

**ROMAN FORTIFIED FARMS (*QSUR*) AND MILITARY SITES IN THE
REGION OF THE WADI AL- KUF, CYRENAICA (EASTERN LIBYA)**

Thesis submitted for the degree of

Doctor of Philosophy

at the University of Leicester

by

Ahmad Emrage

School of Archaeology and Ancient History

University of Leicester

2015

Roman Fortified Farms (*qsur*) and Military Sites in the Region of the Wadi Al-Kuf, Cyrenaica (Eastern Libya)

Ahmad Emrage.

ABSTRACT

Fortified buildings (in Arabic known as *qsur*, singular *qasr*) that stand isolated or formed part of wider settlements are a common phenomenon that existed in many regions of Roman Africa, especially in the late Roman and late antique periods. Different interpretations of the defensive appearance of the *qsur* in Africa (and parallels in different parts of the Roman Empire) have been advanced. In terms of Cyrenaica, this remarkable class of sites, though the most obvious archaeological monuments of the countryside, has not received a great deal of attention in the past. Therefore, the main aim of this thesis was to make a systematic study of the typology, chronology and function of these fortified structures, drawing on archaeological and literary sources and my own fieldwork. I carried out a combination of extensive and intensive archaeological, topographical and landscape survey in the region of Wadi al-Kuf in Cyrenaica. In three different topographical blocks covering a total area of about 1,350 km², a total of 55 sites was documented (42 sites were recorded for the first time by my survey). An attempt is made to distinguish between potential military and civilian sites on the basis of locational and architectural factors. A broad framework is provided by interpreting the limited dating evidence and supported by comparison with similar sites from other regions of the Roman Empire, particularly in Tripolitania. This research has made original contributions to determining the architecture, typology and chronology of *qsur* in the survey region and overall it has increased our knowledge of rural settlement in the Wadi al-Kuf region.

ACKNOWLEDGEMENTS

First of all, my gratitude is due to Allah for sparing my life and health to this day. I would like to express my very great appreciation to my supervisor, Professor David Mattingly, for the opportunity given to me to successfully complete my research degree. It is indeed an honour and privilege to be supervised by a world-class and renowned archaeologist. His incredibly fast, intimidating thinking and critical approach to issues has inspired me to work harder, aim higher and succeed. At the beginning I thought it was an impossible journey, but his mentorship, pastoral care and concern about my welfare meant that the thesis is now completed. Thanks to Professor Graeme Barker and Dr Neil Christie for accepting to examine this thesis.

To all of those too numerous to mention, but who have been a part of my great journey at University of Leicester, thank you. All your companionship has made me feel so comfortable with myself, my family and my environment in the years that I was here. The University of Leicester and in particular the School of Archaeology and Ancient History is an outstanding environment that has changed me in fundamental ways. My appreciation goes to all the departmental staff for your professionalism, my colleagues for sharing tea, and well-wishers both in the UK and Libya. Thanks to Dr Martin Sterry for all his help with some references and illustration related to Fazzan project and to Mohamed Hesein for his help solving some formatting issues in the thesis. My deepest appreciation to Dr Philip Kenrick and Dr Victoria Leitch for their great help in identifying some pottery sherds collected from the sites.

My great thanks are also due to my dear friend Paul Bennett of Canterbury, for his valued remarks on some parts of the thesis and continued advice. His emotional passion and concern about Libyan archaeology is always a source of inspiration to me which is reflected in some points in the thesis.

In Libya, I would like to express my deep gratitude to everybody who helped in different ways in the fieldwork; the members of the Department of Antiquities at Cyrene, in particular, Naser Saed and Ahmad Saber, for the permit to carry on the survey. The team of the first stage of the survey in 2010 variously involved: Ahmed Buzaian, the Late Abdulgader al-Muzini, Mohammed Touati, Fathallah Khalifa, Salem Ahmdi, Mohammed Hamed, Nooh Mohammed, Ahmad Aqeela, Fauzy Mailoud, Imad

Ahmad, Ibrahim Mohammed and Azedden Saad. In particular, I owe a special debt to Ahmed Buzaian for his enormous help and professional skills in recording the first visited sites from which I learned a lot and later I was able to record alone the vast majority of the sites during the difficult times in Libya in 2011 and 2012.

I thank my mother and my Late father for all their support, right from my childhood up to the time I was able to stand on my feet - no matter how far I have gone, I know they have always been with me.

Finally, and by no means least, a very special thanks go to my wife, Alya, to whom this work is dedicated, for being the power behind all my strength in this journey that has come to an end - and most importantly, her sacrifices at home are well and truly appreciated, with firm commitment that we can only get better together. May I also thank all my little daughters – Malak, Lubna, Hala and Nada – for their understanding and enduring daddy’s absence from home, especially towards the end of the project. I hope I made all of you as proud as I am in completing this thesis!

Ahmad Emrage.

Table of Contents

Abstract	i
Acknowledgements	ii
Table of Contents	iv
List of Tables	xii
List of Figures	xii
PART I	1
Chapter 1: Introduction	2
1.1 Research Context	2
1.2 Thesis Structure.....	5
1.3 Geographical Background of the Roman Cyrenaica.....	6
1.4 Brief History of Cyrenaica in the Roman and Byzantine Periods	10
Chapter 2: Previous Studies of <i>Qsur</i> in Cyrenaica, Tripolitania and Fazzan	16
2.1 Introduction	16
2.2 Previous Studies of <i>Qsur</i> in Cyrenaica	16
2.2.1 Travellers and early scholars	16
2.2.2 Goodchild.....	24
2.2.3 Other works.....	35

2.3	Previous Studies of <i>Qsur</i> in Tripolitania.....	45
2.3.1	Travellers accounts	45
2.3.2	Goodchild.....	46
2.3.3	Additional studies	47
2.3.4	The UNESCO Libyan Valleys Survey (ULVS) Project.....	53
2.3.5	Mattingly PhD thesis	56
2.4	Previous Studies of <i>qsur</i> in Fazzan	62
Chapter 3: Wadi al-Kuf Archaeological Survey (KAS).....		70
3.1	Introduction	70
3.2	Site Definition and Characterisation	71
3.3	Survey Methodology	75
3.3.1	Background research and mapping.....	76
3.3.2	Surface survey.....	76
3.3.3	Satellite images and GPS	79
3.3.4	Recording techniques.....	79
3.3.5	Collection techniques.....	81
3.4	Data Analysis	82
3.4.1	Architectural features.....	82
3.4.2	Potsherds.....	82
3.4.3	Application of GIS software	83
3.5	Fieldwork Reflection.....	84

3.6 Summary	84
Chapter 4: Masonry Types, Architectural Features and Size Categories of the Fortified Buildings in the Survey Area.....	86
4.1 Introduction	86
4.2 Masonry Type	86
4.2.1 Ashlar work.....	86
4.2.2 Small and medium roughly dressed and irregular blockwork with ashlar quoins.....	90
4.2.3 Mixture of ashlar work and medium and small blocks.....	90
4.3 Architectural Features of Fortified Buildings in the Survey Area	92
4.3.1 Defensive features.....	92
4.3.2 Other architectural features.....	103
4.4 Agricultural and Industrial Features Associated with the Fortified Sites	118
4.4.1 Water cisterns	118
4.4.2 Rock-cut chambers	122
4.4.3 Olive presses and wine production features	124
4.5 Size Categories of the Fortified Structures in the Survey Area	129
4.6 Summary	132
Chapter 5: Site Typologies.....	133
5.1 Introduction	133
5.2 Military Sites.....	133

5.2.1	Forts (> 0.8 ha).....	134
5.2.2	Fortlets (0.1-0.5 ha)	135
5.2.3	Outposts (c. 0.01-0.10 ha).....	139
5.2.4	Watchtowers (c. 0.01 ha and less)	141
5.3	Fortified <i>Qsur</i> and Unfortified <i>Qasr</i> -like Buildings of Civilian Nature	143
5.3.1	Fortified <i>qsur</i> associated with agricultural and industrial features.....	144
5.3.2	Clusters of <i>qsur</i> located within a large agricultural settlement	146
5.3.3	The <i>qasr</i> -like buildings	151
Chapter 6: Site Chronologies		153
6.1	Introduction	153
6.2	Military Sites	153
6.2.1	The chronology of some military sites in Cyrenaica beyond the survey region	154
6.2.2	The chronology of military sites in the survey region	157
6.3	The Chronology of Fortified Buildings of Civilian Nature (<i>Qsur</i>).....	163
6.3.1	Architectural dating evidence	164
6.3.2	Pottery evidence.....	166
6.3.3	Writings of Synesius	168
Chapter 7: Discussion.....		169
7.1	Introduction	169
7.2	Synesius' Landscape	169

7.3	The Military Presence	171
7.4	Qsur Owners.....	174
7.4.1	Militarised owners	175
7.4.2	Civilian landowners	177
7.5	Questioning Site Changes and Ends	181
7.6	Wider Debates	182
Chapter 8: Conclusion		184
8.1	Overview	184
8.2	Architectural Features of the Sites	185
8.3	Site Typologies.....	186
8.4	Site Chronologies	187
8.4.1	Pottery evidence.....	188
8.5	Gaps and Needs and Recommendation for Further Work	189
PART II.....		192
Site Gazetteer		193
9.1	Introduction.....	193
9.2	KAS Site Gazetteer.....	194
9.2.1	Qasr Beni Gdem.....	194
9.2.2	Qasr Lyktaif	196
9.2.3	Qasr Shahden	198

9.2.4	Qasr Ushish.....	202
9.2.5	Siret Abgail	205
9.2.6	Qasr al-Mistashi.....	208
9.2.7	Qasr Laaraija.....	212
9.2.8	Qasr Ahbaira	214
9.2.9	Qasr et-Traish	216
9.2.10	Qasr al-Akrout al-Warrany 1	219
9.2.11	Qasr al-Akrout al-Warrany 2	222
9.2.12	Qasr al-Akrout al-Qaddamy.....	225
9.2.13	Siret Alwaiiby	229
9.2.14	Siret al-Faqeer Ali.....	231
9.2.15	Siret al-Anaisla	233
9.2.16	Siret Battouma	235
9.2.17	Siret Adhrary.....	238
9.2.18	Siret et-Tauma 1.....	242
9.2.19	Siret et-Tauma 2.....	244
9.2.20	Siret et-Tauma 3.....	247
9.2.21	Siret et-Tauma 4.....	251
9.2.22	Siret Wadi al-Sanab	257
9.2.23	Siret Asbaih.....	260
9.2.24	Siret Amaaty	262

9.2.25	Qasr Aqeela.....	264
9.2.26	Qasr Az-Zaarura	266
9.2.27	Siret Batrow	268
9.2.28	Siret Qasrin el-Giamel	271
9.2.29	Siret Qatoufa	274
9.2.30	Siret Maibra	276
9.2.31	Siret Masaouda	277
9.2.32	Qasr Sidi Abdulmaula.....	279
9.2.33	Qasr al-Hamama	280
9.2.34	Siret Alwet umm-Annamel.....	282
9.2.35	Qasr Bst.....	284
9.2.36	Qasr al-Hammam.....	287
9.2.37	Qasr Alhesy.....	291
9.2.38	Qasr Jarjaroumma	293
9.2.39	Qasr al-Mashoub.....	295
9.2.40	Qasr al-Oqla.....	298
9.2.41	El-Qasr el-Hamar	300
9.2.42	Qasr Sidi Bu-Argoub	308
9.2.43	Qasr Bilyanto	311
9.2.44	Siret al-Azraq.....	313
9.2.45	Qasr Gendez.....	315

9.2.46	Qasr Stablous 1	317
9.2.47	Qasr Stablous 2	321
9.2.48	Siret Bu-al-Husain	325
9.2.49	Qasr al-Hawmy	327
9.2.50	Qasr Atwainish	330
9.2.51	Siret al-Qantouty 1	334
9.2.52	Siret al-Qantouty 2	336
9.2.53	Siret bu-Awena	337
9.2.54	Siret el-Qatroura	339
9.2.55	Siret umm Asnaib	343
Appendices		347
	Appendix 1: Site recording sheets	348
	Appendix 2: Samples of fine pottery recovered by KAS	350
Bibliography		352

List of Tables

Table 1: Principal forts in Tripolitania	58
Table 2: Roman fortlets in Tripolitania	59
Table 3: Roman outposts in Tripolitania	60
Table 4: Previously known and newly recorded sites.....	75

List of Figures

Figure 1.1: Cyrenaica.....	8
Figure 1.2: Cyrenaica: Detailed sites plotted by Goodchild.....	10
Figure 2.1: The fort of al-Motanib: General plan.	18
Figure 2.2: Qasr Beni Gdem: General view	19
Figure 2.3: Qasr Beni Gdem: Measured plan	19
Figure 2.4: The possible fortlet at Ain Mara: Measured plan.....	20
Figure 2.5: Qasr al-Gebala: Measured plan.	21
Figure 2.6: Siret Qasrain el-Giamel: Measured plan	21
Figure 2.7: The fortlet at et-Tailimun	22
Figure 2.8: Qasr el-Heneia.....	23
Figure 2.9: Qasr El- Atallat: Measured plan.....	25
Figure 2.10: Fortified buildings at Ghemines	26
Figure 2.11: Qasr el-Ataresh: General view	28
Figure 2.12: Qasr el-Chel: Ggeneral view	28
Figure 2.13: The outpost at Msus: Measured plan.....	29

Figure 2.14: Qasr Sidi el-Khadri: General plan	30
Figure 2.15: Qasr Shahden: North wall	31
Figure 2.16: Qasr Shahden: General plan.....	31
Figure 2.17: Qasr Ushish: The north wall.....	33
Figure 2.18: Qasr er-Remtheiat: Measured plan.....	33
Figure 2.19: Qasr al-Arid: General plan	35
Figure 2.20: Qasr Silu: General view.	37
Figure 2.21: The location of the four Qsur between Soluq and Wadi et-Tamimi	39
Figure 2.22: Plan of Qsur al-Hamra.....	39
Figure 2.23: Qasr as-Sahabi.....	40
Figure 2.24: Qasr Az-Zaarura: General view	41
Figure 2.25: Qasr al-Maraghah: General view.	44
Figure 2.26: The location of the three forts: Bu Ngem, Gheria el Garbia, Ghadames. ..	46
Figure 2.27: Qasr Duib: Measured plan.....	48
Figure 2.28: Qasr Bularkan: Measured plan	50
Figure 2.29: Ghirza: Building 35 and associated huts: Measured plan.....	52
Figure 2.30: Qsur in Wadi Umm- el-Kharab: Measured plans.....	55
Figure 2.31: The Roman fort and associated features at Gheriat el-Garbia.	56
Figure 2.32: Map of Fazzan: Principal areas of oases settlements	63
Figure 2.33: Qasr Sidi Dawud (LEK 17).....	64
Figure 2.34: Qasr Budrinna (GB2)	64

Figure 2.35: Qasr Larku (LAR 1).	65
Figure 2.36: Qasr Larku (LAR 1): Measured plan	66
Figure 2.37: Qasr Mara (MAR 1) general view and measured plans	67
Figure 3.1: Location of survey region	72
Figure 3.2: Detail from TIR map showing the survey region.....	73
Figure 3.3: Location of sites recorded by KAS	74
Figure 3.4: Examples of using satellite images in locating sites	80
Figure 4.1: Different types of ashlar masonry.	88
Figure 4.2: Qasr al-Hammam: Re-used very large ashlar masonry.....	89
Figure 4.3: Qasr al-Akrouit al-Warrany 1: Patching between the adjacent large blocks.	89
Figure 4.4: Qasr al-Mashoub: Neatly coursed smallish ashlar	89
Figure 4.5: Qasr al-Akrouit al-Warrany 2: Masonry of flattish ashlar	91
Figure 4.6: Siret al-Qatrouira: Type of masonry.	91
Figure 4.7: al-Qasr al-Hamar: The use of rubble masonry in the upper storey.. ..	92
Figure 4.8: Qasr Az-Zaaroura: An example of the sloping revetments.....	93
Figure 4.9: Number and percentage of KAS sites with and without revetments.....	93
Figure 4.10: A map of the survey area showing sites in terms of the revetments	94
Figure 4.11: Qasr al-Akrouit al-Warrany 1: The revetment at the north-east corner... ..	95
Figure 4.12: Qasr al-Akrouit al-Qaddamy: The masonry of the revetment.....	97
Figure 4.13: Qasr Sidi Bu-Argoub: Ashlar masonry utilised in the revetment.	97
Figure 4.14: Qasr Sidi Bu-Argoub: Rubble core of the revetment.....	97

Figure 4.15: Qasr Az-Zaaroura: Crack in the east wall	98
Figure 4.16: A map of the survey area showing sites in terms of ditches.	100
Figure 4.17: Number and percentage of sites with and without ditches.....	100
Figure 4.18: Qasr Shahden: The east side of the surrounded rock-cut ditch.	101
Figure 4.19: Siret et-Tauma 4: Measured plan.	102
Figure 4.20: Qasr Beni Gdem, the northern tower.	103
Figure 4.21: The orientation of the main entrance of the recorded buildings.	104
Figure 4.22: Width of the main entrances of the buildings in the survey area	106
Figure 4.23: Qasr et-Traish: The arched main entrance.	107
Figure 4.24: Qasr Beni Gdem, The north wall: Large and small windows slits.....	107
Figure 4.25: Qasr Ushish: Windows slits in the north.....	108
Figure 4.26: Qasr al-Mistashi: A window in room 1.....	109
Figure 4.27: Qasr al-Akrouit al-Warrany 2: The vaulted chamber.....	110
Figure 4.28: Plans of <i>qsur</i> from (KAS) showing the variation in the courtyards.....	112
Figure 4.29: Al-Qasr el-Hamar: Measured plan.	115
Figure 4.30: Qasr et-Traish: Measured plan.	115
Figure 4.31: Qasr Aqeela: The string course that separated the two levels.....	116
Figure 4.32: Size of rooms of the <i>qsur</i> recorded by KAS.	116
Figure 4.33: Al-Qasr al-Hamar: Flight of steps leading up to the upper floor.	118
Figure 4.34 (a, b): Al-Qasr al-Hamar: Water cisterns.	120
Figure 4.35 (a, b): Siret Adhrary: Vaulted water cisterns.....	120

Figure 4.36 (a, b): Siret al-Qatroura: The water cistern.....	121
Figure 4.37: Siret umm Asnaib: The water cistern	122
Figure 4.38: Siret umm Asnaib: Later entrance of the converted water cistern	122
Figure 4.39: Qasr Shahden: Rock-cut chambers in the inner edge of the ditch.	123
Figure 4.40: Qasr Shahden: One of the rock-cut chambers	124
Figure 4.41: Siret Atwainsh: Rock-cut olive press.	126
Figure 4.42: Siret Adhrary: Rock-cut olive press.	126
Figure 4.43: Remains of olive mills.....	127
Figure 4.44: Qasr al-Akrouit al-Qaddamy: Wine production features..	127
Figure 4.45: Qasr al-Qatroura: Sunken vats..	128
Figure 4.46: Qasr al-Hammam: Sunken vat	128
Figure 4.47: The area dimension of 53 sites recorded by KAS	129
Figure 4.48: A map of the survey area showing sites in terms of their size category. .	130
Figure 4.49: Siret et-Tauma 1: The location.....	131
Figure 5.1: Number and percentage of sites recorded by KAS in term of type.....	134
Figure 5.2: The location of the probable military sites in the survey region.....	135
Figure 5.3: Typology of possible military sites recorded by KAS.	137
Figure 5.4: Qasr Aqeela: General view	142
Figure 5.5: Qasr Aqeela: The interior.....	142
Figure 5.6: Qasr Aqeela: The window slots	142
Figure 5.7: Qasr Aqeela: Gaps between the blocks.....	142

Figure 5.8: The location of the civilian <i>qsur</i> in the survey region.....	145
Figure 5.9: Siret et-Taumat: Traces of outbuildings.....	147
Figure 5.10: Water cisterns at Siret et-Taumat.	147
Figure 5.11: Rock-cut chambers at Siret et-Taumat,	148
Figure 5.12: The settlement of Zawiet al-Qasrain:	149
Figure 5.13: Qasr Sidi Bu-Argoub showing the two underground water cisterns.....	150
Figure 5.14: The settlement of Zawiet al-Qasrain: The Islamic cemetery.	150
Figure 5.15: al-Qasr al-Hamar: The ditch and the rock cut chambers.....	151
Figure 5.16: Qasr al-Qatroura: Mortared basins, looking east	152
Figure 6.1: A fragment of a mid Roman amphora rim recovered from Qasr Aqeela...	158
Figure 6.2: A rim of a carinated bowl recovered from Qasr Shahden.....	160
Figure 6.3: The outpost of Qasr Lyktaif: Crosses incised on a collapsed block.....	161
Figure 6.4: A sample of pottery recovered from Qasr Alhesy.....	162
Figure 9.1: Qasr Beni Gdem: Location.....	194
Figure 9.2: Qasr Beni Gdem: General view.	195
Figure 9.3: Qasr Lyktaif: Location	196
Figure 9.4: Qasr Lyktaif: The north wall	197
Figure 9.5: Siret Lyktaif: Measured plan.....	197
Figure 9.6: Qasr Shahden: Location	198
Figure 9.7:Qasr Shahden: General view	199
Figure 9.8: Qasr Shahden: Sketch-plan of general layout	200

Figure 9.9: Qasr Shahden: Hypothetical phases of keep	200
Figure 9.10: Qasr Shahden: The phase 2 entrance.....	201
Figure 9.11: Qasr Ushish: Location.....	202
Figure 9.12: Qasr Ushish: North wall.....	203
Figure 9.13: Qasr Ushish: The interior.....	204
Figure 9.14: Qasr Ushish: Rock-cut chamber rooms.....	204
Figure 9.15: Siret Abgail: Location	205
Figure 9.16: Siret Abgail: General view.....	206
Figure 9.17: Siret Abgail: The interior	206
Figure 9.18: Siret Abgail: The rock-cut chambers	207
Figure 9.19: Siret Abgail: Water cistern.....	207
Figure 9.20: Qasr al-Mistashi: Location.....	208
Figure 9.21: Qasr al-Mistashi: General view.....	209
Figure 9.22: Qasr al-Mistashi: Measured plan.....	210
Figure 9.23: Qasr al-Mistashi: The arched entrance.....	211
Figure 9.24: Qasr al-Mistashi: The south side.....	211
Figure 9.25: Qasr Laaraija: Location.....	212
Figure 9.26: Qasr Laaraija: General view.....	213
Figure 9.27: Qasr Ahbaira: Location	214
Figure 9.28: Qasr Ahbaira: General view.....	215
Figure 9.29: Qasr et-Traish: location.....	216

Figure 9.30: Qasr et-Traish: The west wall.	217
Figure 9.31: Qasr et-Traish: The north wall.	217
Figure 9.32: Qasr et-Traish: Byzantine cross carved in a corner block.....	218
Figure 9.33: Qasr al-Akrouit al-Warrany 1: Location.	219
Figure 9.34: Qasr al-Akrouit al-Warrany 1: General view	220
Figure 9.35: Qasr al-Akrouit al-Warrany 1: Measured plan.....	221
Figure 9.36: Qasr al-Akrouit al-Warrany 1: Part of Doric frieze.	221
Figure 9.37: Qasr al-Akrouit al-Warrany 2: Location	222
Figure 9.38: Qasr al-Akrouit al-Warrany 2: General view	223
Figure 9.39: Qasr al-Akrouit al-Warrany 2: Measured plan.....	224
Figure 9.40: Qasr al-Akrouit al-Warrany 2: The lime kiln.....	224
Figure 9.41: Qasr al-Akrouit al-Qaddamy: Location.....	225
Figure 9.42: Qasr al-Akrouit al-Qaddamy: General view	226
Figure 9.43: Qasr al-Akrouit al-Qaddamy: South wall, showing manner of masonry ..	227
Figure 9.44: Qasr al-Akrouit al-Qaddamy: Measured plan.	228
Figure 9.45: Qasr al-Akrouit al-Qaddamy: The eastern rock-cut chamber room.....	228
Figure 9.46: Siret Alwaiby: Location.	229
Figure 9.47: Siret Alwaiby: General view	230
Figure 9.48: Siret Alwaiby: Part of the north wall showing manner of construction..	230
Figure 9.49: Siret al-Faqeer Ali: Location.....	231
Figure 9.50: Siret al-Faqeer Ali	232

Figure 9.51: Siret al-Faqeer Ali: The main entrance.	232
Figure 9.52: Siret al-Anaisla: Location.....	233
Figure 9.53: Siret al-Anaisla: General view	234
Figure 9.54: Siret al-Anaisla: Details of the revetment	234
Figure 9.55: Siret Battouma: Location	235
Figure 9.56: Siret Battouma: General view.	236
Figure 9.57: Siret Battouma: The olive mill, the water cistern.....	237
Figure 9.58: Siret Adhrary: Location.....	238
Figure 9.59: Siret Adhrary: General view.	239
Figure 9.60: Siret Adhrary: Measured plan.	240
Figure 9.61: Siret Adhrary: The revetment of the west wall	240
Figure 9.62: Siret Adhrary: The blocked arched doorway	241
Figure 9.63: Siret et-Tauma 1: Location.....	242
Figure 9.64: Siret et-Tauma 1: General view.	243
Figure 9.65: Siret et-Tauma 1: Two rock-cut water cisterns.	243
Figure 9.66: Siret et-Tauma 2: Location.....	244
Figure 9.67: Siret et-Tauma 2: General view.	245
Figure 9.68: Siret et-Tauma 2: The double arched entrance.....	245
Figure 9.69: Siret et-Tauma 2: Later blocking of the rock-cut chambers.....	246
Figure 9.70: Siret et-Tauma 3: Location.....	247
Figure 9.71: Siret et-Tauma 3: Measured plan.	248

Figure 9.72: Siret et-Tauma 3: General view	248
Figure 9.73: Siret et-Tauma 3: The revetment at the eastern side	249
Figure 9.74: Siret et-Tauma 3: The arched entrance of the building.....	249
Figure 9.75: Siret et-Tauma 4: Location.....	251
Figure 9.76: Siret et-Tauma 4: General view:	252
Figure 9.77: Siret et-Tauma 4: Measured plan.	253
Figure 9.78: Siret et-Tauma 4: North wall shows type of masonry and string courses.	254
Figure 9.79: Siret et-Tauma 4: Northern wall of the associated building.....	255
Figure 9.80: Siret et-Tauma 4: Underground rock-cut water cistern.....	256
Figure 9.81: Siret Wadi al-Sanab: Location	257
Figure 9.82: Siret Wadi al-Sanab: General view	258
Figure 9.83: Siret Wadi al-Sanab: The north revetment.....	259
Figure 9.84: Siret Wadi al-Sanab: One of the rock-cut tanks.....	259
Figure 9.85: Siret Asbaih: Location.....	260
Figure 9.86: Siret Asbaih: General view	261
Figure 9.87: Siret Amaaty: Location.	262
Figure 9.88: Siret Amaaty: General view.	263
Figure 9.89: Qasr Aqeela: Location.....	264
Figure 9.90: Qasr Aqeela: General view	265
Figure 9.91: Qasr Az-Zaarura: Location.....	266
Figure 9.92: Qasr Az-Zaarura: General view	267

Figure 9.93: Siret Batrow: Location	268
Figure 9.94: Siret Batrow: General view	269
Figure 9.95: Siret Batrow: Measured plan.....	269
Figure 9.96: Siret Batrow: The north wall.....	270
Figure 9.97: Siret Qasrin El-Giamel: Location.....	271
Figure 9.98: Siret Qasrin el-Giamel: The fortified farm building.	272
Figure 9.99: Siret Qasrin el-Giamel: Measured plan.....	273
Figure 9.100: Siret Qatoufa: Location	274
Figure 9.101: Siret Qatoufa: General view	275
Figure 9.102: Siret Qatoufa: One of the associated outer walls	275
Figure 9.103: Siret Maibra: Location	276
Figure 9.104: Siret Masouda: Location	277
Figure 9.105: Siret masaouda: General view	278
Figure 9.106: Qasr Sidi Abdulmaula: Location.....	279
Figure 9.107: Qasr al-Hamama: Location	280
Figure 9.108 : Qasr al-Hamama: General view	281
Figure 9.109: Siret Alwet umm-Annamel: Location	282
Figure 9.110: Siret Alwet umm-Annamel: General view.....	283
Figure 9.111: Siret Alwet umm-Annamel: Olive or grape pressing elements.....	283
Figure 9.112: Qasr Bst: Location.....	284
Figure 9.113: Qasr Bst: General view	285

Figure 9.114: Qasr Bst: Eastern wall, showing type of masonry	285
Figure 9.115: Qasr Bst: Eastern entrance doorjamb blocks.....	286
Figure 9.116: Qasr al-Hammam: Location.	287
Figure 9.117: Qasr al-Hammam: General view	288
Figure 9.118: Qasr al-Hammam: Measured plan.....	289
Figure 9.119: Qasr al-Hammam: Rock-cut tomb	290
Figure 9.120: Qasr al-Hammam: One of the vats	290
Figure 9.121: Qasr Alhesy: Location.....	291
Figure 9.122: Qasr Alhesy: The north wall, showing the masonry	292
Figure 9.123: Qasr Jarjaroumma: Location.	293
Figure 9.124: Qasr Jarjaroumma: General view	294
Figure 9.125: Qasr Jarjaroumma: Stone quarry	294
Figure 9.126: Qasr al-Mashoub: Location	295
Figure 9.127: Qasr al-Mashoub: General view.....	296
Figure 9.128: Qasr al-Mashoub: The north side.	296
Figure 9.129: Qasr al-Mashoub: The eastern side of the interior	297
Figure 9.130: Qasr al-Oqla: Location	298
Figure 9.131: Qasr al-Oqla: General view	299
Figure 9.132: EL-Qasr el-Hamar: Location.....	300
Figure 9.133: EL-Qasr el-Hamar: General view	301
Figure 9.134: EL-Qasr el-Hamar: Rooms 1, 2 and 3 at the north side of the Qasr.	303

Figure 9.135: EL-Qasr el-Hamar: The niche in room 2.	303
Figure 9.136: EL-Qasr el-Hamar: Room 5, blocked archway	304
Figure 9.137: EL-Qasr el-Hamar: Location of the water cistern in room (6).....	305
Figure 9.138: EL-Qasr el-Hamar: III phase arrangements.	307
Figure 9.139: EL-Qasr el-Hamar: The Islamic cemetery, headstones.....	307
Figure 9.140: Qasr Sidi Bu-Argoub: Location	308
Figure 9.141: Qasr Sidi bu-Argoub: Measured plan.....	309
Figure 9.142: Qasr Sidi bu-Argoub: Rock-cut room	310
Figure 9.143: Qasr Bilyanto: Location	311
Figure 9.144: Qasr Bilyanto: General view	312
Figure 9.145: Qasr Bilyanto: Rock-cut chambers.	312
Figure 9.146: Siret al-Azraq: Location	313
Figure 9.147: Siret al-Azraq: General view	314
Figure 9.148: Siret al-Azraq: Collapsed rubble in the interior	314
Figure 9.149: Qasr Gendez: Location.....	315
Figure 9.150: Qasr Gendez: General view.....	316
Figure 9.151: Qasr Gendez: water cistern	316
Figure 9.152: Qasr Stablous 1: Location.	317
Figure 9.153: Qasr Stablous1: General view	318
Figure 9.154: Qasr Stablous 1: Measured plan.....	319
Figure 9.155: Qasr Stablous1: The western wall, showing the masonry.....	320

Figure 9.156: Qasr Stablous1: The lime kiln, looking north east.	320
Figure 9.157: Qasr Stablous 2: Location.	321
Figure 9.158: Qasr Stablous 2: General view, looking north.	322
Figure 9.159: Qasr Stablous 2: Measured plan.	322
Figure 9.160: Qasr Stablous 2: West wall, showing the masonry.	323
Figure 9.161: Qasr Stablous 2: West revetment	324
Figure 9.162: Qasr Stablous 2: The modern cemetery.	324
Figure 9.163: Siret Bu-al-Husain, the Location.....	325
Figure 9.164: Siret Bu-al-Husain: General view	326
Figure 9.165: Siret Bu-al-Husain: Rock-cut water cistern	326
Figure 9.166: Qasr al-Hawmy: Location	327
Figure 9.167: Qasr al-Hawmy: General view	328
Figure 9.168: Qasr al-Hawmy: Measured plan.....	328
Figure 9.169: Qasr al-Hawmy: The north part of the east wall	329
Figure 9.170: Qasr al-Hawmy: The north wall of the adjacent room.....	329
Figure 9.171: Qasr Atwainish: Location.....	330
Figure 9.172: Qasr Atwainish: General view	331
Figure 9.173: Qasr Atwainish: Measured plan	331
Figure 9.174: Qasr Atwainish: North-west corner.....	332
Figure 9.175: Qasr Atwainish: Collapsed voussoirs inside the building.....	332
Figure 9.176: Qasr Atwainish: Unfinished olive mill.....	333

Figure 9.177: Siret al-Qantouty 1: Location.....	334
Figure 9.178: Siret al-Qantouty 1: General view.....	335
Figure 9.179: Siret al-Qantouty 2: Location.....	336
Figure 9.180: Siret bu-Awena: Location	337
Figure 9.181: Siret al-Qatroura: Location.....	339
Figure 9.182: Siret al-Qatroura: General view	340
Figure 9.183: Siret al-Qatroura: Measured plan.	340
Figure 9.184: Siret al-Qatroura: The interior.....	341
Figure 9.185: Siret umm Asnaib: Location	343
Figure 9.186: Siret umm Asnaib: General view	344
Figure 9.187: Siret umm Asnaib: Internal walls.....	346
Figure 9.188: Siret umm Asnaib: Possible olive press elements.....	346

PART I

Chapter 1: Introduction

1.1 Research Context

This research explores the fortified farms and Roman military fortifications in the region of the Wadi al-Kuf, Cyrenaica in the eastern part of Libya. Roman rural fortified structures are a common phenomenon that existed in many regions of the Roman Empire, especially in the late Roman and late antique periods. To understand these commonalities, many interpretations have been drawn, but the majority points to the security condition of the region in which they were built (Christie, 2004). Similarly, smaller fortified buildings (singular *qasr*, plural *qsur*) have been studied in different regions of the North Africa and various interpretations advanced. For example, Mattingly (1995:194-201) has presented an interesting argument about the *qsur* in Tripolitania. The official Roman military classification of these sites which had already been suggested by Goodchild and Ward-Perkins (1949:94) has now been discredited in favour of identifying these sites as fortified farms. Using archaeological evidence, Mattingly instead argues that many of the fortified farms were constructed by indigenous people “for reasons of prestige and defence by a civilian population who had, in many cases, been in the zone for a hundred years or more before the Severan frontier was created” (Mattingly, 1995:195). This investigation confirmed that *qsur* in Tripolitania involved indigenous Libyan civilian agricultural societies.

