees with Bandyopadhyay that the work of Wilkinson by no means provide a holistic picture of the Omani culture – as far as its spatial nature is concerned, and the same falls with Cleuzious and Tosi’s work. Wilkinson’s major work, for example, came from the Arabic sources¹²⁴, and focused

¹²³ Details are in Chapter 4: Sources are at al-Ḥamrā, where I have discussed archaeology of early human settlements in al-Ḥamrā in discussing all periods found evident in that area.

¹²⁴ Details are in Chapter 4: Sources are at Ḥarāt al-Wiṣṭā tribal pattern and structure, where Wilkinson’s source of discussion on the ʿAbriyīn.

on the geographical setting and the Imamate tradition in Oman without emphasising their influence on the settlements social and physical formation. The archaeologists, on the other hand, extracted the remains from its historical context and created a gap in understanding its cultural continuity.

The work on the traditional architecture of Oman has always suffered from being selective, descriptive or specific to glorified forts and palaces as a signature of the so-called 'golden age'. Other works, which tried to study the traditional settlement, had again lacked the holistic approach, which eventually were unsuccessful in understanding the traditional architecture from a cultural a social perspective¹²⁵. Others studied the traditional settlements in regions or disciplinary isolation which disconnected the culture and architectural relation from the other parts of Oman¹²⁶. Bandyopadhyay's work on Ḥarāt al-Bilād in Manaḥ could be considered, to some extent, the most complete in understanding the traditional settlements in Oman, in the sense of including the historical, social, religious, and architectural factors in shaping the settlement¹²⁷. However, the geographical and locational factor were absent which are considered highly important none the less.

The Omani traditional settlement quarters, like any ancient city on earth, has a story about its origins. An origin that might have begun with migration and dispersal, a dispersal that developed a spiritual unity, a unity that evolved to political power. The

¹²⁵ Details are in Chapter 1: Sources are at Literature and Supported Considered disciplines, where I have discussed the Ṣuḥāri houses by the coast of Ṣuḥār in Bāṭinah region by Kervran, and the Ibrā and Muḏayrib settlements in Sharqiyah region by Bonnenfant and Le Cour-Grandmaison.

¹²⁶ Details are in Chapter 1: Sources are at Literature and Supported Considered disciplines, where I have discussed Costs's work on the traditional built environment of the Bāṭinah region.

¹²⁷ Details are in Chapter 1: Sources are at Literature and Supported Considered disciplines, where I have discussed the work of Bandyopadhyay in Ḥarāt al-Bilād in Manaḥ.

power that grew to a settling ambition, and an ambition that led to selecting a location. From location the emergence of a settlement begins, a settlement that became a way of living, a way of living became local tradition. The tradition that became a legacy, a legacy passing from generation to another till it rested in our hands today. Through this time span, the transformation evolves and develops with time, events and other influencing factors. In order to understand settlement evolution, it is necessary to re-visit the past to trace the roots of the original inhabitants who settled there and the events associated in that time, and in turn the morphology of the settlement. By doing so, it will explore the historical settlement morphology and synthesise the factors that influenced it through time.

It is now clearly recognised that the formation of the traditional settlements are influenced by internal and external factors. The external factors are determined by the geographical location, environment (climate and natural resources), and security (defence and accessibility). The internal are defined by topography, the *falaj* channels and accessibility. The settlement's formation is a result of balance between the external and internal factors through the social, tribal and religious cohesiveness of the inhabitants. Each factor influences the other. Hence, the large context of the traditional settlements indicate how crucial it is to approach their study in a holistic and interdisciplinary manner¹²⁸. The fields of archaeology, anthropology, religion, hydrology, geography, geology, history, sociology and architecture, should all be considered together when studying the traditional settlements. Kent has emphasised the importance of the interdisciplinary research:

¹²⁸ Details are in Chapter 1: Sources are at rational of acknowledging other disciplines and methodology, where I have discussed the importance of combining other disciplines and the interdisciplinary research approach.

“Interdisciplinary research provides more alternatives with which to view data. Awareness of different disciplines allows one to introduce novel approaches not considered before, to have access to a different data base which may enhance a discipline’s pre-existing one, and to avoid mistakes already made and corrected in other disciplines” (Kent, 1990, p. 1).

6.2: The traditional foothill settlements

The traditional foothill settlements are the most outstanding types in reflecting harmony with the environment and being prominent majestically to the viewer. Their location centred on the foothills between the older oasis settlements (Nizwa, Manaḥ and Bahla) on the plains and the mountain settlements (Misfat al-^ʿAbriyīn, Bilād Sait and Sīq) gained them political importance. The fact that these foothill settlements were newly established and located centrally between the older settlements defines them as intermediate settlements. Hence, the two foothill settlements studied in this dissertation developed political and geographical power as exercising control over dispersed small settlements within the Oman Mountains. Unlike the oasis settlements on the plains, the foothill ones are mainly challenged by topography and space availability. Hence, it was essential and logical to investigate the topography’s physical and social impact on the settlement formation. The decision of establishing the settlements on the foothills was the result of political and functional decision. The political climate came in the form of support and appreciation from the Ya^ʿrubi Imam to the tribes for their loyalty, and to extend Imamate investment (water shares and palm grove products) into these areas at the same time. This political influence is considered to be the cornerstone supporting the internal and external factors for both settlements. This gave the Imam control over the main two mountain routes (Jabal Shams and al-

Akhḍar) and safe access to gain allies with other tribes on the other side of the mountain. This also provided alternative routes to the coast, which supported trade and exchange. The functional element of locating the settlements on the foothills was to maximise the agricultural land and to overlook the surrounding area as a security measure. The positioning, however, was done in coordination with the surrounding hills for security measures, and the feasibility of excavating the *falaj* channel¹²⁹.

The discussion on the topography of both settlements has revealed four principal influences on their physical pattern, (1) the foothill shape, (2) the steepness of slope, (3) change in altitude, and (4) the rocky surface structure. The foothill shape contributed in defining the site limitations and extension opportunities, the direction of expansion, and the accessibility of the site. The slope contributed towards defining the development in phases using different or appropriate construction techniques. In Ḥarāt al-Ḥamrā, the smooth incline and the dwelling stone foundations revealed a direct correlation between the increase in the slope steepness and the height of the stone foundation. In Ḥarāt as-Saybānī, the steep hill revealed the early inhabitants' knowledge of a wide range of advanced masonry construction techniques (it could be safely assumed that the site was occupied in some form from very ancient times). The change in altitude provided opportunities of communal open spaces and defining the phases of development and structure types. The influence of the rocky surface structure varied between the two sites too. In al-Ḥamrā, the surface fractures formed an approximate natural grid, which contributed in defining the scale and form of the dwelling clusters and so the urban pattern. It also contributed in defining the passageways and the *falaj* access points along the main lower passage. In Birkat al-

¹²⁹ Details are in Chapter 3: Sources are at topography and urban pattern, where I have discussed the topography influence in the formation of the two settlements.

Mawz, the layered rock structure of various thicknesses contributed in defining, (a) the settlement's edge, (b) becoming preliminary anchoring foundation for the structures, (c) the beginning and the end of some developed phases, and (d) the orientation of the individual and dwelling clusters¹³⁰.

The topography also had a major impact on the *falaj* distribution system in both settlements. The defined straight (to some extent) south edge and smoothness of the slope in Ḥarāt al-Ḥamrā contributed a having one main *falaj* channel along the main lower passage. The *falaj* channel has also contributed in defining the communal structures along the lower main passage which emphasise one communal public passage. The sudden change in steepness in Ḥarāt as-Saybānī and the agreed shared water and palm groves between the Imam and the inhabitants resulted in having two *falaj* channels crossing through the settlement at two different levels. The two levels of *falaj* channels resulted in the emergence of two communal passages, the lower more social and public than the upper one, whose semi-communal nature was strictly reserved for the inhabitants. The steepness at both sites had contributed in the overlap between dwelling and overhead rooms straddling passages shared between two dwellings. This sense of sharing, along with dwellings providing two access points from both sides to be used communally, and the *sbal* associated in the dwellings for communal use, confirms the tribal unity and adds more solidarity and cohesiveness to the settlement.

The establishment of the two settlements at a time known as “the time of fear” made it crucial to develop a defensive settlement pattern and the key element was their

¹³⁰ Details are in Chapter 3: Sources are at topography and urban pattern, where I have discussed the topography influence in the formation of the two settlements.

geographical location. The physical environment of each geographical location of each site has contributed in defining the hierarchy of the outer and the inner defensive features of the Ḥārat. The early inhabitant's knowledge of the land reflected in their efficient and effective use of the coherent relation between the mountain and the low hills in embracing al-Ḥamrā through the outer defensive zone. The defensive zones in al-Ḥamrā revealed a sense of hierarchy and each element was not only a defensive zone by itself, but also relied and connected with the others. The inhabitants relied on the low hills to divert the *wadī* flow and block the view from the outsiders. The guards on the towers also relied on the *wadī* for clear views out, the towers relied on the altitude of the low hills. In turn, the *falaj* also relied on the foot of the low hills for the channel alignment, and the mosques aligned with the channels. The disconnection between the mountain and the low hills, and rhythm of the low hills themselves in Birkat al-Mawz contributed to having gaps and blind defensive spots, which resulted in developing new outer defence zones. This not only resulted in the increase in the number of towers but also in connecting the low hills defensively through stonewalls and having sniper posts hidden in the mountain behind the settlement. This shows how the diversity of the natural setting of each geographical location influenced the settlement location and defensive strategy¹³¹.

The positioning of the settlement on the foothill gave significant advantages that were absent from the other settlement types. The foothill settlements had the advantage of (1) being positioned in a defensive location supported by the mountain, (2) overlooking the whole oasis, (3) maximizing the use of available land for agriculture, and (4) forming a natural pattern of development with respect to the foothill rock

¹³¹ Details are in Chapter 3: Sources are at topography and urban pattern, where I have discussed the fortification internal and external zones of both settlements.

structure. These advantages gave the foothill settlements an outstanding territorial and formational identity.

6.3: Diversity and unity

Revisiting the past on both sites has revealed the early human settlements in both territories through the archaeological evidence of all periods discovered. In al-Ḥamrā, these evidence suggests (1) site overlap, (2) closeness, and (3) re-use of the existing structures of different periods, which indicates a sense of spatial – if not cultural – cultural continuity. In Birkat al-Mawz, although the only evidence that were found were the Rock Art in the gorge of *wadī* Mu^ʿaidin, it nevertheless indicated the importance of the *wadī* from the early human settlers. The change over time unveils man's settling nature and understanding of the environment. This continuity becomes part of the inherited culture, which was clearly evident in their habitation at the apex and the slopes of the low hills and near or in the *wadīs*, which are still evident within the traditional settlements¹³².

The positing of the settlements within a big oasis and surrounded by other constituent settlements and the natural environment, highlights the fact that oasis settlements were formed within large contextual settings. This emphasises the importance the historical settling geography of the region. The early settling of ^ʿAbriyīn in Missfāh and Nakher and their use of arable land along with the important mountain routes connecting their villages in Jabal Shams region, all contributed towards the eventual emergence of Ḥarāt al-Ḥamrā as the capital (*dar*) of the tribe. Similarly, the settling of all Banī Riyām

¹³² Details are in Chapter 4: Sources are at al-Ḥamrā and Birkat al-Mawz tribal pattern and settlement structure, where I have discussed the archaeology and the early human settlements and movements in of al-Ḥamrā and Birkat al-Maws.

tribes in the older settlements around and above Birkat al-Mawz and their control of Jabal al-Akhḍar with Sīq being their older capital, along with their small structures behind and on top of the hills surrounding Birkat al-Mawz, contributed to the emergence of Ḥarāt as-Sybānī. The physical closeness of settlements from the same tribal group within the shared geographical environment played an important role in the choice of the settling locations¹³³.

Both the tribes' origins, migration and final settling contributed in understanding their tribal behaviour. The gradual revival, cohesion and evolved socio-political role of the ʿAbriyīn over time contributed in them building-up their power and their desire to settle in their own *dār*. This power was presented through (1) making allies during their early dispersed settling pattern, (2) the religious and temporal knowledge of the *ʿulama* within the tribe, (3) their power as strong warriors, and (3) their support to the Yaʿāribah Imamate. All of this resulted in them gaining wide knowledge of the geography of the Jawf region and self-confidence and independence, and thus to agree to settle in their own independent capital *dār*. The Banī Riyām, on the other hand, had the advantage of being one of the first tribes to migrate to Oman and settled early in the Jawf region. This gave them the opportunity to, (1) expand and control the Jawf, (2) settle in Jabal al-Akhḍar, and (3) became allies with the Nabāhinah who were the original settlers of Oman in that time. The expansion of their power after the Nabāhinah and later supporting the Yaʿāribah Imamate, along with their well-known intelligence reputation among tribes, resulted in settling in the entire Jawf region¹³⁴.

¹³³ Details are in Chapter 4: Sources are at al-Ḥamrā and Birkat al-Mawz tribal pattern and settlement structure, where I have discussed the historical location settling morphology of al-Ḥamrā and Birkat al-Mawz.

¹³⁴ Details are in Chapter 4: Sources are at al-Ḥamrā and Birkat al-Mawz tribal pattern and settlement structure, where I have discussed the tribal pattern and settlement structure of Ḥarāt al-Wisṭā and Ḥarāt as-Saybānī.

The tribal spatial distribution and structure through the different developed stages of both Ḥarāt reflected a clear understanding on the social, physical features and urban pattern. The developing phases of Ḥarāt al-Ḥamrā show a core settlement established as a reference point, which transformed from one phase to another over time. This transferring reference develops with the tribal solidarity, along with the natural grid surface of the foothills, which eventually develops the urban pattern. The formation in Ḥarāt al-Ḥamra started from the *falaj* channel and extended north, while in Ḥarāt as-Saybānī it was the opposite, from north down towards the *falaj* channel. The developing phases of as-Saybānī emphasised the influence of the topographic structure of the territory on the development of the construction technique, the urban pattern and passages. These dwelling forms and block patterns possibly suggest the development of individual spaces within one dwelling at different times caused by need and necessity for family extension, along with the challenge of topography and affordability¹³⁵.