Many of these sites in North Africa are known to be distinctive from the most common fortified structures of the Roman Empire. However, a combination of factors to account for the role of fortified sites was suggested by Mattingly *et al.* (2013), such as 1) protection from attack of nomad raiders; 2) the replacement of the Roman military units by soldier farmers for economic reasons; 3) as an expression of social power and wealth within rural societies; 4) as a result of increased violence within Roman provinces; and 5) as a side-effect of the decline of Roman power. Among all these factors, it was asserted by Mattingly *et al.* (2013:169) that: “there are clear indications that the pioneer agricultural and sedentary rural communities in Africa tended to construct fortified settlements in the initial stages of agrarian development”.

In terms of their chronology, scholars such as Barker *et al.* (1991), Barker (1996a) and Welsby (1992) have conducted systematic investigations at various sites in Tripolitania. Based on these studies, it can be inferred that the earliest *qsur* were built at the end of the second century AD, but the majority were dated to the third century and later, with their peak time put at the fourth century. According to Mattingly (1995:103), insecurity in the Tripolitanian hinterlands throughout the third to the fifth centuries was the major reason behind the defensive character of the *qsur*, followed by the prestige and social status of the landholders. Elsewhere, the trend towards fortification of countryside in the Late Antiquity has also been observed by Poulter (2004) in the lower Danube region. The emergence of the fortified hilltop sites is considered a phenomenon characteristic of the late antique countryside as found across the mountains of western Thrace and in the northern foothills of the Stara Planina. However, the majority of these constructions dated to the fifth and early sixth century AD. Poulter (2003:46-47) suggested that these fortifications - majority of these constructions dated to the fifth and early sixth century AD - were used as refuges in the time of insecurity. However, he recommended that further excavations are needed to determine whether or not these structures had been permanently occupied.

In terms of Cyrenaica, to date, including the relatively exceptional works of Goodchild (1951b and 1953), no systematic archaeological survey has been done in a way that could help to gain a greater understanding of our fortified structures. For example, regarding the dating, previous studies (such as Goodchild, 1951b and 1953) have not presented substantial evidence to support the suggested dates of the sites. For example, The Byzantine date which has been given to a settlement containing a group of defensive structures located on the edge of the second terrace of the Gebel overlooking the plain of al-Marj, cannot be relied upon as it was based only on a cross of “Byzantine type” found engraved on one of the corner stones of Qasr Sidi el-Khadri (Goodchild, 1953:68-69). As a result, establishing the typology, chronology and function of these fortified structures in Cyrenaica is considered one the main goals of this study (see Chapters 4, 5, 6 and 7). The chronological frame of this study is mainly focused on the Late Roman and Byzantine periods. The abundance and diversity of the architectural data, literary sources, the existence of datable potsherds at many sites, and my own recent survey data in the study area, not only support this conclusion, but also

contributes to wider debates on fortification of the countryside in Late Antiquity. This research also draws parallels and contrasts with similar studies of the same topic in other places of the Roman world.

In Sum, The broad aim of this research is to investigate the purpose of fortified structures, their distribution, typology, chronology and relationship with military sites and with farming activities and nearby rural settlements. This was investigated by using archaeological, topographical and landscape survey to answer the following specific research questions:

- 1- What is the chronological significance of the fortified farms and military fortifications that existed in Cyrenaica? Did the majority of them exist at the same time and, if they did, did they act together to form part of a greater regional system, to protect the main towns, cities and ports during periods of increasing tribal raids from the desert in the third century AD and beyond?
- 2- Were the fortified farms in Cyrenaica a reflection of domestic security or a more organised system of collective defence?
- 3- Are there other reasons other than defence to account for their architectural form?
- 4- Were there particular types of defended farm buildings and were there different types of military fortification? Do different styles of building correlate with different topographical locations or dates?
- 5- In particular, what comparisons and contrasts can be drawn between the fortified farms in Cyrenaica and in Tripolitania?
- 6- How does the trend towards fortification of rural sites in Cyrenaica compare and contrast with similar phenomena observed in other areas of the late Roman Empire?

My own fieldwork was planned to commence in August 2010. The first target was to record the previously known sites already identified by Goodchild and others. However, In February 2011 the “Arab spring” reached Libya (Gelvin, 2012) and it became almost impossible to visit sites in the study area. To be able to complete the fieldwork I returned to Libya in August 2011. As I am familiar with the people and the sites, despite

the insecurity, I went to conduct the survey. During this time I was able to record about 35 sites in different topographical belts of the survey area. I returned to Leicester in September 2011 to write up descriptions and to analyse the data. But In early 2012 I suffered from a burglary attack in which my computer and external hard drive containing data for many of my recorded sites and previous work were stolen. For this reason, I returned to Libya in the summer of 2013 to revisit some of the sites that I had earlier visited in 2011. Due to time limitations, it was impossible for me to revisit all of the sites I had recorded, and so I decided to revisit only those whose data were completely missing. Amidst all these events, I sought to collect as many data as would be adequate to offer a fair analysis of the fortified structures in my survey area.

The remainder of this introduction to the thesis is divided into three sections: the first (1.2) is a summary description of the contents of each of the eight chapters of the thesis; the following section (1.3) explores the geography of the study region, eastern Libya at Cyrenaica, in terms of spatial distribution, physical attributes such as climate, landforms and settlement; and the final section (1.4) narrates in summary the history of Cyrenaica in the Roman and Byzantine period.

1.2 Thesis Structure

Part I of the thesis is organised into eight chapters, reflecting the transition from introduction to context, followed by research design and investigative tools, to substantive findings/interpretations, and ending with the conclusion which contains my contribution to knowledge and recommendations for preservation of the site and areas for further studies. Part II of the thesis presents my site gazetteer. The summary of the contents of each chapter follows.

This introductory chapter deals with the main research issues and introduces the problems being investigated, the location of the study area and presents an historical account of Cyrenaica. Chapter 2 covers the most relevant previous studies of the fortified structures in Cyrenaica, Tripolitania and Fazzan starting from early travellers to the latest studies on the subject (such as The Beechey brothers, Goodchild, Di Vita, Mattingly) and projects (e.g. The UNESCO Libyan Valleys Survey) which are presented and reviewed . Chapter 3 presents the methods employed in the

archaeological investigation of the study area covering site selection, preliminary mapping and research, methods for field survey and materials collection, analysis of collected materials and, finally, a reflection on the field survey. The findings of the study begin in Chapter 4 with a description and comparative study of the masonry types, architectural features and size categories of the fortified buildings in the survey area. Chapter 5 contains discussion about the typology of the possible military sites and fortified and unfortified sites of civilian nature. Chapter 6 explores the chronology of the fortified buildings in the survey region and the evidence used to support the suggested chronologies. Discussing and questioning who was owned, used, built, and worked at the various sites surveyed and when they did start, changed and ended is made in chapter 7. Chapter 8 links the aims and objectives, literature review and the results from the research to present the conclusions to this research project. In this chapter, recommendations are offered based on the findings and suggestions are equally made on areas for further extension of this study. In all the chapters, my presentations are supported by maps, pictures and tables that were sourced either from the literature or from my own fieldwork. Complementing the main analysis of Part I, Part II is the detailed descriptions of many sites featured in the thesis.

1.3 Geographical Background of the Roman Cyrenaica

Cyrenaica is the historical and geographical name of the region located in the eastern part of modern Libya (figures 1.1 and 1.2). According to Scylax (IX, 1), who wrote in the fourth century BC, the eastern border of the region was at *Χερρνησοσ Αχηλδοσ* (Ras al-Teen) to the west of the modern Tobruk, and the western limit was at the famous site of *Arae Philaenorum* in the bottom of the Great Syrtis. While Strabo (XVIII, 20, 22), the Greek geographical and historian who died in AD 25, identified the western border of Cyrenaica at the castle of *Ευφροντα* that was located to the west of *Arae Philaenorum*. The Younger Pliny (V, 5) limited the eastern border of Cyrenaica at *Καταβαθμοσ*, al-Salloum in Egypt which was also indicated in the inscription of the Cyrenaican Ptolemaic constitution as the eastern limit of the region while the western border according to this inscription (S.E.G. IX. 1) was at *Αυτομαλκοσ*, al-Aqeila.

Through this brief overview we see that there was an agreement between what has been stated by some ancient writers and the Ptolemaic inscription on the location of the

eastern border of the region. However, there is a contrast between these sources in the identification of the western border of the region, which, does not extend beyond the site known as the Altar of the Philaeni Brothers. As for the southern border of Cyrenaica, there is no doubt that it extended deep into the desert, as can be seen later in this section.

The Green mountain of Cyrenaica (Gebel Akhdar), where my survey is focused, is a plateau of generally moderate relief which has experienced successive phases of denudation to produce the present hill-to-low mountain landform with intersections of valleys (wadis) and escarpments rising to around 800 m above sea level (Johnson, 1973:1-2).

The geomorphology and location of this mountain enable fruits and orchard plantation and cereal agriculture. There is also a third scarp and terrace in the highest areas of the mountain between Slunta and Marawa. All these features lie close to the Mediterranean coast and the drainage is less than 40 km inland (see section 3.2). The alternating features left by orogeny and erosion are still visible in modern Libya. There is a prominent ridge feature along the coastal plain, known as the as-Sahil, lying between Marsa Susa and Derna. This feature is narrow (about 1 km in width) and fades out as the scarp approaches shoreline. Fossilised remnants of coastal sand dunes left by lower sea level and small off-shore islands are common features of as-Sahil (Johnson, 1973:4-6). The geomorphology of Cyrenaica also includes al-Arquub (the lower terrace); Az-Zahir (the upper terrace) and the southern slope (see Johnson, 1973 for an extended literature).

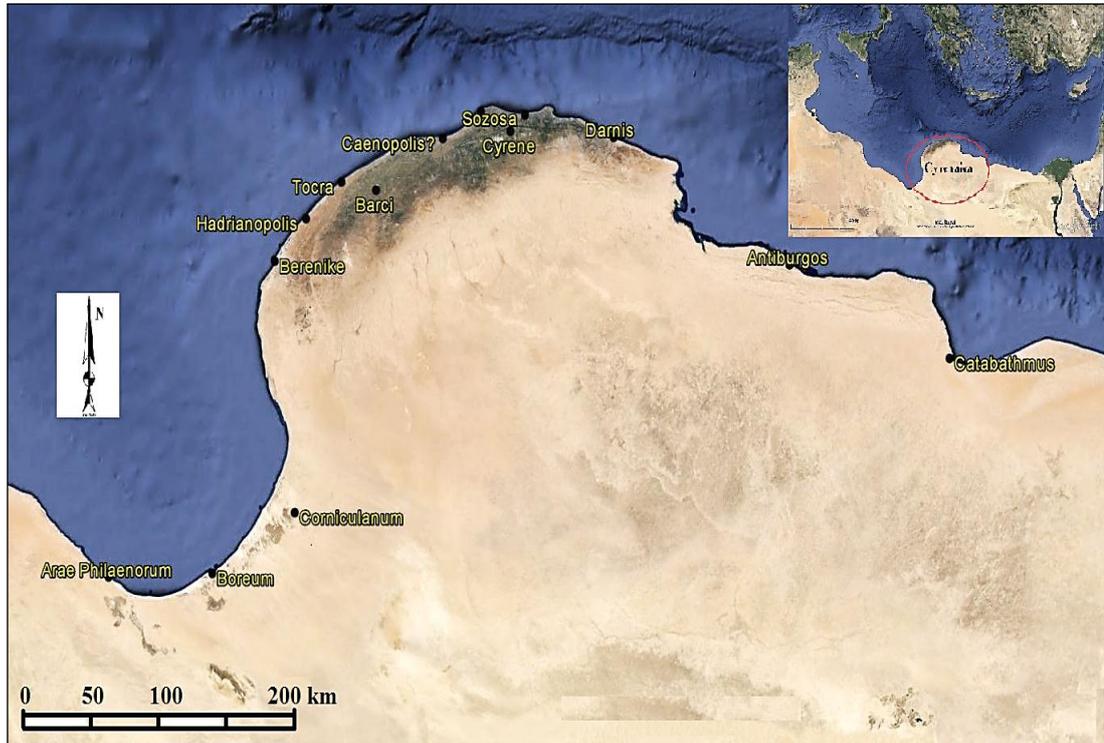


Figure 1.1: Cyrenaica (Google Earth 2014).

Rainfall pattern in the region of Cyrenaica is extremely seasonal, occurring mostly in the winter months, and it varies considerably from place to place and from winter to summer in both quantity and intensity. The rain fall is at its lowest in the months of June, July and August, and appears sporadic in distribution; summer rain is thus of no significance for cultivation of crops. For the remaining nine months of the year, half of the rainfall occurs from the months of December to February. However, the total amount of precipitation is also unevenly distributed with the maximum recorded in the month of January. The erratic nature of the rainfall draws the possibility of drought recurring at short intervals of years. Precipitation is a product of two factors: 1) cyclonic storms generated either in the Atlantic or in the western Mediterranean basin and that then move eastward; 2) local disturbances originating in the Tyrrhenian and Adriatic Seas which then travel directly south. Generally, precipitation falls in light showers but occasionally drops in violent storms that result in rapid run-off and serious flooding in the seasonal stream beds. Rainfall is also associated with relief pattern. For example, the combination of rise in elevation close to the coast means that precipitation on Gebel Akhdar is greater on the average than on the coastal plain, but it is also seasonal in distribution. Historically, the problem of water supply and conservation, together with

the lack of rich soil for crop cultivation has severe implications for crop failure and herd decimation in the area. During rainy years herds expand since more animals can be supported by vegetation. In contrast, a succession of years of limited rain results in dramatic reduction in the size of nomadic flocks (Johnson, 1973:11-13). Most recent data following the line of Goodchild (1968a) are required to better determine the historical pattern of variation of rainfall and temperature and their effect on the ancient artifacts and local economy.

Prevailing winds are from the north-north-west through north. The *qibli* is a strong, hot, dry wind from Sahara that is invariably accompanied by large quantities of airborne sand and dust. The *qibli* is an important factor in northern Cyrenaica as it can occur year round, but most frequently during spring and early summer. Sandstorms are unpredictable in Cyrenaica, and if they occur and persist for days they have adverse effects on humans and crops ((Johnson, 1973:14).

Two major kinds of vegetation can be identified in Cyrenaica- maquis and steppe. Maquis vegetation typically consists of dense growing shrubs on the lower slopes of the elevated areas of the Mediterranean Sea. Because the sub-humid and humid zones of the northern coast and the upper terrace receive relatively large amounts of rainfall, they support maquis vegetation. Steppe vegetation comprises mostly grasses, with occasional trees and shrubs mostly found around rivers and lakes. The interior areas of the dip-slope with correspondingly lower amount of rainfall are dominated by a steppe vegetation of variable composition (Johnson, 1973).

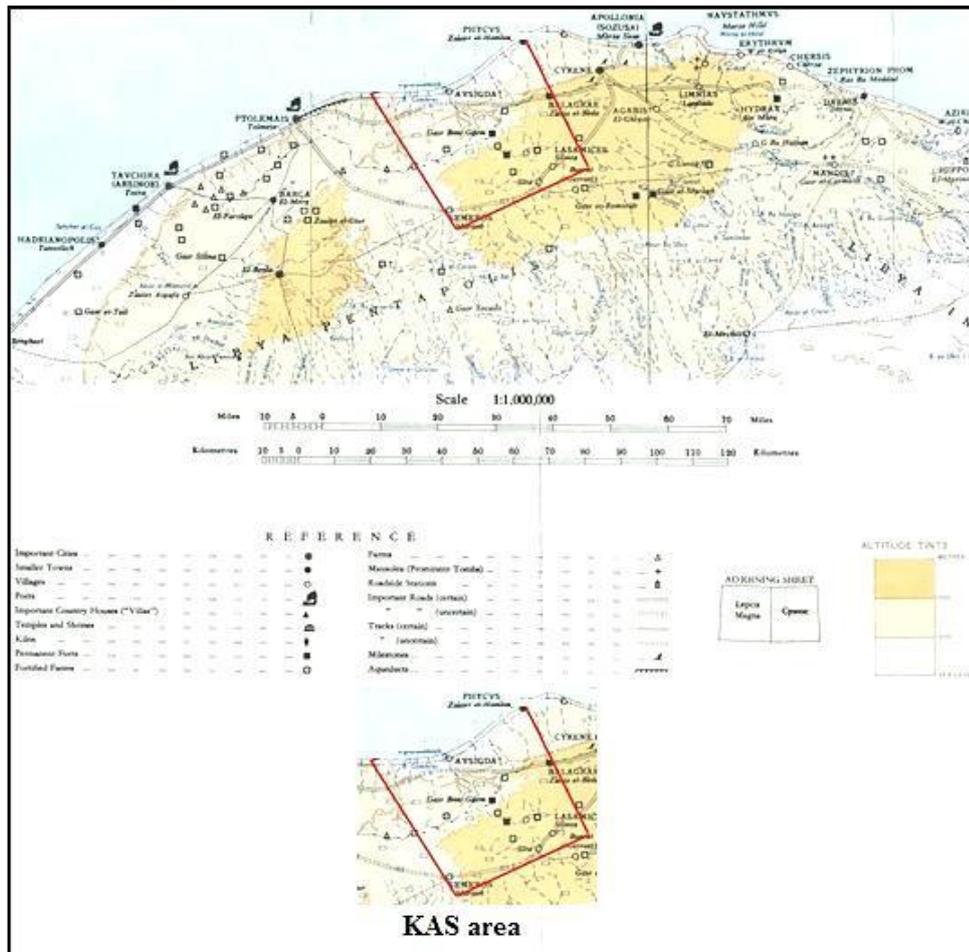


Figure 1.2: Cyrenaica: Detailed sites plotted by Goodchild (TIR, Cyrene, Goodchild, 1954b).

The mainstay of the economy of early settlers of Cyrenaica was animal husbandry, with agriculture and commerce playing a subsidiary role. Until the recent boom in the population of modern settlements consequent on the wealth generated by the discovery of oil, Lloyd (1977:1-3) observed that the Cyrenaican hinterland was unsuitable for agriculture, with more abundant evidence for animal husbandry such as sheep, goat, camels, donkeys and horses. However, climatic variability of the region is an ever present threat on this type of economy.

1.4 Brief History of Cyrenaica in the Roman and Byzantine Periods

Cyrenaica in the Roman period began when Ptolemy Apion, the king who was related to the dynasty ruling in Egypt, bequeathed his kingdom to Rome should he die

without an heir. After his death in 96 BC, the Roman people inherited Cyrenaica according to his will as he has no heirs (Jones, 1971a:358).

During the first 20 years, the province suffered from turmoil and chaos as a result of the absence of direct political control. This is because the Roman Senate during this period left the cities in Cyrenaica under local autonomy and only annexed the royal lands and imposed levies on the plant of silphium. This political idleness resulted in a conflict between aristocrats and the general public, but also the multi-ethnic elements in the region had contributed to the disorder (Romanelli, 1943:42-3). In 86 BC Rome tried to regulate the situation in the region, with the Senate sending Consul Lucullus who made some reforms (Jones, 1971a:358). In 74 BC Rome decided to consider Cyrenaica as a Roman province. To achieve this, the Roman Senate sent a low level magistrate, *quaestor*, Cornelius Lentulus Marcellinus, who became the first governor of Roman Cyrenaica who quelled any potential disorder. As a Roman province, Cyrenaica was affected by the wider political events of the Republic, including the danger of pirates and disadvantages of the conflict between Roman leaders. However, the period of Cornelius' governorship, compared to the twenty years prior to his time, was a period of smooth political stability, because of the relative ease with which his leadership succeeded in getting Cyrenaica to succumb and stabilise to Roman stability. This was reflected in the title of 'the protector and saviour of Cyrenaica' bestowed on Cornelius by the people of Cyrene (Romanelli, 1943:43). In 67 BC, after the Roman occupation of Crete, the Roman government decided to combine Cyrenaica and Crete into one province and by this time the Libyan part of this province became known as the "Pentapolis" (named after the five cities: Cyrene, Apollonia, Ptolemais, Tocra and Berenike). However, the initial integration between Cyrenaica and Crete did not last long as the assassination of Julius Caesar in 44 BC made the Roman Senate grant the governorship of Cyrenaica to Cassius and Crete to Brutus (Row, 1956:3).

After the defeat of Cassius and Brutus in the battle of Phillipi in 42 BC, Cyrenaica was one of the provinces that fell under the occupation of Marcus Antonius. In 34 BC, Cyrenaica became a kingdom again for a short time as it was gifted by Marcus Antonius to Cleopatra, the Ptolemaic queen. After his victory in the battle of Actium (31 BC), Augustus brought Cyrenaica back under Roman rule and in 27 BC reintegrated it with Crete as a province ruled by the Roman Senate. In order to establish peace in Cyrenaica,

Libyan tribal attacks were first dealt with as a priority and the Romans managed in 8 BC to put an end to the so-called Marmarican wars (Romanelli, 1943:77). In an attempt to establish Roman Peace (*Pax Romana*) in all parts of the Empire, Augustus made many legal reforms in Cyrenaica, including the issuance of a legal document known as the 'decisions of Augustus'. Moreover, he made land reclamation efforts so that the Libyan tribes would remain in peace and exploit the vast agricultural potential of the province. The works of Augustus were highly appreciated by the people of Cyrene who expressed this by setting up his statue in the northern corridor of the Agora and joined his name with Zeus Soter the saviour. After the death of Augustus in AD 14, the standard of living deteriorated in Cyrenaica due to political corruption that characterised the ruling class of the province. Complaints submitted to the Roman Senate by a delegation from Cyrene accused the governors of bribery, extortion and nepotism. During the reign of Emperor Claudius (AD 41-54), Cyrenaica received some attention, including architectural projects such as building roads between villages and cities. Claudius also returned to the state many of the lands previously seized by some of the aristocrats as a way of bridging the trust that was lost between the rulers and the common people (Goodchild, 1968b:155).

The most important event in Cyrenaica in early second century AD was the massive Jewish revolt of AD 115. The revolt, which occurred during the reign of Trajan, started in Alexandria in Egypt where the Jews rose violently against the dominant Greek faction and, before being overturned, succeeded in largely destroying the city. In Cyrene the uprising was led by Lukuas, who claimed to be the Messiah; this too was marked by widespread violence. Dio Cassius that reported the Jews, who had lost all self-restraint, resorted to torture and even to cannibalism; tens of thousands of Gentiles – Greeks, Jews and Christians – lost their lives during the uprising. Trajan suppressed the revolt by sending in the Roman general, Q. Marcius Turbo, who succeeded in putting down the uprising though only after considerable use of brutal force (Fraser and Applebaum, 1950:84).

The great city of Cyrene took many years to recover and only regained its prosperity during the reign of Emperor Hadrian (AD 117-138). The province then enjoyed a prosperous period as evidenced by the architectural structures in Cyrene that date to this period. Moreover, Hadrian established a new city between Tocra and Berenike named

after himself, Hadrianopolis (Jones and Little, 1971:53). Overall, Cyrenaica remained a peaceful part of the Roman Empire and the prosperity during the reign of the Emperor Septimius Severus (AD 193-211) is shown by the foundation of a gate in the main street in Cyrene with the inscription: 'This Emperor gave kindness to the whole world'.

In AD 268 during the time of Emperor Claudius II, the raids of the Libyan tribes on the province's cities increased and the new Emperor instructed the Roman governor in Egypt to suppress the attacks. In AD 297, during the reign of the Emperor Diocletian (AD 284-305), Cyrenaica was separated from Crete and split into two parts: Upper Libya or the Pentapolis with its capital Ptolemais, and Lower Libya that included the area between Derna (*Darnis*) and Alexandria, which were initially administrated from Marsa Matruh (*Paraetonium*) and then Derna. Thereafter, these two new provinces were governed as "standard" late antique provinces.

The first document that referred to Christianity in the province was the record of the first bishop Amonas from Berenike in AD 260. In AD 325 we hear of bishops in Tocra, Ptolemais, Barca and Boreum in the Pentapolis, Tobruk (*Antiburgos*) and Siwa (*Ammonium*) in lower Libya (Goodchild, 1981:22-24)

In addition to the massive earthquake of AD 365 that devastated the region (for more on this earthquake see Goodchild, 1967 and 1968c), perhaps the most noteworthy events in the region during the late Roman period were the continued attacks on the Cyrenaican cities by the Libyan tribes. These attacks intensified during the era of Synesius, the bishop of Ptolemais from AD 410, as is evident from his letters about the misery that the region experienced as a result of these attacks, as well as the insecurity and poor condition of the army. Among these attacks was the invasion of the province by a nomadic Libyan tribe known as *Ausurani* or *Austuriani*, from the hinterland of Syrtics. According to Synesius (*Epist.* 107, 108, 113, 125, 130-32), their raids were extremely destructive. Crops were burnt, animals were stolen, men were killed and women were taken as slaves.

The military commanders at the time of Synesius, and afterwards, had a really difficult job. Synesius despised the regular troops for staying behind their town walls, leaving the countryside to be ravaged. As an estate owner, one can understand his feelings, however, as the forces available for defence of the Kuf region and elsewhere

were limited, the *dux* had to decide where his priorities lay, the towns and ports came first and the countryside second. It is not possible to deploy a large field force in Kuf for long periods of time. The area is perfect for guerrilla warfare as the Italians found to their detriment in 1922-30 with the resistance fighters of Omar al-Muchtar. Holding the line and being prepared to take action when the need arose was perhaps all the regular military was able to do (Goodchild, 1976:53). As a consequence, the farmers and estate owners were reliant on their own resources to cope with the situation and *qsur* are probably the result. Although Synesius tells us towards the end of his life in AD 412 that the province was entirely lost and he awaited his doom in Ptolemais, in fact, the *status quo* prevailed until the arrival of Byzantine troops in AD 533-4. Life continued on this frontier zone for at least two and a half centuries after Synesius and almost certainly far more.

Few military units were, as Jones (1971b) stated, mentioned by Synesius: The *Dalmatians*, the *Marcomanni*, the *Thracian* cavalry and the *Balagritae*. They all were a normal type of *Limitanei* troops that were based in forts and garrisoning the frontier zones of the empire. The value of the writings' of Synesius in terms of attempting reconstruction of the chronology of some features of the survey sites and the landscape and the identity of the *qsur*'s occupants is discussed in different sections of this thesis.

The Decree of Anastasias (c. AD 501) that was inscribed on the façade of the Headquarters of the *dux* in Ptolemais also reveals some information regarding military organisation in Cyrenaica. A provincial garrison of five units and two ratings of military groups were mentioned in the Decree: the *numeri* and the *castrensiani*. The duty of the *numeri* was to control the fortified frontier line, whereas the *castrensiani*, which is another term for the *limitanei*, were installed in forts in order to police the roads and prevent contact between Roman and local tribes, other than docile ones (Jones, 1971b:293).

After the 'liberation' of North Africa, west of Syrtica, from the Vandals by the imperial forces of Justinian in AD 534 some re-arrangement of the provincial administrative system in this region of North Africa was undertaken by the Byzantine Empire. As a result, Cyrenaica came directly under the control of the praetorian prefect of the east, in Constantinople (Jones, 1971b:289). Justinian's reign (AD 527-565)

brought relative stability and prosperity to the region. Procopius (*De aedificiis*, vi. 2) provides a brief account of what Justinian did for the region. Most notable was a change in provincial capital. Due to problems of water supply and because its city walls were too extensive to be manned, the provincial capital was moved from Ptolemais to the harbour city of Apollonia which was renamed *Sozousa* (Pedley, 1976:20-21).

Numerous architectural structures are attributed to the early Byzantine period in the cities and the countryside of Cyrenaica, including defensive buildings. For example, the Hellenistic city walls of Apollonia, Tocra, and Berenike were restored and two new fortifications were constructed and garrisoned in *Paraetonium* and *Antiburgos*. Moreover, existing military installations were re-built and new ones built across the region. As expressed by Goodchild (1953:75): “The whole province of Libya Pentapolis had become, by the reign of Justinian, a land of castles, and almost every hill-top was surmounted by a fort or tower in visual communication with a score of other towers.”

While we have otherwise limited documentary data after this, we do hear that in AD 608 Heraclius recruited a force of 3000 men from the Pentapolis to support his army against Emperor Phocas in Constantinople. He was successful, taking the throne in AD 610. However, in the year AD 643, the Muslim armies led by ‘Amr ibn al-Aas’ conquered Cyrenaica and drew down the curtain on the fairly short period of renewed Roman rule in Cyrenaica. Subsequently, Cyrenaica became known as *Barqah*, named after its provincial capital (Goodchild, 1981:26-28).

Chapter 2: Previous Studies of *Qsur* in Cyrenaica, Tripolitania and Fazzan

2.1 Introduction

This section outlines the most important previous studies of the fortified structures (*qsur*) in Cyrenaica, Tripolitania and Fazzan that are related to my own research. For each region previous studies will be provided in chronological order starting with the writings of the nineteenth-century travellers who left some records of these sites down to the latest studies on the subject. In this section, information for every single site will only be briefly provided as detailed descriptions are contained in Chapters 4, 5, 6 and in the Site Gazetteer.

This chapter is broadly organised into six sections. The first three sections following the introduction focus on previous studies of *qsur* in Libya: in Cyrenaica (2.2), Tripolitania (2.3) and Fazzan (2.4). In each, a literature survey of notable published and unpublished studies about fortified building structures is given. The UNESCO Libyan Valley Survey that undertook an extensive archaeological survey of pre-desert areas of Tripolitania and the central parts of the Gulf of Sirte, between 1979 and 1989, can be found in section 2.3.4. Section 2.3.5 contains a review of one of the most important archaeological studies of the region made by David Mattingly in his thesis that later revised and published as a book titled, *Tripolitania*, in 1995.

2.2 Previous Studies of *Qsur* in Cyrenaica

2.2.1 Travellers and early scholars

Many fortified structures in Cyrenaica were seen and described by a number of nineteenth-century travellers. For example, The Beechey brothers, the English travellers, left a brief description of some fortified structures that they encountered on their way along the Libyan coast (Beechey and Beechey, 1828). In the western part of Cyrenaica, many fortified sites were mentioned including a group noticed in Wadi Shegga and about 3 km east of them is “a very remarkable projection of a high cliff into the sea, on which has been built a strong and very conspicuous fortress.” The Beechey

brothers, following Strabo (XVII, 836), suggested that this site, including scattered buildings at the plain in the back of the fort, might be the castle of Euphrantes (Beechey and Beechey, 1828:188-89).

At Brega (*Boreum*) they described the fortified structure as mainly for defensive purposes and they (incorrectly) identified it as the site of *Automala*. They also described fortified buildings passed in route to Benghazi. For instance, the remains of a castle at a site called Tabilba, two “forts” at Ain Agan, two at Shohan and several “forts” in the area between Carcora and Benghazi (Beechey and Beechey, 1828:243-44). At Ghemines south of Benghazi, several fortified buildings surrounded by ditches and built in the Cyclopean manner with rounded corners were also visited (Beechey and Beechey, 1828:244).

On the coast, some two km north of Birsis and about 10 km west of the ancient city of Tobra, two “forts” were noted by the Beechey brothers, but they were not able to reach them due to the marsh which separated them from the cultivated land to the south (Beechey and Beechey, 1828:350). Most likely one of these buildings corresponds with the late Roman fort of Qasr al-Motanib (figure 2.1) on which a recent report has been published (Bentaher and Buzaian, 2010). On the way to Tobra, some comment was made of Gusser el-Toweel, c. 30 km east of Benghazi. According to the Beechey brothers, on the basis of its architecture, Gusser el-Toweel was one of the fortresses restored by Justinian (Beechey and Beechey, 1828:365-66).

Additional fortified structures located between el-Merj and Cyrene were mentioned without any details (Beechey and Beechey, 1828:421), including remains of an ancient “fort” at Tereet, located 15 km east of Cyrene, two near Ras el-Hilal, and some located at the edge of the lower escarpment close to the road that connected Cyrene with Apollonia (Beechey and Beechey, 1828:468, 479, 490). Finally, a very brief description was given of the possible late Roman fortlet of Qasr Beni Gdem (KAS 1), located on the east edge of Wadi al-Kuf (figures 2.2 and 2.3). The brothers described it as “a very large fort, now called by the Arabs Beliggidem; the walls of this are still upwards of forty feet in height” (Beechey and Beechey, 1828:570) Also, they pointed out its strategic location in controlling the Wadi al-Kuf system “Other valleys are seen from the fort, stretching out far into the blue horizon; we looked on all sides over the tops of

thick forests of pine, which covered the sides and the summit of the wadies, as far as the eye could reach” (Beechey and Beechey, 1828:570).

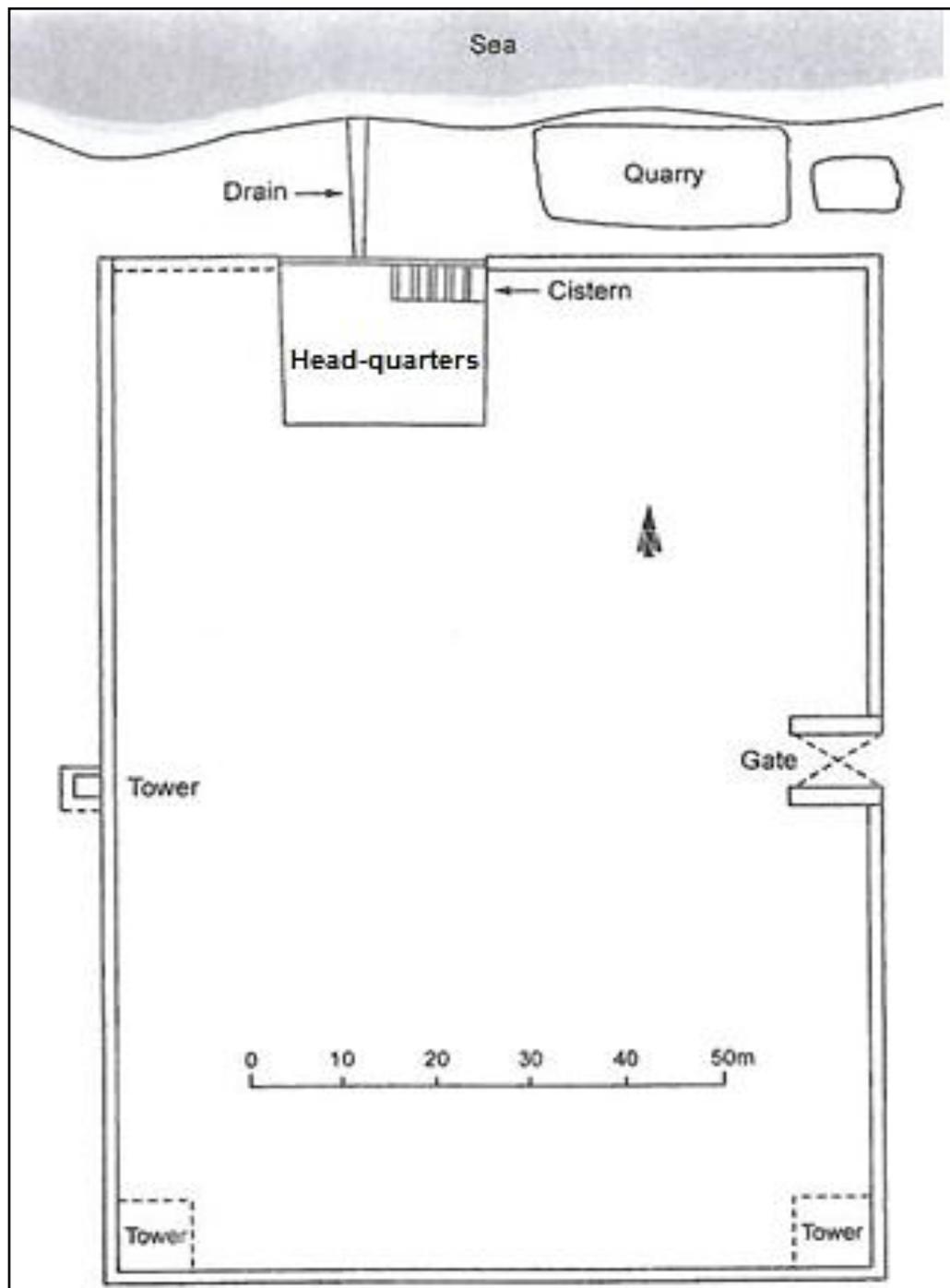


Figure 2.1: The fort of al-Motanib: General plan (Bentaher and Buzaian, 2010: fig. 2).



Figure 2.2: Qasr Beni Gdem: General view, looking south.

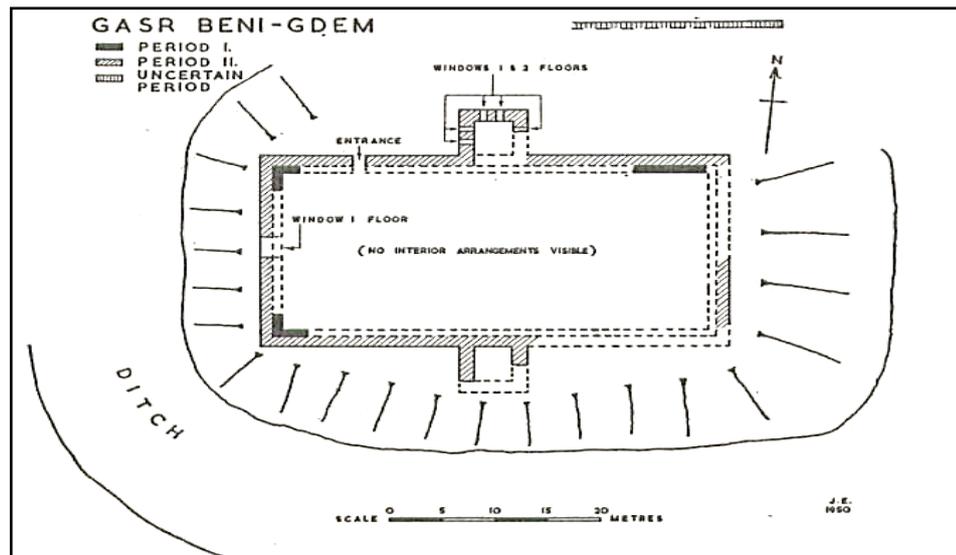


Figure 2.3: Qasr Beni Gdem: Measured plan (Goodchild, 1953: fig. 18).

In 1825, the French academic and Traveller Jean-Raymond Pacho travelled across Cyrenaica and he identified and presented some fortified buildings in the countryside of the region. Due to their defensive appearance, some of the Byzantine churches such as Siret es-Shnedira were wrongly described as Roman forts (Pacho, 1827:120-21). However, the small hill-top tower of Qasr Reffa, located between Tert and Lamlouda was viewed as one of the Roman defensive structures in the region (Pacho, 1827:130). The Roman fortlet at Ain Mara (figure 2.4) was visited (Pacho, 1827:106) and its location was suggested being the ancient site of *Hydrax* mentioned by Synesius (*Epist.*

67). With regard to the late Roman fortlet of Qasr Beni Gdem, its site was incorrectly identified as the ancient site of *Balagrae* (the modern el-Baida) (Pacho, 1827:170). Also, the brief description provided included inaccurate measurements (Pacho, 1827:382).

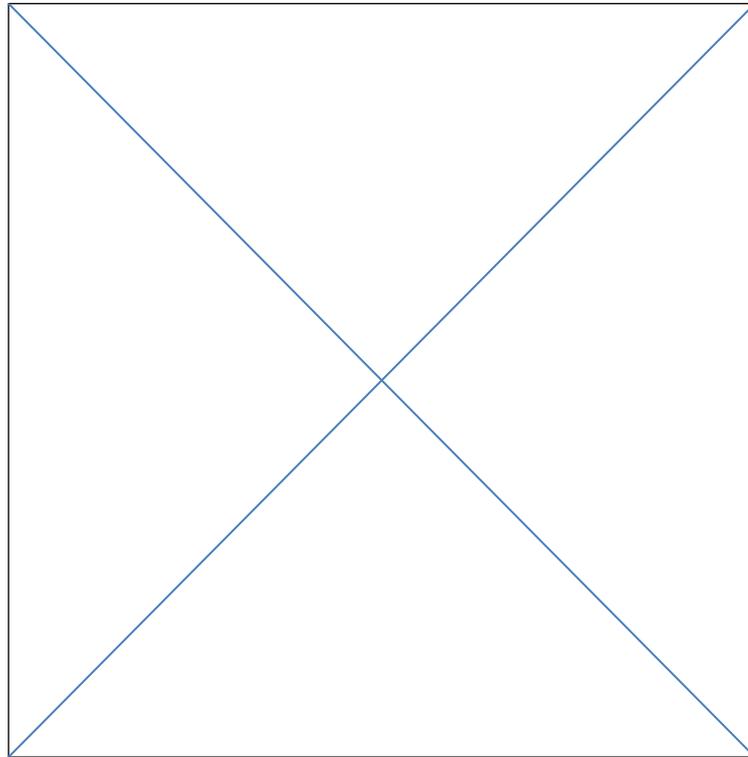


Figure 2.4: The possible fortlet at Ain Mara: Measured plan (Goodchild, 1953: fig. 18).

Some Roman military structures in Cyrenaica were noted and recorded by the English academic and traveller, James Hamilton, in the middle of the nineteenth century (Hamilton, 1856). These included a brief description of the probable late Roman fortlet of Qasr al-Gebala (figure 2.5) near Labiar south east of Benghazi (Hamilton, 1856:24). At Sireh between Marawa and Slonta, a building in poor condition was described as a square castle which formed with other similar sites as “a line of defence against the border tribes” (Hamilton, 1856:29). Reynolds (2003:294-302) reported that one of the two fortified churches at Lamluda was described by Hamilton (1856:107) as a castle. The fortified farms of Siret Qasrain el-Giamel at el-Baida (KAS 28) (figure 2.6) and Qasr Nawara to the west of Messa were also visited. The first was described as a Roman stronghold and the second as an important tower (Hamilton, 1856:125). The possible late Roman military fortlet of Qasr Beni Gdem was carefully considered. According to

Hamilton (1856:127-128): it is “the best preserved of the old forts [that we] are met with everywhere in the Cyrenaica”.

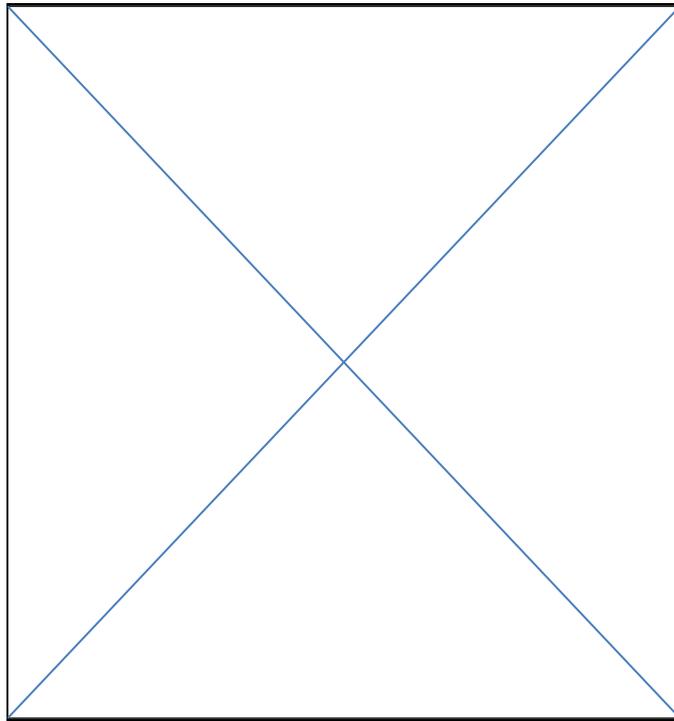


Figure 2.5: Qasr al-Gebala: Measured plan (Goodchild, 1953: fig. 16).

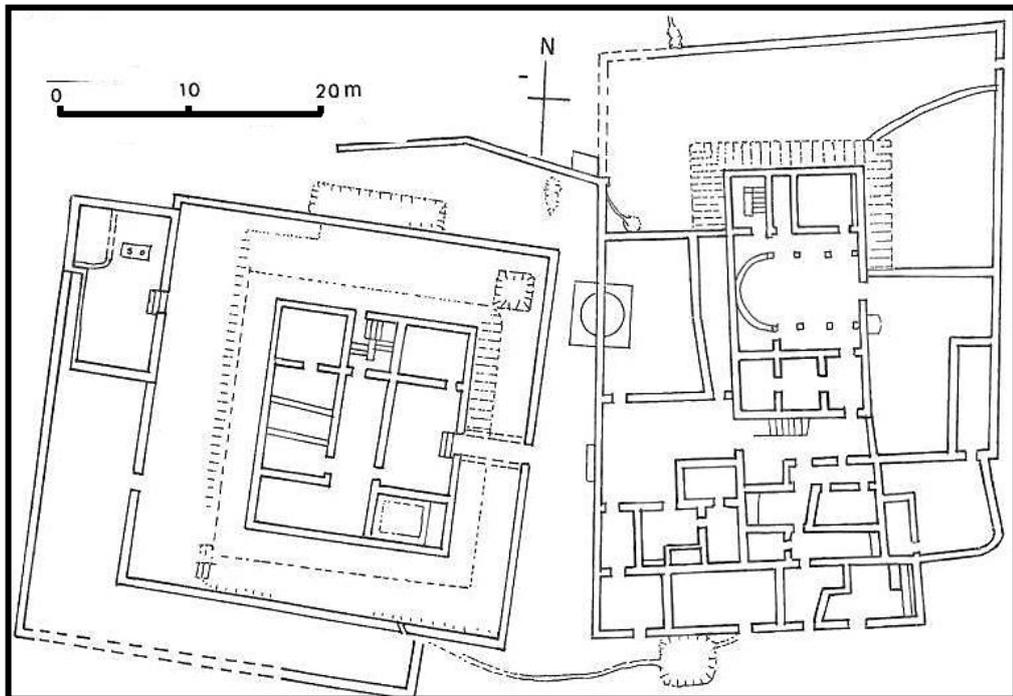


Figure 2.6: Siret Qasrain el-Giamel: Measured plan (Reynolds, 2003: illus. 364).

Though incorrectly described as a castle and named Tell-i-mout, instead of Tailimun, the general layout and masonry type of this structure located in Zaviet Tailimun, 60 km south-west of Benghazi is possibly a late Roman fortlet (figure 2.7). Even though Hamilton (1856:168-69) paid considerable attention to the fortlet, of the visible two angle towers only the one on the north-east corner was mentioned. The square ditched outpost of Qasr el-Heneia, located 7 km south of Agedabia (*Corniculatum*) appeared the most impressive fortified site for Hamilton (figure 2.8). According to him the site is: “a strong fortress of very early architecture, and by far the most curious construction I had met with in these countries” (Hamilton, 1856:175). The building was described in detail and some measurements were given, but incorrectly dated to the Greek period. Furthermore, Hamilton (1856:176) pointed out the strategic location of the site in the Caravan route that connected Agedabia with the oases of Augila to the south. (as presented in Section 2.2.2 below), some of Hamilton’s incorrect architectural interpretations were corrected by Goodchild (1951b:131-41) in his detailed architectural investigation of Qasr al-Heneia, nevertheless, Hamilton’s account remains of special importance as it is the first piece of written information about the site.

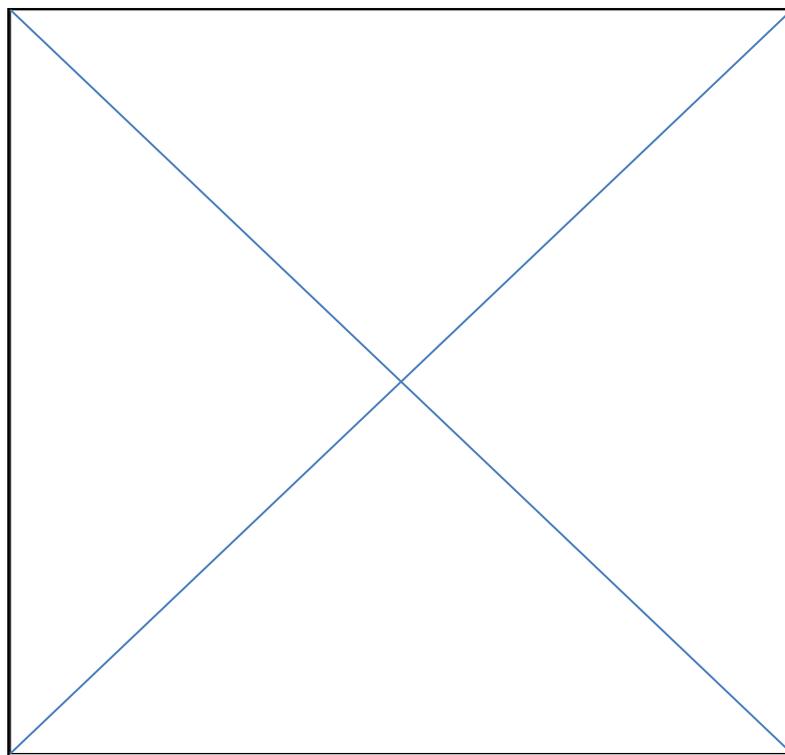


Figure 2.7: The fortlet at et-Tailimun (Goodchild, 1953: fig. 16).

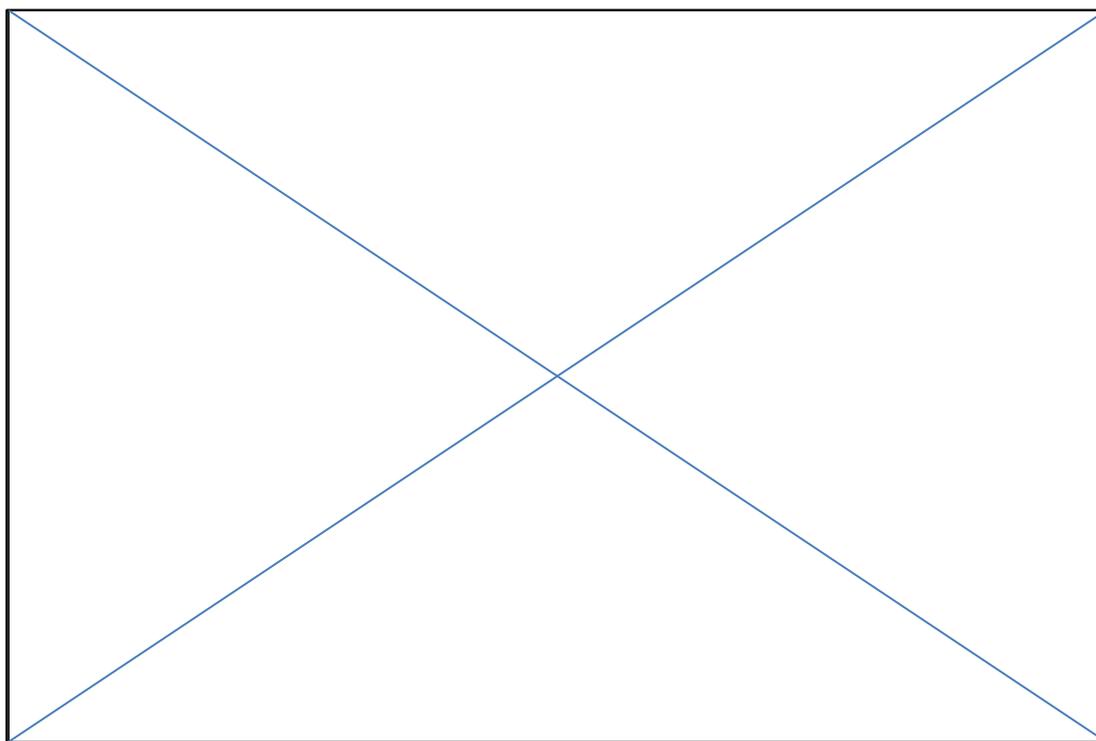


Figure 2.8: Qasr el-Heneia (Goodchild, 1951b: fig. 2).

In 1868 the German geographer and explorer Friedrich G. Rohlfs also visited the outpost of Qasr el-Heneia and presented a short description of the site which he (incorrectly) interpreted as a fortification of Libyan origin (Rohlfs, 1871: II, 39). This interpretation was, however, discredited by Goodchild (1951b:139-40) (see below) Section 2.2.2.

The earliest attempt to discuss some of the fortified structures in Cyrenaica in greater detail was that of the American scholar Oric Bates, The Curator of African Archaeology and Ethnology at the Peabody museum in 1940s. He had studied some examples located in the south-west of the region (such as Qasr el Heneia) and the group of fortified structures east of Ghemines, south of Benghazi. Building on what had been attested by the ancient writer Diodorus Siculus (III, 69.3) and on the basis of their architectural character, he (even though incorrectly) concluded that these buildings were of early Libyan origin and dated back to the ninth and eighth centuries BC. Bates (1914:160) also presumed that they were used by locals as: “resort in time of war, where they could lay up such booty or superfluous goods as came into their hands, and where they could count upon finding a strong band of their fellows.”

In his historical book about Cyrenaica, the Italian scholar of Roman history Pietro Romanelli wrote a chapter about the Roman military organisation and defence in Cyrenaica (Romanelli, 1943:189-205). Architectural descriptions were presented regarding some fortified structures which had already been noted by the earlier travellers. Qasr Beni Gdem (KAS 1), for instance, was dated to the Byzantine period and considered as “the best preserved of all the castles of Cyrenaica” (Romanelli, 1943:201).

2.2.2 Goodchild

While the above accounts rarely extended beyond short descriptions, the work of the British archaeologist Richard Goodchild, (the controller of the Department of Antiquity of Cyrenaica 1953-1966), on the fortified farms (*qsur*) and other fortified buildings of military nature in the countryside of Cyrenaica remains the most sophisticated work done in the region (Goodchild 1951b; 1951c, 1952a; 1952b; and 1953).

Around the westernmost Roman military sites defending the routes between the Syrtic region and the Cyrenaican plateau was a fortlet located at Umm el-Garanaigh close to the Altars of the Philaeni. This site, according to Goodchild (1953:67) was occupied in the first century AD and continued until its replacement as a western strong point by *Boreum* (Bugrada, near Marsa Brega) before the time of Justinian. A brief description of an outpost known as Qasr el-Atallat (figure 2.9) located 10 km south-east of Boreum was presented. On the basis of the similarity between its masonry and that of the town-walls of *Boreum*, it has been maintained that this outpost and similar fortified farms and towers in the region were built in the time of Justinian. Moreover, he claimed that these defensive structures, centred on el-Atallat, were built to form a front defensive line to help in protecting the western frontier of Cyrenaica from attack by Syrtic tribes (Goodchild, 1951b:14-15).

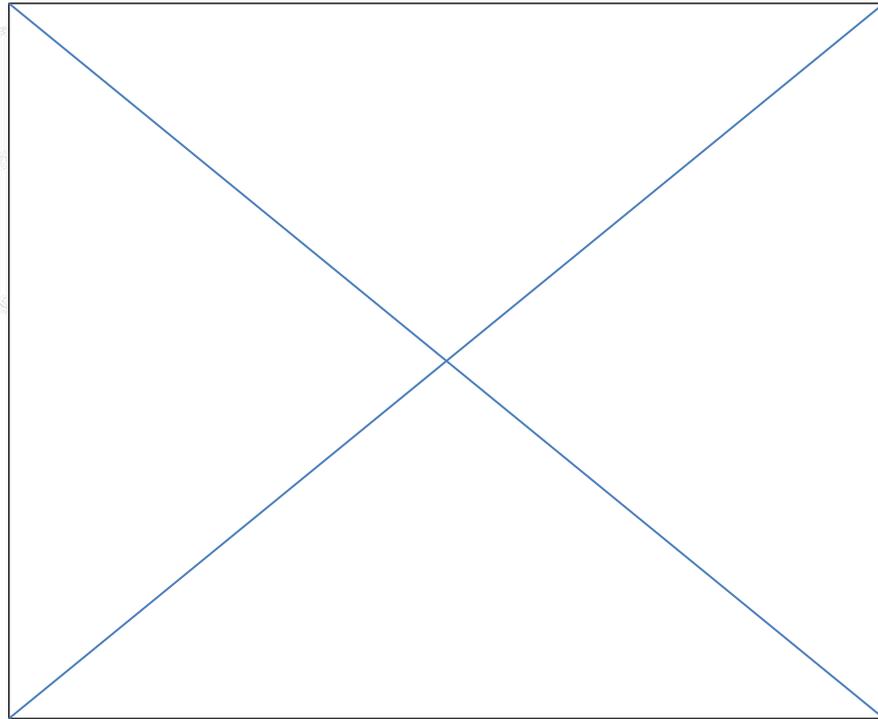


Figure 2.9: Qasr El- Atallat: Measured plan (Goodchild 1951b: fig. 3).