It is now recognised that the traditional settlements may be positioned in a diversity of geographical locations but they tend to be connected through tribal solidarity and unity. This sense is driven by the spirit of sharing between all inhabitants in all living matters in and out of the settlement. The sharing is not only evident in the water shares of the *falaj* or date palms, but extends to shared responsibilities towards protecting the settlement, sharing dwelling storage and access, sharing a terrace or roof, and even sharing ones traditional wheat grinder (*raḥā*). The sharing is also evident in the

¹³⁵ Details are in Chapter 4: Sources are at al-Ḥamrā and Birkat al-Mawz tribal pattern and settlement structure, where I have discussed the tribal pattern and settlement structure of Ḥarāt al-Wisṭā and Ḥarāt as-Saybānī.

provision of communal structures for both genders. The sharing was also associated with caring for each other in the sense that everyone knew everyone in the settlement, much like one big family. This was clear through the daily coffee breaks of the women, the women countless social visits to each other, the gathering of the men five times a day for prayers, the gathering of the men in the *souq*, and the gathering of the men in the *sbal*. Even with diverse dwelling scales and social status, all inhabitants dressed the same, eat the same food, worked on their own livelihood and practiced the same traditions.

6.4: Sacred relation

The research on the traditional foothill settlements has revealed that the inhabitants have managed to face the topographic challenge and resource limitations with ingenuity and respect. This respect is a sacred relation defined as, (1) respect for the surrounding environment, (2) respect for the available and limited resources, (3) respect for the tribe and social ties, (4) respect for equality in front of Allah, (5) respect to the neighbours, and (5) respect for their livelihood. This sacred relation gave these settlements the ability to develop in a simple and efficient manner over a long period of time, reflecting a strong sense of cultural continuity. This sacred relation gave the inhabitant a strong bond with their settlement and tribe, it gave them the true meaning of dwelling. This sense and way of living made the inhabitants live in solidarity and work with devotion.

This sacred relation should continue to develop the scholars understanding towards the study of the traditional Omani settlements. It is crucial to consider all factors, external and internal, influencing the formation of the settlement with the inhabitant's deep

connection to them. Today's studies on the traditional settlements are faced with an often neglected fact that scholars have to make do with deserted settlements, missing therefore the perception of the inhabitants towards their settlements. Every part or even a small object, or space had meaning and value to the inhabitants.

The MHC and MOT today is trying to approach these deserted settlements through documentation to achieve a touristic and economic perspective. The settlements, however, are still inhabited with history and memory, and the worry is that all these will be neglected just to achieve such tangible projects. Therefore, it is crucial that these settlements are first thoroughly studied by researchers in the field to maintain that valuable knowledge and to share it with the present and future generations. A study with an interdisciplinary approach to understand the settlement is thus crucial.

6.5: Areas of future research

This dissertation is an early attempt at understanding the traditional foothill settlements of one of its first in Oman and the less researched areas of the world. The value of this work lies on the multidisciplinary approach in trying to understand the subject from a holistic perspective. Without doubt, the assertions made in this dissertation have to be further analysed and refined in future by taking an even wider set of evidence into consideration. A closer scrutiny of some of the arguments will probably challenge some of the conclusions along with new developments and findings in other disciplines.

In this dissertation I have discussed the socio-political relation between Imamate and tribes and highlighted their influence to the settlement. The political influence of the Imamate as a cornerstone in established the settlement emphasise the importance of

further research on their politics and investments on the settlements. In order to have a fuller understanding of Imamate wealth and influence on the settlement, it is essential to study their external and internal connection in and out of Oman. The other important and interesting political factor that needs further research and lies within the settlement is the influence of the Shaikh families on the settlement. The Shaikh families play a leading role in all settlements affairs of tribal, religious, economic matters. In order to have a clear understanding of the settlements internal political system, it is crucial to study the role of the Shaikh families in the settlement. The agriculture in the oasis forms an income for every family and structure in the settlement which plays a principle role in the settlement economic and possibly political prosperity. In order to have a full understanding of the agricultural economic and political influence on the settlement, it is important of conduct research on the landownership and its relation to the Imamate and Bait al-Mall. It will be interesting to note how politics in the context of Imamate and Shaikh influence, and agriculture management, contribute in understanding the architecture of the traditional settlement.

Appendix-I: Interview Transcripts

These interviews were conducted during the fieldwork season of Birkat al-Mawz in Ḥārat as-Saybānī in April 2011. The interviewees were five former inhabitants of the settlement; Khamis Bin Mansur Al-Dighashi, Mubarak Bin Salam Bin Hilal Al-Tubi, Mousa Bin Mukhtar Bin Issa As-Saqri, Humud Bin Saif Bin Jarooḥ As-Siyabi and Abdullah Bin Salim Bin Rashid As-Saqri.

First Interview:

Interview with: Khamis Bin Mansur Al-Dighashi & Mubarak Bin Salam Bin Hilal Al-Tubi

Date: 06, Feb 2011

Location: Ḥārat Al-Sibani

Interviewer & voice recorder: Haitham Al-Abri

Note recorder: Prof. Soumyen Bandyopadhyay

Video recording: Dr. Giamila Quattrone

Time period: 63:35 min



Mubarak



Khamis

Introduction:

The interview started with a brief history on the *hara* near the gates. Then proceeded recording the name and house owner of each houses by walking through the *harah* starting from the small outside gate and passing in front of each house. The interview walk ended near the two gates and mosque and recorded the history of the *falaj* and general idea of the whole settlement. The house codes in the interpretation are based on a numbering system done after documenting the settlement to easily reference the house during the interview which is attached with this document. Below are some photos during the interview walk through the *Sibani* settlement.



Notes in reading the interpretation:

The interview interpretation has been written in a transcript style. The questions are written in bold and preceded by the initials of the interviewer or any other person asking the question. The answers are in *Italic* on a new line and preceded by the initials of interviewee. The codes of the structures can be found at the end of the transcript in a code map of the settlement.

Interview Interpretation:

KD: *The settlement was constructed starting from here in Burkat Al-Mouz since approximately 400 years ago and it evolved a lot with the expanding of number of houses and conserving them. The settlement expanded vertically from bottom to top. The houses are owned and the ownership changed from one to another but some houses are still owned by their originals. There are principal remaining houses owned by specific tribes although the inhabitants were within limited number of tribes of one or two. The components of the settlement are: the inhabitant's houses, the mosque, public majlis, falaj that crosses through, three main vertical accesses sekik (passages, editor's note), and three gates.*

MT: *four gates.*

KD: *That were closed at night by the order set for it for the settlement. There are only two settlements, this one and that one (pointing at Al-Wādī settlement) that were inhabited till the mid 1970s and there are still remains of the electricity lines. Now none lives in the harah except this man (pointing at Mubarak, editor's note).*

HA: When did the people start moving from the harah?

KD: *They started approximately in 1976 and 75.*

HA: What were the tribes that inhabited the harah?

KD: *Bani Tubah, Al-Fuhud and Bani Riyam. These are the main principal inhabitants. Bani Riyam and their clans. Al-Fuhud and Sukur were also under Bani Riyam.*

SB: Masarir?

KD: *No they didn't have Masarir.*

HA: You have mentioned that the harah was constructed vertically bottom to top?

KD: *Yes as I heard alongside with the newly expansion.*

HA: What about the tower at the top?

KD: *The tower was there before with its attached structures around and behind it. However, the harah was constructed in a very short period, started from the bottom and in short time continued upward to the top. It didn't take 300 or 400 year to build up the harah and it was inhabited with limited number of people. The houses were increasing gradually one next to another and some of the houses in the bottom and top are overlapping with each other.*

HA: how many houses are approximately in the harah?

KD: *It's difficult to count but approximately 50 to 60 houses.*

HA: Can we start walking in the settlement to point out the names, history and owners of each house?

KD: *Yes, that's fine and we can start from the gates. Old men accompany me to the gate (talking to Mubarak, editor's note). Each house was inhabited by four to five families (saying on the way to the gate). The houses were very close that the ground level of one house was on the first floor of the neighbouring house. The ground level of one house was for one family and the first was for another and they all entered from the same door. They were all corporative with no disagreement of one saying this is my house against each another.*

HA: What's the name of the owner of this house? (H3, editor's note)

KD: *Said Bin Sulaiman Bin Mohammed Al-Saqri. He has passed away and now it is inherited by his sons Shaikh Saif and Nassir.*

HA: how old is the house and was it constructed with the harah?

KD: *A bout the same time, no, it was built after the harah by Mohammed Bin Sulayim because before this area was date orchards. So the orchards started after these gates? Yes.*

HA: These gates do they have names? (H1 & H4, editor's note)

KD: *Sabah Al-Sharki (H1, editor's note), Sabah Al-Gharbi (H2, editor's note) and the third gate is on that side (pointing at gate opposite to the car parking, editor's note). There are two falaj channels that enters the harah which divides from one falaj, the lower one here (pointing at the one the crosses next the mosque, editor's note) and the upper one.*

HA: Where does the falaj divide?

KD: *It divides far next to the Sharia (head of falaj) but enters the harah in two channels.*

MT: *The falaj has three flows*

HA: Dose the entry point of the falaj to the settlement close?

KD: *No, it's not close. It flows under the gate and the houses. This house is one example (G8, editor's note); and one crosses at the top which we saw. The mosque was her (G4, editor's note); and there was a Quran school her (G7, editor's note).*

MT: *The school is next to that wood.*

KD: *A Quran School and a water well, which is still exists. It is still there next to that Sidrah (local tree, editor's note). In the past at war time, the inhabitants close the harah and use the well, none enters or exist. At night time after nine or sunset none enters*

the harah except for known guests. The harah was totally enclosed for its habitants only. There was a guard by the gate from a long time.

HA: What about the mosque? (G4, editor's note)

KD: *This mosque is called Waljah mosque and it was the main and only one for the harah. There were two public sablas, this is one above the Al-Sharki gate which was less used by a specific group and the other located upper near the vertical access for the whole harah.*

HA: Was the sabla on top of the Al-Sharki gate used by a specific tribe?

KD: *No, It was for all the inhabitants and also the other big sabla.*

HA: Was there a house in the ruin area between the mosque and that house?

KD: *Yes, there was a house. It was our house. That whole area was enclosed with the harah. I had to demolish the house to reconstruct the falaj channel. I had to sacrifice the house to reconstruct the falaj channel. The houses were affected by the leakage from the falaj channel which caused collapse in some of the houses. The houses were already old and week and the falaj leak were affecting them more.*

HA: Is the path of the reconstructed falaj the same as the old one? KD: *Yes, the same. Some bits have changes, like the change of sarooj material and location of the majasah (public bathing and ablution cubes, editor's note) which we didn't rebuilt.*

HA: Where there specified majasahs between the houses?

KD: *Yes, there were some specified for men and some for ladies along the falaj path.*

HA: Who is this house attached to the gate? (G8, editor's note)

KD: *Khafan Bin Sulaiman Al-Handaly but I don't know who he bought it originally from. He is not the original owner. The harah was evolving and there was a lot of buying and selling. In the old times, the house remained for the same family inherited one after another but now it has changed. Then they started to expand and who doesn't have ability to construct will buy one. Are the new owners who buy the houses from the settlement or outsiders? No, they are all from the settlement. All the inhabitants of the harah are from the settlement.*

HA: Shall we go to the other gate?

KD: *Yes, let's go.*

HA: What's the name of this falaj?

KD: *It's the same falaj Al-Khatman. It divides in to two channels, upper and lower.*

HA: It seems that the original arch was big. I think they reduced it and I am not sure why.

KD: *Some of the arch openings of the falaj were reduced and blocked in the 1950s and 1940s when there were problems.*

HA: Was there a relation between blocking the arch openings of the falaj with the expansion of the houses?

KD: *No, it was a security issue and some of the arches, openings and window gets blocked or closed. As you see there are houses at upper levels and houses at lower*

levels, majasahs at lower levels and her (pointing at the one next to the gate, editor's note) and the houses evolves upward.

HA: Was this gate known by any name?

KD: *No, it wasn't.*

HA: What about this house? (G10, editor's note)

KD: *It is for Salim Bin Sulaiman Al-Abri and it was one of basic principal houses.*

HA: Is it still owned by him?

KD: *It is owned by his sons.*

HA: Where is he now?

KD: *He passed away but his sons and grandsons are still here. But the house is old and none live there anymore. One the house is known as Bait Al-Ras which is also one of the main principal houses. There are two or three main principal houses: Bait Salim Bin Sulaiman Al-Abri which was for his father Sulaiman Bin Salim, Bait Al-Sukur which we passed by earlier and Bait Al-Ras for Said Bin Jarruf Bin Sulaiman Al-Tubi who lived in it with his family, about three or four families together. There is another house called Bait Al-Sharqi which is also a main principal house and it inhabited six families.*

HA: six families!

KD: *That's because of the size of house and family and strong social ties within the families.*

HA: We also heard from one of the old people about a house called *Bait Al-Kabir*?

KD: *It is for Said Bin Sulaiman Al-Abri.*

HA: What about this house? (G11, editor's note)

MT: *For Rashid known as Bu Khuluf.*

KD: *For Rashid Bin Salim Al-Sakri.*

MT: *This house (G14, editor's note); is for Ali Bin Said Al-Fahdi. I wasn't there in the inhabitant's life time of most of the houses in the harah. This opposite (G12, editor's note); was sold and I don't know the new owner but it was originally owned by the brother of (G14, editor's note); Al-Fadi, Hasan Bin Said the brother of Ali Bin Said (Mubarak continued). I remember them starting from the 1970s. That is Bait Al-Ras (C1, editor's note); for Said Bin Jarruf Bin Sulaiman Al-Tubi. That's the vertical access that goes up till the tower.*

HA: Was this access known by any name?

KD: *No, I don't remember that it was known by a name. The whole harah is known by Al-Sibani.*

KD: *What is the other access?*

MT: *Burj Al-Sababirah.*

KD: *No, I mean the access.*

MT: *No, it doesn't have a name.*

HA: What is *Burj Al-Sababirah*?

KD: *It's the tower at the top by the end of the stairs. The name Sabairah comes from the word sibir or Khibir (meaning: defend, editor's note); when they used to defend against enemies.*

GQ: **Haitham ask him if this was a shop because someone told us so yesterday.**

KT: *This is the house of Salim Bin Sulaiman Al-Abri, this is the upper entrance and the other lower one is from the back.*

HA: **Was this a shop?**

KD: *That was the location for raha to grain or mill the wheat which is done by women. Then the owner Rashid Bin Salim (G11, editor's note); changed it to a shop selling coffee, sugar and other goods.*

HA: **Who was the owner on the raha time? (Flat circular stone used to grain wheat, editor's note)**

KD: *None, it was for the use of all inhabitants. They go there and grain there wheat themselves. We had a place for the wheat and another for Khall. Then they shifted the location to grain wheat to that location (attached to E3, editor's note).*

MT: *There is another one next to your house (G3, editor's note).*

HA: **What about this house? (G12, editor's note)**

KD: *It was owned by Saif Bin Said Al-Fahdi and it has been sold and we don't know the new owner. As I told you the tribes that inhabited the hara were the Fuhud, Sukur, Bani Tubah and Al-Abriyin.*

HA: **What about this house? (C5, editor's note)**

KD: *It is for Khamis Bin Salim Al-Saqri. This was that sabla that I was telling you about (G10, editor's note). It is called Al-Ghurfa and used for meetings, receiving condolences and to host travellers and guests.*

HA: **Is this sabla part of the house? (G10, editor's note)**

KD: *Yes, attached to the house but the house is separate.*

HA: **Where is the entry to the sabla?**

KD: *From here (pointing at the location we were standing next to the falaj, editor's note).*

HA: **The sabla was longitudinal?**

MT: *Yes, it was. This room was for preparing coffee and they enter from here to then enter to the sabla.*

HA: **What about the space beneath the sabla?**

KD: *It was for storing stock for Salim Bin Sulaiman (G10, editor's note), until the sabla.*

HA: **Is this all part of his house?**

KD: *Yes, his house and family is one of the biggest in the harah. As I told you, the lower level is for animal stock and storage and the upper level is for the family. In some house you will find the lower level for one family the upper for another. This is the main falaj channel for the harah.*

HA: **Dose the lower falaj channel branch from the upper one?**

KD: *No, that is a branch and this is a branch but the upper one is bigger. This is two divides in one. If you go the shriaah (mother source of falaj, editor's note).*

MT: *The water flow channel divides into three flows. Two are for the upper and one for the lower.*

KD: *The channel of this upper falaj was raised up but now we have lowered it a bit. You see it high because of the filling of the compacted ruins but before, this path was low to that level (pointing to the gate next to G8, editor's note), and there was a stone steps rising from the gate to her.* **HA:** **HA: If the channel was high, how did the inhabitant of the houses next to the falaj enter to their houses?**

KD: *No, I mean that the existing level now was high in the old time and the ground next to it was low. They had a system before that if the flow of the falaj stopped; there will still be water in the channel for other uses like fire, ablution or other.*

HA: **That means that the flow pushes itself through the harah tell it exits.**

KD: *Yes, it was.*

HA: **What about this house? (C4, editor's note)**

KD: *Mukhtar Bin Issa Al-Saqri but I don't know if it is still owned by his sons or sold.*

HA: **What about this house? (G6, editor's note)**

KD: *Mohammed Bin Said Bin Jarruf Al-Tubi, it was originally for his wife but for him.*

HA: **What about this house? (G5, editor's note)**

KD: *Humud Bin Hamad Bin Mhana Al-Fahdi but now it is for his sons.*

KD: *This was the remains of the original falaj channel it was wide under the houses.*

HA: **Since there was a stairs rising up from the gate, where was the entry to these houses? (G5, G6 & G8, editor's note)**

KD: *They were entered from the lower level, through the stairs path. These ruins that you see are the upper level. This house (C2, editor's note) is for Ibrahim Bin Salim Al-Tubi.*

HA: **For who was this sabla? (Attached to C2, editor's note)**

KD: *It was for us but then used by this house (C2, editor's note).*

HA: **Was it constructed with the house (C2, editor's note) or came later?**

KD: *No, it came later.*

HA: **Was it a sabla?**

KD: *Used as a sabla by the family of the house (C2, editor's note).*

HA: **What about the space under the sabla?**

MT: *It was used to grain wheat it was previously her next to the falaj.*

HA: **Did the inhabitants grow a lot of corps?**

KD: *Yes, all the time and that was the original location for a room to grain wheat and Khall and it gone now.*

MT: *This is the house (D5, editor's note) of Said Bin Salim Al-Dughaishi, the Shaikh (settlement leader, editor's note). This house (G1, editor's note) is for Humud Bin Hamad Al-Fahdi.*

HA: **What about this house? (D1, editor's note)**

MT: *That house is from below.*

KD: *It is not part of the settlement.*

HA: **What about the house (D4, editor's note) which is behind this house? (D5, editor's note)**

KD: *That house is part of the settlement and it ends her at the edge of (D5, editor's note). There are other house expanding on that side but the settlement ends her.*

HA: was there any specific function on the shaded space of falaj under a room expansion above it?

KD: *No, it was just a shaded path and along the falaj there were mujasas (public cubic rooms for bathing, ablution and other uses, editor's note). The woman gets drinking water from Shiria (water source, editor's note).*

MT: *Two women mujaza next to each other were in front of my house (D6, editor's note).*

HA: What about that house? (G3, editor's note)

KD: *That is two houses attached, the first is for Khalfan Bin Abdullah and the second is for Saif Bin Abdullah Bin Salih Al-Tubi and the next is main, Monsur Bin Khamis Al-Tubi and his brothers. This house (D6, editor's note) is for Mubarak Bin Salam Al-Tubi.*

HA: The houses on this edge were they entire from outside the settlement?

MT: *No, they don't. The only access to all the houses is through the main gates. What you see now on this level is the upper level and below is all service. You enter them from the upper level and go down by stairs to the lower level. The settlement is enclosed and only entered through the gates. There is another gate up the settlement next to the house (D3, editor's note) of Nassir Bin Khusaib.*

KD: *The original stairs starting from the gate by (G8, editor's note) was similar to this stairs between (D8, editor's note) and (C2, editor's note) but wider and two or three times longer.*

HA: Did the discharge water affect the paths between the houses? KD: *No, it comes down to collect in the falaj and discharges outside the settlement without affecting the houses.*

HA: What about this house? (D8, editor's note)

MT: *It is for my uncle Rashid Bin Khamis Bin Rashid Al-Tubi. The house behind it (D7, editor's note) is for Ali Bin Issa Al-Saqri, but now been bought by Said Bin Sulaiman.*

KD: *Some has passed away and some has sold their houses.*

HA: What about this house? (C3, editor's note)

KD: *Khalfan Bin Sulaiman Al-Hundhaly.*

HA: The paths are not straight upward, is that done on purpose?

KD: *Because of topography, the nature of the houses and the stairs.*

HA: Which came first, the houses or the paths?

KD: *I don't know. If one house collapses, ten houses will collapse with it because the all support each other.*

HA: What about this house? (D9, editor's note)

KD: *For Abdullah Bin Zaher but sold it to Khalfan Bin Obid, no, Humud Bin Hamad Al-Fahdi.*

HA: What about this house? (B5, editor's note)

KD: *For Abdullah Bin Zaher Bin Saif Al-Fahdi but sold it to Khalfan Bin Obid Al-Hundhaly.*

HA: **Was this a separate house? (B5, editor's note)**

KD: *This was part of this house (B5, editor's note), it was a big house. The inhabitants used to sleep on the roofs and terraces overlooking each other.*

HA: **Is this a stair path continuing her? (Between B5 and D10, editor's note)**

KD: *Yes, there is stairs continuing up.*

HA: **What about this house? (D10, editor's note)**

KD: *For Hasan Bin Hamad Bin Khamis Al-Fahdi. The stair path turns and crosses in front of the houses. This house (B4, editor's note) is for Humud Bin Saif Al-Siyabi.*

MT: *This house (D2, editor's note) is for Nassir Bin Khusaib Al-Siyabi, my uncle .*

HA: **What about this house? (D1, editor's note)**

KD: *For Ali Bin Jarruf Al-Siyabi.*

HA: **Are these houses at the top the oldest?**

MT: *They are the oldest.*

KD: *You mean latest.*

MT: *No, the oldest.*

HA: **you mean the houses descending from the tower downwards are older?**

KD: *Yes, older.*

HA: **what about the big houses by the *falaj* and upward?**

MT: *They are later houses.*

KD: *The hara didn't seem to be constructed in a long period of time. Yes.*

HA: **Is that the reason of having gates?**

MT: *In the old times, there was fear, that's why the constructed gates. This is one gate that I told you about. This is a small gate, not a main one.*

HA: **Does the gate have a name?**

KD: *This gate and area is called Al-Ginanah and this is the owner's current house of this house (D4, editor's note).*

HA: **so, this gate is called *Al-Ginanah*?**

MT: *Yes. That is the location of the children's graveyard (pointing at the area next to the small mosque, editor's note).*

HA: **Is there another graveyard near the *hara*?**

MT: *No, this is the only near one. What about that stone structure? I don't remember seeing them inhabited.*

HA: **Did these structures exist before settlement?**

KD: *Yes and the tower.*

HA: **Do you know who constructed the tower? Did the elder people mention?**

KD: *No, we don't know, this was four generations ago, approximately 400 years ago. See the channel path of the *falaj* extends until it connects to the next hara.*

HA: **What is the name of this garden area?**

KD: *Al-Waljah and the next hara was called Burj Al-Makaseer. It is called Burj Al-Makaseer because the tower overlooks all the makaseer (gardens, editor's note) in the area.*

HA: What about this house? (D3, editor's note)

KD: *For Musoud Bin Saif Bin Mubarak Al-Sakri.*

HA: What was her next to the entrance door? (D3, editor's note)

KD: *A ruin, this area was a path. During the fear time in the past, the inhabitants used to jump cross from her downward through the house of Said Bin Salim to our house till they reach the bottom of the hara.*

HA: Do they escape from top to bottom or opposite?

On their house while people were asleep, they inform each other through the roofs and terraces of the houses during an attack or fire or any other issues. **HA: What about that house (D5, editor's note)?**

MT: *This is Said Bin Salim Al-Dughashi, these are two overlapping houses, and this one (D7, editor's note) is for Saif Bin Abdullah Al-Tubi. They are all cousins of one man of one family. After that house is the house of Issa Bin Salim then my house all enters from one entrance door. There was a stairs path her (Between 3a and 3b, editor's note). That tower is called Burj Al-Sababrah.*

HA: The structure next to the tower, Is it part of the tower or a house?

KD: *That is a house but if you mean the one at the top, I don't know.*

HA: Do you know the owners of these houses? (B1, B2 & B9, editor's note)

KD: *No, I was not born when these houses were inhabited. I only recall 5 to 6 inhabitants in my time and I remember living in our house when I was a child but you moved out since then. I was 5 to 6 years old when we move out. The settlement deserted and if one house collapses, other houses will collapse with it.*

HA: This was the house (A7, editor's note) that I was asking you about. Is this the oldest part of the harah? (B1, B2 & B9, editor's note) and (F1, F2 & F3, editor's note)

KD: *Yes, according to Mubarak. We think that this is the oldest houses according the buildings features and materials compared to the houses below because the ratio of stone used is more. That means the more the stone the older the building. The structures behind the tower are all stone made and scale is smaller. It seems whenever the go down they found mud to use for their construction. Maybe it was difficult to carry the mud to the top.*

HA: What was the reason that the ratio of stone increase from bottom to top?

KD: *because of the mountain, most of the stone is in the top and the more you go down, the less the stone. This is another stairs path (Between B8 & E2, editor's note).*

HA: Is there a function for open spaces between the houses?

KD: *No, there was no function.*

HA: Did the inhabitant create them in purpose or just naturally came with the construction of the houses?

KD: *It was through the construction and division of the houses and these spaces were not big, they were used to give access to the houses. For example, there was a stair structure her leading to each house through this space. You will always find the ceiling height in most of the houses low.*

HA: Was there a reason for low ceilings and small doors?

KD: *Every one constructs his house according to his needs.*

HA: What about this house? (E6, editor's note)

KD: *I don't know. But it has collapsed and it seems it habited more than one family and abundant more than 40 years ago.*

HA: What about this top path? (Between E2 and E6, editor's note)

KD: *That belongs to this house connecting to the upper level. (E2, editor's note)*

HA: What about this house? (B7, editor's note)

KD: *I don't know.*

HA: What about this house? (B6, editor's note)

KD: *This house is called Bait Al-Ras for Said Bin Jurrof Bin Sulaiman Al-Tubi. HA: What are these openings used for?*

KD: *To discharge water.*

HA: What about this house? (B5, editor's note)

KD: *I don't know.*

HA: What about this house? (E3, editor's note)

KD: *It is for Khalfan Bin Ali Bin Jurrof Al-Siyabi. I remember when it was still inhabited.*

HA: What about this house? (C1, editor's note)

KD: *I seem to mix up between the two houses. This is Bait Al-Rra for Said Bin Jurrof Bin Sulaiman Al-Tubi and it seems to be called that name for some importance, mybe they were one of the leaders but the biggest house is for Salim Bin Sulaiman called Baith Al-Kabir. Most of the settlement was inhabited by Bani Riyam and Bani Tubah but Bani Tubah had the leadership of the oasis. You will find most of the houses are for them.*

HA: The other person (Mubarak) informed us that D5 was the Shaikhs house, the Al-Dughaishi.

KD: *Dughaishi and Tubi is the same tribe. The Dughaishi is a tribe branch from Tubi. They are the same, some write Dughaishi and some write Tubi but they are all the sons of the same man.*

HA: Why there was a change in the name to Dughaishi?

KD: *because of the war time. During the war time before the renaissance, there were allies with the Imam which caused three houses to be destroyed by dynamite which where for the head of the tribes. Then they were not allowed to travel so any Bani Tuba is not allowed which made them change their tribe name to Dughaishi to work for their families. For example, some of my family members have chosen different tribe names. This was in the early 1950s during the Jabal war in 1952. They changed and travelled and when they came back in the early 1970s in His Majisty's time, some returned to the original tribe name and some didn't. Two to three houses didn't change back, one of them was my father.*

HA: Can we go from her to ask you about this sabla?