An interesting argument effectively disproving the theories of Rohlfs and Bates that these sites were of Libyan origin and dated to the early first millennium BC was presented by Goodchild (1951b) based on detailed description of fortified sites in southwestern Cyrenaica (Rohlfs, 1871: II, 39; Bates, 1914:160). Instead, he argued that they were all of Roman origin based on their architecture and sherds of Roman pottery scattered on the sites. After discussing the previous observations on Qasr el-Heneia (figure 2.8), located about 7 km south of Agedabia, he supplied a detailed description of the outpost and corrected some previous misleading interpretations. He also presented reasonable interpretations of the functions of some architectural characteristics. Goodchild's description showed the strong defensive features of the site and he pointed out that: "despite its small size the fort could accommodate mounted detachments, and could, in time of emergency, resist siege" (Goodchild, 1951b:139). On these grounds, he identified a Roman military origin for this structure. With regard to its date, no inscriptions were found, and although the surface pottery there was completely Roman, it cannot be considered as conclusive evidence of the earliest phases of the building. He, however, suggested that the architecture of the building in general indicated a Roman date. Moreover, due to its location, Qasr el-Heneia was classified by Goodchild as a frontier outpost constructed in the first century AD to control the southern approaches to

Agedabia and was probably reused by Justinian in his reorganisation of Syrtic *Limes*. According to the military inscriptions found in Ajdabiyah (*Corniclanum*) that dated to the first century AD the outpost most likely relates to a Roman fort, which existed somewhere in Agedabia. These important inscriptions inform us on the names and ranks of some Roman soldiers of the *Cohors Apamenorum I* who came from Apamea in Syria to garrison the western *limes* of the region (Ferri, 1926:367; S.E.G IX 773-795). The military site that this garrison was based in has not been identified yet, however, it probably lies beneath the known Islamic fort in Ajdabiyah (Goodchild, 1951b:140-41).

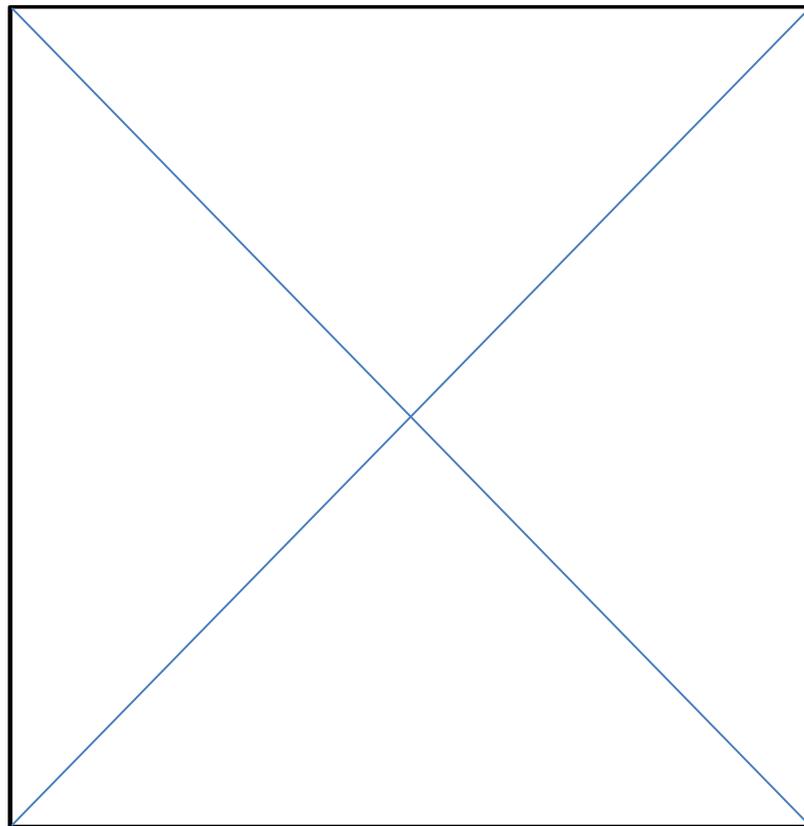


Figure 2.10: Fortified buildings at Ghemines (Goodchild, 1951b: fig. 7).

In addition to Qasr el-Heneia, Goodchild investigated a group of fortified structures in Ghemines (figure 2.10), some of which, as noted above, were mentioned by the Beechey brothers. After citing their observations, Goodchild presented a short description of the largest and best preserved of them, Qasr el-Ataresh (figure 2.11). Due to the collapse of the upper storeys, the interior parts of the *qasr* were completely filled with stones and earth and, therefore, only the visible outer walls were described. Interestingly, he repeated the Beecheys' interpretation that the Ghemines forts were

purposely filled with earth, but observed that they had failed to notice the existence of the arched entrance doorway in the centre of the east wall of Qasr el-Ataresh, which disproved their hypothesis that the occupants of these buildings reached the upper storey by ropes or similar equipment. Furthermore, the term ‘Cyclopean’, which was given by the Beecheys was rejected by Goodchild, when he observed that many small gaps between the large stones were filled with small ones (Goodchild, 1951b:141-43).

Further fortified structures recorded by Goodchild include two fully collapsed fortified buildings some 5 km south east of Ghemines at a site called el-Frascit and one in a better condition known as Bu Msceili (figure 2.10). Most of the buildings he observed were surrounded by remains of settlements of agricultural character. Goodchild rejected an early first millennium BC date on the basis of extant architectural features, such as the arched doorways in Qasr el-Ataresh and well-cut door jambs in this *qasr* and in the nearby *qasr* of el-Chel (figures 2.10 and 2.12).

As regards pottery associated with these sites, he claimed that most of it had been brought to these sites by the Bedouins, but the majority of it was Roman with no archaic forms evident. Architecturally, Goodchild asserted that the native Libyan character in these sites is clearly noticeable. He interpreted these buildings by comparing them to nearby Roman fortified buildings, such as the fortlet at et-Tailimun (figure 2.7), about 10 km south-east of Ghemines, and the small fortified farm known as Qsur Khalita, some 17 km south of Benghazi, in addition to Qasr el-Heneia (Goodchild, 1951b:143). These examples, which were considered military (although Qsur Khalita is most likely a fortified farm), were built in good quality masonry with right-angled corners, while the Ghemines’ buildings were distinguished by large irregular stones and rounded angles (Reynolds, 2003:430). In short, it was concluded that: “The most probable interpretation of the Ghemines structures is that they are native buildings of the Roman period, influenced by the architecture of the fortified farms, but inferior in materials and structural technique” (Goodchild, 1951b:143-44).

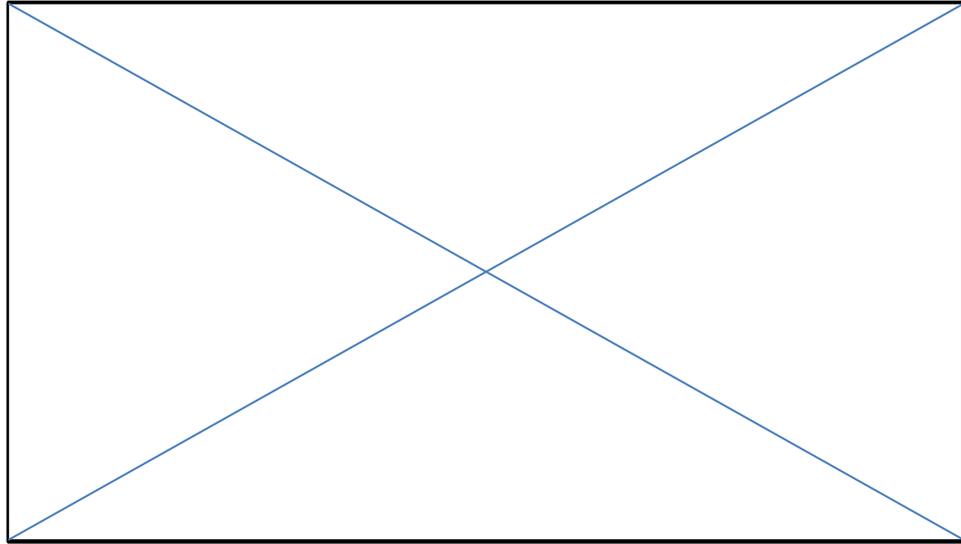


Figure 2.11: Qasr el-Ataresh: General view, looking south-west (Goodchild, 1951b: plate II c).

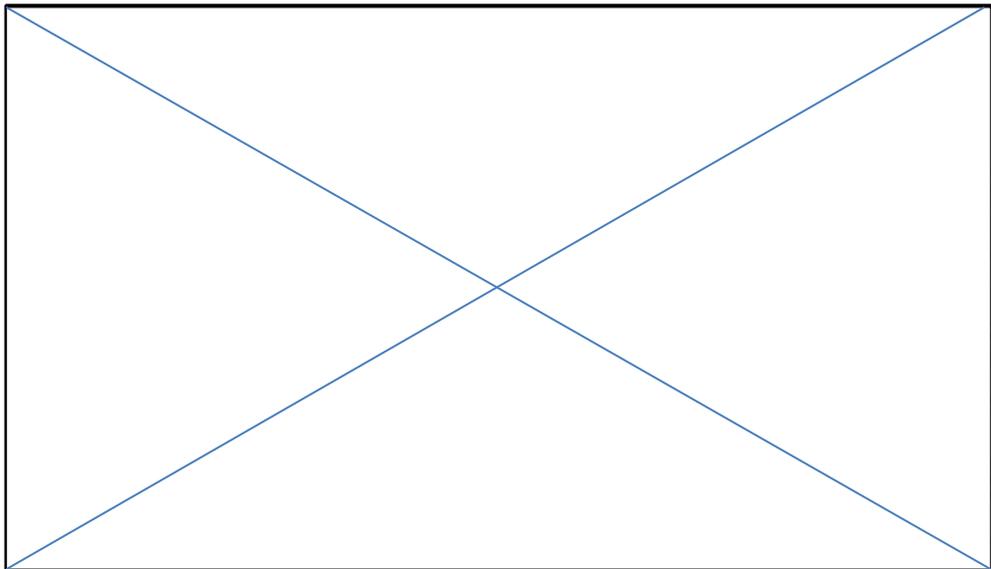


Figure 2.12: Qasr el-Chel: General view, looking north-west (Goodchild, 1951b: plate III g).

Goodchild also suggested that they formed part of a zone of *limitanei* settlements situated behind the military outposts of the Agedabia area. These settlements were occupied by 'docile' local tribes from Cyrenaica, used by Romans to defend the non-garrisoned areas. Finally, he assumed that only excavation could prove whether these fortified buildings, if they belonged to the latter part of the fourth century, were built by the Libyan tribe *Macetae* under Roman supervision, or whether they might have been constructed in the time of Justinian as part of his reorganisation of the region's security in the first half of the sixth century (Goodchild, 1951b:144).

The fortlets of et-Tailimun, Esh-Sheleidima and the watchtower at Zaviet Msus (figure 2.13) were considered by Goodchild as important “forts” forming part of the innermost defences of the Syrtic region (Goodchild, 1953:66-7). While Tailimun and Esh-Sheleidima were described as rectangular forts, the structure at Zaviet Msus was classified as an outpost consisting of a watch-tower surrounded by an unditched square enclosure (Goodchild, 1953:68). Some inscriptions in Greek recording names and ranks of Graeco-Roman soldiers have been found on some walls of the enclosure and on the single door-lintel at Msus. In comparison with the inscriptions found in Agedabia, Msus’s inscriptions and some architectural features, such as the flat lintel doorway, confirmed, as Goodchild suggested, a first-century AD date for the outpost (Goodchild, 1953:76).

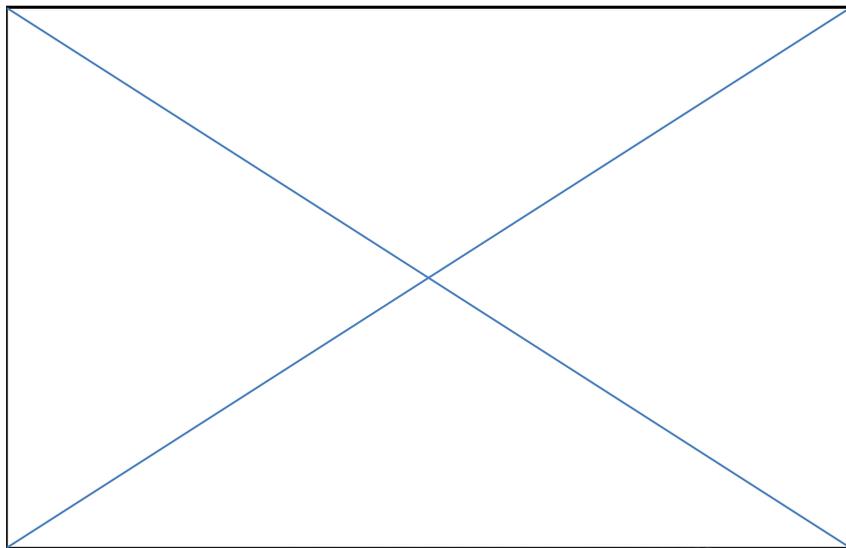


Figure 2.13: The outpost at Msus: Measured plan (Goodchild 1953: fig. 17).

Regarding the western defences of the Cyrenaican plateau a brief description was presented about an unditched square fort located on a hill at el-Benia south of al-Marj known as Qasr el-Geballa (figure 2.5). Its strategic location at the junction of a number of valleys made it an effective control point for the surrounding area. At the edge of the second terrace of the Gebel overlooking the plain of al-Marj are a group of defensive structures. Among them was a well-preserved building named Sidi el-Khadri (figure 2.14) labelled by Goodchild (1953:68), despite its small size (23 x 23 m), as a fortlet. Here, once again we meet the term *limitanei* used by Goodchild to describe a settlement of farmhouses which are of the same type as the fortified farms *qsur* in Tripolitania.

Each building comprised two storeys with a central courtyard surrounded by a number of rooms entered by arched doorways. The Byzantine date given to this settlement was based only on a cross of Byzantine type found engraved on one of the corner stones of Qasr Sidi el-Khadri (Goodchild, 1953:69).

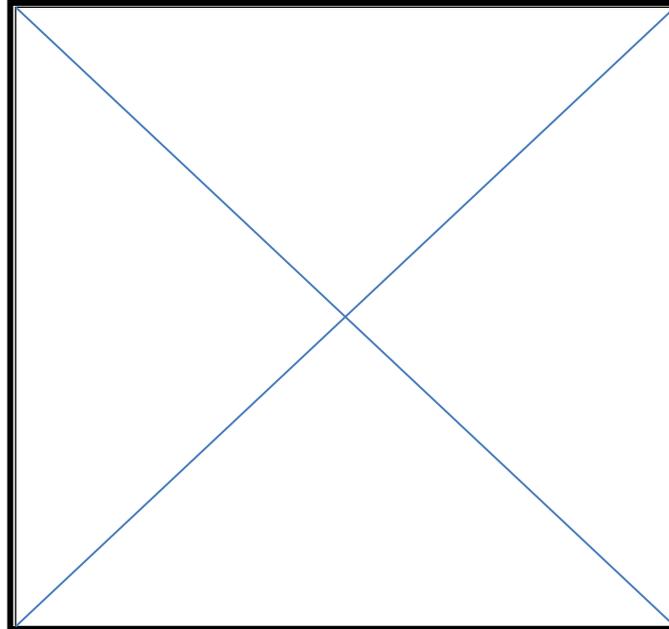


Figure 2.14: Qasr Sidi el-Khadri: General plan (Goodchild, 1953: fig. 21).

The main features of three sites of the defences of the Wadi al-Kuf region were presented. These include the possible late Roman fortlet of Qasr Beni Gdem (KAS 1), the possible outposts of Qasr Shahden (KAS 3) and Ushish (KAS 4). Although no dating evidence was given, the fortlet of Qasr Beni Gdem (figures 2.2 and 2.3) was cited as a 'remarkable' late Roman military structure, constructed to control "the most dangerous area of the Kuf region" (Goodchild, 1953:71). However, it seems that the late Roman date was suggested on the basis of the architecture of the building. The rectangular (44 x 23 m) three-storey fortlet was constructed of fine ashlar blocks and had two external projecting towers located in the middle of its long sides. A single arched doorway was inserted in the southern half of the western wall to give access to the interior that largely masked by the collapsed masonry.

The probable military outpost known as Qasr Shahden lay 8 km south-east of Beni Gdem. The site, as shown in figures 2.15 and 2.16, occupied a high hill-top surrounded

by a wide ditch framed by an irregular enclosure with several rock-cut chambers cut into the sides of the ditch. Although three phases of construction were identified in the outpost, no secure dating evidence was found. However, Goodchild suggested fifth century date for the first phase and the seventh century as the last phase. Without any supporting evidence, Goodchild suggested that the site probably had pre-Roman fortified phase (Goodchild, 1953:72).



Figure 2.15: Qasr Shahden: North wall (photo by: Ahmed Buzaian).

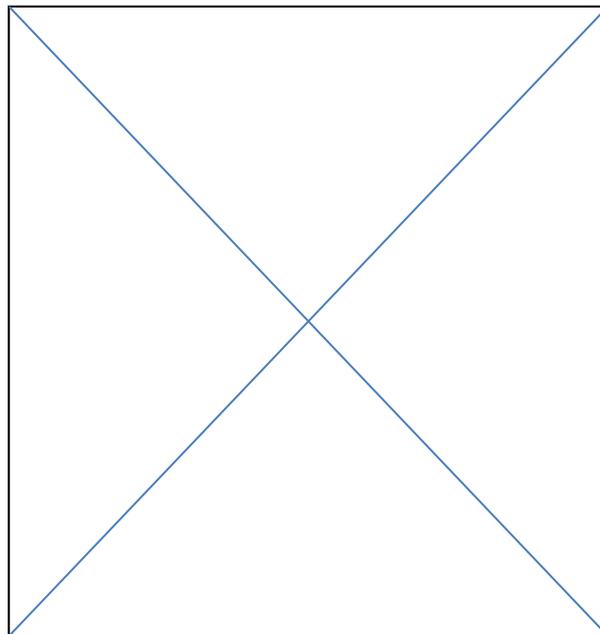


Figure 2.16: Qasr Shahden: General plan (Goodchild, 1953: figs. 19 and 20).

A third fortified structure from the Kuf region highlighted by Goodchild was the small (15x13 m), unditched outpost of Qasr Ushish (figure 2.17). The two-storey building was located south-west of Slonta on the southern border of the Kuf region. No specific date was given to the building; nevertheless, the similarity of its walls to the first period of Shahden (5th century AD) was highlighted (Goodchild, 1953:72).

Further fortified buildings were probably located to protect the eastern approaches of the Cyrene plateau. Of these was the 34x34 m ditched square fortlet at Ain Mara. Following Pacho (1827:106), Goodchild supposed that the site of Ain Mara probably corresponded with the ancient site of *Hydrax* named in one of Synesius's letters (*Epist.* 67) where a fort devastated by an earthquake in about AD 400 was mentioned. Therefore, the fortlet (figure 2.4) has been considered by Goodchild as one of the early Roman fortifications of the region, most likely constructed before the earthquake of AD 365. This (suggested) date was also based on the architectural similarity between this fortlet and the outpost of Qasr al-Heneia. Moreover, both sites vertical ditches contained rock-cut chambers in their outer sides.

West of Ain Mara are fortified structures described by Goodchild as "outposts" distributed 15 km or less away from each other to form an outer ring to protect the southern and eastern routes of the Cyrene's plateau. These included Qasr er-Remtheiat, Qasr al-Maragh, Qasr Uertig and Qasr Bu-Hassan. The ditched 33x33 m square fortlet of Qasr er-Remtheiat (figure 2.18), set some 35 km south of Cyrene, was considered "the most notable, and probably the most ancient, having some of the characteristics both of el-Heneia and of Ain Mara" (Goodchild, 1953:70). The other structures located close to the road running south-east from Cyrene to Gulf of Bomba were, according to Goodchild (1953:70), of a later date.



Figure 2.17: Qasr Ushish: The north wall. Scale 1m.

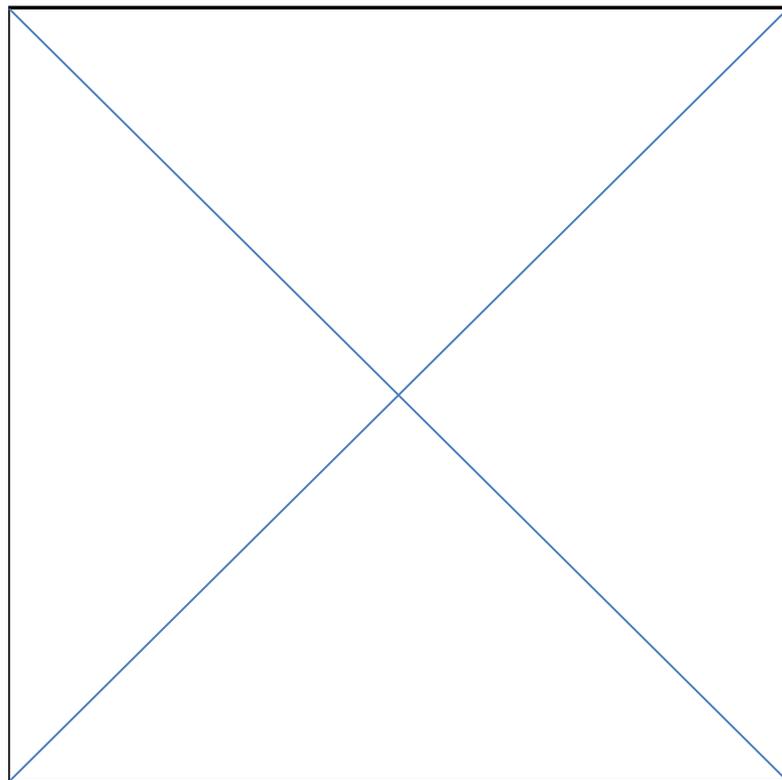


Figure 2.18: Qasr er-Remtheiat: Measured plan (Goodchild, 1953: fig. 21).

With regard to the eastern approaches to the Pentapolis province, Goodchild (1953) pointed out the rarity of military structures there. Without giving any information

regarding its date or architecture, he mentioned a small square tower called Siret el-Medaanat as an example of some compact military buildings (Goodchild, 1953: 72). He suggested that these buildings were built around Martuba in order to protect the inland route which ran from Derna to el-Mechili. Due to the importance of el-Mechili as a water point and track-centre, Goodchild proposed the probable existence of a Roman fort beneath the ruins of an early Islamic fort known in Mechili. A square fort with projecting towers built by Justinian in Tobruk (*Antipyrgus*) was also briefly discussed by Goodchild (1953:72-3). Although Goodchild argued that further fortified structures were widely scattered in the internal lands of the Cyrenaican plateau, few related examples were given. Of these, Qasr Tectana was named as an example of the small square ditched buildings that formed the majority of fortified structures in this part of the region. Goodchild's work demonstrated that distinguishing between the fort and the fortified farm is very difficult in densely populated areas. However, he suggested that even the fortified farms had a military significance as they were used by soldier farmers (*limitanei*). He also noted that smaller fortified structures in the cultivated areas of the Pentapolis have no "special tactical significance" in their distribution. Some of these small fortified buildings he identified were constructed in the more 'sheltered terrain' for military purposes to control the outlaws' hiding place and for economic reasons to reward the *limitanei* with tax-free lands (Goodchild, 1953:73-4).

In summary, Goodchild claimed that between the first and the sixth century AD the Romans did not significantly vary the limits of their defensive system in Cyrenaica. On the one hand, he supposed that isolated military sites such as Msus were deserted at an early date, before the end of the Roman period. On the other hand, he argued that the wide-spread construction of fortified structures on the Cyrenaican plateau was a result of the Byzantine state's desire to control fertile lands of the region (Goodchild, 1953:74). Generally, regarding their chronology, it can be said that dating these structures to the late Roman period was not demonstrated via secure archaeological evidence. However, Goodchild pointed out that the earlier *limes* were covered by the 'thick crust of the late fortifications' and they cannot be traced without large scale excavations. He also strongly suggested that the early Roman *limes* in Cyrenaica from the first century AD existed in its south-western region to control the routes from the

Syrtic Gulf. Moreover, he assigned to the same early era the forts located on the edges of the Cyrene plateau (e.g. Ain Mara and er-Remtheiat).

As a result of this extensive topographical survey, two key questions emerged (Goodchild, 1953). At first, Goodchild wondered whether the date of what he called *limitanei* settlements, as in Tripolitania, began in the third century. Secondly, he wondered whether the simple square fort or tower, which formed a notable feature of late Roman defensive structure in Cyrenaica, developed from similar forts of the early Roman period or had Hellenistic roots (Goodchild, 1953:75-6).

2.2.3 Other works

In 1962 some fortified structures south of Benghazi were surveyed by the Pennsylvania expedition and a small scale excavation was conducted at a ditched fortified building known as Qasr al-Arid, located 30 km north of Ghemines. The *qasr* (figure 2.19) formed a part of large settlement and, according to sherds of fine and coarse pottery examined by Theresa Carter (1963:19-20), the site was occupied in the third, fourth and fifth centuries AD.

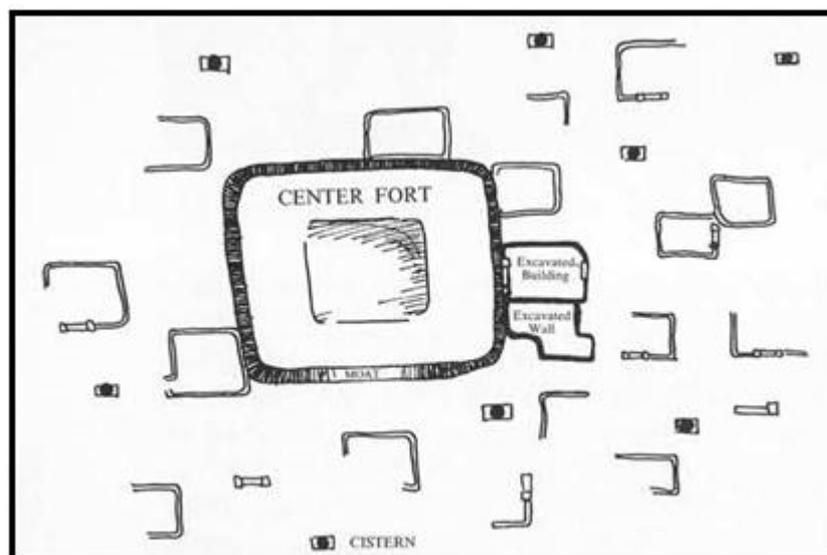


Figure 2.19: Qasr al-Arid: General plan (Carter, 1963).

In 1975 the Italian scholar of archaeology Sandro Stucchi wrote an account regarding the fortified structures in Cyrenaica in his comprehensive book. In general, based on the structures' architectural character, locations and their association to some farming

activities” features, Stucchi (1975:16-17) suggested that the *qsur* in Cyrenaica were agricultural rather than military structures. To support his hypothesis, he highlighted the cultivable locations and organisation of the many examples of the *qsur* as well as the associated industrial elements. He pointed out that, in addition to farming and olive and wine production, evidence of the purple dye production was found associated with some coastal *qsur* such as Suani Rdanu and Suani Segba west of Tobra and Qasr Nutah located 18 km west of Apollonia (Stucchi, 1975:518). Stucchi also discussed the general plans of some *qsur* in an attempt to show their weaknesses as possible defensive structures.

While the Roman military sites and fortified farms (*qsur*) were not the main focus of the British Greek and Latin inscriptions expert Joyce Reynolds’s edited book (*Christian Monuments of Cyrenaica*), some of them were briefly described and a few more were mentioned (Reynolds, 2003). Of these few, a small settlement located on the south side of the main road (some 17 km to the south of the centre of Benghazi) contained a ditched fortified building located on a low hill-top. The site, known as Qsur Khalita is the same small Roman fortified farm previously mentioned by Goodchild (1951b:143) and named Gsur al-Galida. A small scale excavation was conducted in the *qasr* in 1997 by the Libyan Department of Antiquities, but unfortunately, has not been published (Reynolds, 2003:429-32).

A small semi-square watch tower measuring 7x7.90 m was located within a large settlement at Tansoluch, some 44 km east of Benghazi. On the bases of its construction manner and the discovery of a lower part of a milestone, this feature was interpreted as a road station on the ancient road that connected Tobra and Berenike (Reynolds, 2003:414). Further to the east, numerous sites containing fortified buildings described as *qsur* were mentioned in the book. Qasr Asceisc, which was located some 12 km west of Ptolemais, was constructed of fine ashlar and considered as a “Christian fortified building” on the basis of crosses found inscribed on some of its walls (Reynolds, 2003:392-93). The late Roman fortlet of Qasr al-Geballa (figure 2.5) was briefly mentioned by Reynolds (2003:397) as opposed to the large, 32.10x29.70 m, ditched fortified building known as Qasr Silu (figure 2.20) that has received considerable attention. The *qasr* is located on a low hill about 2 km south-east of Mirad Masaud village and roughly 10 km north-west of Qasr Libya. The *qasr* was part of a Byzantine

settlement, which contained two churches, several buildings of unidentified function and a number of cisterns and olive presses. The architecture of the *qasr* was briefly described to show the two phases of constructions of its outer walls (Reynolds 2003:292-293). Following Goodchild and Stucchi, a brief description was given of Qasr Beni Gdem (KAS 1). Two phases of constructions have been suggested regarding its outer walls. The first dated back to the fifth century and the second to the sixth century (Reynolds, 2003:396). No further detailed information was provided on the fort of Qasr Shahden (KAS 3), which is 8 km south of Qasr Beni Gdem (Reynolds, 2003:399).

At Messa (10 km west of Baida), a square fortified building built on a hill top was described as a *qasr*. Two phases of construction were identified, the latter dated to the late-antique period (Reynolds, 2003:303). A more detailed description of Siret Qasrain el-Giamel (KAS 28) (figure 2.6), which is sit in the heart of the modern city of el-Baida, indicate that the site comprises two buildings. One of them, described as a fortified agricultural villa, was suggested as originating in the fifth century AD and continuing in use into the seventh century (Reynolds, 2003:413).



Figure 2.20: Qasr Silu: General view (Reynolds, 2003: illus. 231).

One of the latest investigations of the *qsur* in Cyrenaica is that which was carried out by Paul Bennett, the director of Canterbury Archaeological Trust with the support of some Libyan archaeologists in the summer of 2007 (Bennett *et al.*, 2008). The small

team have examined four *qsur* between Soluq in north-western Cyrenaica and wadi et-Tmimi on the Gulf of Bomba to the east (figure 2.21). The four *qsur* included two buildings known as Qsur el-Hamra (the red forts), located 100 km north-east of Soluq (figure 2.22), Qasr al-Abiad (the white fort), located 2 km north of Qsur el-Hamra and Qasr Tekasees that lies 160 km west of wadi et-Tamimi. This study showed that the four *qsur* were massively built in mud brick and covered by stone and each formed a part of a settlement. The *qsur* were positioned to overlook an adjoining cultivated wadi. A late Roman date was allocated on the basis of fragments of coarse pottery found scattered in the sites. They claimed that the structures were probably built for defensive reasons to protect the associated settlements. On the other hand, a much later date, the thirteenth century, has been proposed by the team on the basis of some architectural and historical considerations. However, the writers concluded that these sites need further archaeological work to gain secure information regarding their chronology and function (Bennett *et al.*, 2008:128-30).

A brief account of a coastal fort known as Qasr al-Motanib (figure 2.1) has been presented by Bentaher and Buzaian (2010). The paper provided an architectural description of the fort that is located on the beach, some 10 km west of Tocrá (*Taucheira*). This building was previously mentioned by the Beechey brothers as one of two towers located 2 km to the north of Birsis, but not able to reach them due to the marsh separating them from the cultivated land to the south (Beechey and Beechey, 1828:350). The fort was also mentioned by Goodchild as a remarkable example of the coastal forts in the region. He suggested that the fort was probably built or strengthened after the conquest of the African provinces by the Vandals (Goodchild, 1953:68 note 18).

The rectangular fort that comprises two floors, measuring 81.5x114 m, is the largest known fort in the countryside of Cyrenaica. On the basis of some architectural features the site was considered a military site. These are the three towers (two internal and one external) and a possible headquarters building of two or three-storey located at the northern side of the fort. A single arched wide gate measured about 5 m wide was opened in the middle of the eastern wall. Based on its location and architectural features, the fort has been dated by Bentaher and Buzaian (2010:220-3) to the late fifth century AD.

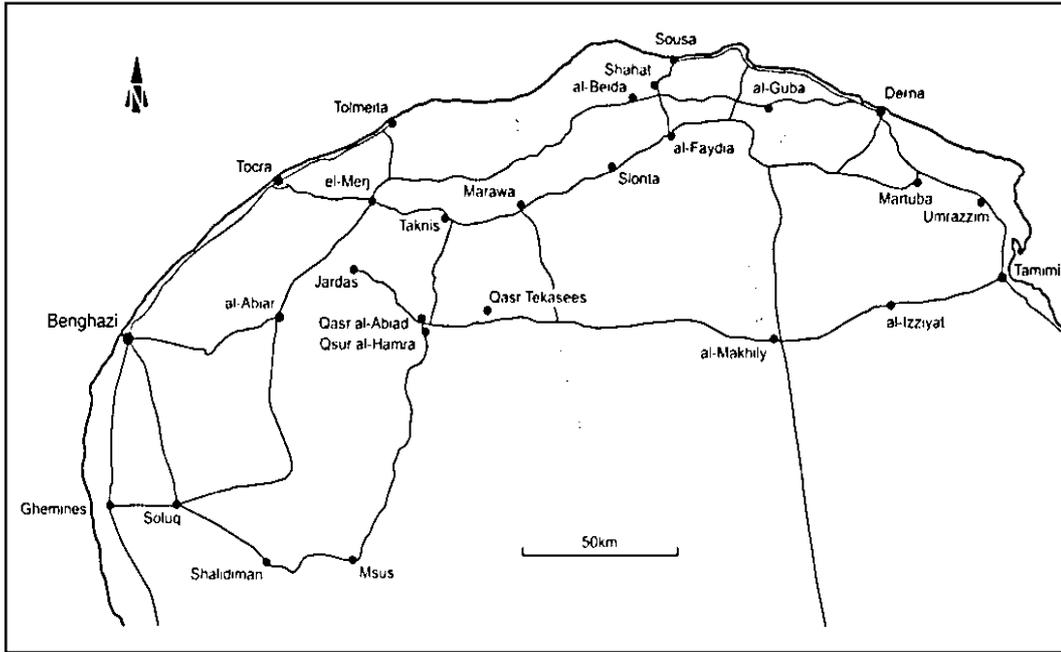


Figure 2.21: The location of the four Qsur between Soluq and Wadi et-Tamimi (Bennett *et al*, 2008: fig. 1).

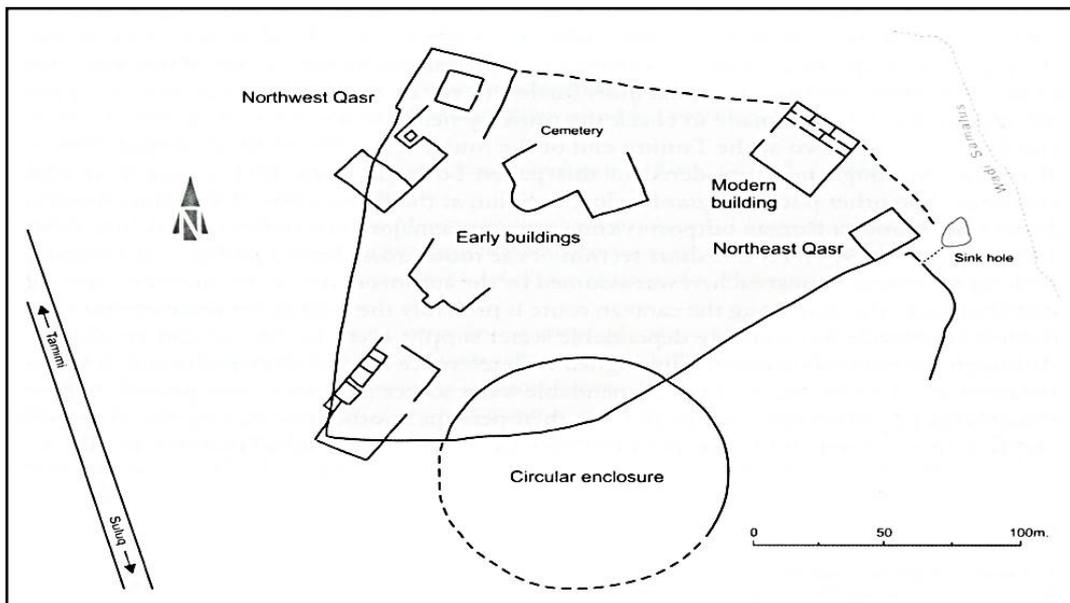


Figure 2.22: Plan of Qsur al-Hamra (Bennett *et al*, 2008: fig. 2).

In his guide book, Philip Kenrick has visited and recorded several fortified structures scattered on the countryside of Cyrenaica (Kenrick, 2013). In keeping with the nature of the book as a tourist guide, the sites were presented in geographical order from west to east, with sites located to the south of Benghazi first introduced. In addition to fortified

structures previously recorded by the nineteenth century travellers and also those that were surveyed by Goodchild, the guide included a few fortified buildings recorded for the first time by the author.

It is most likely that the fortified building spotted in TIR (figure 1.2) and named Qasr B by Kenrick could be considered one of the newly recorded sites. Due to its ruined condition, it was not possible to reconstruct the general layout of this outpost which is located 2 km to the north-west of Qasr al-Atallat (figure 2.9). However, it was obvious that the building was surrounded by a vertical-sided ditch similar to those at nearby Qasr al-Atallat (Kenrick, 2013:29). Kenrick attributed the first phase of the multi-period fortified building of Qasr as-Sahabi to Roman era that was also marked in the TIR, and located 100 km south of Agedabia in the direction of Augila. The building (figure 2.23), refurbished and reused in the medieval and Italian periods, was originally constructed of coursed mortared stones with some courses laid diagonally in the way that been used in some late Roman sites in Tripolitania (e.g. at Bir Shedewa) and in the late antique site of Maddinat Bu Hindi in Cyrenaica. Internally the building comprised a central courtyard onto which seven vaulted rooms opened. This site was described by Kenrick as a Roman farm; nonetheless, he also presumed that it probably had a military significance (Kenrick, 2013:34-5).

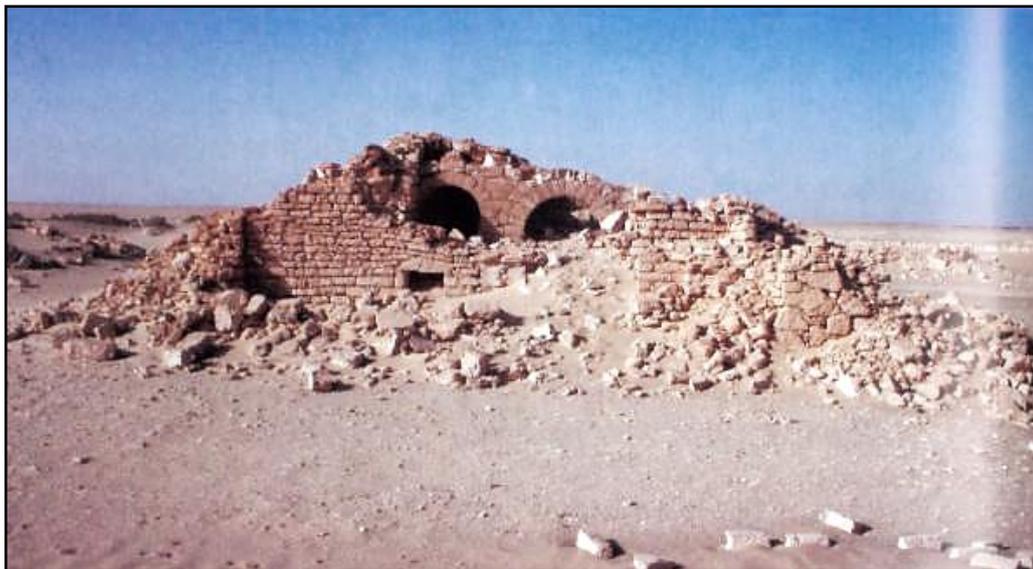


Figure 2.23: Qasr as-Sahabi: Looking south-east (Kenrick 2013a: fig. 20).

The most interesting site that was recorded for the first time by Kenrick is the well-preserved fortified farm of Qasr Az-Zaarura (KAS 26) (figure 2.24), located

immediately to west of Messa. The ashlar square building had in common some architectural features that existed at some other sites dating to late Roman period. These features included a single-arched doorway, curtain brackets and string courses. Internally the building consists of several vaulted rooms opening into a central courtyard. An interesting argument is given with regard to the sloping revetment that surrounded the outer walls from the four sides. A part of this revetment has been cleared out by the farmer who currently owns the land that the *qasr* is located on. This clearance resulted in the exposure of a crack in the west wall most likely to be the effect of an earthquake. Suggestions were therefore made that the revetment was added to the building at a later date in order to stabilise outer walls. It has been also presumed that this natural disaster probably happened in the Byzantine period based on a cross found chiselled in a loose block located by the north-east corner (Kenrick, 2013a:124).



Figure 2.24: Qasr Az-Zaarura: General view, looking south-east.

Some of the sites mentioned in his book were further observed and published in a separate article (Kenrick, 2013b). The observations presented for some of the sites are worth presenting here:

a. *Qasr al-Heneia* (figure 2.8)

With regard to this Roman outpost, Kenrick claimed that one of the figures provided by Goodchild did not match its caption. Goodchild (1951b: Plate 2d) stated that this figure “shows recesses for horizontal beams of a bridge over the south ditch and for voussoirs of supporting arches” which, according to Kenrick (2013b:58), represents in fact small windows that open on the inner side of the eastern ditch to provide lighting for the corridor located in this side.

b. *Qasr Az-Zaarura* (KAS 26) (figure 2.24)

More details of the architecture of this fortified farm and consequently an argument on its chronology were provided in Kenrick (2013b:59-62). Kenrick highlighted the architectural similarity between this site and other sites in the region, particularly *Qasr Sidi al-Khadri* (figure 2.14) to the south east of al-Marj. As will be discussed in Chapter 6, the architectural characteristics of these sites, including ashlar masonry, string courses and Christian crosses, were used as indications to their late Roman and Byzantine date. Moreover, the curtain brackets that flanked the arched entrance of this building were discussed and compared with those in the south door of the church at Ras al-Hilal and the probable military site of *Qasr Shahden* (KAS 3).

c. *Qasr Ushish* (KAS 4) (figure 2.17)

The architectural similarity of this probable military site with *Qasr Az-Zaarura* was pointed out based on what Kenrick (2013b: 62) referred to as the “extraordinary contrast between the state of preservation of the opposite sides of the building”. Consequently, Kenrick (2013b:62) believes that the site was abandoned after being severely damaged by an ancient earthquake.

d. *Qasr Shahden* (KAS 3) (figures 2.15)

Kenrick supposed that this “unquestionably” military site is more likely the fortress of *Bombaia* described by Synesius (*Epist.* 104), as one of the two monasteries that Procopius (*De aedificiis*, VI.ii.7-8) believed to have been fortified by Justinian. It was also been pointed out that the matching in size, masonry type and the general layout in the first constructional phase of this building and *Qasr Ushish*, suggest a military site.

Kenrick also noted that curtain brackets existed in both the original arched entrance and in the one added in the second or third phase of construction (Kenrick, 2013:63).

e. Qasr er-Remtheiat (figure 2.18)

More detailed description than previously presented by Goodchild (1953:70) was given for this military site. The early date suggested by Goodchild was supported by the existence of datable pottery recovered from the surface, this included Eastern Sigillata B and African cookware (Kenrick, 2013:63-4).

f. Qasr al-Maraghah (figure 2.25)

The classification of Qasr al-Maraghah as a simple watch tower suggested by Goodchild (1953:70) has been rejected by Kenrick (2013:64-6). Instead, building on its location on low ground adjacent to a wadi, he argued that this site is most likely a fortified farm building. The outer walls were built of ashlar masonry of two faces and rubble core strengthened in a later time by a sloping revetment faced with rough stones. Some agricultural elements were evident, such as wadi walls for control of irrigation lies in the adjacent wadi. Pottery, ranging in time from the first to seventh century AD, was noted at the site.

g. Qasr Wurtij (Uertig)

Qasr Wurtij is smaller in size but very similar in masonry type and structure to Qasr al-Maraghah. Kenrick (2013b:66) believes that a small watch tower is a convenient term for this site based on its size and location on a high ground overlooking the surrounding landscape. A number of sherds of first-century Terra Sigillata and fifth or sixth-century African Red Slip ware were recovered from the site.



Figure 2.25: Qasr al-Maraghah: General view, looking north (Kenrick, 2013a: fig. 207).

g. Qasr Bu Hassan

Though previously noted by Goodchild (1953:70) and Stucchi (1975:31), the brief description provided by Kenrick (2013b:66-7) is the first information ever written with regard to this site. The external walls of the small rectangular structure (15x10 m) were constructed of good ashlar masonry. The walls were strengthened by a sloping revetment built of large undressed blocks. Traces of an outer enclosure built of large irregular stones are visible on the north and west sides. Whether this site was a military watch tower or a civilian fortified farm has not been stated by Kenrick. However, he pointed its similarity in character to Qasr al-Maraghah and Qasr Wurtij and also claimed that its plot size is very small for a farm.

Generally, on the basis of their architecture and on the surface pottery, Kenrick suggested that the last three sites mentioned above have early origins in the first century AD and continued in use until the sixth or seventh century AD. Moreover, he presumed that these sites “are of less obvious military character, and are perhaps more likely to have been simply residences of the indigenous population” (Kenrick, 2013b:67).

As can be seen from the background studies of the Cyrenaican fortified structures, it is clear that the typology, chronology and the distinction between civilian and military nature of these sites has received little attention. What is evident from the examples presented above is that they cover a wide range of architectural forms and sizes. Therefore, further investigations need to be conducted to address the typological and

chronological issues of these sites. Nonetheless, the previous works have paved the way for my own detailed research work and provided me much useful information in the discussion of the fortified structures in Cyrenaica.

2.3 Previous Studies of *Qsur* in Tripolitania

When compared with Cyrenaica, Roman *qsur* in Tripolitania have received more attention from scholars (e.g. Barker, 1996a; Barker and Jones, 1980-81; Barker and Jones, 1982; Barker and Jones, 1984; Barker *et al.*, 1991; Brogan, 1964; Brogan, 1965; Brogan, 1980; Brogan and Reynolds, 1964; Brogan and Smith, 1957; Brogan and Smith, 1967; Brogan and Smith, 1984; Di Vita, 1964; Elmayer, 1985; Goodchild, 1950a; 1950b; 1951a; 1954a; Goodchild and Ward-Perkins, 1949; Haynes 1955; Hunt *et al.*, 1986; 1987; Jones and Barker, 1980; 1983; Mattingly, 1989; 1995; Mattingly and Zenati, 1984; Oates, 1953; 1954; Reynolds, 1955; Reynolds and Brogan, 1960; Reynolds and Simpson, 1967; Rebuffat, 1969, 1970; 1973a; 1973b; 1973c; 1975a; 1975b; 1977a; 1977b; 1985a; 1985b; 1989; 1995; Rebuffat *et al.*, 1967; Rebuffat *et al.*, 1970; Redde, 1988; Welsby, 1983; 1988; 1990; 1992).

2.3.1 Travellers accounts

The British naval officer and explorer Captain G.F. Lyon was the first who left recordings about Roman military structures in Tripolitania in 1818. He discovered the Roman fort at Bu Ngem on his way to Morzouk. In a brief documentation, he described the fort defences and copied some words of the Latin inscriptions, which were inscribed above the gateways (Lyon, 1821:66). Three years later, the Beechey brothers passed along the whole Libyan coastal route from Tripoli to Cyrenaica and they left an extensive report on their expedition, which contained descriptions of some Roman defensive structures in the Syrtic coastal zone (Beechey and Beechey, 1826). In addition, several Roman defensive structures ruins in the region between Mizda and Tabunia were noted by the German traveller H. Barth in 1851 (Barth, 1857:112-31). In 1861, the German traveller Rohlfs on his way to Kufra passed some defence structures in the Orfella district and he dated some of them to the early Islamic period (Rohlfs, 1881:112). Between 1901 and 1904, the French explorer, de Mathuisieulx, investigated a wide area of the internal plateau of Tripolitania. He visited some Roman military

structures such as Qasr Uames and identified them as Roman outposts on the road between Zintan and Mizda (de Mathuisieulx, 1906:73-102).

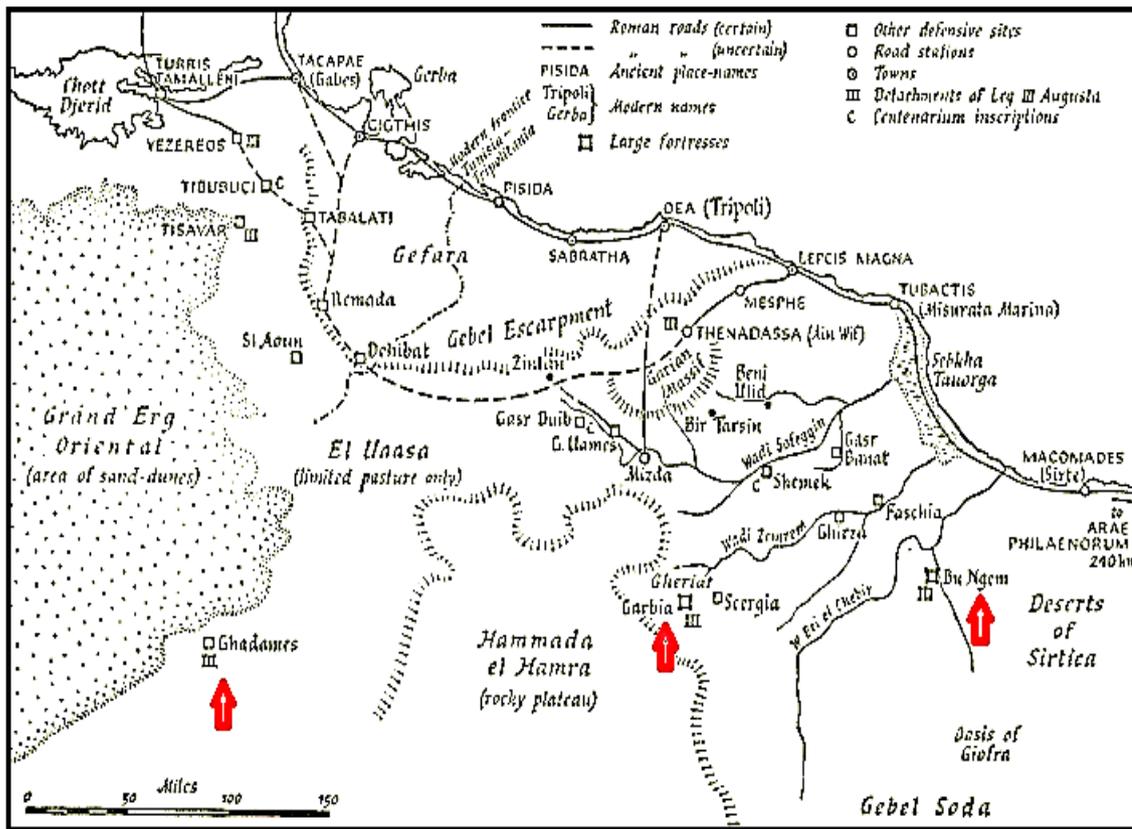


Figure 2.26: The location of the three forts: Bu Ngem, Gheria el Garbia and Ghadames. (Goodchild and Ward-Perkins, 1949: fig. 3).

2.3.2 Goodchild

The next significant study about Roman fortified structures in the southern frontier zone of Tripolitania was carried out by R.G. Goodchild and Ward Perkins between 1949 and 1956 (Goodchild, 1950a; 1950b; 1951a; 1954a; Goodchild and Ward-Perkins, 1949). These studies (which were based on field investigations and distinguished by air survey and photography by Goodchild for the first time in some areas) brought to light some important information about the chronology, types and functions of Roman fortified structures in different areas in Tripolitania. Furthermore, they demonstrated that the *limes* of Roman Tripolitania extended far south of the Gebel into the pre-desert in the third century AD. As depicted in figure 2.26, the frontier was defended by three main forts: Bu Ngem, Gheria el Garbia and Ghadames (Goodchild, 1954:57).

In addition, Goodchild and Ward-Perkins (1949) presented pioneer information and detailed descriptions of some important *qsur*, which were scattered widely in the region between the line of the three forts and the Gebel. They suggested that these buildings were designed by Roman military engineers and used by soldier farmers called *Limitanei*. They also dated these sites to the third century AD and later (Goodchild and Ward-Perkins, 1949:94-5). With further survey of 15 *qsur* around Tarhuna, Goodchild contended that these third-century structures were probably inhabited by Romanised Libyan families based on their inscriptions (Goodchild, 1951a:64). Additional investigations from the inscription found at Qasr Duib (40 km south of Zintan) prompted Goodchild's conclusion that the *Legio III Augusta* had been replaced by a new system to defend the borders after its disbandment in AD 238 (figure 2.27). He envisaged the creation of irregular units of the local population in the border regions, each under the command of an officer called a *centenarius* (Goodchild and Ward-Perkins, 1949:92). However, later study of the inscriptions and reinvestigation of Qasr Duib and Qasr Uames carried out by David Smith in 1967, suggested that the 'new' system of defence had already existed before the disbandment of the *Legio III Augusta* (Smith, 1971:309).

2.3.3 Additional studies

Detailed investigations of rural settlement were made by David Oates between 1941-1951 around Qasr ed-Dauun, the eastern Gebel of Tripolitania (Oates, 1953). The study shed some light on the agricultural nature of the settlements, their architectural character and productive features. The earliest sites were undefended farms, some of very large size with multiple presses for oil or wine production. On one hand, Oates assumed that the larger and more complex structures were probably built with large capital, surveyors and builders from the city, while the workers were locals. On the other hand, he claimed that the smaller and less regular farms were likely built and used by Libyans of Punic culture and language based on the basis of an inscription in a Neo-Punic script found in Ras el-Haddaagia. According to the pottery, Oates proved that the chronology of undefended farming sites can be dated back to as early as the first century AD (Oates, 1953:110). He also noted that on some sites, fortified structures (*qsur*) were erected at a

later date (Oates, 1954). His work in the Gebel Tarhuna has been supplemented in more recent times by Muftah Ahmed (Ahmed, 2010).

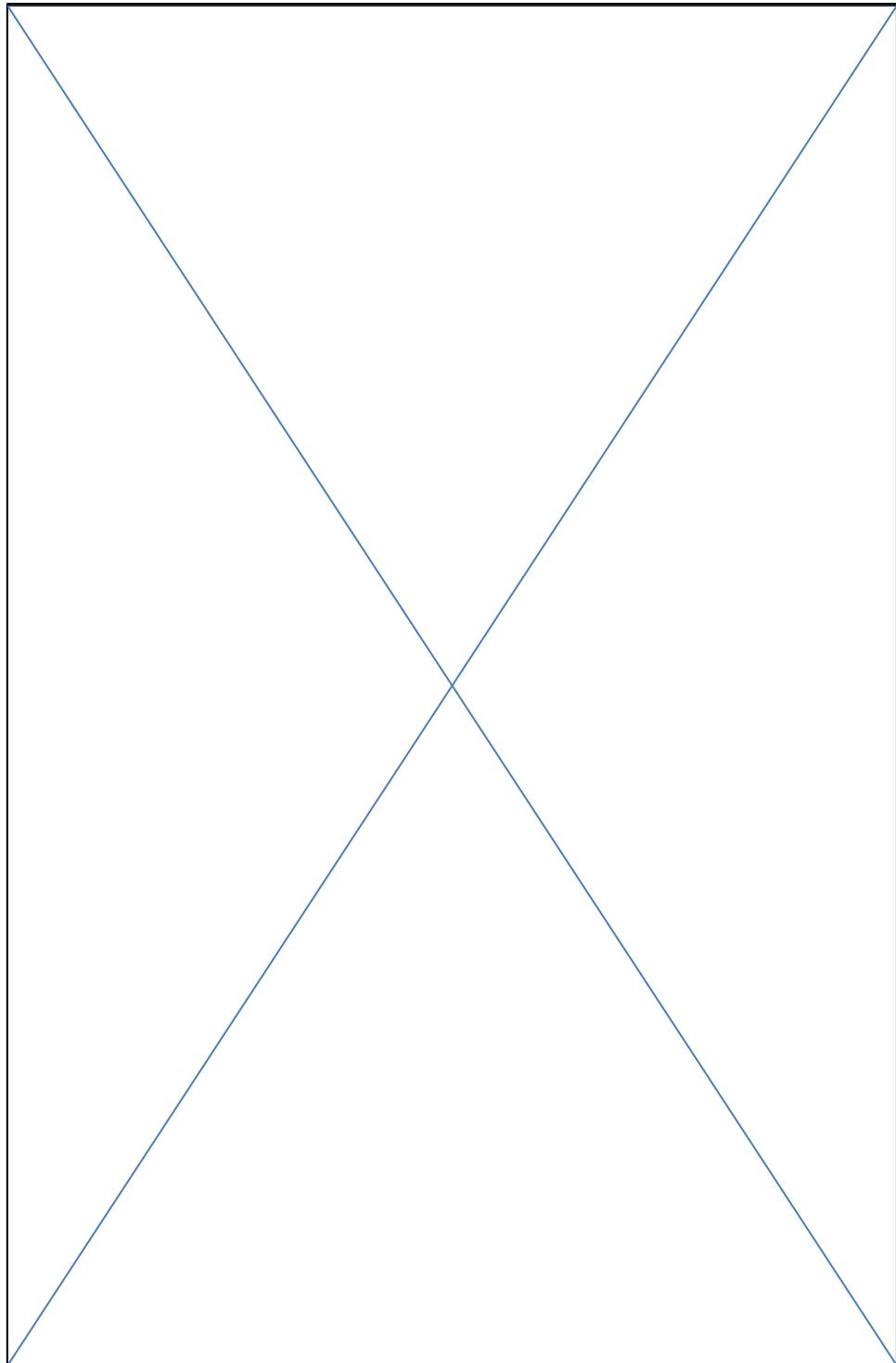


Figure 2.27: Qasr Duib: Measured plan (Goodchild and Ward-Perkins, 1949: fig. 17).

Some Latin inscriptions found in an archaeological site called el-Auenia (located some 14 km west of Yefren on the Gebel Nefusa) published between 1955 and 1967.

The inscriptions included some information about the existence of Roman military troops from the *Legio III Augusta* from the period of Septimius Severus (193-211) (Reynolds 1955; Reynolds and Brogan, 1960; Reynolds and Simpson, 1967). But no certain plan of a military structure has been identified here and the exact nature of the Roman base was not clear from the work carried out in 1950s and 1960s.

An archaeological and historical guide written by the British archaeologist and scholar D.E.L Haynes (1955) included important summary information regarding the Roman military sites and fortified farms in Tripolitania. Haynes (1955) claimed that Roman Tripolitania had an open frontier during the first two centuries of the empire. Therefore, following Goodchild's suggestion, he believed that Septimius Severus was the creator of the *Tripolitanian limes*. The *limes* consisted of three zones from south to north: the most southerly comprising three major forts (Bu Ngem, el-Gheria el-Garbia and Ghadames); Behind them to the north were a series of fortified farms which were used, according to Haynes, by Libyan soldier-farmers (*limitanei*); The northern line of the Tripolitanian *limes* was the road which connected *Tacape* (Gabes in Tunisia) with *Lepcis*. Furthermore, on the basis of archaeological and epigraphic evidence previously presented by Goodchild and Ward-Perkins (1949), Haynes (1955:139-40) argued that the *centenarii* played an equal role to legionary centurions, and that the role had been introduced, as a result of the *Legio III Augusta*'s disbandment. Forming a new defensive system, the *centenaria* were located either in uncultivable but strategic fringe areas, or were built within the *limitanei* zone if needed and occupied by *centenarii*.

An architectural description was presented by Haynes (1955:139-40) for the small fort at Mselleten (also known as Qasr Bularkan) (figure 2.28) and the two massive forts of Bu Ngem and el-Gheria el-Garbia. Some fortified farms were also described in detail. Qasr el-Banat in Wadi Nfed, Qasr el-Garia esc-Scerghia and Qasr el-Faschia in wadi Zemzem were presented as examples of the earliest fortified farms distinguished by the quality of their masonry. Haynes asserted that they were erected "as a result of the introduction of the *limitanei* system by Alexander Severus, and were perhaps constructed as prototypes by Roman military engineers" (Haynes, 1955:149). Having earlier considered Qasr Duib as a *centenarium*, Haynes identified it as a fortified farm due to architectural similarity. According to the inscription, it was built between AD 244 and 246 and counted as a good example of a perceived architectural decline in the

later fortified farms. However, examples of good masonry structures from wadi Sofeggin were enumerated to demonstrate that not all the later fortified farms were carelessly constructed (Haynes, 1955:151-2).