KD: *This house (F6, editor's note) is a big house for Bader Bin Saif Bin Hashm Awlad Thani now Riyami which are the same. His father was a Kadhi (judge, editor's note) in the previous governance of the Shaikhs.*

HA: What is this space? (Attached to D17, editor's note)

KD: *I am not sure; it seems like a restroom or a majlis.*

HA: Which settlement was the oldest? Al-Sibani, Al-Makaseer or Al-Wādī?

KD: *I far as I know, Al-Sibani was the first and oldest, but the Imam's house was the oldest which collapsed and the only part left is the majlis and it is in the size of a house because it was the governor's majlis. The first mosque ever constructed in this area was located by the joining point of the wādīs outside the two settlements. Three wādīs join there, wādī Al-Hail, wādī Al-Khasina and wādī Al-Muaidin. That area is rich of water and fertile soil. The water collects like Birkah (big pool) and the first thing the Imame grow there was bananas which was the reason for calling the settlement Birkat Al-Mouz. Two years ago you could be in Birkat Al-Mouz and find it full of bananas but now the number of farmers reduced and people got busy with other things, I think.*

HA: Is the mosque you mentioned in the wādī joining point known by any name?

KD: *They called Al-Kadeem mosque (the old mosque, editor's note), constructed by the Imame about 400 years ago or more and it was constructed by stone.*

HA: When the Imame gave the orders to dig the Khatmmen falaj spring, how did they locate it?

KD: *Generally, 60% of the aflaj in Oman were found by the Ya'ariba. Omani people know the location of aflaj through the Sidir tree. If they see a green Sidir tree and it has very long big roots go deep in earth, then they know that there is water there. They also have people experts in water. There were Bussar for aflaj and also wisdom. Omani people were very well knowledge in aflaj. See the wisdom, the falaj spring is 18 m underground level and the falaj flows on the top of the mountain. The Imam was hoping to then turn the path of the falaj back to its source but he passed away before achieving it. It starts 18 m below ground level and rises up self flow to the top of the mountain, it is an amazing accurate engineering levelling system and I am responsible for the falaj.*

HA: that's great, it will ensure the maintenance of the falaj.

KD: *Know we have managed to make addition to support the flow the falaj in the same way the Ya'ariba did in the traditional way. There are other settlements here in Birkat Al-Mouz. There is ḥārat Al-Rungsin and haraht Al-mdana which came later in small scale of 4 to 5 house in the mountain because the lower land was for agriculture and some houses are within the gardens which they used them in the summer.*

HA: When the settlement got supplied by electricity?

KD: *In 1981, early 1980s but some of the inhabitants already moved out. They already started to construct houses outside the hara. This house (H3, editor's note) was still inhabited five years ago. When the old man got week, he went to live with his sons.*

HA: What is the name of the old man that was walking with us?

KD: *His name is Mubarak Bin Salam Bin Hilal Al-Tubi. The only one left in the settlement today and this mosque (G4, editor's note) is called Al-Waljah mosque.*

HA: Did the children go to Quran School in the mosque?

KD: *They were learning in this school (G7, editor's note) her and after it collapsed, they were learning in that one in the parking area which was originally constructed in mud.*

HA: **Where did the woman learn Quran?**

KD: *The boys and girls lean together in the same school, rather in the old and the new one.*

HA: **Did they have a male or female teacher?**

KD: *They had a Mualam (male teacher, editor's note).*

HA: **Was there specific timing for the school?**

KD: *They had two periods a day. One in the morning and the other in the afternoon. This was for Mualam Khlafan in the morning, correct?*

MT: *No, first was Mualam Saif Bin Salim Al-Nabi her in (G7, editor's note) in the morning and there by the Mugasal (place for wasing the dead, editor's note) in the afternoon. Then came Mualam Khalfan Al-Sakri and then the school was located out and the Mualam was Salih Bin Salim. It was in mud and the boys and girls learned together. That time there was respect between them, not like what we see nowadays. Everyone cares for everyone that time. That was the old location (G7, editor's note) and every Thursday morning we give the Mualam two baisa as help from our side and he didn't have a salary. Sometime we give him coffee or dates, anything that was useful that time for him.*

HA: **Where did you pray the Friday prayer?**

KD: *We didn't do the Friday prayers that time. They only started to pray Friday 10 years ago in the Jama but no pary before that time.*



Second Interview:

Interview with: Mousa Bin Mukhtar Bin Issa As-Saqri

Date: 19, Feb 2011

Location: Ḥārat Al-Sibani

Interviewer & voice recorder: Haitham Al-Abri

Video recording: Dr.Giamila Quattrone

Time period: 53:31 min



Mousa As-Saqri

Introduction:

The interview started at the gates by recording the name and house owner of each house around it. Then proceeded by walking through the *harah* starting from the inner gate and passing in front of each house. The interview walk ended near the two gates and mosque and recorded the history of the *falaj* and general idea of the whole settlement. The house codes in the interpretation are based on a numbering system done after documenting the settlement to easily reference the house during the interview which is attached with this document. Below are some photos during the interview walk through the *Sibani* settlement.

Notes in reading the interpretation:

The interview interpretation has been written in a transcript style. The questions are written in bold and preceded by the initials of the interviewer or any other person asking the question. The answers are in *Italic* on a new line and preceded by the initials of interviewee. The codes of the structures can be found at the end of the transcript in a code map of the settlement.

Interview Interpretation:

HA: Can you please introduce your self?

MS: *Mousa Bin Mukhtar Bin Issa As-Saqri.*

HA: Can you take us a walk through the *harah* and tell us its components, history, owners and age of each house?

MS: *The old original owners are possible but the new owners are difficult because some we sold. Do you need the name for the purpose of conservation and compensation for the owners or other reasons?*

HA: We need to know the original owner and the current owner for documentation purpose. Would you like us to start from this gate (*Sabah*)?

MS: *Yes, this is the main Sabah access called Sabah Al-Gharbi (H2, editor's note) and the opposite is called Sabah A-Sharqi (H1, editor's note) and above it is Sablat As-Sabah and this house is known as Bait Al-Hadith (H3, editor's note) for Said Bin Sulaiman Bin Mohammed As-Saqri.*

HA: Was he a trader?

MS: *His grandfather was a big trader with Africa.*

HA: We noticed that this house is the only one projecting out the *harah* boundaries. Why?

MS: *Because there is a garden behind it that extends to the suq. It is called Kitat As-Sumrah.*

HA: Did the house come later?

MS: *The house and garden came together.*

HA: I mean was the house constructed with the *harah*?

MS: *No, this house came later.*

HA: Do you know how old it is?

MS: *About 300 years old.*

HA: What was in its location before? Was there a wall?

MS: *Yes, there was a wall and this was the only *harah* here and there was no *harahs* on the other side. It was the main *harah*.*

HA: What about the mosque?

MS: *This was the old mosque (Al-Jama), known as al-Walja mosque.*

HA: Did they pray the Friday prayers in it?

MS: *No, they didn't. They only did the five daily prayers.*

HA: How old is it?

MS: *It was constructed with the *harah*. It's very old and it had been conserved.*

HA: Did the mosque remain in the same original size after conservation?

MS: *Yes, the same as the original size.*

MS: *This is the house of Ali Bin Issa Bin Sulaiman As-Sakri (G9, editor's note), my uncle and this one (H3, editor's note) is also my other uncle.*

HA: Is this house (G9, editor's note), older than this house (H3, editor's note)?

MS: *Yes, it's older because it was constructed with the Sabah gates and the other house (H3, editor's note) was constructed later. This is our house (G8, editor's note), Zaher Bin Issa Bin Sulaiman As-Sakri and here (G7, editor's note), was the Quran School.*

HA: Was the Quran School for boys and girls?

MS: *Yes, it was for boys and girls.*

HA: What about this access? (Between G8 & G6, editor's note),

MS: *This was the second Sabah, similar to this Sabah (H4, editor's note) but they removed it.*

HA: Where dose it lead to?

MS: *It takes you all the way through the harah. Access through the two harahs, ḥārat Al-Lembjah and ḥārat Al-Qawa. This harah divides in to two haras, Al-Lembjah and Al-Qawa.*

HA: It divides in to two haras! Ḥārat al-Kahwa (meaning: coffee, editor's note)?

MS: *No, Qawa is a tree. Don't you know the Qawa tree?*

HA: Yes, I do.

MS: *That's the one I mean. It had a Qawa tree on one side and Al-Lambjah tree on the other side. Al-Lambjah is small like the olive tree.*

HA: Can you show us where did it divide?

MS: *Yes, I will show you.*

MS: *This is our house (G6, editor's note).*

HA: What is the name of this Sabah?

MS: *This was the secure Sabah, after it closes, no one can enter the harah in the evening because out side it was some service and falaj but from here none is allowed.*

HA: That means there was a door gate here?

MS: *Yes, there was a door and they took it out when they were making a movie of Oman in History.*

HA: What about the Sabah Sharqi and Gharbi?

MS: *These two Sabahs were always left open like an access through to the East gardens and only closed if something very important happened. But this gate was a daily closed defence gate (gate between G8 & G6, editor's note).*

HA: The two Sharqi and Gharbi Sabahs are always open while this gate is closed every night?

MS: *Yes, because you have the falaj, the gardens and the mosque on that side.*

HA: Any person passing through can only access that area between the Sabahs only?

MS: *Yes, to use the falaj and mosque. And that room attached to the mosque was used for preparing the dead for funeral.*

HA: So, they used the falaj to wash the dead?

MS: *Yes, everything was recorded for specific use and property. The Kafan (cloth use to cover the dead for funeral, editor's note) has gardens Amwal (meaning: date palm tree gardens, editor's note). The Jama'a (the wise people or leaders, editor's note) opinion also has Amwal. Also the Khall that they use for Eid and the Jama'a opinion. Also the mualim of the Quran School in the mosque evening time and the mosques. Also the Orifah and the Sabil for the poor people. And they all gathered in the mosque.*

HA: They didn't gather in the sabla?

MS: *Sabla was for coffee but the mosque was for all local matters.*

MS: *Here is sablat Al-Gurfah on this house (G10, editor's note), Bait Al-Kabir which extends towards that direction (pointing to the north, editor's note).*

HA: Dose the sablah have a separate entrance or is it accessed from inside the Bait Al-Kabir?

MS: *No, the sablah has its own separate entrance and the Bait Al-Kabir has two entrances one from this side and one from the opposite side (pointing at the south and north directions, editor's note).*

MS: *Look here, the falaj crosses through inside the house (G8, editor's note). For example this house that we lived in, you can't imagine that 10 people lived here. That space is called Nathad for storing the dates and that was the stair to the upper floor and that space was the darss for cows. That access is to the woman's musala (prayer room, editor's note), mujasah in other words where the falaj crosses there inside. The house door is kept open and the woman comes and goes to pray here.*

HA: What is the name of the space after the entrance door?

MS: *It is called dahrris and we sometime tie the goats in this space and that space is called mutabekh as a small kitchen and the access to it is called mukhatif. This room is for winter and that room is for summer and this one on top of the access is for the guests.*

HA: What is special about the winter room?

MS: *It has a farkha (opening in the ceiling, editor's note) at the ceiling and no openings in the wall. They put on the fire in the afternoon and by evening there will be no smoke.*

HA: What about the summer room?

MS: *It has windows and openings from every side possible.*

HA: What do you call the space in the upper level between the rooms?

MS: *We call it arsha.*

HA: Was there a space used as a bathroom?

MS: *Yes, there was. Some call it bishrona, and some call it matrab, others call it kaneef and others call it makan elkala or makan eladab. It was known by many names.*

HA: Was it available in every house?

MS: *Yes, in every house.*

HA: What about draying the dates?

MS: *It was done on the roof of the house.*

HA: Do they do it on the ground?

MS: *They use the da'an which they place it on the roof and spread the dates on top of it to dry.*

HA: Was the area next to the school enclosed?

MS: *No, there was an access that leads to the mall garden. It was enclosed to the mosque.*

HA: Can someone access from here?

MS: *No, there is no access from there. The only access to the hara is from this sabah (gate between G8 & G6, editor's note).*

HA: Does that mean that all these houses have no access from outside?

MS: *No access from outside, there access is from inside the hara.*

MS: *This house (G6, editor's note) is three floors and inhabited by a lady, her name was Salma Bin Othman Ar-Riyamiya and she is a Shaykhah and wealthy woman with many garden properties that she inherited from her father Othman. She inherited*

from more than one person. The house remained under her name till she passed away.