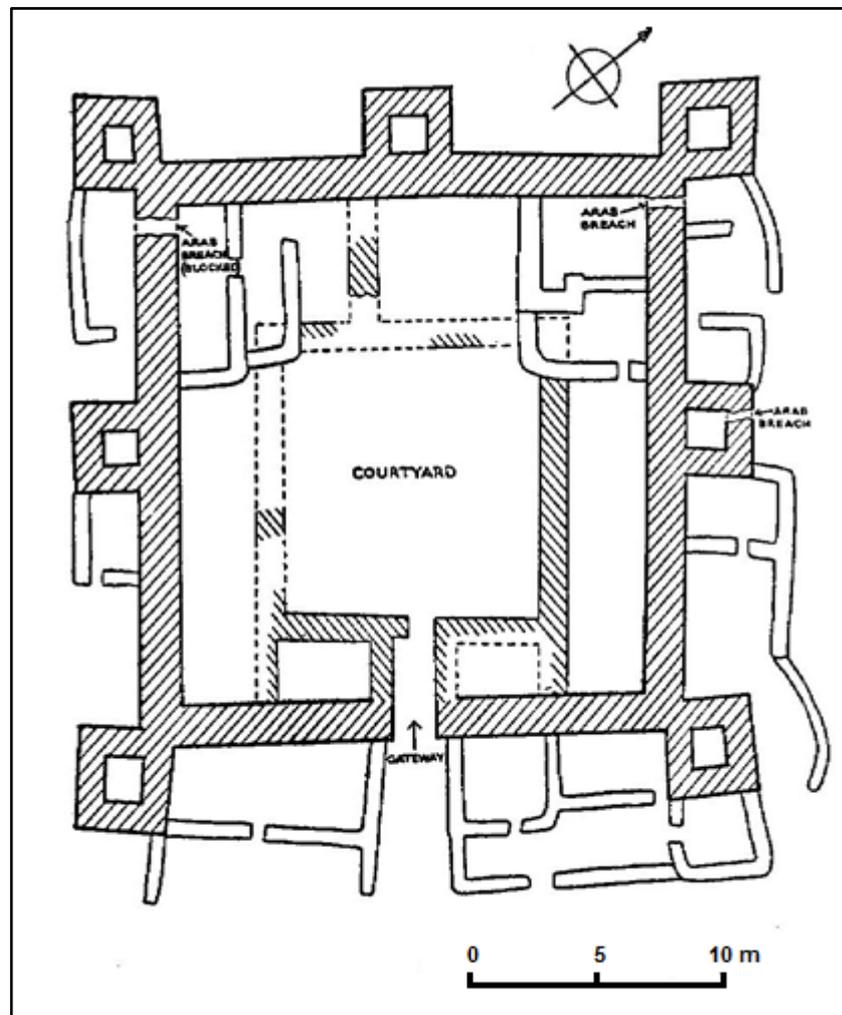


Figure 2.28: Qasr Bularkan: Measured plan (Goodchild, 1950b: fig. 4).

In their important study of the Libyan-Roman site of Ghirza (located 250 km south-east of Tripoli), Brogan and Smith (1984) presented an interesting argument regarding the fortified farms (*qsur*). Out of the total of 38 buildings in the site, six were categorised as *qsur*. These included the six buildings of class C (buildings 1, 26, 31, 33, 34 and 35) (Brogan and Smith, 1984:77). In a comparison to some fortified farms that had previously been studied by Goodchild in the Gebel and the pre-desert area in Tripolitania (Goodchild, 1950a; 1951a), Brogan and Smith (1984) contested that only the second type of the three chronological classes provided by Goodchild was

identifiable at Ghirza. They indicated that the time range of Goodchild's second type (the second half of the second century to the fourth century) was longer than he thought. They also disclosed that only Goodchild's type IV of the second class was represented at Ghirza. This was represented in building 35 (figure 2.29), which is much larger but very similar in plan and construction to Qasr E at Bir Shedewa in the middle of Wadi Sofeggin (Brogan and Smith, 1984:78). In general, they concluded that the fourth century is most likely the earliest date that *qsur* at Ghirza could be dated to (Brogan and Smith, 1984:80).

Also, Brogan (1964) analysed some of the remains of open farms and fortified structures in Wadi el-Amud some 60 km south-east of Mizda. She described a large *qasr* located on a top of a hill and mentioned a smaller one on the east side of the wadi. Evidence of agricultural and industrial activities was evident, such as huge cisterns and an olive press. Latin and Punic inscriptions including Libyan names indicated that these sites had likely been used by indigenous Libyans. According to the pottery, the early occupation of the site dated back to the first century AD (Brogan, 1964:47-56).

Further *qsur* were described by Brogan and Reynolds (1964) in the Tripolitanian hinterland (such as Qasr Zerzi, located some 27 km west of Bu Ngem). Relying on a Latin inscription, they identified the site as a small Roman outpost. From its foundation near the beginning of the third century AD, the site was occupied until AD 238, the year of the *Legio III Augusta* disbandment. Some observations about several small *qsur* known as the Qsur Beni Musa near the junction of the Wadi Beni Musa and the Wadi Tareglat were also presented (Brogan and Reynolds, 1964:43-7).

Brogan and Smith examined a number of Roman sites in Wadi Marsit, Sofeggin, Gifa and Saiad in the eastern pre-desert region of Tripolitania in 1967. Among the visited sites were three *qsur* including one located in Wadi Sofeggin, one in Wadi Gifa and one in Wadi Saiad. The first two sites were of the standard type of the courtyard *qasr* and were comprised more than one storey. Remains of associated settlement were noted including huts, water cisterns and olive presses. Pottery from the two sites ranged from the first to the seventh century AD. The third site at wadi Saiad contained projecting towers and rounded angles at the north-east and north-west corners. All the

pottery scattered in the site was late including a lamp of fourth century AD Tripolitanian Red Slip Ware (Brogan and Smith, 1967:139-44).

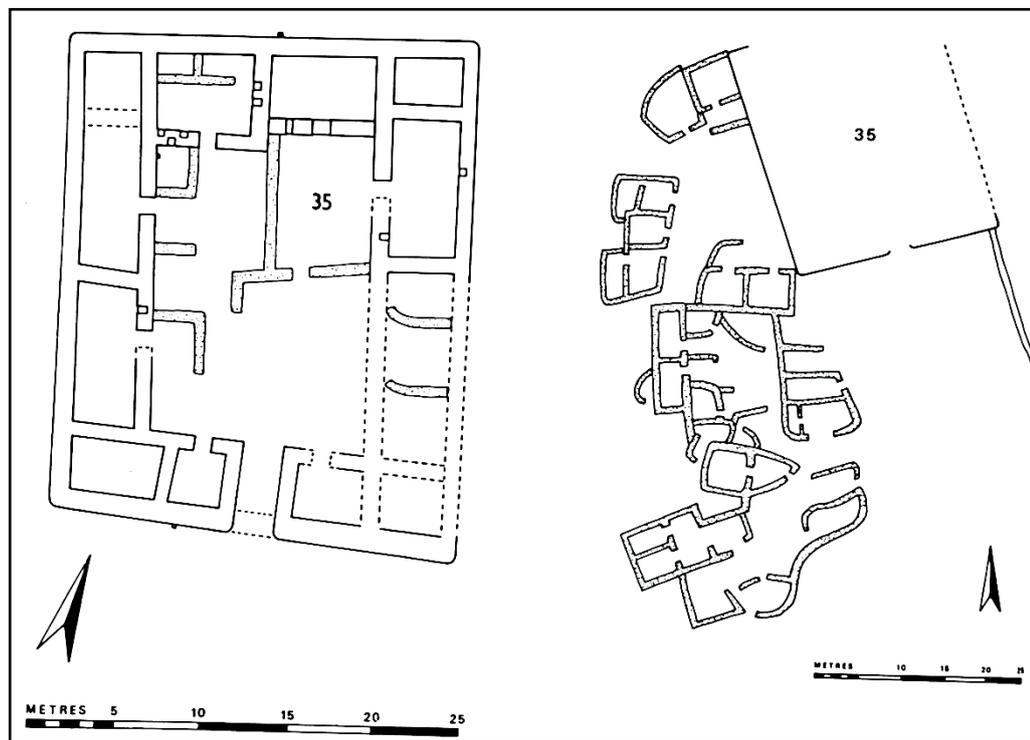


Figure 2.29: Ghirza: Building 35 and associated huts: Measured plan (Brogan and Smith, 1984: fig. 16).

Some military structures were described by Brogan in her article on Hadd Hajar, the first linear wall or *clausura* recorded in Libya about 20 km south of Asabaa (Brogan, 1980). These structures included two watchtowers located on two hills (Ras al Tays al Abyad and Ras al Tays al Alswad) and another smaller tower with a gateway built in a narrow valley called Ras al-Saqifah. Brogan suggested that this *clausura* and the associated fortified structures helped to “control the movement of flocks and herds into and out of fertile territory around the south of Asabaa” (Brogan, 1980:50). In terms of the dating, no specific period was suggested, but, on the basis of the pottery found in Medina al Ragda, a site located 7 km north of Ras al- Saqifah, Brogan tentatively suggested that these defensive structures were constructed as early as the first century AD (Brogan, 1980:51).

The Roman *limes* in the hinterland of Tripolitania was the subject of study carried out by Antonio Di Vita in 1964. The work emphasised historical information about the agricultural activities and architectural character of the region. Using archaeological

evidence, he proved that the early agricultural settlement in this area can be dated back to the first century AD. Furthermore, he claimed that local people of the area played an important role in the organisation of the *limes*, which was created by the emperor Septimius Severus and his successors (Di Vita, 1964).

One of the most remarkable archaeological excavations carried out on Roman military constructions in Tripolitania, is that conducted during the years between 1967 and 1980 at the Roman fort of Bu Ngem Golaia and the small associated settlement in the Wadi Bey-el-Kebir in the eastern hinterland of Tripolitania (e.g. Rebuffat, 1967; 1970a; 1970b; 1973a; 1973b; 1975a; 1975b; 1977; 1989). These excavations greatly increased our knowledge about the *limes* of Tripolitania in the third century AD. The abundant epigraphic evidence, found in various places in the fort and in some of the surrounding structures, presented new important information about the chronology of the Roman military existence and the date of architectural constructions at the site.

2.3.4 The UNESCO Libyan Valleys Survey (ULVS) Project

The UNESCO Libyan Valleys Survey (ULVS) 1979-1989 can be considered a landmark project in Libyan archaeology. The survey was sponsored by UNESCO and was carried out by two teams in two different areas. The first project, comprising an Anglo-Libyan team led by Graeme Barker, surveyed an area of 50,000 square km in the pre-desert area in the western part of Tripolitania (Barker, 1996a; Barker and Jones, 1980-81; 1982; 1984; Barker *et al.*, 1991; Hunt *et al.*, 1986; 1987; Jones and Barker, 1980; 1983; Mattingly, 1996; Mattingly and Zenati, 1984; Welsby, 1983; 1992). The second, Franco-Libyan team carried out some work in the western and central parts of the Gulf of Sirte (Redde, 1988). The overarching aim of the UNESCO project was “to investigate the long-term relationship between settlement, land-use and environment on the desert margins” (Barker, 1996b:1).

Romano-Libyan settlements received a great deal of attention on the project. More than 2000 sites from the late first to the mid seventh centuries AD were recorded. Among them hundreds of fortified structures were described and interpreted and small scale excavations were undertaken in two fortified farms/*qsur* in Wadi Umm el Kharab

(Welsby, 1992), plus one at Wadi Buzra and one at Wadi Mimoun (Barker *et al.*, 1991; 1996a).

A total of 263 fortified farms (*qsur*) was identified by the survey and categorised by the ULVS into six types according to their architectural design (Mattingly with Dore, 1996:129). An intensive work has been done in some of them, for instance, the architectural survey in eight *qsur* in Wadi Umm el Kharab (figure 2.30) and four in Wadi Buzra.

Apart from a few Latino-Punic inscriptions, no datable inscription was found in these *qsur*. Therefore, their chronology was established on the basis of other archaeological finds, particularly the pottery which suggested that they date from the fourth to the seventh century AD. Generally, the ULVS concluded that the construction of *qsur* in the surveyed area started in the third century and had largely replaced the open farms of earlier centuries by the fourth and fifth centuries AD. It argued that they declined gradually but: “some settlements continued in use in the northern wadis of Beni Ulid and Merdum to the Ottoman Period, in some cases to very recent times” (Barker with Gilbertson, 1996b:344).

On the basis of the high standard of construction and decoration of two of the Kharab *qsur*, Welsby suggested that they were probably built by professional contractors. Moreover, he implied, based on the similarity between the two buildings, they possibly were built by the same builders at the same scheme (Welsby, 1992:97). An interesting argument has also been made by Welsby in terms of the *qsur* function based on the limited excavations carried out in the Umm el Kharab. In addition to his suggestion that they were designed both for defensive purposes and as residences suited to the climate condition of that area, he presented an explanation to the function of the individual rooms in the *qsur* as a reflection of the social and economic situation of their owners. The rooms in upper storey(s) were for accommodation, whereas the ground floor rooms in *qsur* were for ordinary usage, mainly as storage rooms, particularly those lacking doorways. He also supposed that some rooms such as room 3 in Qasr KH41, on the ground floor in some *qsur* probably served as reception rooms (Welsby, 1992:97).

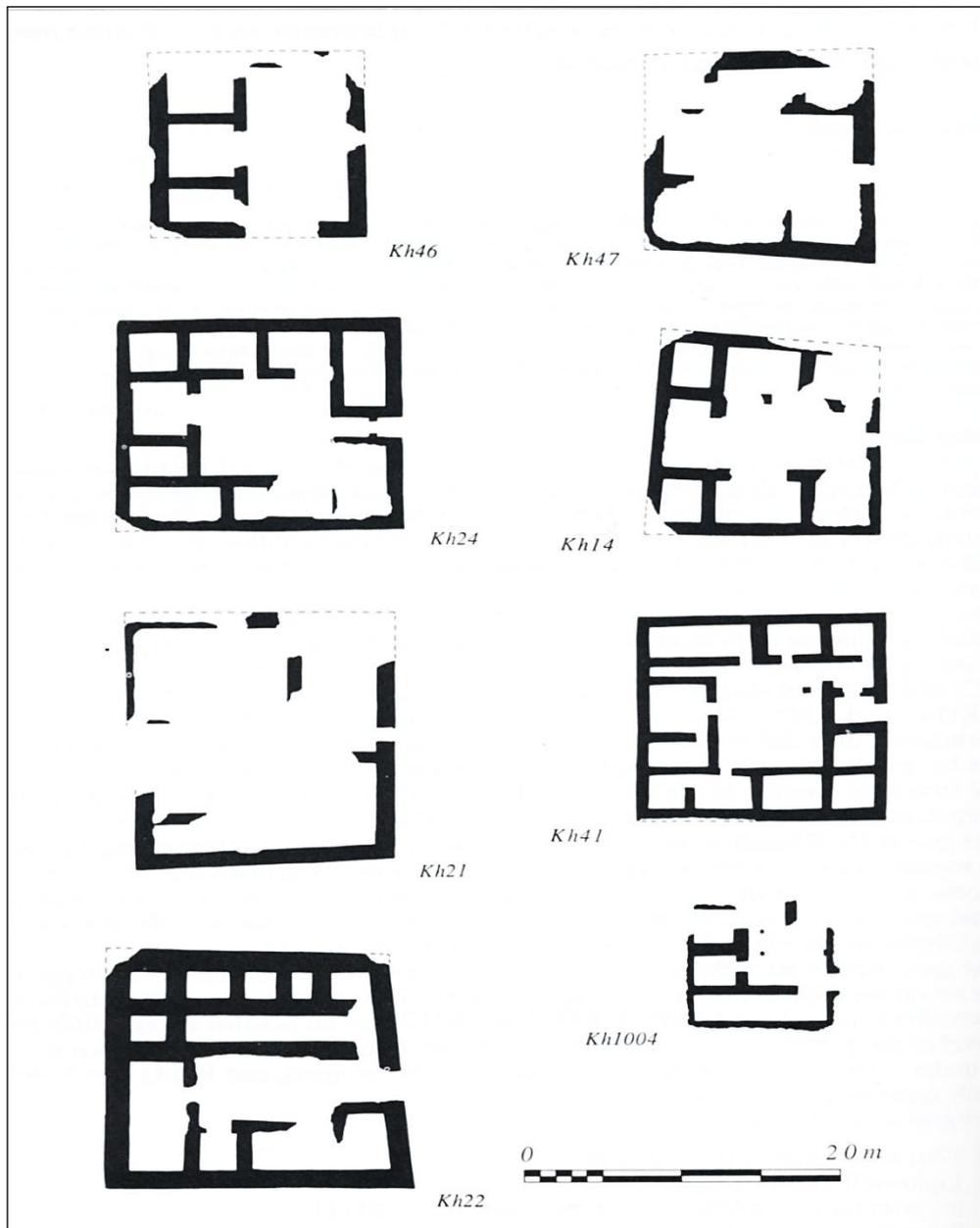


Figure 2.30: Qsur in Wadi Umm- el-Kharab: Measured plans (Welsby, 1992: fig. 1).

In terms of certain Roman military sites in the survey area, new investigations were carried out in some of them and produced additional information. For instance, more architectural details of the fort at Gheriat el-Garbia (figure 2.31) have been described in the light of discoveries in 1981. In addition, its relationship with archaeological features in its immediate surroundings was clarified, resulting in a suggestion that the oases had several military activities preceding the establishment of the fort in c. AD 201 (Jones and Barker, 1983; Mattingly, 1995:78; Mattingly with Dore, 1996:114). Furthermore, the survey results suggested that role of Gheriat el-Garbia as a military base ended by

the end of the third century though, more recent work by Mackensen has shown this to be wrong and he claims a late Roman garrison was still stationed in the site c.AD 360-380 (Mackensen 2012:57) In general, the ULVS assumed that no more Roman military bases were constructed after the third century and claimed that some sites, such as Qasr Bularkan on Wadi Merdum, were “civil constructions imitating military forms” (Mattingly with Dore, 1996:116).

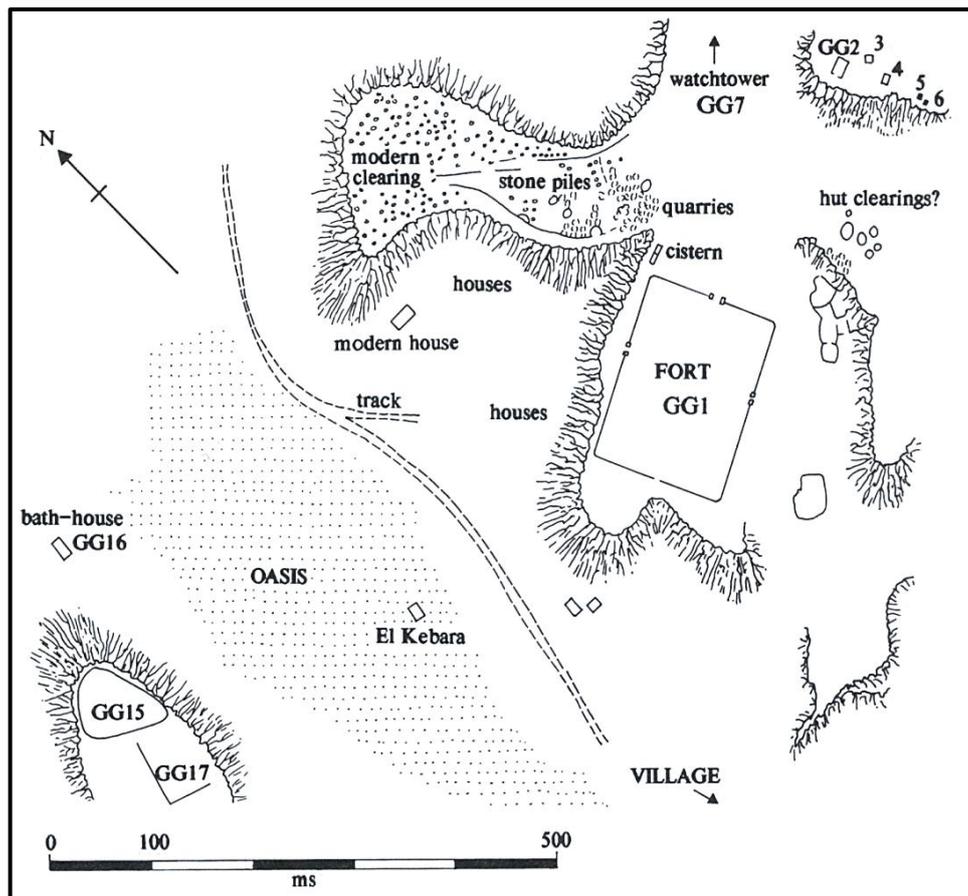


Figure 2.31: The Roman fort and associated features at Gheriat el-Garbia (Mattingly with Dore 1996: fig . 5.3)

2.3.5 Mattingly PhD thesis

The PhD thesis of David Mattingly, completed in 1984 was subsequently revised and published as a book, titled *Tripolitania*, in 1995. It can still be considered one of the most important archaeological studies of the region. The Roman frontier zone in

Tripolitania was a main focus of the book, making it of very high interest for my own research.

In contrast with the Numidian and Mauritanian *limes*, Mattingly argued that only Tripolitania had an unbroken desert frontier zone. Also, he argued that the regional geography and tribal society influenced the form of the frontier deployment in Tripolitania (Mattingly, 1995:68-9). Moreover, the study pointed out that the early frontiers in Roman Africa were not in a linear form, as some earlier studies had suggested, but they were located to control the main routes and water resources (Mattingly, 1995:77).

Regarding the chronology, he claimed that the African frontiers had been garrisoned in the pre-Severan period. Examples of pre-Severan forts include the site of Remada (*Tillibari*) in southern Tunisia, which some researchers argued was built originally in the Hadrianic period. Mattingly also suggested the existence of early military posts at Mizda and Zintan in Libya due to their strategic locations, though supporting structural evidence is lacking. Two phases of military occupation were recognised in Ain Wif where pottery and an inscription dated the earlier one to the second century. Further epigraphic evidence strongly suggested that the fortlet at Ksar Rhilane (*Tisavar*) in western Tripolitania was built between AD 184-91 (Mattingly, 1995:77-83). Additional archaeological and historical evidence were presented to conclude that Septimius Severus was the re-organiser of the Tripolitanian frontier, but not its creator.

Numerous epigraphic finds and archaeological data demonstrated that Septimius Severus developed the frontier to meet the need to control the main routes and to supervise the desert tribes. For these reasons, he extended the deployment to the south where new military structures were built. For instance, the fortlet at Si Aioun south of Remada, which was built in AD 198 and the fort at Bu Ngem which its construction start in AD 201, probably in the same year when the larger fort at Gheriat el-Garbia was erected.

The nature of the command structure in Tripolitania, provided in Mattingly's book. Among them is the idea that regional command centres with their associated outposts commanded by *praepositi* had existed from the beginning of the third century AD (Mattingly, 1995:84).

In terms of the typology of military constructions, Mattingly classified them into four categories according to their sizes: fort (> 0.8 ha) (Table 1) fortlet (0.11-0.05 ha) (Table 2), outpost (< 0.10) (Table 3) and tower under 10x10 m. Starting with forts, brief architectural descriptions and a summary of the previous notices and studies were presented in a chronological order for the main military structures in Tripolitania. Some results of the ULVS such as the important discoveries in Gheriat el-Garbia were reviewed. Regarding road stations and fortlets, Mattingly mentions that the earliest definite ones were those of *Bezereos* and *Tisavar* in southern Tunisia which securely dated back to Commodan times (AD 180-92) and this kind of post continued in construction into the fourth century (Mattingly, 1995:98). Among the examples provided is Ain Wif I (*Thenadasa*) where a fortlet of two phases was recognised. Further fortlets and post stations were briefly described and dated, such as Bir Rhezene (*Bezereos*), Hr Mgarine (*Agarlabas?*), Ksar Rhilane (*Tisavar*), Qasr el-Haddadia (*Tugulus*) Medina Doga (*Mesphe*) and Ain-Auenia.

Area (across ramparts)	Name	Unit	Garrison size (max.)	Occupation
2.48 ha/6.20 acres	Gheriat el-Garbia	1) <i>vex leg. III Aug.</i> 2) <i>Detachment of coh I Syrorum (?)</i>	800-1000?	201-238 post-238
Unknown	Zintan (<i>Thenteos</i>)	1) <i>Coh I Syrorum</i>	480/800?	3rd C (possibly earlier also)
1.95 ha/4.87 acres	Remada (<i>Tillibari</i>)	1) <i>Coh II Flavia Afrorum</i>	600?	2nd-5th (?)
1.28 ha/3.21 acres	Bu Njem (<i>Gholaia</i>)	1) <i>vex leg. III Aug</i> 2) <i>vex leg III + numerus conlatus</i> 3) <i>vexillatio Golensis/numerus</i>	c. 480 c. 500? c. 500?	201-? 236-238 (perhaps earlier) 238-263
0.86 ha/2.16 acres	Ras el-Ain (<i>Talalati</i>)	<i>Cohors VIII Fida</i>	300-400?	post-263
Unknown	<i>Secedi</i> (modern location unknown)	<i>Cohors VIII Fida</i>	300-400?	pre-263
Unknown	Mizda	<i>Unknown</i>	?	?
Unknown (possibly not a full size fort?)	Ghadames (<i>Cidamus</i>)	<i>vex leg. III Aug</i>	?	201-238?

Table 1: Principal forts in Tripolitania (Mattingly, 1995: Table 5:1).

There is also a brief description of certain outposts and military *qsur* such as Gheriat esh-Shergia and Qasr Isawi (Banat). Sites less than 10x10 m were categorised as towers

built for military purposes including the circular tower or *burgus* at Gheriat el-Garbia and the towers associated with the *clausurae*. Late Roman fortifications in Tripolitania, as Mattingly pointed out, tended to be very small in size and they were characterised with projecting corner towers (Mattingly, 1995:193). The examples presented show that Henchir el-Hadjar fortlet was surrounded by ditches. The fourth-century site of Qasr Bularkan (Mselletin) is evidence that some regular troops continued to be used in eastern Tripolitania at that time (Mattingly, 1995:194).

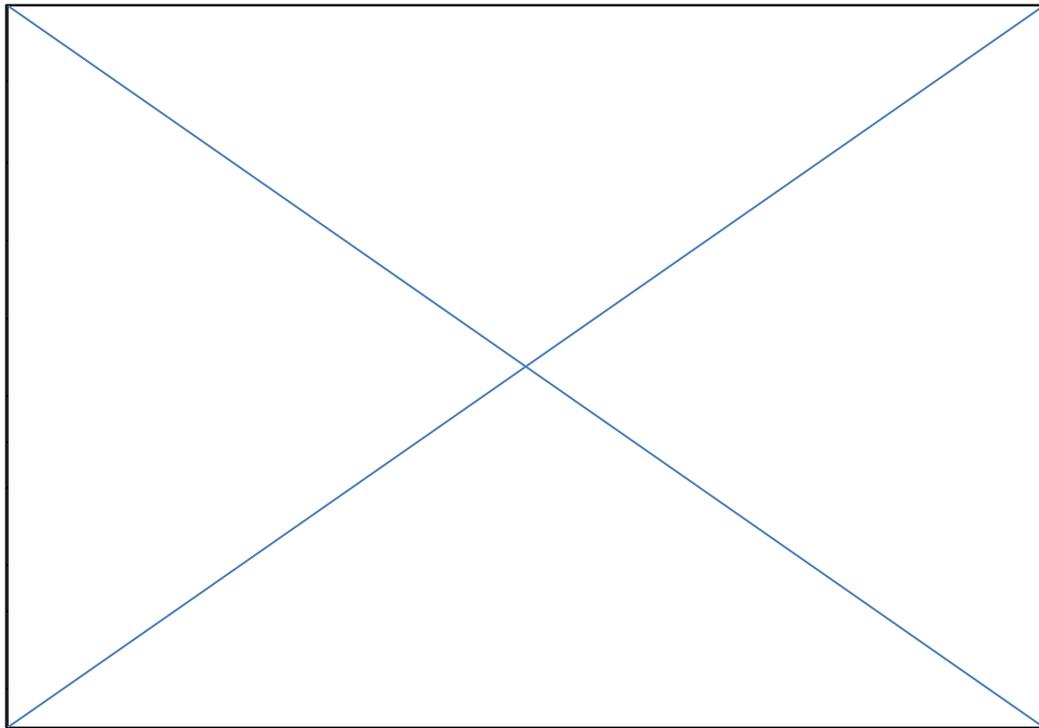


Table 2: Roman fortlets in Tripolitania (Mattingly 1995: Table 5:2)

An interesting argument about the fortified farms was presented. As seen above, Goodchild and Ward-Perkins claimed that the fortified farms in the Libyan pre-desert and the Gebel had been designed by Roman military engineers and used by soldier farmers or *limitanei*. In addition, they assumed that these sites can be dated to the third century AD (Goodchild and Ward-Perkins, 1949). However, on the basis of the ULVS work, the military classification of the fortified farms *qsur* has been greatly discredited. Furthermore, archaeological evidence proved that many of the fortified farms *qsur* were constructed “for reasons of prestige and defence by a civilian population who had, in many cases, been in the zone for a hundred years or more before the Severan frontier was erected” (Mattingly, 1995:195). It was also confirmed that the majority of the *qsur*

in Tripolitania related to civilian agricultural communities. Additionally, the epigraphic and architectural evidence from Bir ed-Dreder and Scedua sites disproved Goodchild's interpretation regarding the nature of these two nearby settlements. He believed, on the basis of the uniformity in architectural characteristics in the Bir Scedua *qsur*, that they were settlement of frontier militia and soldier farmers and the Bir ed-Dreder inscription related to a separate Libyan irregular unit. Nevertheless, Mattingly has presented a logical interpretation demonstrating that the population in the two sites were linked to a single Libyan group, who helped, according to some treaty with the Roman government, in the protection of the frontier (Mattingly, 1995:197).