MS: *That is winter room that I told you about with the farkha in the ceiling for the smoke exit.*

MS: *We also bought that house (C4, editor's note) which was owned by Hasan Bin Said Ad-Dighashi who was the only Dlghashi.*

HA: **Are the Dighashi and Tubi the same tribe?**

MS: *Yes, the same and they changed the name back to Tubi except this man. His name was Hasan Bin Said Bin Hasan Ad-Dighashi. We bought it from him.*

HA: **So now it owned by your family?**

MS: *No, my father gave its ownership to his wife, which then got inherited by her daughter.*

HA: **How was the access after entering through this gate?**

MS: *There was a stairs rising up from the gate up word. Horses and donkeys also claim up these stairs. Donkeys used to claim up the stair from here to the Burj Es-Sabra and Siyabiyin houses which were about five houses.*

MS: *The path is not accessible form here, can you access?*

HA: **We can access from here but we can go around if you want.**

MS: *Let go around. This is sablat al-ghurfah which is part of this house (G10, editor's note) called Bait al-Kabir.*

HA: **Is this the biggest sabla in the hara?**

MS: *Yes, this one and the sabla by the sabah but there is also another sabla up hill (B3a and B3b, editor's note) called sablat As-Siyabiyin.*

HA: **So the sabla by the sabah (H1, editor's note) is for the Sukur and this one is called sablat Al-Ghurfah (G10, editor's note) is for all the inhabitants?**

MS: *Yes.*

HA: **Is the Sukur sabla only used by Sukur?**

MS: *It is only for Sukur.*

HA: **What about the Siyabiyin sabla?**

MS: *It is only for Siyabiyin (B3a and B3b, editor's note) but this sabla (sabla in G10, editor's note) is for public.*

HA: **Was this sabah (sabah between G8 and G6, editor's note) known by any name?**

MS: *It was known as sabah al-dakhili. It is similar to the other sabahs, Sharki and Gharbi, and the one on the other side. Did you see the other one?*

HA: **We saw it but the door is not there.**

MS: *All these doors are made of strong Joos wood.*

HA: **Where did they get this wood from?**

KD: *They get it from Jabal Al-Akhdar and the carpenters were available everywhere.*

MS: *This orchard which is for Bait el-mall was previously owned by Shaykh Sulaiman Bin Hamiyar and now it is for Bait el-mall for the government.*

MS: *this orchard area is called el-Walja.*

HA: **Was this edge enclosed?**

MS: *This edge was enclosed and extends and ends at the Quran School. It ends next to this house (G5, editor's note) for Mohammed Bin Yousif Al-Fahdi. Next to it is the house of Said Bin Ali Al-Fahdi. This house (G3, editor's note) is for Mansour Bin Khamis Al-Digashi and the next house (G2, editor's note) to it is for Rashid Bin Khamis Bin Rashid Al-Tobi the uncle of Mansour. After it comes the house (G1, editor's note) of Ali Bin Issa Bin Sulaiman Al-Sakri. He has two houses, one next to sabah and this one.*

HA: **Why did he have two houses?**

MS: *He had two wives.*

MS: *After the house of Ali Bin Issa Bin Sulaiman Al-Sakri (G1, editor's note) come the house of Saif Bin Abdullah Bin Salih Al-Tobi and after it is the house of Khalfan Bin Nassir Bin Salih Al-Tobi, his cousin. After that comes the house of Humod Bin Hamad al-Fahdi. Then the house of Salim Bin Sulaiman An-Na'abi then the house of Said Bin Salim Bin Salih al-Tobi Then this house for Rashid Bin Khamis al-Tobi (D5, editor's note) then the after it is for Khamis Bin Rashid Bin Khamis al-Tobi there grandfather.*

HA: **Are you sequencing the names upward?**

MS: *No, we are naming the owners of the houses of this area down. The upper hara known as Ḥārat el-Fouq is different and this one is Ḥārat el-Qawa and the opposite is called el-Lembjah.*

MS: *Now we come back to the houses. This house is for Ibrahim Bin Salim Bin Salih*

HA: **Let us go back to this house (D5, editor's note), who is the owner?**

MS: *Rashid Bin Khamis al-Tobi*

HA: **Was he the sheikh of the hara?**

MS: *No, he wasn't. His father was the sheikh. Khamis Bin Rashid Bin Khamis al-Tobi there grandfather was a wealthy man.*

HA: **Was Khamis Bin Rashid Bin Khamis al-Tobi considered to be the sheikh of the hara?**

MS: *No, not him. Before the hara Shaikh and the whole area was Shaikh Sulaiman Bin Hamyar and no other. But these others came later after the establishment of the government as shaikhs and rashids. The principal man sheikh was Sulaiman Bin Hamyar.*

HA: **Where was his house?**

MS: *It was Bait Ar-Ridadah. There was one Tobi his name was Said Bin Humod Al-Tobi, he was given a house in Ḥārat Al-Wādī and he was assigned as deputy wali as shaikh for the hara in the Bilad.*

HA: **Remind us of the name of this house (D5, editor's note)?**

KD: *That house (D5, editor's note) is for Rashid Bin Khamis al-Tobi and the house before it (D4, editor's note) is for Issa Bin Salim Bin Salih Al-Tobi after the house of Said Bin Salim (G1, editor's note). Yes, Said Bin Salim (G1, editor's note) and Issa Bin Salim (D4, editor's note) and Rashid Bin Khamis (D5, editor's note) and Khamis Bin Rashid (D6, editor's note) and this house is for Ibrahim Bin Salim (D7, editor's note).*

HA: **Were they all Tobiyin?**

MS: *Yes, they were all Tobiyin.*

HA: **Were they all from the same family?**

MS: *Yes, all from the same family.*

MS: *Should we go up, where is the stairs?*

HA: It is this way.

MS *I was wrong; this was the house (D8 editor's note) of Rashid Bin Khamis Al-Tobi. The previous house (D5 editor's note) was for Said bin Salim and the house before it (D4, editor's note) was for Issa Bin Salim. And this house (C3, editor's note) was for Ibrahim Bin Salim Bin Salih Al-Tobi and the house after it (C4, editor's note) was for Hasan Bin Said Bin Hasan Ad-Dighashi. Do you want us to go around from here or go up the stairs?*

HA: What ever suits you. For who is this sabla (attached to C3 and C2, editor's note)?

MS: *It is For Khamis Bin Rashid. This sabla is for Bani Toba Jama'a. It was a small special private sabla.*

HA: Dose this sabla has a name?

KD: *No, it doesn't. It known as sablat Khamis Bin Rashid.*

MS: *This was an old house (C2, editor's note) known as Bait Mathla but I don't know who her father was but many bought the house. The original owner was from Izki. This stairs is known as the Fowq stairs and it takes you to Hārat el-Fowq. This house (D9, editor's note) is for Musoud Bin Saif As-Sakri.*

HA: What about that house? (B5, editor's note)

MS: *It is for Said Bin Saif Bin Jarrof As-Siyabi.*

HA: The Siyabiyn houses starts from here?

MS: *Yes, and this is his fathers house.*

HA: You mean, these were two houses in one house?

MS: *No, there was a path that crosses here. That's the path (pointing at the stairs in B5, editor's note).*

HA: You mean, this is a path not a house?

MS: *No, this was the house.*

HA: Was this the entrance?

MS: *Yes, this was part of the latest conservation.*

HA: This path takes you up.

MS: *Yes, there were houses up there.*

HA: That means this was left open to be accessible for public.

MS: *Yes, a path as I am aware.*

HA: Who uses this space? (Lobby space by the entrance of B5, editor's note)

MS: *It was his son's house, Said, and this part for Said Bin Jarrof. Oh, there is no path from here, where is the path? The path is blocked from here.*

HA: There are a lot of ruins blocking this access.

MS: *That means the path is from there.*

HA: We should go around from there.

MS: *This was the path and there was no path from here (through B5, editor's note).*

HA: So, Where does his son's house start from?

MS: *It starts from here (B5, editor's note). This was the path and it takes you to Burj Al-Subabrah (The tower A6, editor's note).*

HA: What about this house? (D10, editor's note)

MS: *For Hasan Bin Hamad Bin Hasan Al-Fahdi.*

HA: What about this house? (D2, editor's note)

MS: *For Khusaiyib Bin Jarruf Al-Siyabi.*

HA: What about this house? (D4, editor's note)

MS: *For Ali Bin Jarruf Al-Siyabi, his brother.*

HA: They were all brothers living in the same area?

MS: *Yes, all brothers and they have a sabla here up.*

HA: Inside the house (D4, editor's note)?

MS: *No, outside behind the house. It is a big sabla form this path.*

HA: It is the one behind the house (D4, editor's note)?

MS: *Yes.*

MS: *This path leads to an area called al-Ginana and there was a small gate here.*

HA: Can you show us the gate?

MS: *Yes. This is the stairs that drops down. This house (D1, editor's note) is for Nassir Bin Khamis al-Fahdi. He lately bought it but I don't remember the original owner. This is the path to Ginana.*

HA: What about this house? (D3, editor's note)

MS: *This house is Musoud Bin Saif As-Sakri. The previous house that I mentioned for him was wrong.*

HA: Dose this access has a name?

MS: *This whole area is known as Ginana.*

HA: What about the mosque?

MS: *It is known as Ginana mosque by the name of the area.*

HA: Was there a door in the gate?

MS: *It was a small door left open as a small opening.*

HA: Was there a cemetery there?

MS: *Yes, it was for the children. If we get Humod Bin Saif, he knows more.*

HA: What about the structures behind the tower? (A1, A2, A3 & A4, editor's note)

MS: *They are called siyab, which protects the whole area. Siyab were for the guards that sit on the tower. Some were on the tower and other guards lived in the siyab. If there is any important issue, they keep them watching from the siyab to scan the whole area.*

HA: So, they watch from the tower and siyab?

MS: *To watch for thieves or enemies.*

HA: Do you know when were they constructed?

MS: *The same time the hara was constructed. The tower was the oldest; it was older than the hara.*

HA: How old is the tower?

MS: *They approximated it to 450 years but now it is more than 500 years.*

HA: So, the oldest part of the hara is the tower.

MS: *Yes, Burj As-Sbabrah. Do you want to go down from there? (Pointing toward the tower area, editor's note)*

HA: Any were you like.

MS: *This is the stairs that takes you upward (Between B4 & BD1, editor's note) between the houses.*

HA: What about this house? (D1, editor's note)

MS: *I told you that's for Ali Bin Jarrof As-Siyabi.*

HA: Was this the *sabla*? (B3d, editor's note)

MS: *This was the sabla (B3a, editor's note), isn't that the tower?*

HA: Yes.

MS: *Yes, the sabla location was below it.*

HA: *Sablat As-Siyabin*?

MS: *They didn't call it sabalt As-Siyabin, it was known as sablat el-Fowq.*

HA: What about this structure? (B3b, editor's note)

MS: *That is a house for Nassir Bin Khamis Al-Fahdi.*

HA: What about this house? (B9, editor's note)

MS: *I don't remember.*

HA: Do you know for which tribe?

MS: *No.*

HA: What about this house? (B2, editor's note)

MS: *I don't know.*

MS: *There is no stairs here, just a natural path. This house (A7, editor's note) is for Issa Bin Sanour Al-Hathrami.*

HA: So, his the only Hathrami in the *hara*?

MS: *Yes.*

HA: Where did he come from?

MS: *He came from Farq.*

HA: What about that structure there? (A5, editor's note)

MS: *That is all part of the tower structure.*

HA: What do you called the structures that are part of the tower?

MS: *They are called *siyab*.*

HA: So, all structures around and behind the tower are called *siyab*?

MS: *Yes.*

HA: What about this house? (B1, editor's note)

MS: *I think this house is for Issa Bin Sanour Al-Hadrami. That upper house is for Sbabrah.*

HA: What about that house? (A7, editor's note)

MS: *For someone from Farq, he is dead now.*

HA: The houses at the top, are they the oldest in the *hara*?

MS: *Yes, approximately. The whole *hara* is old, there is no before and after. Who had money, started to construct his house.*

HA: But, the *hara* was not constructed at once?

MS: *No.*

MS: *Here the houses are a bit more complex. This house (E2, editor's note) is for Khalfan Bin Mohammed Bin Said An-Na'bi, next to it is the house (B7, editor's note) of Salih Bin Mohammed Bin Said An-Na'bi and after it is the house (F3, editor's note) of Saif Bin Salim Bin Saif An-Na'bi. So, this is the house (F3, editor's note) of Saif*

Bin Salim Bin Saif An-Na'bi and the house next to it (F4, *editor's note*) is for Saif Bin Majid As-Sakri.

HA: Is it the house on our right while going down this path?

MS: *Yes, there is a path there called Bani Ufshah.*

HA: What about this house? (F3, *editor's note*)

MS: *That is the house for Saif Bin Salim Bin Saif An-Na'bi and this is the house (E6, *editor's note*) of Khalfan Bin Mohammed Bin Said An-Na'bi, then the house (B7, *editor's note*) of Salih Bin Mohammed Bin Said An-Na'bi. This house (B8, *editor's note*) is for a 'ulama', his name is Mohammed Bin Rashid Bin Mohammed As-Sakri.*

MS: *Now the hara here divides in two parts, here is a path and here is another, two stairs.*

HA: Does this path have a name? (Next to F4, *editor's note*)

MS: *It is called Ginana path.*

HA: What about this path? (Through E2, *editor's note*)

MS: *It doesn't have a name but it is near a 'alim' house, his name was Zahir Bin Saif Al-Fahdi. I will show you his house on the way. Which path should we go through? There are two paths.*

HA: As you prefer.

MS: *Let's go from here (Path next to F4, *editor's note*).*

HA: We wanted to ask you, the stairs that leads to this house (F3, *editor's note*)?

MS: *That shayb Saif Bin Salim An-Na'bi.*

HA: Where did the Na'biyin come from to the hara?

MS: *These Na'biyin came from Nafa.*

HA: Where is this place? Which wilaya?

MS: *It is near from here, near Bidbid. In wilayat Sumail.*

HA: What about this house? (F4, *editor's note*)

MS: *For Salim Bin Khamis Bin Mohammed Ar-Riyami and the house after it (F5, *editor's note*) is for Saif Bin Majid As-Sakri. That house (F6, *editor's note*) is for Said Bin Marhun Bin Uthman Ar-Riyami.*

HA: Is that the judge house?

MS: *No, he is just a wealthy man. This house (E5, *editor's note*) is for Bader Bin Saif Bin Hashim Awlad Thani.*

HA: What about this house? (E6, *editor's note*)

MS: *That house we mentioned it, it is for Khalfan Bin Mohammed Bin Said An-Na'bi.*

MS: *There is a path through this house (B7, *editor's note*) to Ginana.*

HA: Is this path for the use of the family of the house?

MS: *No, it is for all inhabitants of the hara, public use. That's the door access to the path. There is a stairs there. This house (F6, *editor's note*) is for Said Bin Marhun Bin Uthman Ar-Riyami and this house (E5, *editor's note*) is for Bader Bin Saif Bin Hashim Awlad Thani. This was his father's house, we don't need to record it, and it was destroyed during the war by dynamite.*

HA: Why was this house destroyed then others? (E5, *editor's note*)

MS: *It was during the war and he was a Qadi in Rustaq with the shaikhs and it was destroyed.*

HA: So, they didn't reconstruct it later.

MS: *No, they didn't. Also attacked was Bait Al-Ridadah and some watch towers.*

HA: After the house was destroyed, did they use that space for any activity?

MS: *No, they didn't.*

MS: *This was a mujazah (Next to the entrance of house F6, editor's note) for public and there is another one inside that house (F6, editor's note) open for public as well. This is a big house (F6, editor's note) with path access through it.*

HA: Remind us the owner's name?