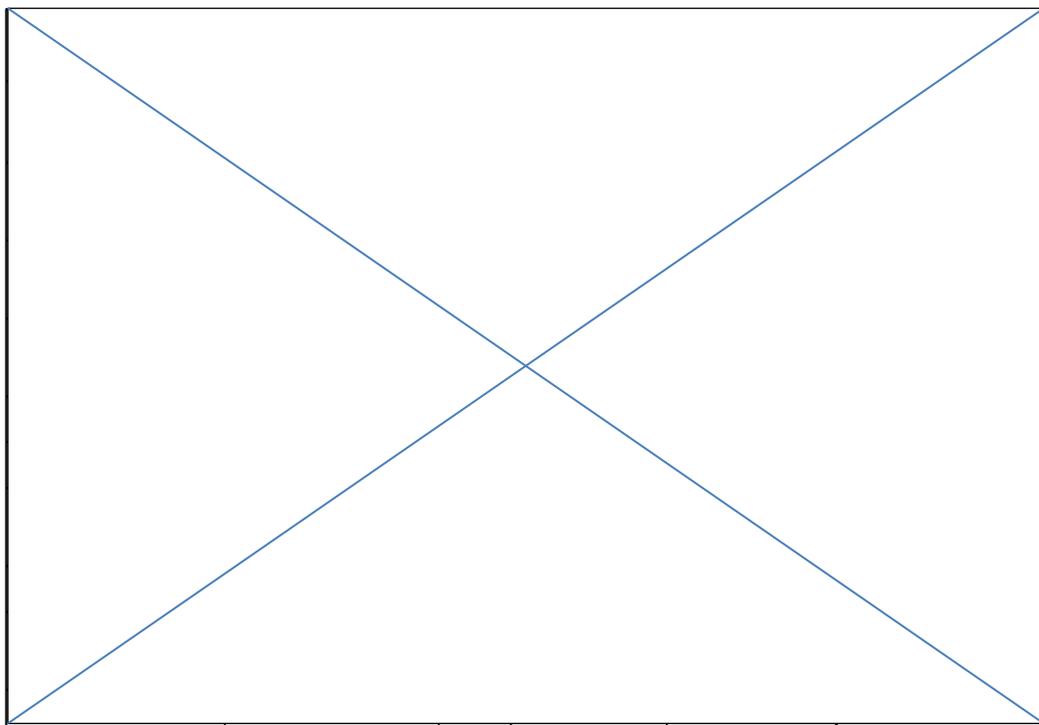


Table 3: Roman outposts in Tripolitania (Mattingly, 1995: Table 5:3)

With regard to Western Tripolitania, Mattingly reinterpreted some sites in the Tebaga corridor in Tunisia which previously had been considered by some French antiquarians as military constructions. Their large size and proximity to each other made them inconvenient to be a chain of signalling towers. Moreover, they are too large to have served simply as observation posts in a flat corridor like Tebaga. On the other hand, the location of these sites and the archaeological evidence make identifying them as fortified farms similar to those of the ULVS more reasonable (Mattingly, 1995:200).

On the basis of systematic investigation at some sites in Tripolitania, Mattingly claims that the earliest *qsur* were built from the end of the second century, but the majority dated to third century and later and their peak was the fourth century. Furthermore, he suggested that military outposts may have served as a pattern for some of the early civilian *qsur*. Increased insecurity in the Tripolitania hinterlands throughout the third, fourth and fifth centuries was one of the reasons in the defensive character of the *qsur*, as well as the prestige and social status of the landholders. The book summarised results from previous studies that proved how the fortified farms replaced the open farms and reflected the huge reduction in the farming activities during the fourth and fifth centuries in different areas of the region.

With regard to linear walls or *clausurae*, enough information was presented to form a general idea about them. This includes an explanation of the difference between the *clausurae* and *fossatum*, terms used for linear walls and earthworks in the frontier zones in Roman Africa. Briefly, the *clausurae* are shorter than a section of *fossatum*. The function of the *clausurae* was, as Mattingly explained (1995:112-13), to oblige people to pass controlled approaches and check points, especially in relation to pastoral transhumance movement. This explains why the discovered *clausurae* are located in areas of rapid transition between pastoral pre-desert and agricultural regions. Therefore, they played an important role in policing population movement in these zones. In terms of the dating of *clausurae*, Mattingly suggested that their origin probably lay in the second century AD and that they continued in use to the end of the Roman Africa (Mattingly, 1995:114-15). Some examples were given and described in brief, such as the Cherb *clausurae*, the Gebel Tebaga, the Skifa group and Hadd Hajar.

In the light of his interpretation of some Latino-Punic inscriptions found in the frontier zone of Tripolitania and discussion of some previous studies, Elmayer (1985) agreed with the view that the fortified farms *qsur* were private dwellings built and occupied by indigenous people. However, he argued that “they were militarily as well as economically important and maintained the security of the rich coastal area” (Elmayer, 1985:82). Reassessing older works in the light of reinvestigation and new discoveries regarding to the Roman frontier in Tripolitania, was the main aim of an article written by David Mattingly (Mattingly, 1989). A general view on the Roman armed campaigns in Tripolitania was given to explain why the frontier was dramatically

developed during and after the Severan period. By analysing military events and some literary and archaeological sources Mattingly rejected the view that the Tripolitanian frontier was open until the late second century. He presented robust arguments to demonstrate that some garrisons were posted at military sites which could be dated to the first and second centuries AD, such as Remada, El Hamma, Telmine, Ain Wif and Medina Ragda. Evidence of the considerable change in military deployment in the region in the second and beginning of the third century was briefly presented in the article, including an emphasis on the importance of the substantial forts at Bu Ngem and Gheriat (Mattingly, 1989).

2.4 Previous Studies of *qsur* in Fazzan

Fazzan is the region located in the south-west of Libya beyond the southern frontier of Roman Tripolitania (figure 2.32). This region was the home of the Libya's first indigenous civilisation that flourished between the first millennium BC and AD 700. The heartland of the Garamantes was located in the Wadi al-Ajal with its capital Garama (modern Jerma), which lies approximately 1000 km south of Tripoli. Between 500 BC and AD 500 they were the dominating power in the Libyan Saharan, controlling a vast area of 250,000 m² (Mattingly, 2000:160). They developed an independent complex society, lived in planned villages and towns and cultivated the oasis (Mattingly, 2007b:139-40). (For extended literatures about the Garamantes see Mattingly 2000; 2003; 2007a; 2007b; 2010; 2013). Interestingly a number of *qsur* are found in Fazzan to show that this phenomenon also existed beyond the Roman frontier in Libya.

As indicated by Mattingly (2003:146), earlier work by Lethielleux (1948:13-28) identified 50 *qsur* in Wadi al-Ajal which he categorised into three types: 1) variable large forts constructed along the main routes of Wadi al-Ajal; 2) small castles found either on the edge or in the centre of the ancient settlement, and 3) a group of small isolated dispersed *qsur* serving as watchtowers, refuge areas or blockhouses. Even as these structures were identified with greater extensity, there is no available record showing dating details. For example, as a result of the reported series of invasions and intrusions of Arab tribes between eleventh and sixteenth centuries, it was suggested that

Fazzan *qsur* were constructed from late Antiquity into early Islamic times and up to the medieval and early modern period (Despois, 1946:59-60 cited in Mattingly, 2003:147). But to Mattingly (2003:147), the earliest occurrence of *qsur* is likely belong to the third century AD.



Figure 2.32: Map of Fazzan: Principal areas of oases settlements (Mattingly, 2013: fig. 1.2).

As discussed below, Accelerator Mass Spectrometry (AMS) dating has confirmed that a number if not all of the *qsur* in Wadi al-Ajal originate during the Garamantian period (see Sterry and Mattingly, 2013). To support this assertion, an example was drawn from the study of surface pottery from Qasr al-Fjayj and Qasr ash-Sharraba, which has loopholes in its outer wall. The Garamantian period was also confirmed on most of the rest of the sites. Two sites, labelled by Mattingly (2003:149) as LEK 18 and TEK 10, are *qsur* within settlements with mosque – with the former dated fifteenth to eighteenth centuries and the latter to the post-Garamantian period (AD 860-1020).

In terms of the layout of *qsur*, the following classification was made by Mattingly (2003:151-52):

1-Rectangular forts (>1000 m²) with projecting angle towers: Of these, the well-preserved site of Qasr Sidi Dawud (LEK 17) (figure 2.33) was built of mudbrick with towers still surviving to 10 m high. It was once thought most likely of medieval date, but now is likely to be seen as Garamantian.



Figure 2.33: Qasr Sidi Dawud (LEK 17) Looking north-west (Fazzan Project Archive 2014).

2- Irregular forts (>1000 m²): An example of these is the fort of Aghram Nadarif which is located close to the southern approach to the oasis of Ghat. The fort built in stone and measuring 140 by 55m and formed one of the Garamantian outposts in the vicinity of the Akakus.



Figure 2.34: Qasr Budrinna (GB2) (Fazzan Project Archive 2014).

3- Medium rectangular enceintes (500-1000m²) with single projecting tower:

This type was evident in Qasr bin Dughba area where a number of fortified buildings share the similar plan with thick walls (c.2m) and projecting single tower. Though perhaps it could be considered a *terminus post quem*, the late Garamantian period has been proved by AMS dating from Qasr Budrinna (GB2) (figure 2.34).

4- Plain rectangular enceinte: Several sites were defended by a rectangular enclosure that had no projecting towers.

5- Small rectangular enceintes (<1000 m²) with projecting towers: This type that comprising a square or rectangular structure with projecting towers only at the corners was the commonest form of *qsur* in Fazzan. Qasr Larku (LAR 1) (figures 2.35 and 2.36) is one of the best examples of this type. The surface pottery and the stonework masonry used in this type of *qsur* strongly suggest a Garamantian date. Also, other examples built in mudbrick were also of Garamantian date as proved by AMS dating and surface pottery. Also, as confirmed by AMS dating one of the Sharraba *qsur* continued in use from its construction in the late Garamantian period to the twelfth century.



Figure 2.35: Qasr Larku (LAR 1) (Fazzan Project Archive 2014).

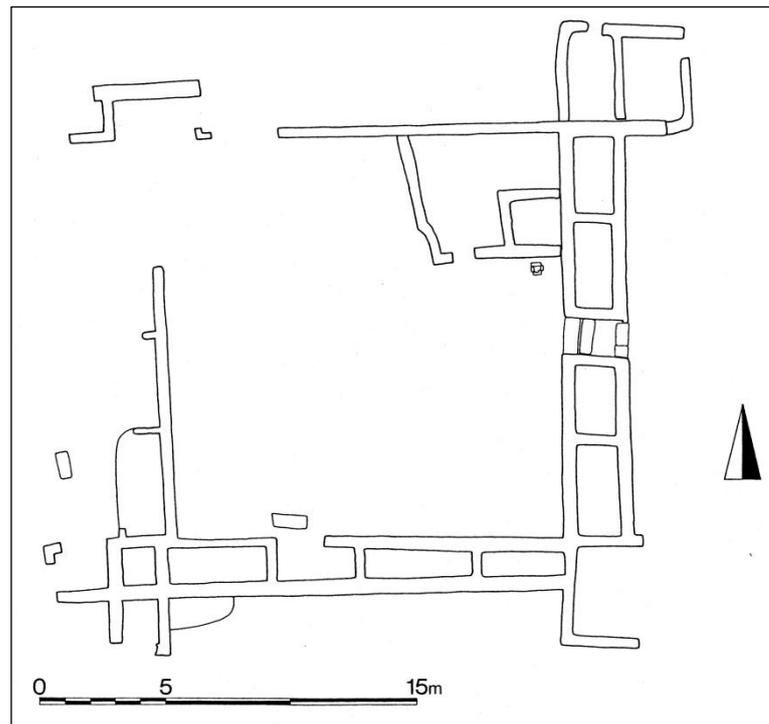


Figure 2.36: Qasr Larku (LAR 1): Measured plan (Fazzan Project Archive 2014).

6- Small tower-like fortified structures: This type is represented in a square fortified structure measuring c.15-20 m on each side of two or three storeys, built of yellow mudbrick and located in rural settlements. Internally, this type of *qsur* consisted of rooms often arranged around a central courtyard or light-well very similar to those recorded in Tripolitania and Cyrenaica. As suggested by Roman-period pottery and confirmed by AMS dating, some examples such as Qasr Mara (MAR 1) (figure 2.37) were certainly of Garamantian date. However, more recent dates are suggested for some sites: LEK 18 has been dated to the fifteenth-sixteenth century on the basis of an AMS date. Some of the *qsur* were located within larger settlement and villages contained defensive structures built of stones. Evidence from well-preserved field systems and irrigation works indicates the primary roles of these fortified settlements were overseeing for agriculture. The largest fortified rural sites, probably mainly medieval in date, are fortified villages found behind enceintes constructed since Late Antiquity. Garamantian settlements were densely distributed in the landscape, but scholars including Mattingly *et al.* (2012:117-31) are yet to document their detailed site morphology.

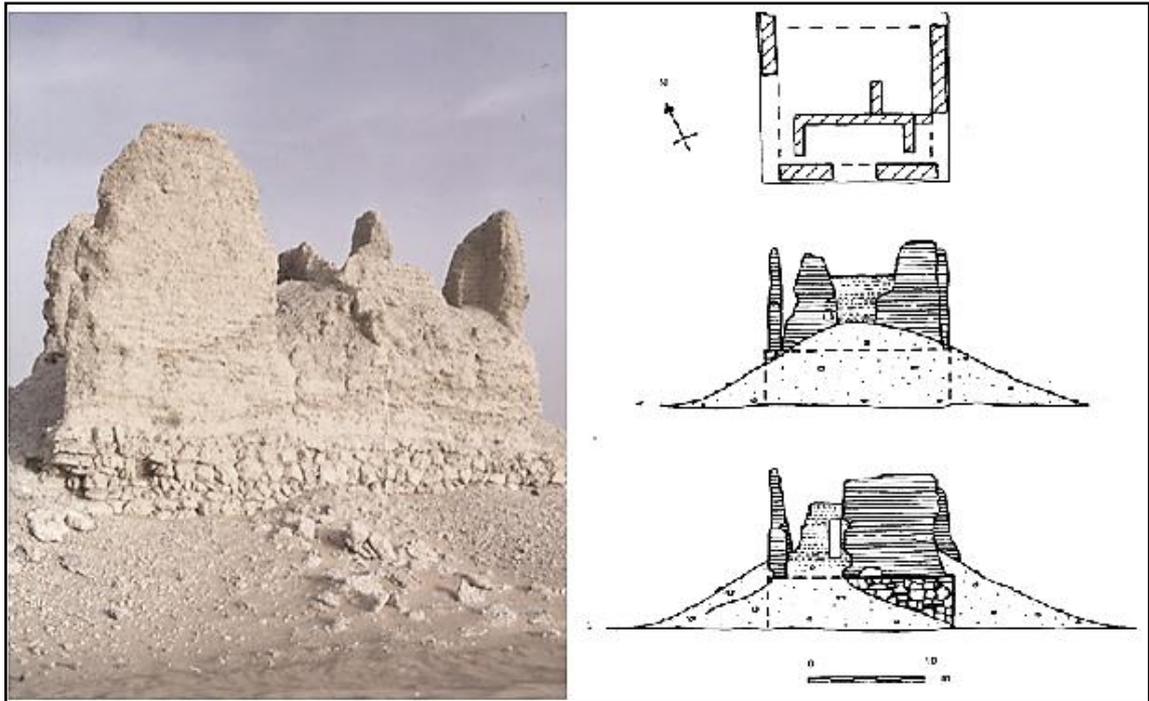


Figure 2.37: Qasr Mara (MAR 1) general view and measured plans (FP. Archive).

Fortified farms and defended villages of Late Roman and Late Antique North Africa discussed by Mattingly *et al.* (2013). The *qsur* in Fazzan were included in the article and received some attention. Some 250 *qsur* were recorded in the Wadi al-Ajal and Murzuq/Hufra basin. The vast majority of these *qsur* were rectangular fortified sites with projecting towers in the manner that commonly existed in many frontier areas of the Roman Empire and that is considered a distinctive class of the Late Roman fortifications. With regard to the existence of this type of *qsur* in Fazzan, Mattingly argued that, “the Garamantian state initially adopted an architectural style from the Roman empire for its own garrison installations overseeing the constituent oases of the kingdom. However, the numbers and density of such sites go far beyond the requirements of a security conscious state and they have a broad date range from c. AD 350-540”.

Generally this type of *qsur* was categorised into three sub-types in Fazzan:

1-Tower like *qasr* with projecting towers at angles, gates and along sides: Apart from the existence of the projecting towers the general layout and size of this type is very similar to type 6 provided above.

2- *Qasr* with external towers as focal points in larger unfortified settlements: This type is represented by one or more *qsur* located in the centre of a larger, but unenclosed settlement.

3- *Qasr* as focal point within larger enceintes with projecting towers: Some of the Garamantian *qsur* formed a part of larger defended settlement whose outer enclosure also containing projecting towers.

Sterry and Mattingly's (2013) paper titled, 'Further AMS Dates for Historic Settlements from Fazzan, South-West Libya, under the Desert Migrations Project XVII' is the most recent and accurate work that has established the chronology of fortified structures in Fazzan. This was made possible by the use of AMS radiocarbon dating technology to analyse the chronology of the settlements. A total of 30 samples was analysed and 25 of the samples have provided significant added information about the previously known pattern of Fazzan settlements. For example, previous works by Mattingly (2007a: 190-91) has indicated that the *qsur* in Wadi al-Ajal was a Classic Garamantian site on the basis of imported pottery, but the AMS radiocarbon dating has refined this assertion towards cal AD 264 - Classic-Late Garamantian (Sterry and Mattingly, 2013:130). Two sites, FJJ056 and GRE015, thought to be Garamantian and Islamic in date each with fortified structures had projecting towers at the corners, a larger structure casement built against the outer walls, and a small musket loops all pointing to an early modern date. But, Sterry and Mattingly (2013) now conclude, based on AMS radiocarbon dating that *qsur* were constructed predominantly in the Garamantian period, even if some later Islamic constructions were also identified.

As already documented in section 2.3.4, these sites are of comparable date to the *qsur* studied by ULVS in Tripolitania, the majority of which had been constructed by the late fourth and early fifth century. The exceptions are "those *qsur* with regular mudbrick walls and square/rectangular plan and with external corner and central towers on the outer wall" which are most likely of Garamantian origin (Sterry and Mattingly, 2013:134-35). The pieces of materials found from the Garamantian period were believed to have been re-used during later periods. Sterry and Mattingly (2013) further identified a number of other Garamantian settlement sites located less than 1 km apart throughout the linear oasis and the size is of village scale. These authors have proposed

Garamantian as an 'urban' society based on the findings from their excavation in the Wadi al-Ajal. These sites demonstrate that Fazzan as a whole must have been highly developed during the Garamantian period, with most of the population living in small urban – or village – scale settlement of sophisticated layout occupying an area suitable for oasis cultivation, with fortified sites as guards or overseers to these fertile zones.

Chapter 3: Wadi al-Kuf Archaeological Survey (KAS)

3.1 Introduction

My PhD research included an archaeological, topographical and landscape survey of fortified structures in the Wadi al-Kuf region in Cyrenaica. The main aims were to investigate the purpose of the fortified structures, their distribution, typology, chronology and relationship with farming activities and nearby rural settlements. By researching the background material, visiting as many sites as possible, mapping the landscape and analysing the collected archaeological data, I hoped to advance understanding of how the fortified structures developed through time, when they started and how they ended. The architectural features of the fortified buildings in the coastal zone, mountain tops, wadis and pre-desert have also been investigated to determine whether environmental or local patterns influenced the manner and material of their construction. My study also aimed to examine the relationship between the agricultural settlements, the fortified farm buildings and probable military fortifications within the study area.

Because of the diversity in the materials, landscapes and histories of the regions involved in this study, the methodology combines diverse lines of enquiry (section 3.4) ranging from background mapping, site selection, survey (extensive and intensive) to GIS techniques. The basic material evidence investigated at all selected sites constitutes various objects — e.g. broader material culture categories such as pottery sherds, architectural features, and any other datable remains — that might explain the historical development of these fortified structures from Roman period.

This chapter is organised as follows: the next section (3.2) covers the strategy used in the selection and demarcation of sites for the study; Section 3.3 explains the processes involved in the execution of this research including: background research and mapping, surface survey (extensive and intensive), satellite images and GPS, recoding and collection of data techniques. The methods of analysing architectural features, potsherds

and other small finds are contained in section 3.4. Before the conclusion of this chapter, section 3.5 is a brief reflection on the research and fieldwork.

3.2 Site Definition and Characterisation

The selected study area is located in north-eastern Libya on the Gebel Akhdar (the Green Mountain) in Cyrenaica (figure 3.1). The Wadi al-Kuf region is one of the richest areas for surviving archaeological sites, as well as one of the most spectacular and beautiful for its challenging interconnecting valleys and vegetation in Cyrenaica. This area is also part of my tribal home and an area where I have conducted some fieldwork prior to this research in 1996 as part of an uncompleted proposal for master degree in University of Benghazi.

Although the Wadi al-Al-Kuf is the main focus of this study, the survey area was deliberately extended south-east to the village of Slonta and south-west to Marawa. The inclusion of Slonta and Marawa means that the study area also includes the reverse watershed, falling from north to south into the lower, drier and more challenging pre-desert zone of the southern foothills of the Gebel. The north-west limit included the important settlement of Gamaa and the nearby port of Maatan el-Oqla (perhaps Roman *Caenopolis*) to the west of the Wadi al-Kuf. The north-east limit was taken to be the town and port of Zaviet el-Hamama (ancient *Phycus*). The area so-defined combines not only the rugged terrain of the Wadi al-Kuf system and its outlet to the sea, but also the staircase topography of the Gebel Akhdar rising from sea level in steps to a height of 830 m above sea level. Therefore, the total area of my survey covers selected regions of about 1350 km².

Scholars such as Bintliff *et al.* (1999), Gillings and Sbonias (1999) and Pettigrew (2001) have argued that Mediterranean landscape survey benefits from a long history of well-developed and well-tested methods for site discovery; however, there is room for more findings and the already existing findings can be reconstructed using various archaeological survey data. The assumptions of these scholars accurately describe Wadi al-Kuf. This study region was known to encompass diverse architectural and topographical data, and, as presented in Chapter 2, there were different kinds of ancient

fortified structures, probably of both military and civilian nature, such as forts, fortlets, outposts, towers and fortified farms (*qsur*). Distinguishing between military and civilian sites is currently difficult and this was one of the reasons why I decided that my study area needed to cover different geographical locations and topographical regions. However, due to the limited period of research for the PhD and, more importantly, the eruption of Libyan crisis in 2011, it was not possible to survey the entirety of the zone in detail. Within the broad study zone, I thus selected case study areas that contained a representative sample of the numerous fortified structures of different sizes and architectural character distributed across a series of different topographical levels. This was in line with Kitchin and Tate's (2000) observation that a case study should enable the collection of evidence that achieved the research objectives as unambiguously as possible. Therefore, as shown in figures 3.1 and 3.3, the survey covered three different topographical regions: a) the coastal plain, b) the three escarpments of the Gebel, and c) the pre-desert zone.

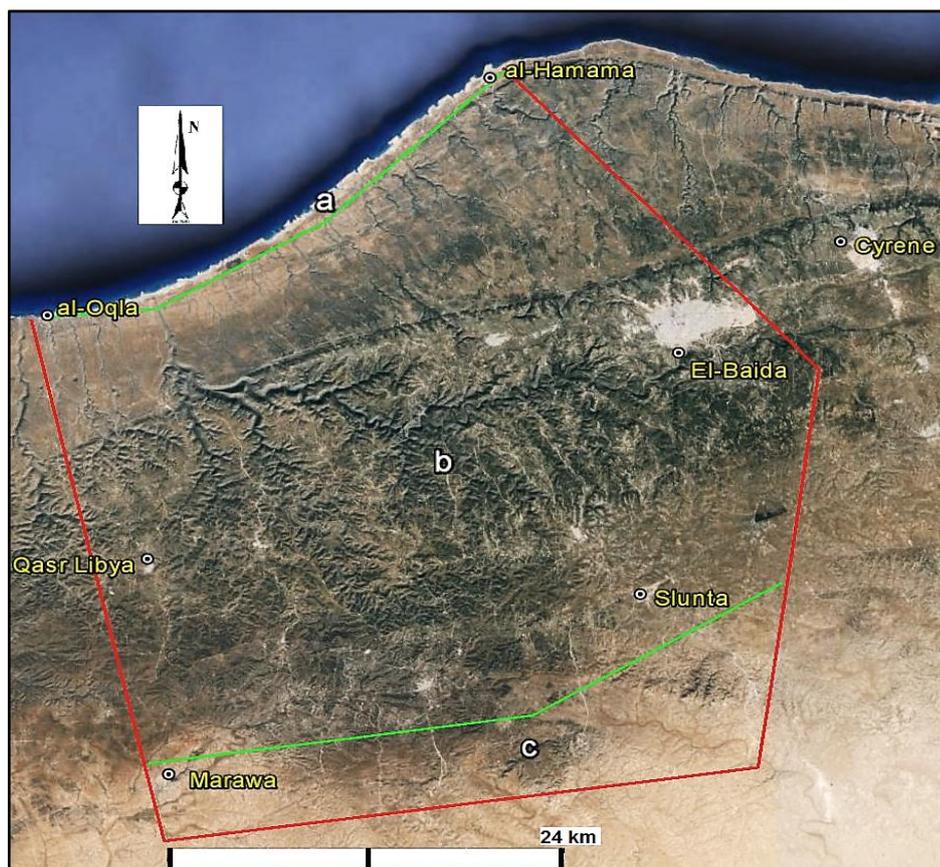


Figure 3.1: Location of survey region (Google Earth 2014).

In the coastal plain (zone a), the survey covered the area located between Zaviet el-Hamama (ancient *Phycus*) from the east and Maatan el-Oqla (perhaps *Caenopolis*) to the west. This area is approximately 35 km from east to west, and about 1 km from north to south direction. Eight sites have been recorded in this demarcated area; where some are located on low hilltops close to the sea, while the rest are built on level ground. The vast majority of the recorded sites (45 in total) are located on the escarpments of Gebel (zone b), particularly on the second escarpment (41 sites) and they were densely scattered in and adjacent to fertile lands and wadis. In the pre-desert area (zone c), only two sites were identified. However, further fortified sites located in the pre-desert existed to the east and west beyond the survey region, but were located only by using Google Earth. In total, I recorded 55 sites and, as shown in Table 4, about 76% of these were only known to locals and have never been recorded in the past by archaeologists although a few were marked in the Tabula Imperii Romani (TIR) (figure 3.2).

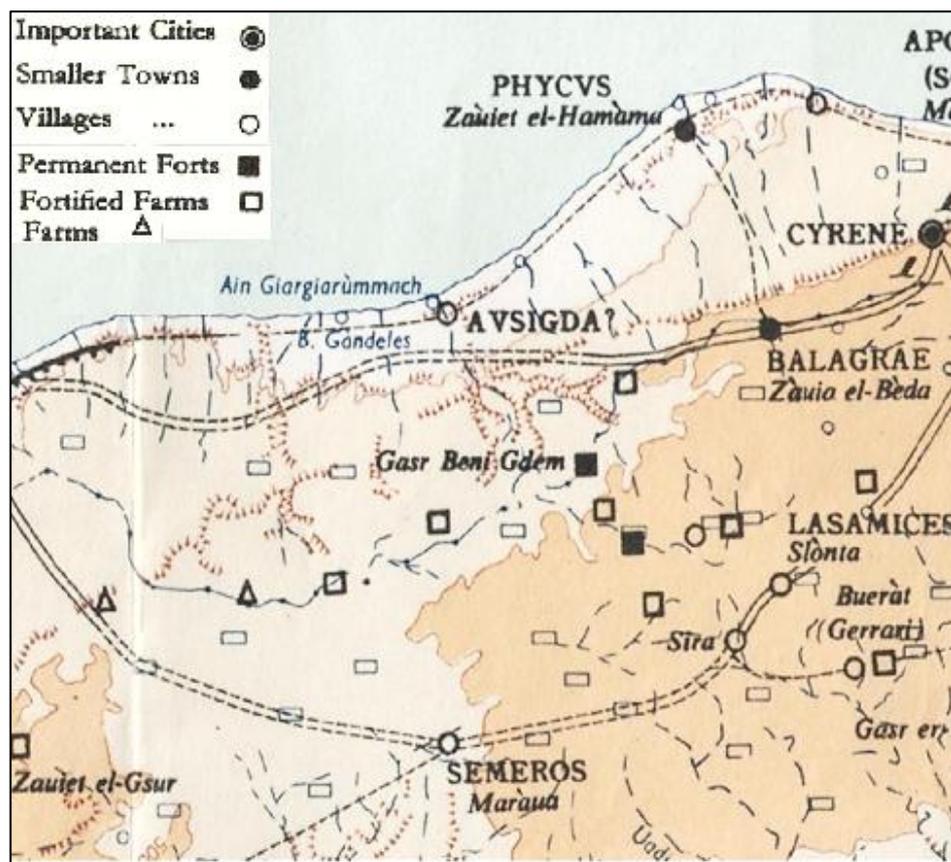


Figure 3.2: Detail from TIR map showing the survey region (TIR, Cyrene-Goodchild, 1954b).