MS: *Said Bin Marhun Bin Uthman Ar-Riyami.*

MS: *This house (G16 & G17, editor's note) is for Said Bin Nassir Al-Fahdi and this house (G15, editor's note) is for Khalaf Bin Said As-Subahi.*

HA: What about this house (G17, editor's note)? Is it part of this house (F6, editor's note)?

MS: *No, that is the house of Said Bin Nassir. This is one big house (G16 & G17, editor's note).*

MS: *This house (E4, editor's note) is for an old woman; her name is Marhunah Bint El-Abd.*

MS: *That house (G14, editor's note) is for Said Bin Ali Al-Fahdi and the opposite house (G12, editor's note) is for Saif Bin Said Bin Ali Al-Fahdi, his son. That last house (G11, editor's note) is for Salim Bin Rashid As-Sakri. This house (G13, editor's note) is for a woman; her name is Al-Bash Al-Fahdi. This house (C1, editor's note) is for Said Bin Jarrof Bin Sulaiman Al-Tobi.*

HA: Was the house known by any name?

MS: *No, no name.*

HA: What about this house? (C6, editor's note)

MS: *That house is for Mohammed Bin Abdullah Al-Tobi, the son in law of Said Bin Jarrof. This house (E3, editor's note) is for a Ruwaihi, his name is Sulaiman Bin Mohammed Ar-Ruwaihi.*

GQ: What about the Indians house?

MS: *We already recorded that house, for the old woman Marhunah but now it is owned by Khalfan Bin Ali Bin Jarrof As-Siyabi.*

MS: *You see, this is another path, one her (Next to C1, editor's note) and one there. That house after Said Bin Jarrof is for Zaher Bin Saif Al-Fahdi.*

HA: Between this house (C1, editor's note) and that house (B6, editor's note), there is a path to another house (B5, editor's note).

MS: *Yes, that big house is for Zaher Bin Saif Al-Fahdi and the house next to it (B6, editor's note) is for him as well. The house facing us (E2, editor's note) is for Mohammed Bin Rashid As-Saqri. The house of Khalfan Bin Mohammed An-Na'bi is the one on the left side (E6, editor's note).*

HA: Dose this path has a name? (Next to C1, editor's note)

MS: *Only the hara has names, this one Lembgah and that one Qawa.*

HA: What about the name of the upper hara?

MS: *Hārat el-Fowq to Burj As-Sbabrah. We have finished that side to the sabah.*

HA: Dose that sabah have a name?

MS: *No, it doesn't have a name.*

HA: The one down stairs?

MS: *No.*

HA: But, it did have a door?

MS: Yes, it did. The whole hara was defensive. It had strong door gates. The Bait Al-Kabir starts from here (Opposite to G12, editor's note). The sharia of the falaj starts from here (In front of G10, editor's note). Before, it started from here and not from the shops area by Bait Al-Ridadah.

HA: You mean that the *falaj* was covered? And starts from here?

MS: There it was accessible and they only used it when necessary and work on it. But all the precautionary defences were here in the hara including the falaj. If you wanted for drinking, you can take it from her. It is called sharia because it's the beginning of the hara or the beginning of the Bilad. The other part of the falaj was considered like wādī al-Muaidin.

HA: The *Khatmain falaj* channel from the mother spring till the hara, was it all covered?

MS: Yes, it was covered.

HA: So, the *falaj* appears for usage from the hara?

MS: Yes. This was 500 to 600 years ago. This house (G10, editor's note) was called Bait Al-Kabir because it was in by the sharia. This house (C5, editor's note) is for Khamis Bin Salim Bin Ali As-Sakri. He inherited it from his grandfather.

HA: What about this entrance? (Between G11 & G12, editor's note)

MS: We recorded that house (G11, editor's note). It is for Salim Bin Rashid As-Sakri. This is a small entrance and the other is the main one.

GQ: Haitham, the small shop?

HA: What about this small shop?

MS: That small shop is for this house (G11, editor's note).

HA: What did they sell in it?

MS: They sold simple things, candy and cookies.

HA: What about that shop? (Next to E3, editor's note)

MS: There was no shop there. That was a mutrab (traditional toilet, editor's note).

GQ: Was this the only shop in the settlement?

HA: Was this the only shop in the hara?

MS: It was the only one, it was small, but all the inhabitants relay on the suq down (Hārat al-Wādī, editor's note). Before they bring the goods from Muscat and Mutrah, called Bandar, and they distribute it to all the inhabitants. Then later Hārat al-Wādī was constructed.

HA: You mean, the first hara was constructed was Saybani?

MS: Yes. The rest are all new.

HA: So, the al-Wādī and Makaseer were constructed later?

MS: Yes. All came later, alongside with others.

MS: This house was called Al-Kabir because next to it was the sharia. Then the hara started to extend and many people came from Izki and other places. This is sablat Al-Ghurfa (Part of G10, editor's note), its entrance was from here and the rest is part of Bait Al-Kabir for Salim Bin Sulaiman Al-Abri.

HA: Is this the woman's house? (G6, editor's note)

MS: Salmah Bint Uthman Ar-Riyami.

MS: Here were some mujazahs but they were demolished (Pointing at the public bathing room by the falaj channel next to C5, editor's note).

HA: What about this house? (G5, editor's note)

MS: *That house is for Humod Bin Said Al-Fahdi. He inherited it from his father. It is a big house and it ends here.*

HA: **What about this house? (C4, editor's note)**

MS: *That house is for Hasan Bin Said Bin Hasan Ad-Dighashi. And we bought the house from him, Mukhtar Bin Issa Bin Sulaiman As-Sakri.*

HA: **Is the path of the new *falaj* the same as the original one? Is it the same level?**

MS: *Yes, the same path but a bit lower but the channel was wide big. They used to bath the horses of the shaikhs on it. The water accessibility for use and drink was here, all people came here. The hara was populated with inhabitants.*

HA: **Was the *falaj* divided in to two channels, up and down?**

MS: *Yes, there is one flow down and one up.*

HA: **You have mentioned to us that the *hara* divides in *sub-haras*, where dose it divide?**

MS: *From here (Path between G10 & G6, editor's note), this is one stair path. It ends here (In front of C4, editor's note) with a space. The other stair path is there by the sabah. This path from here to the house of Saif Bin Said is flat with no risers. The stair starts from the other sabah (Next to G14, editor's note).*

MS: *The entrance doors of these houses (G5 & G6, editor's note) were high until you reach the Na'bi houses, until the house of Salim Bin Sulaiman An-Na'bi.*

MS: *I was born in that house (G8, editor's note) then we bought this house (C4, editor's note).*

HA: **How many years did you live in the *hara*?**

MS: *More than 50 years, before 1952, before the war, six years before the war.*

MS: *If you need more details, I can contact Hmoud Bin Saif for you. He is from hrart el-Fowq. He helped in some maintenance work. If you need to do something small, or are you not planning to do anything?*

HA: **We don't know yet.**

HA: **Is there a door or gate at the exit of the *falaj* flow from the *hara*?**

MS: *No, there is Okat al-Waljah. The Okah is in hight level above the palm gardens, around 10 m high, along the whole settlement to al-Jazeera, until it exits at al-Hail. Didn't you pass there?*

HA: **Not yet.**

MS: *You will get surprised to know that the *falaj* level is 10 m here in the hara and drops 30 m deep there by the source, amazing levelling.*

HA: **You mean, its 30 m deep there underground and 10 m high above ground here?**

MS: *Yes. Go check it out. It is amazing engineering done. In the old days, during the work on the *falaj*, they were beaten. They dig and work on the *falaj* but the wādī water discharge demolishes it. They do the work again and wādī demolishes it again and they were coming back defeated and seven workers were killed from Al-Jabal Al-Akhdar. The Imam asked them what they want. They answered, we want half the Bilad and he agreed. They took the sudoor, meaning uphill and the Imamate administration took the bottom lands during Said Bin Sultan al-Ya'rubi.*

HA: **So the *Bilad* is half owned by inhabitants and half by administration.**

MS: *That was before, but now it changed and they buy and sell their shares.*

MS: *He made a great invention. He got a gizlah of dates and placed it on the peak of Al-Jabal Al-Akhdar called Ras Al-Sa'id, its height is 10,700 ft. He told a person to put it there and fill it up with sand and place the ring upside-down on the gizlah and check the weather. Whenever a wind blows, and when part of the ring appears and keep me updated till it reached the bottom of the ring, the fass. When it reached the fass, he informed the workers to precede the work on the falaj. They worked on the falaj and closed it and the wādī came and didn't affect the falaj. They stayed working for years to do so. They dug the well for the falaj but trying to dig the channel for the falaj to reach the hara but the wādī, keeps coming and demolish it.*

HA: **How long did take to accomplish the work?**

MS: *I don't remember. But this amazing invention that he made of using the wind and showing parts of the ring till its fass and gave them the order, like weather forecast.*

HA: **That was the Imam idea?**

MS: *Yes, he was a alam. They were already coming back defeated and unable to work. They were tired and seven people died. They were buried by the wādī. There is a furtha called furthat al-musa'la, where they pray.*

HA: **where is this furtha?**

MS: *Here near by. There are a lot. We have furthat al-musa'la, furthat al-rubkhi, furthat al-mtarih, furthat khamis bin twair, many names which are recorded.*

MS: *Shall we go?*

HA: **Do you want us to go to Ḥārat al-Wādī?**

MS: *We can't do it now. Let us do it some other time.*

HA: **What about Makaseer?**

MS: *I will arrange it for you with Humud? Will you give him something?*

HA: **It is OK.**

MS: *I will call him and arrange it the meeting. Do you want him to come tomorrow?*

HA: **Tomorrow will be fine. I will follow it up with you.**

MS: *When the people finished their prayers, they sat on this wall, called mumsha, a sarooj wall that extends to the Quran School. Some of them sit on the wall and others in the sabah (H4, editor's note).*

HA: **Can you tell us about the people's daily life, how it was?**

MS: *They start their day by the salat el-fajer (dawn prayer, editor's note) then return back home and prepare coffee and take it to the sabla and some coffee is prepared in the sabla and they meet in the sabla and have their coffee, then everyone heads to his orchards, some to falah (shepherding, editor's note), some go to collect wood, some to collect charcoal, some collect honey, some hunt gazelle, some collect forage for livestock. In date season, some collect dates and some do other tasks on date palm trees. They spread on earth, some to filaha (gardening, editor's note) and some to falah (shepherding, editor's note). Then they return at 11 am for coffee then go for lunch at home. They first have lunch then go to pray. After finishing prayers at 1 pm, they head to the suq (the market, editor's note). After the market, they return to have coffee, it is called qahwat tulua es-suq (the coffee of market exit, editor's note). Then they go back to their orchards and harvest some clover.*

HA: **So, first they go to their orchards, then after lunch at noon they head to the market. That means the market only opens at that time.**

MS: *Yes, there was no suq in the morning.*

HA: Is it because some of the inhabitants had suqs there, so they can sell their good in the afternoon?

MS: *Yes. The trading was in the afternoon. Before the suq was only from 4 pm to 6 pm then they close. Only 2 to 3 hours.*

MS: *This is Bait el-Hadith (H3, editor's note) and there is a house for my uncle, Khalifa Bin Issa Bin Sulaiman as-Saqri.*

HA: Is it after out the sabah (H1, editor's note)?

MS: *Yes. My uncle's name is Khalifa Bin Issa Bin Sulaiman as-Saqri. This is Bait el-Kabir (G10, editor's note), see how long it extends, from her to the other gate. It is a big house and this back garden also belongs to it.*

HA: What about this Quran School (next to the parking, editor's note) did it come later?

MS: *Yes, it came later. This area is called Khaboor. There was the School, a place to juice the sugar straws and a tunoor (fire hole to cook meat in the Eid feast, editor's note).*

HA: It was out side the harah?

MS: *Yes, it was here.*

HA: Where did they do the Eid prayer in the old days?

MS: *It was here in this area before making it in the existing location now. The important thing is to be done outside the harah. They didn't pray fare because there was fear in the old days. There were tribal matters and other things not like today, you can pray where ever you want, sleep any where, go anywhere and do what ever you want.*

MS: *Shall we go.*

HA: *Yes.*



Third Interview:

Interview with: Humud Bin Saif Bin Jaroof As-Siyabi

Date: 20, Feb 2011

Location: Ḥārat Al-Sibani

Interviewer & voice recorder: Haitham Al-Abri

Video recording: Dr. Giamila Quattrone

Time period: 18:40 min



Humud As-Siyabi

Notes in reading the interpretation:

The interview interpretation has been written in a transcript style. The questions are written in bold and preceded by the initials of the interviewer or any other person asking the question. The answers are in *Italic* on a new line and preceded by the initials of interviewee. The codes of the structures can be found at the end of the transcript in a code map of the settlement.

Interview Interpretation:

HA: Can you please introduce your self?

HS: *Humud Bin Saif Bin Jaroof As-Siyabi.*

HA: Can you take us a walk through the *harah* and tell us its components, history, owners and age of each house?

HS: *I will tell what I know. Let's go.*

HS: *This house (G9, editor's note) is for Ali Bin Issa As-Saqri and that house (H3, editor's note) is for Said Bin Sulaiman As-Saqri. This is the mosque (G4, editor's note) called Al-Walja mosque. That collapsed house (G5, editor's note) is for a person who died, Mohammed from the Jabal (mountain, editor's note), he is not Saqri, But Fahdi. That house (G3, editor's note) is for Mansor Bin Khamis Al-Tobi. This house (G6, editor's note) is for Said Bin Marhon Bin Othman Ar-Riyami and this house (G8, editor's note) is for Mukhtar Bin Issa As-Saqri.*

HS: *We start to rise from her.*

HA: **What is this *sabah* called?**

HS: *It is called Mitla'a al-hijra (The rise of the hijra, editor's note), Mitla'a Ḥārat As-Saybani.*

HS: *This is the sabla (Big hall in G10, editor's note) of Ḥārat As-Saybani and the house (G10, editor's note) is for Sulaiman Al-Abri.*

HA: **What is the name of the sabla?**

HS: *That is the sabla of Ḥārat As-Saybani.*

HA: **What about this house (C4, editor's note)?**

HS: *This house (C4, editor's note) is for Hassan Bin Said Ad-Dighashi and this house (G5a, editor's note) is for Humud Bin Said Al-Fahdi and this house (C3, editor's note) is for Ibrahim Bin Salim Al-Tobi.*

HA: **What about the sabla? (sabla attached to C3, editor's note)**

HS: *It is for this house (C3, editor's note) and this house (G3b, editor's note) is for Khamis Bin Rashid Al-Tobi and that house (G3a, editor's note) is for Khalfan Bin Nassir Al-Tobi and here was a raha (communal space to grain wheat, editor's note) but now it is demolished.*

HA: **What about that house (D5, editor's note) at the end of the *falaj*?**

HS: *That house (D6, editor's note) is for Salam, this house (D5, editor's note) is for Said Bin Salim Al-Tobi and this house (D6, editor's note) is for Salam Bin Hilal Al-Tobi.*

HA: **Did these passages going up have any name?**

HS: *They take you up to the houses as-Saybani.*

HS: *This house (D8, editor's note) is for Rashid Bin Khamis Al-Tobi and you know this owner of this house (C2, editor's note).*

HA: **Can you remained us please of this house (C2, editor's note)?**

HS: *This is for a women from Izki, her name is Methla and this house (D9, editor's note) is for Abdullah Bin Thuhai and this house (B5, editor's note) is for Zaher Bin Saif Al-Fahdi. This house (D10, editor's note) is for my brother Said Bin Saif Bin Jarruf As-Siyabi and that house (B4, editor's note) is for Humud Bin Saif Bin Jarruf As-Siyabi for me and that house (D2, editor's note) is for my uncle Khsaiyb Bin Jarruf As-Siyabi and that house (D1, editor's note) is for Ali Bin Jarruf As-Siyabi.*

HA: **You are all a family living in one place.**

HS: *Yes, in one place.*

HA: **What about that house? (D3, editor's note)**

HS: *That house (D3, editor's note) is for Msoud As-Saqri and there was a door here. In the time of war, the door was close but we don't remember it. This is as we were tooled that during war it was closed.*

HA: **Did this path have any name?**

HS: *It is a path going down leading to the orchards.*

HA: **What about that mosque? (Mosque outside the *harah* near the back gate, editor's note)**

HS: *That is a mosque called al-Waljah and the houses around it are for the orchards. Those houses (A1, A2, A3 & A4, editor's note) are very old and we don't remember their owners.*

HA: **Were they built before the *harah*?**

HS: *Yes, older than the *harah*. It is all constructed with stone without mud.*

HA: **What about the tower? (A6, editor's note)**

HS: *The tower is with the *harah*.*

HA: ***I mean, was the tower constructed in the same time with these old structures? (A1, A2, A3 & A4, editor's note).***

HS: *God only knows.*

HS: *This is a *sabla* (B3a, editor's note); the place that we are standing on is a *sabla* for as-Saybani.*

HA: ***Was this *sabla* known by any name?***

HS: *Sablat Ḥārat As-Syabani Fouq, for Siyabiyin, written for the Siyabiyin.*

HA: **What about this structure? (B3b, editor's note)**

HS: *That is also a *sabla* (B3b, editor's note) used during the winter and this *sabla* (B3a, editor's note) is for the summer.*

HS: **That house (B2, editor's note) is for Ubaib Bin Mattar.**

HA: **What is his family name?**

HS: *I don't remember his family name, give him any name.*

HA: **What about that house? (B9, editor's note)**

HS: *That house is for Nassir Bin Khamis Al-Fahdi.*

HS: *These are very old houses (B1, editor's note) and none knows their owners.*

HA: **Even when you were still living in the *harah*?**

HS: *None knows. In our generation, none recall them inhabited. They were very old.*

HA: **You mean these and the tower are very old.**

HS: *Yes, they were abundant long time ago.*

HS: *This house (F2, editor's note) is for Siaf Bin Salim Al-Fahdi and this house (A7, editor's note) is for someone from Farq known as the Najar. He lived here and then passed away. That area is called Rengsain (The area before the *harah*, editor's note) and also known as al-Lemdanah.*

HA: **What about this house? (F3, editor's note)**

HS: *This house is for Salim Bin Khamis Ar-Riyami and this house (E6, editor's note) is for Zaker Bin Abdullah Al-Fahdi and this house (F4, editor's note) is for Saif Bin Abdullah As-Saqri and this house (F6, editor's note) is for Mohammed Bin Bader Al-Thani.*

HA: **What about this house? (E5, editor's note)**

HS: *It is also for him and this part of the house was destroyed during the war.*

HA: *When was that?*

HS: *long time ago.*

HS: *This house (G16, editor's note) is for Said Bin Nassir Al-Fahdi.*

HA: **Is this all one house?**

HS: *Yes, this house (E4, editor's note) is for Khalfan Bin Ali as-Siyabi and this house (G15, editor's note) is for Khalaf Bin Said an-Na'abi. That house (G14, editor's note) is for Said Bin Ali Al-Fahdi and this house (G12, editor's note) is for his son Saif Bin*

Said Bin Ali Al-Fahdi and that house (G11, editor's note) is for Rashid Bin Salim As-Saqri.

HS: *This house (G13, editor's note) is for Humud Bin Nassir Al-Tobi and this house (C1, editor's note) is for Said Bin Jarruf Al-Tobi and this house (C6, editor's note) is for Mohammed Bin Abdullah Al-Tobi and this house (E3, editor's note) is for Said Bin Nassir Al-Fahdi the same owner of that house (G16, editor's note) and that house (B7, editor's note) is for Ali Bin Saif Al-Fahdi.*

HA: **What about that house? (B5, editor's note)**

HS: *I told you that house is for Zaher Bin Saif Al-Fahdi.*

HA: **What about this house? (B6, editor's note)**

HS: *For Ali Bin Saif Al-Fadi and this house (E6, editor's note) is for Saleh Bin Mohammed Awlad Thani and that house (E2, editor's note) is for Abdullah, he is dead now, Abdullah Bin Mohammed Al-Fahdi.*

HA: **Can we continue down aligned with the *falaj*?**

HS: *Let's go.*

HS: *This harah is very old not like your harah.*

HA: **How old is this harah?**

HS: *I don't know. But not like your harah. Yours is more resent in al-Ḥamrā.*

HA: **What about is this house? (G12, editor's note)**

HS: *I told you for Saif Bin Said Al-Fahdi and this house (C6, editor's note) is for Mohammed Bin Abdullah Al-Tobi and this house (G11, editor's note) is for Rashid Bin Salim As-Saqri.*

HA: **What about this structure?**

HS: *That is a shop for him (owner of G11, editor's note).*

HA: **What did sell?**

HS: *Pepsi and other new goods not like the old times.*

HS: *This is the house (G10, editor's note) of Sulaiman Bin Salim Al-Abri.*

HA: **Is this the house they call Bait Al-Kabir?**

HS: *Yes, this is the one.*

HA: **What about this house? (C5, editor's note)**

HS: *It is for Khamis Mraifas-Saqri and this is a mujazah for men (communal bathing cube near C4, editor's note).*

HA: **So, all the mujazah on the falaj line are for men except that one (C6, editor's note).**

HS: *Yes.*

HS: *Here was a raha and there was a mujazah.*

HA: **Do you know how the *harah* was constructed? Was it from top to bottom or bottom to top?**

HS: *It was constructed from top to bottom. They started from the top and on there way down.*

HA: **Do you know how long did it take to construct the *harah*?**

HS: *No, I don't know. I only say what I know.*

HS: *There is a well here, made after the rise of the harah but there is no water now.*

HA: Did Ḥārat al-Wādī and Burj Al-Makaseer were built at the same time as as-Saybani or later?

HS: *None knows. We don't know if they were before or after. We can't say what we don't know.*



Fourth Interview:

Interview with: Abdullah Bin Salim Bin Rashid As-Saqri

Date: 24, Feb 2011

Location: Ḥārat Al-Sibani

Interviewer & voice recorder: Haitham Al-Abri

Video recording: Dr. Giamila Quattrone

Time period: 57:48 min



Abdullah As-Saqri

Notes in reading the interpretation:

The interview interpretation has been written in a transcript style. The questions are written in bold and preceded by the initials of the interviewer or any other person asking the question. The answers are in *Italic* on a new line and preceded by the initials of interviewee. The codes of the structures can be found at the end of the transcript in a code map of the settlement.

Interview Interpretation:

HA: Were you the keeper of the *falaj*?

AS: *It changes with time, I was the keeper 40 years ago then other people took over and now I am again the falaj keeper for the last 7 years on the general upper level and then I left it and one of my sons is taking care of the falaj.*

HA: Can you tell us the history of the *falaj*?

AS: *I can only tell you what I know, but there was nothing written on it and I followed it but it is about 400 years old in the same time of falaj al-Ḥamrā as our grandfathers informed us. Both falaj al-Ḥamrā and this one were made at the same time.*

HA: Where did the *falaj* start in the *harah*? Starting from which dwelling? Where did the *Shria* start?

AS: *This falaj here (the lower falaj, editor's note) its shria is here, it stops here and doesn't go any further and the other one (The upper falaj, editor's note) its shria was here in the place where you met me.*

HA: Some previous inhabitants informed us that the *shria* started in front of Bait Al-Kabir.

AS: *Yes, after the harah has formed all together but before it was where you met me. After the harah was completed and the dwellings formed and clustered around it, the shria was then agreed to be by Bait Al-Kabir.*

HA: Was the *falaj* divided from the beginning to be one up and one down?

AS: *Yes, it has been divided to five divisions, three divisions for the upper falaj and two divisions for the lower falaj. Didn't you go and see the giyaz (The section where the falaj divides, editor's note)?*

HA: No, we didn't go there yet.

AS: *Shria?*

AS: *It is opposite to Mosa's shop by the big sidrah.*

HA: Is it near the mosque?

AS: *No, after the mosque it is there divided into three channels, two channels are counted for three divisions and one channel is counted for two divisions. The lower falaj is counted for two divisions so it sometime is directed to the piedmont lands and sometimes to here. Yes, it is five divisions. Didn't you see it till now?*

HA: We were busy documenting the *harah*.

AS: *The division is there near the big sidrah next to the shops by the shria, three for the upper falaj and two for the lower.*

HA: Do all the *falaj* shares belong to the inhabitants?

AS: *Yes, but half is for the government. In the "reded" they change going around, if we say starting from today, it will last for nine days and change around in the tenth day. First al-qa'adah, then mabda bait al-mal, then baqi bait al-mal, and then radat bin Ismail, then thalathet Arba'a, then redah wi tisah, then mukhalaf Saif, then comes Ar-Ridadah in the beginning, the first orchards ar-rud al-fouqi. Then al-qa'adah for the whole day is for the falaj and the rest eight days are for the inhabitants and the government and it's divided everyone has his share. Radat mabda bait al-mal and baqi bait al-mal are for the government to irrigate the east orchards.*

HA: Is the orchards around al-Makaseer owned by the government?

AS: *No, it is divided and also the water of the falaj is divided.*

HA: Were the three harahs, As-Saybani, Wādī and Makaseer built at the same time?

AS: *No, As-Saybani is the oldest one.*

HA: What came after As-Saybani?

AS: Houses in Makaseer were not as you see them today as dwellings; they were small structures for livestock owners.

HA: Were they for the Shawawi?

AS: For the Shraqiyin and Bani Tobah whom are from this oasis. But they were livestock owners.

HA: What about Ḥārat al-Wādī?

AS: Ḥārat al-Wādī has its own people, when this harah got full of inhabitants; they extended by making harah al-Wādī.

AS: I remember this harah; their inhabitants didn't reach 300 souls. Nowadays they are more than 3000 and up to 9000 souls. When there is no space, they extend gradually.

HA: So Ḥārat al-Wādī came later after as-Saybani?

AS: Yes.

HA: When the Ḥārat al-Wādī came, was the suq already there or came later?

AS: The suq and the dwellings formed together, but I didn't follow its history or questioned about it because that time there was no writing or paper but we inherited this knowledge from our fathers whom inherited it from our grandfathers and so on which was the way to record history then.

HA: What can you tell us about the history of Ḥārat As-Saybani? Does anyone know the history of the stone structures (A1, A2 , A3 & A4, editor's note) behind the tower(A6, editor's note)?

AS: These small structures (sfif) were also for livestock owners, shu'wan. They were shraqiyin as they are known today, but before they were known as awlad Ghash and it is not good to talk about them because they will not like it. Their tribe was awlad Ghash who lived there, the same Shraqiyin today also livestock owners. In the same place you met me the other day, they lived in that top hill area.

HA: You mean all structures made of stone?

AS: Yes, all from stone. I also was told from one of the older people who owned one of the stone structures (sufah) to build a mosque which you saw at the back side of the harah. He told me that this is my sufah, demolish it and you the stone to construct the mosque.

AS: The livestock owners always have dogs, and these dogs started to come down to the falaj near the spring and the inhabitants of the harah complained about them. These dogs were always on the falaj when the weather is hot. So, all the livestock owners were requested to come down and they lived on the small structures that you see aligned with the street. One constructed, then the other next to him and so on. And their livestock were kept where you see the suq now. This is what I was told and not what I witnessed.

HA: These sfif that you mentioned, are they the oldest structures in the harah?

AS: No, they formed together with the harah. But when they came down, the livestock owners are not allowed to live in the harah. As you know, they are liveable with people. That time the inhabitant relied on the livestock. Not much of agriculture land and livelihood was limited.

HA: What about the domestic livestock in the dwellings of the harah? Were they collected in a known place for herding?

AS: *Yes, they were.*

HA: Where were they collected?

AS: *They were collected by the sidrah on the path from here, opposite to Ḥārat al-Wādī near the house with towers. They were collected there and then the shepherd takes them for herding. And for this hara they were collected by this sidrah here and the shepherd takes them all together. And he brings them back by noon time after Thuhur prayer and everyone takes back his livestock to his house. Everyone depends on the livestock that time in the production of milk, meat and fertilisers.*

HA: What about these two gates? (H1 & H4), you mentioned that they were not here before.

AS: *Yes, as I was told by my father. When this house (H3 , editor's note) was built by my grandfather, there was no gates (H1 & H4 , editor's note) on both sides. There was only these two gates: this one (gate between G8 & G6a , editor's note) next to the falaj and opposite to the mosque and the Quran school is outside near it. And that gate (gate between G11 & G14 , editor's note). So, when this house (H3 , editor's note) got constructed, these two gates (H1 & H4 , editor's note) were constructed too. This is what I was told by my father. The harah was only edged to these gates (gate between G11 & G14 & gate between G8 & G6a , editor's note) but after this house came (H3 , editor's note), it was included within the harah.*

AS: *In those old times, these gates had guards and they guard and close them day and night.*

HA: You mean these two gates (H1 & H4, editor's note) ?

AS: *Yes, as you know that time was a lot of fights. So the harah depends on the guard.*

AS: *This gate (H4 , editor's note) had a big wood pillar to lock the gate by fixing it both ends horizontally on these holes on the sides of the gate wall. It is done in a way so the guard can lock and open the gate while he is sitting on the bench.*

HA: Is it the same with the other gate (H1, editor's note)?

AS: *No, only one gate was open for access. This gate was open for inhabitants to go to their orchards or any other livelihood means.*

HA: Before these gates were here (H1 & H4 , editor's note), when did they open the inner gate (gate between G8 & G6a , editor's note)?

AS: *That gate (gate between G8 & G6a , editor's note) didn't have a defined location like this gate (H4 , editor's note) with place for sitting and guarding but that gate (gate between G8 & G6a , editor's note) was open in day time and closed at night. The older gates (gate between G8 & G6a , editor's note) didn't have fixed guarding positions like these gates (H1 & H4 , editor's note).*

HA: Tell us about the inhabitant's way of life in that time, like their daily activities from early morning to sunset.

AS: *Everyone goes to and takes care of his livelihoods, collecting wood, harvesting for livestock and working in their orchards. Everyone is working in his own livelihood and living day by day. We worked like that in those times. In the time of harvesting the dates, we used to make the traditional baskets from date palm leaves, some had a donkey for carrying anything, and some had bulls for mixing the orchard soil for planting. That is how it was, when the date harvest comes, some is stored, some is*

eaten, some used for other date productions and some are sold for the rich people. Some people work as orchard labour.

HA: What about the women? What do they do?

AS: Women are responsible for all house activities, grass harvesting, collecting wood, taking care of domestic livestock, grinding the wheat and all relative cooking activities.

HA: What about al-Waljah mosque?

AS: Al-Walja mosque goes back to the Ya'riba period. It was a small mosque with one column with four prayer rows and two zones. Constructed with stone and sarooj from bottom to top in the Ya'riba period. Formed with the harah, in the same time with this oldest house that I told you about (G10, editor's note). There was no space enough after the population of inhabitants increased so they had to expand the mosque with another three columns and the one who built it is still alive, Saif b.Said Al-Fahdi, he is ill now in bed and can't go out. It was done during my life time, they demolish the old one and constructed the new one, with more space of four columns.

HA: Did they also make the new one with stone and mud bricks?

AS: Yes, at the bottom was the stone and sarooj and the top with mud bricks. As you see it today, it only got plastered with cement and paint now.

HA: When did they do this extend the mosque?

AS: Since 1375 .A.H (58 years ago, editor's note).

HA: How many sablas do we have in the harah? We have here sablat as-Suqur.

AS: This sabla was used as a watching location and done by the owners of this house (H3, editor's note) ,our family. Saif b.Said, the one who opened the door for you, we are cousins. My grandparents and his grandparents lived together in this house. But my grandfather left the house and built a house where you met me the other day and then my father bought a house in the harah.

HA:Is the path of the falaj channel the same as it was before?

AS: Yes, the same. To fit the equilibrium of altitude with respect to the falaj's long path through the harah and orchards. If you like, I can demonstrate to you the plan on the floor.

HA: That will be great if you can.

AS: This is the falaj channel; this is where it inters (between G16b and F6, editor's note) the harah and this is where it exits (between D4 and G1, editor's note). This is the location of this house (H3, editor's note). The falaj channel (The upper falaj channel, editor's note) is considered as a passage and for the falaj. This is one passage (The passage that starts between F6 and E5 (P1), editor's note) that branches from the falaj path and this is the other passage branch (The passage that starts between D8 and C2(P3), editor's note). And this is the centre passage (The passage that starts between E3 and C1(P2), editor's note).

This passage (P1, editor's note) goes up to the tower (A6, editor's note) and this passage (P2, editor's note) continues up and turns around the houses and meets with the tower. This passage (P3, editor's note) goes up till the sablas (B3a & B3b, editor's note) you saw up and meets with this passage (P2, editor's note) then meets with this passage (P1, editor's note) which connects to the tower (A6, editor's note).

HA: Do you mean the Siyabiyyin sablas?

AS: *These sablas are for the whole harah not only Siyaniyyin. They were the only sablas in the hara that time.*

HA: Were these passages known by any names?

AS: *Yes, this passage (P3, editor's note) is known as sikat al-Qawa and this passage (P1, editor's note) is known as sikat al-Lambjah and the central passage (P2, editor's note) wasn't known by any name.*

AS: *Now the houses:*

This house (C1, editor's note) is for Said b.Jaroof Al-Dighashi,

This house (B6, editor's note) was for the Suqur but now it is for Abdullah b.Zaher Al-Fahdi,

This house (B7, editor's note) is for Saif b.Shikhan,

This house (B8, editor's note) is for Mohammed b.Rashid As'Saqri, ower house,

This house (E2, editor's note) is for Salih b.Mohammed,

This house (E3, editor's note) was for one or our tribal group (Saqri, editor's note) and now is for Nassir b.Said Al-Fahdi, this square house.

This house (B1, editor's note) is for Said b.Abdullah b. Shikhan As 'Saqri.

These houses (B2 & B9, editor's note) at the top that I told you they don't have anyone inheriting them are for Mohammed b Qassan and Azzan b.Qassan As 'Saqri.

Here I told you, this is the tower (A6, editor's note) and this house (A7, editor's note) is for Salim b.Saif An 'Nabi.

This house (F3, editor's note) is for Salim b.Khamis Ar'Riyami,

This house (F4, editor's note) is for Saif b.Majid As 'Saqri,

This house (F5, editor's note) is for awlad Othman (Said Bin Marhun Bin Othman Ar-Riyami, editor's note), before it was not for them but I don't remember the original owner.

This house (F6, editor's note) was for awlad Othma (Said Bin Marhun Bin Othman Ar-Riyami, editor's note) but now it is for Bader Bin Saif Bin Hashim Awlad Thani (Ar'Riyami, editor's note).

This house (G16a, editor's note) is for Nassir b.Said Al-Fahdi,

This house (G16b, editor's note) is for Saif b.Mubarak Al-Fahdi,

This house (G15, editor's note) is for Rasheed,

This house (G14, editor's note) is for Said b.Ali Al-Fahdi,

This house (G12, editor's note) is for Saif b.Said Al-Fahdi,

This house (G16b, editor's note) is for Rashid b.Salim As 'Saqri, my brother.

AS: *On thiat side alongside the falaj from the other end is the house (D4, editor's note) of Sulaiman Bin Salim An 'Na 'abi and the opposite house (G1, editor's note) to it from the falaj below is for Hamad b.Mahana Al-Fahdi.*

This house (G2, editor's note) is for Khalfan Bin Nassir Al-Tobi.

This house (G3a, editor's note) is for Abdullah Bin Salih Al-Fahdi.

This house (G3b, editor's note) is for Khamis b.Rashid.

This house (D5, editor's note) is for Said b.Salim Al-Tobi.

This house (D6, editor's note) is for Mohammed b.Marhoon Al-Tobi.

This house (D7, editor's note) is for Mubarak Bin Salam Bin Hilal Al-Tobi.

This house (D8, editor's note) is for Rashid Bin Khamis Bin Rashid Al-Tobi.

This house (D9, editor's note) was for Abdullah b.Thuhai, now it is for Saif b.Ali Al-Fahdi.

This house (B5, editor's note) was for Zaher Bin Saif Al-Fahdi, now it is for Khalfan Bin Obaid Al-Hundhaly.

This house (D10, editor's note) was for Hamad b.Khamis, now it is for Said Bin Saif Bin Jarruf As-Siyabi.

This house (B4, editor's note) is for Humud Bin Saif Bin Jarruf As-Siyabi.

This house (D2, editor's note) is for Nassir Bin Khusaib Bin Jarrof Al-Siyabi.

This house (D3, editor's note) is for Musoud Bin Saif Bin Mubarak Al-Sakri.

This house (D1, editor's note) is for Salim Bin Ali Bin Jarruf Al-Siyabi.

AS:*On this path, this lower structure is sablat Ashit'a (B3b, winter meeting hall, editor's note) for the whole harah and this upper structure is sablat As'Saif (B3a, summer meeting hall, editor's note).*

AS:*This house is for (A5, editor's note) is for Obaid b.Matar As'Saqri and this house (A6, editor's note) Nassir b.Khamis Al-Fahdi.*

HA: These two sablas (B3a & B3b, editor's note) at the top, were they for all the inhabitants?

AS: Yes, they were.

HA: What were their names?

AS: They were known as sablat Al-Fouq.

HA: Was Hārat As'Saybani known by this name from the beginning? Or was it known by any other names before?

AS: It was known as As'Saybani and I didn't know of any other names to it.

HA: We came to know by some of the inhabitants that it was divided in three name: part was harar al-Qawa, part was Hārat al-Limdjah and the upper part was called Hārat al-Fouq.

AS: Yes, This route (Between C4 and G5d towards the East, editor's note) was called sikat al-Qawa and this route (Between C6 and G512 towards the West, editor's note) was called sikat al-Limbjah. The naming starts from the beginning alongside the falaj channel.

AS: As my mother told me, there was no houses below the falaj channel. When the inhabitants needed to expand, they built the houses below the falaj. My mother told me and she is from Tanuf.

HA: What about Al-Jinanh mosque at the back of the harah?

AS: I constructed that mosque not long ago. Everyone used to come down to this mosque (al-Walja mosque, editor's note), so someone gave me 100 RO to construct the mosque.

HA: Did the inhabitants pray the Friday prayer in this mosque (al-Walja mosque, editor's note)?

AS: There was no Friday prayer, Only in Nizwa.

HA: What about the Eid prayer? Where did they pray?

AS: In the same prayer location, next to Husin Ar'Ridadh.

HA: What about the *tunoor* (fire hole in the ground for cooking meat in traditional way, editor's note) of the harah?

AS: It is located near the sidra ouside near the car park. But before the tunoor was located at the top behind the wall, behind the house of Salim b.Ali As'Siyabi. But after people expanded and it became safer, they made it down to be easier for them. You know how it is, you are from al-Ḥamrā. I have been to al-Ḥamrā and seen it all and

been to the sabla for giving my condolences, visiting Muhsin b.Zahran who was living in his farm that time.

AS: If you need me to show you the houses and define their owners, I would will do it house by house. Humud b.Saif who showed you around was originaly from here, born here. But In the time of Imam Mohammed, they left to Ibri and they only came back in my life time. He came here and he doesn't know much about the harah and the houses.

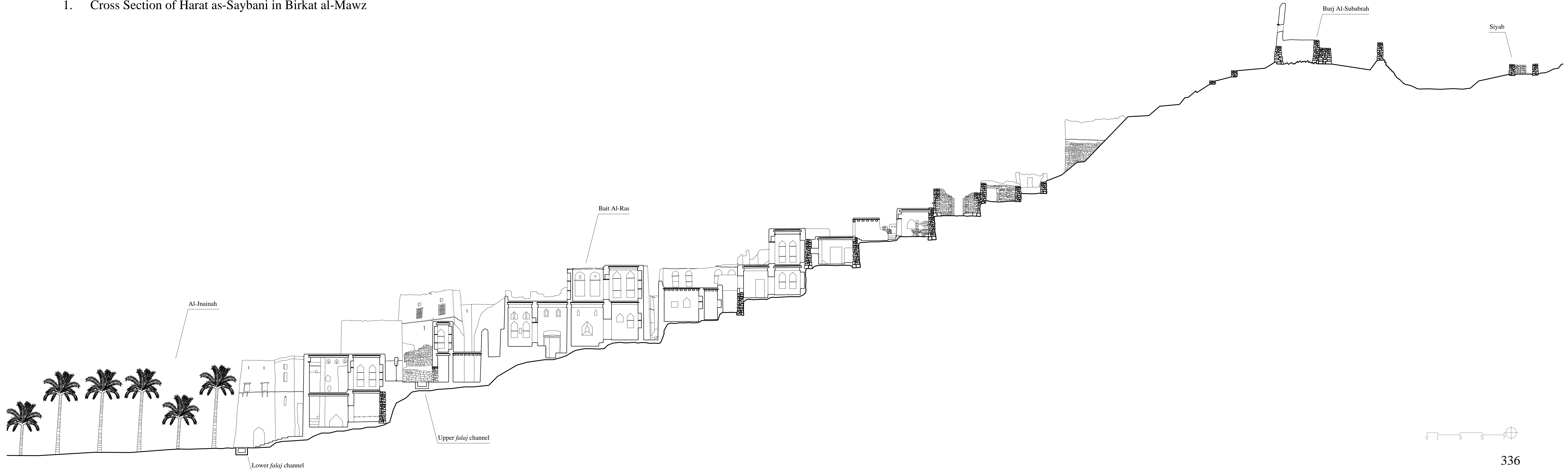
AS: I told you everything you want to know about the harah and the houses on this drawing on the floor. If you need change the owners and update the owner's names, I can tell you and guide you on every house again.



Appendix-II: Large-scale Drawings

1. Cross-section of Ḥārat as-Saybānī in Birkat al-Mawz
2. Ground Floor plan of Ḥārat as-Saybānī in Birkat al-Mawz
3. First Floor plan of Ḥārat as-Saybānī in Birkat al-Mawz

1. Cross Section of Harat as-Saybani in Birkat al-Mawz



2. Ground Floor Plans of Harat as-Saybani in Birkat al-Mawz



3. First Floor Plans of Harat as-Saybani in Birkat al-Mawz



Appendix-III: Bibliography

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