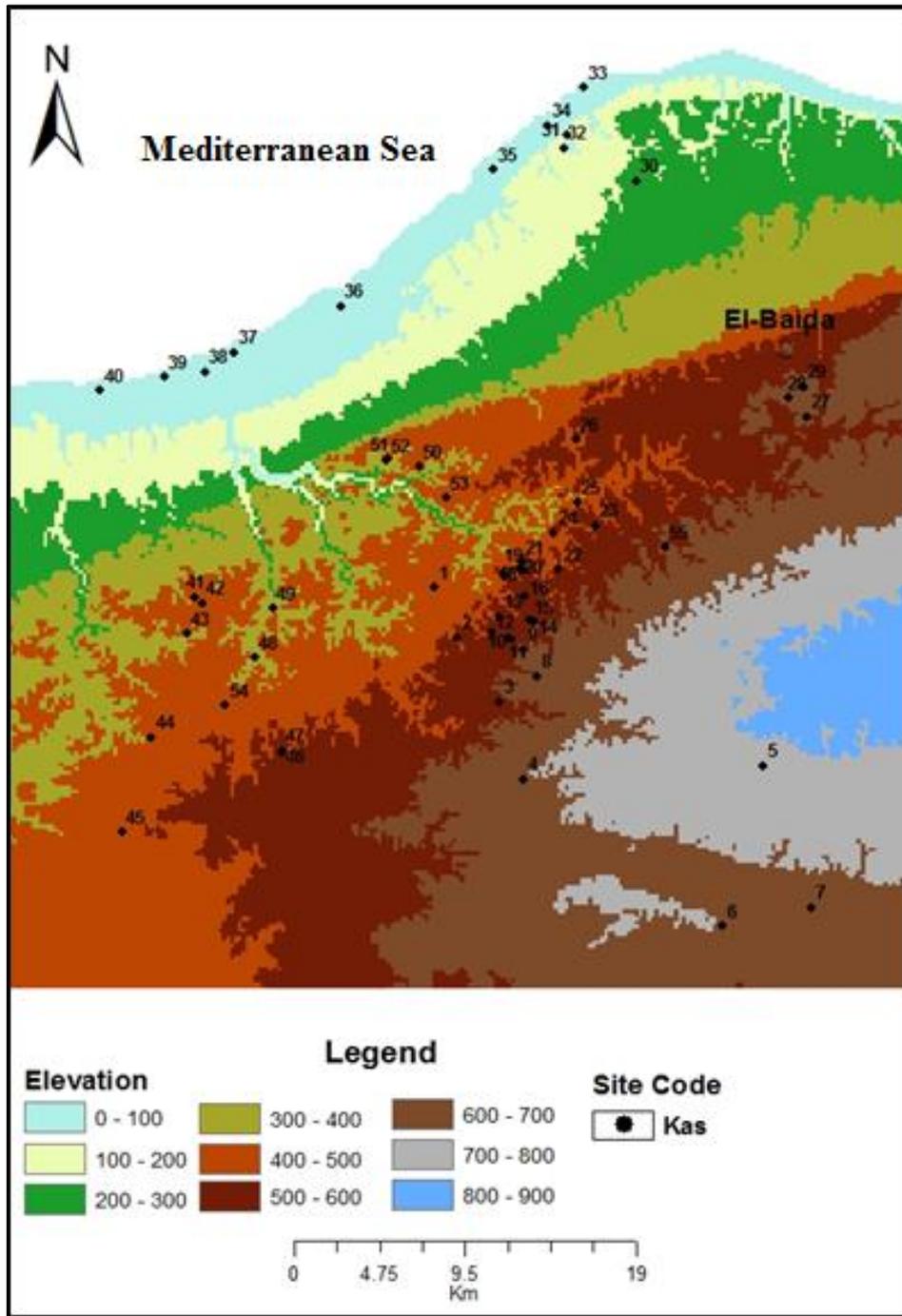


Figure 3.3: Location of sites recorded by KAS

1: Qasr Beni Gdem, 2: Qasr Lyktaif, 3: Qasr Shahden, 4: Qasr Ushish, 5: Siret Abgail, 6: Qasr al-Mistashi, 7: Qasr Laaraija, 8: Siret Ahbaira, 9: Siret et-Traish, 10: Qasr al-Akrout al-Warrany1, 11: Qasr al-Akrout al-Warrany2, 12: Qasr al-Akrout al-Qaddamy, 13: Siret Alwaiby, 14: Siret al-Faqeer Ali, 15: Siret al-Anaisla, 16: Siret Battouma, 17: Siret Adhrary, 18: Siret et-Tauma1, 19: Siret et-Tauma2, 20: Siret et-Tauma3, 21: Siret et-Tauma4 22: Qasr Wadi As-Senab, 23: Siret Asbah, 24: Siret Amaaty, 25: Qasr Aqeela, 26: Qasr Az-Zaaroura, 27: Siret Batrow, 28: Siret al-Jamal, 29: Siret Qatoufa, 30: Siret Maibra, 31: Siret Masaouda, 32: Qasr Side Abdulmaula, 33: Qasr al-Hamama, 34: Qasr Alwet Umm-

Annamel, 35: Qasr Bst, 36: Qasr al-Hammam, 37: Qasr Alhesy, 38: Qasr Jarjaroumma, 39: Qasr al-Mashoub, 40: Qasr al-Oqla, 41: al-Qasr el-Hamar, 42: Qasr Sidi Bu-Argoub, 43: Qasr Bilyanto, 44: Siret al-Azraq, 45: Qasr Qendiz, 46: Qasr Stablous 1, 47: Qasr Stablous 2, 48: Siret Bu al-Husain 49: Qasr al-Hawmy, 50: Qasr Atwainish, 51: Qasr al-Qantouty 1, 52: Qasr al-Qantouty 2, 53 Siret bu-Awena: , 54: Siret el-Qatroura, 55: Siret Umm-Asnaib.

Area	Area Km ²	Previously known sites	%	Newly recorded sites	%	Total sites
Coastal plain	c.30	5	62.5	3	37.5	8
Gebel Akhdar 1st plateau	c.450	0	0	3	100	3
Gebel Akhdar 2nd plateau	c.600	6	14.6	35	85.4	41
Gebel Akhdar 3rd plateau	c.125	1	100	0	0	1
Pre-Desert	c.150	1	50	1	50	2
Total	c.1355	13	23.6	42	76.4	55

Table 4: Previously known and newly recorded sites in the different topographical locations

3.3 Survey Methodology

This study, like most archaeological surveys, involves the use of a wide range of techniques. Each method presents different opportunities for obtaining as much detailed information as possible. For example, following archaeological research convention, before I even put a trowel to the ground in the field, I used non-invasive techniques to discover the possible presence of archaeological material. These include among others, preliminary desktop survey, aerial photography and field-walking (section 3.3.1). Using a mixture of the above methods, I was able to define and demarcate my selected sites for study as indicated in section 3.2. A combination of extensive and intensive survey of the demarcated area followed to understand the architecture and function of the fortified structures (section 3.3.2). Satellite imagery, GPS and GIS techniques were also applied in the study (section 3.3.3). The focus is not on the mechanics of GIS analysis, but on the spatial organisation of the fortified structures and their relationships with other constructed sites. Drawing these strands of methodology together deepens

our understanding of the chronology of the fortified structures of Wadi al-Kuf archaeological site.

3.3.1 Background research and mapping

Before carrying out any fieldwork a representation of the study area needed to be built up. For this reason, it has been important to survey the literature for contextual understanding and review of some sites which have been left by past travellers, early explorers, antiquarians and archaeologists. Recent surveys and excavations are also studied and included in the database. A general account of the previous studies on the fortified buildings in Cyrenaica and Tripolitania was presented in Chapter 2.

There is no doubt that accurate mapping is an essential stage in archaeological surveys (Renfrew and Bahn, 2004:91). Some detailed maps of the study area are available and those produced by the British and American cartographers in the past (1940s and 50s) contain useful information on archaeological sites that could be placed in the project database with co-ordinate references. New maps based on satellite images being made by the Libyan state in the last decade for the purposes of future planning, especially for preservation and tourism was obtained. The satellite imagery (Google Earth) and GPS technology was to ensure accurate placements of sites. Throughout this process of collecting information, ethical issues conformed to what Wiles *et al.* (2005) describe as factors to consider in obtaining information or consent for research participation. Even though a public document “reflects the aims and attitudes of the people and organisations that collected the data” (Clark, 1997:65); I have used and converted the data into a format suitable for analysis.

3.3.2 Surface survey

There are many methods of archaeological field survey that can be applied. However, research questions, type of the available archaeological data and aims of the survey are the factors that determine what kind of survey needs to be applied in any given location (Wilkinson, 2007:32). Extensive and intensive surveys are the main categories used in different projects worldwide (Barker, 1991; Barker, 1996a; Cherry,

1983; Keay *et al.*, 2005). In many cases, a combination of both is commonly adopted (Keller, 1983), and how that applies to this research is contained in the following subsections.

After the background studies and mapping have been completed, sites located have been visited and recorded on the ground. I used a combination of extensive and intensive survey of the chosen area as this provided me with the best opportunity to make a comparative study of the architecture and function of the fortified structures between the coastal sites, the sites located on the plateau of the Gebel Akhdar and sites lying in the pre-desert zone to the south. An important methodological consideration was that there is a wide diversity in the fortified structures in this region and they needed characterising in morphological terms. As already stated, one of the objectives of the thesis was to create a typology according to their size and architectural features. Additionally, the Wadi al-Kuf region contains enough architectural data for me to attempt to draw a picture of the relationship between the fortified farms and the military fortifications. Using GIS software has helped to determine this relationship through aspects of their spatial distribution.

1. Extensive Survey

As I have been dealing with clearly visible archaeological data (fortified structures) in a broad area (c.1350 sq. km), the extensive survey method was implemented in the first phase of work. The study area contains more than 100 fortified structures. Therefore, I carried out an extensive survey that allowed me to examine at a basic level of detail as large a sample as possible in a short period of time. By doing the extensive survey I was aiming to build an overall view of the number, distribution and typology of the fortified structures in the region and their relationship to each other and to the surrounding environment. Hence, I have visited as many sites as possible in the study region and at every site, in addition to making notes, general and detailed photographs have been taken, diagnostic potsherds collected and some measured tape plans made.

In the first phase of the work, I visited sites which had already been documented in previous works. Data from my field survey have been combined with material from the background research, including data in the archives of the Department of Antiquities responsible for the study area. At each site I visited, I rechecked any plans, dimensions

and sketch surveys which were done in the past to ensure that they are accurate and to make any additions where needed. Where no previous plan existed, I carried out simple surveys of the site to produce one. A complete photographic record was made of each site and any dating evidence recorded. As the majority of the sites were located within private farms and properties, the owners were interviewed in an open and unstructured style to draw a response with commentary, if possible, rather than to prove or refute a claim. Interviews in this case provided useful information, such as the name of the site and the location of any adjacent archaeological remains.

2. Intensive survey

It has been proved that the systematic survey is the most suitable method in the Mediterranean classical landscape, and many projects that have adopted systematic field-walking presented remarkable results (Barker, 1991:2-3). Moreover, not all the research questions contained in this research can be addressed by extensive survey alone. Due to logistical constraints, the overall goal of my research and the nature and preservation of the archaeological data I was interested in did not favour the application of systematic field-walking survey as a prime tool of site discovery. Therefore, after the extensive survey, I identified representative areas within each landscape block for further intensive survey. These case study areas have been selected on the basis of: 1) they contain architecturally more than one type of fortified structures, and 2) are in close proximity to areas where the fortified buildings is associated or formed a part of larger settlements. In these instances, the chronological and functional relationships between the fortified structure and the other architectural features in the settlement were carefully evaluated from the various archaeological data available at each site. The chosen sites for the intensive survey were carefully investigated, more detailed plans were made, dimensions and sketches and photographs were taken. In the sites where the fortified structures formed a part of larger settlement, I investigated the positional, chronological and functional relationship between them and between the site and surrounding landscape. The combined gazetteers of sites recorded in both the phase I (extensive) and phase II (intensive) survey are included as Part II of the thesis.

3.3.3 Satellite images and GPS

Satellite images can provide an overall view of the study area and consequently, be very useful to choose the most convenient samples for the detailed study (Allan and Richards, 1983:4). Good satellite coverage exists for my study area (figure 3.4) and these images have been carefully studied to provide evidence for the fortified sites and an understanding of their distribution, topography and possible routes of communication. Also, high resolution satellite images have helped in mapping and planning the sites.

In recent years, the Global Positioning System (GPS) has become a basic technique in archaeological surveys (Wilkinson, 2007). The use of GPS in archaeological survey is not only cost-effective but also “allowed for the collection of accurate, reliable information about archaeological ground conditions, such as surface artifact densities, subsurface prehistoric structures, and natural features that could be integrated into and visualised with GIS for excavation prioritisation and planning” (Tomaszewski, 2009:17). The GPS device is easy to use, appeared accurate (within 1-5 m at most control points) for the spatial needs of this study and storage capacity allowed for easy integration. So, in my survey handheld GPS (Garmin eTrex Legend) has been routinely used: firstly in mapping, to locate the geographical positions of the sites through giving their Latitude and Longitude co-ordinates and their elevation above sea level; secondly, the GPS is a basic requirement for the GIS software (Wheatley and Gillings, 2002).

3.3.4 Recording techniques

3.3.4.1 Site recording sheet

In both extensive and intensive surveys, I designed a suitable recording sheet for use in the field and for ease of data entry into the project data base (Appendix 1: a-b). As indicated in the sheet each site was given a unique number, and this number is written on a standard survey site sheet (A4). Other data categories on the sheet include: site ancient name (when known), site modern name, date of field visit, description of location, GPS coordinates, site provisional type, current land use, site topography,

chronological periods represented, condition of the site, material culture present, site description, additional comments and finally spaces for field sketch and photo records.

3.3.4.2 Drawn record

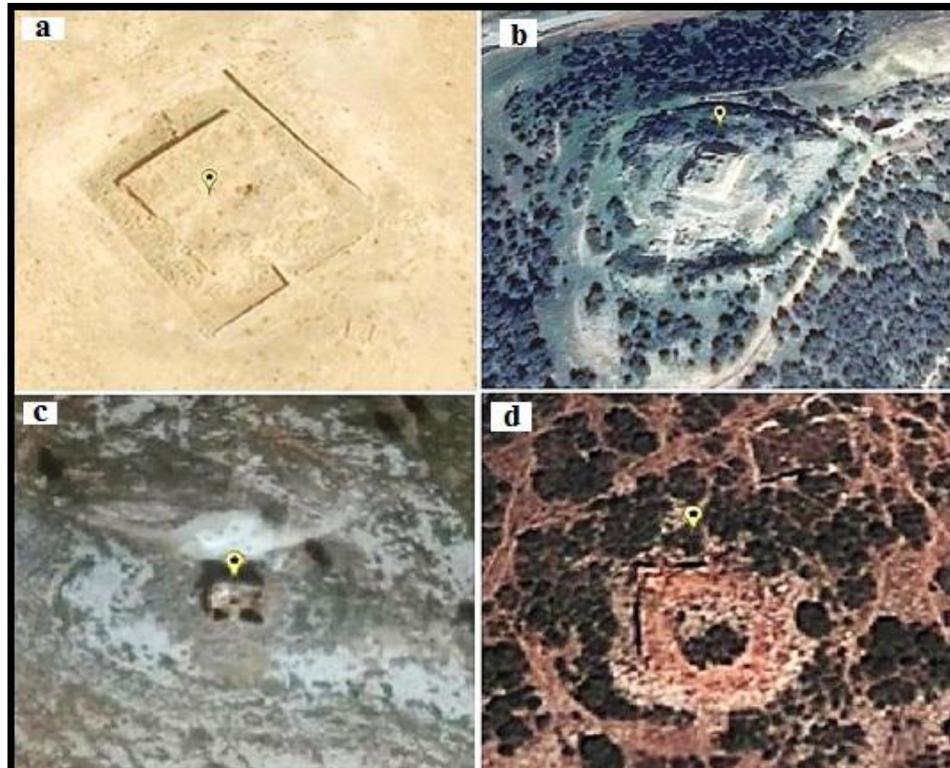


Figure 3.4: Examples of using satellite images in locating sites (Google Earth, 2014).

a) Qasr er-Remtheiat, b) Qasr Shahden (KAS 3), c) Qasr al-Mistashi (KAS 6), d) Qasr Bilyanto (KAS 43)

An essential part in recording standing archaeological structures is making plans of the architectural features. Accurate plans have been made for the fortified structures (for 26 sites in total). The traditional manner of using measuring tapes (50m and 5m) in planning architectural constructions has been used since it allows the rapid production of sufficiently accurate plans. In the previous studies of the fortified structures in Cyrenaica, many plans and sketches have already been done. Therefore, I rechecked these plans and sketches to make sure that they were accurate and have added more features when necessary. Following the example of the plans presented by Welsby (1992) in studying the *qsur* of Tripolitania, I have mainly chosen a scale of 1:100 as an appropriate measure for planning the fortified structures.

3.3.4.3 **Photographic record**

During the survey I have used a digital camera to record general shots and details of every visited site in a systematic manner. All photographs have been recorded on a form showing the main information of the photo. Different sizes of scales in appropriate colours were also used.

General views of each site were taken first to show its condition, location and relationship to the surrounding environmental context. At least a part of each external wall of the four walls at most Cyrenaican fortified sites is clearly visible; in this case I have followed the same order in taking photos according to the location of the walls at all sites. To illustrate this, the first detailed photo at a site was taken of the north wall followed by the remaining walls in clockwise direction (the overall order is thus: N, E, S and W). In addition to the main architectural features, any smaller architectural details were photographed. These include details of masonry, windows, doors, vaults etc. Other interesting architectural remains and features which exist adjacent to fortified structures were also recorded (e.g. ditches, olive and wine presses elements, cisterns, etc.).

3.3.5 **Collection techniques**

In the UNESCO Libyan Valleys Archaeological Survey (ULVS), due to the time limitation and the huge size of the survey area, priority was given to collect datable samples of pottery sherds for assisting with dating the architectural structures (Barker with Gilbertson, 1996a:36). I applied the same extensive and intensive survey method in my Kuf Archaeological Survey (KAS). The team (which in best cases consisted of three people including me) walked at random around the site to collect diagnostic pottery sherds and any other datable finds. The walkers have collected the diagnostic samples of pottery sherds in cases where large amount of it was scattered on the surface. It is important to note that every single sherd was collected from sites where surface artifacts were scarce. At sites where *qsur* formed part of a visible wider settlement, the collection of the artifacts covered as much of the surrounding landscape as possible.

3.4 Data Analysis

3.4.1 Architectural features

Some of the fortified structures and associated architectural features in the survey area were in an excellent condition of preservation. Therefore, it was possible, to some extent, to categorise them according to their architectural features. At every site, when possible, the type of masonry, internal divisions and outer and surrounding features were carefully investigated and recorded.

Different types of masonry were used in these structures. These included ashlar work of different quality, large and medium dressed blocks, slightly dressed stones and rubble. Other architectural features such as revetments, ditches, type of outer and internal doors and their orientations, windows, stairs, vaults and surrounding agricultural and industrial features were all investigated and considered. By doing this, I was able to draw some comparisons and contrasts between the fortified buildings in my survey region with that previously studied in some other regions of the Roman Empire particularly in Tripolitania. Also investigating the architectural features allowed me to compare the method and material of construction with other kinds of buildings that existed in the region, such as fortified churches, that had, for example, similar sloping revetments or construction features.

3.4.2 Potsherds

At the vast majority of the sites datable pottery was very scarce. However, for dating purposes, I always tried to collect as many pottery sherds as possible. Pottery sherds from each site were put in a plastic bag with a small label inside the bag, including the number and name of the site. At the end of every day in the field, the collected pottery was carefully washed, and the next day distinctive and datable sherds were photographed. By seeking help from specialists in the UK (Dr Victoria Leitch and Philip Kenrick), I have managed to identify some kinds of pottery and consequently their chronological frame.

3.4.3 Application of GIS software

Geographical Information Systems (GIS) is a well-established archaeological tool and has played an important role in the study of past landscapes since 1990s (Bell *et al.*, 2002; Bintiff, 2000; Gillings and Sbonias, 1999). Location has always been considered among archaeologists an important matter in the inventory record of any archaeological data (Fisher, 1999:8). From an intensive archaeological field survey of selected areas covering a region of 1350 square km (figure 3.1), a GIS database was developed and combined with satellite images (using Google Earth) to help in addressing the research questions stated in section 3.2. Specific questions targeting the geomorphology and historical geography of the study areas forms a complimentary area of enquiry. The need to coordinate this information from a variety of sources provides an ideal opportunity to position GIS as an integrative and analytical tool. As stated in section 3.3, the focus of using GIS is not on the mechanics of the analysis, but to illustrate the spatial organisation of fortified buildings and their chronological, functional and topographical significance through assessing their distributions and locations. The application of the GIS on archaeological surveys has been documented by several scholars (see Bevan and Conolly, 2004; Gillings *et al.*, 1999; Mehrer and Wescott, 2006; Wheatley and Gillings, 2002).

Additionally, the Wadi al-Kuf region contains enough architectural data and these have allowed me to explore or question the relationship between cultural and environmental dynamics (if there was one), the fortified farms and the military fortifications. Using GIS software demonstrates the value of GIS in helping to understand the archaeological record and past settlement dynamics. To maximise the benefits, the following steps were carried using ArcGIS 10 – renowned GIS software. Contains a wide range of datasets within which the GIS manipulation was based upon. Additional Google Satellite images were collected as part of the intensive survey and the GPS was used for mapping co-ordinates and elevation of several points on selected archaeological sites. An example of steps in GPS/GIS integration for archaeological surveying is described by Tomaszewski (2009). The spatial datasets describe the Wadi al-Kuf landscape at a variety of scales, but a 1:200 map was used for the survey of the area. To Bevan and Conolly (2004), integrating maps of different spatial scales can both be challenging and heuristically valuable. In this case, the issue of scale was rarely

acknowledged, as the new maps collected are already pre-processed, and I was liberty to select the appropriate scale suitable for my analysis. However, in the few situations where the projection of these fortified structures on the map did not correspond with the GPS data, geo-referencing functions of the ArcGIS Spatial Analyst extension were used to adjust the imagery in a correct reference to the GPS data.

3.5 Fieldwork Reflection

Several factors had a negative impact on my research. First, the vast majority of the sites being located within private lands sometimes presented problems of access. At several times I was asked to leave the site in the middle of my work and in some cases the official written permission from the [responsible] authorities was not honoured. Therefore, it was vital to use social approaches and contacts to facilitate visits to Roman fortified sites in my region. To gain access onto private lands, I sometimes sought the help of a person known to the landowner to allow me visit and record the site. While the process of seeking gatekeeper's consent was time consuming and regrettably refused on so many occasions, it has not affected the coverage of sites sufficient enough to make a judgement. Second, the vast majority of my fieldwork was conducted in 2011 and 2012 during the Libyan revolution. Therefore, the insecurity of the country delayed strict compliance to my work plan. I initially planned to conduct the second stage of the survey with a small team including some postgraduate students from the school of Archaeology and Ancient History in Leicester, but unfortunately this became impossible. Third, I spent additional periods of time in Libya in the summer of 2013 in order to re-gather some of my survey data after my laptop and back-up drives were stolen in 2012 in a break-in at my home in Leicester. Despite all these obstacles, I have managed to record a significant number of sites in good detail.

3.6 Summary

This chapter has presented the research methodology deployed to study fortified buildings of Wadi al-Kuf region focusing on the Late Roman and Byzantine periods. The chapter began by laying the process for site selection and characterisation of the

study area. The fieldwork was undertaken based on the fact that: (a) The Wadi al-Kuf region is one of the richest areas for surviving archaeological sites, (b) a study of this nature focusing on an extended area covering the Roman and Byzantine periods is not well understood. The majority of the data was gathered through multiple means such as site surveys and collection datable pottery to understand the archaeology, chronology and distribution of fortified structures to answer the research questions set in section 3.3. The use of multiple methods had provided the detailed information required for the project. It should be noted that archaeological site is never really finished; the presentation of the data from these sites not only allows me to undertake the PhD, but also allows future archaeologists to reinvestigate and reinterpret my findings based on more recent research. Moreover, it is my hope to be able to follow up research on *qsur* with excavations - which will certainly add considerable further complexity and help refine chronology. For the moment, though, discussion rests on the survey results. Chapter 4 next discusses the findings on masonry types, architectural features and size category of recorded fortified buildings.

Chapter 4: Masonry Types, Architectural Features and Size Categories of the Fortified Buildings in the Survey Area

4.1 Introduction

This chapter is not intended merely to provide a catalogue of materials used in the fortified sites recorded in the survey region. Rather my scope of attention is focused on understanding the architectural features and categories of those fortified buildings. The chapter sets out the masonry types in section 4.2, followed by extensive analysis of the architectural features of fortified buildings in section 4.3. These aspects including the defensive features - revetments and ditches - and other available features - the internal layout of buildings, orientation of the outer entrance (s) - are also discussed. Section 4.4 is focused on associated agricultural and industrial structures such presses, water cisterns and rock-cut chambers. Apart from documenting the various types and features of the fortified buildings, an attempt is made in section 4.5 to measure their size. By looking at all the features of the fortified structures, it helps in identifying the site typology and in understanding the chronology of the sites.

4.2 Masonry Type

The Kuf Archaeological Survey (KAS) has revealed that there is diversity in the type and quality of the masonry of the fortified buildings recorded in the survey area. The following broad categories of stonework have been identified.

4.2.1 Ashlar work

Ashlar work of lime and sandstone varied in terms of size and quality and was widely utilised in the study sites. It was used either to construct an entire building or to form the outer walls alone. Sometimes it was only employed for specific elements within walls, such as the quoins and projecting strings. The best examples of ashlar blocks used in the fortified structures comprise high class dressed and coursed large and medium ashlar work. This was employed at many sites of either military and civilian nature such as the fortlet of Qasr Beni Gdem (KAS 1), the outpost of Qasr Ushish (KAS

4), the fortified farm of al-Qasr al-Hamar (KAS 41), the outer walls of the fortified farm of Siret et-Tauma 4 (KAS 21), the external face of the outer walls of the fortified farm of Qasr umm Asnaib (KAS 55) and the *qasr*-like building of Qasr Abgail (KAS 5) (see various examples from figure 4.1-a, b, c, d). Large elongated and medium ashlar work (measuring 1.10 m long, 0.70 m thick and 0.30 m high) has been recognised in the fortified farm of Siret al-Qantouty 1 (KAS 51) (figure 4.1e). In the outpost of Qasr Lyktaif (KAS 2), two faces with rubble between of dressed ashlar work formed the external walls (figure 4.1f). Flattish ashlar blocks were also used partly in the outer walls of the upper story of the outpost of Qasr al-Mistashi (KAS 6) (figure 4.1g). Very large ashlar blocks were used in the small building of Qasr al-Hammam (KAS 36). It was very obvious that these blocks were reused from an earlier building as they had originally formed a part of an architrave (figure 4.2).

In some buildings, where different sizes of ashlar blocks were used together on walls, small stones were inserted for levelling purposes between wall courses and also to fill gaps between the horizontally adjacent blocks. This manner has been recognised in the outer walls of the fortified farm of Qasr al-Akrout al-Warrany 1 (KAS 10) (figure 4.3). A clandestine excavation conducted in the coastal fortified farm of Qasr al-Mashoub (KAS 39) revealed that the lower courses of the walls were constructed of neatly coursed small and medium ashlar blocks with average dimensions between 0.30 to 0.50 m long, 0.30 to 0.40 m high and about 0.60 m thick (figure 4.4).

At sites where outer walls were exceptionally well preserved, slightly projecting strings of thinner ashlar blocks have been recognised. They were certainly used in some cases to mark the separation between the floor levels inside the building. In the military buildings of Qasr Beni Gdem and Qasr Ushish projecting string courses provide a good indication that the first comprised three stories and the second two stories (figure 4.1a and b). Qasr al-Mistashi, the fortified farm of Siret al-Faqeer Ali (KAS 14), Siret Umm-Asnaib and the outer walls of the second phase of the military site of Qasr Shahden (KAS 3) are good examples in employing the slightly projecting strips of thinner stone blocks to mark the separation between the levels of the building.

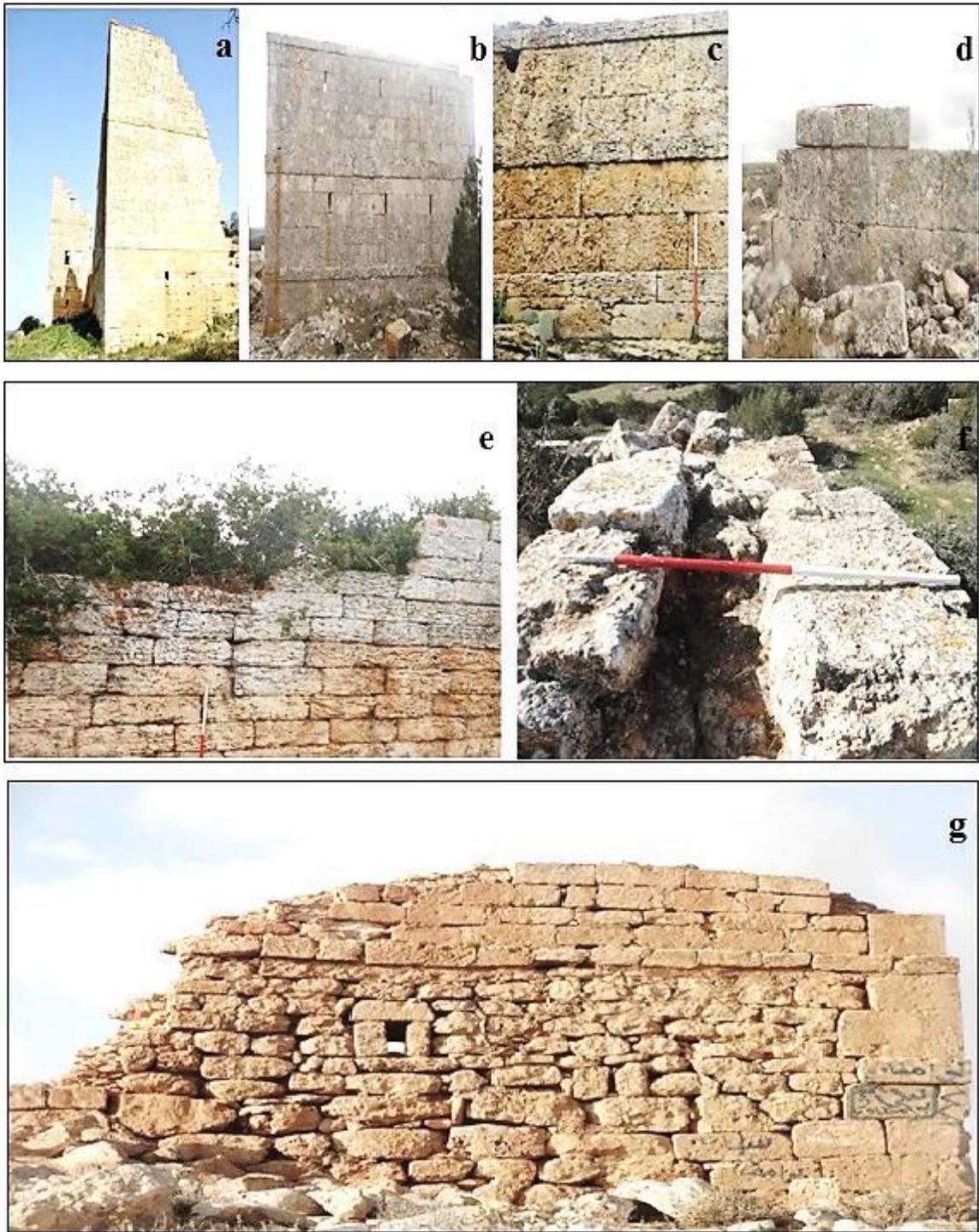


Figure 4.1: Different types of ashlar masonry. Scale 1m

(a) Qasr Beni Gdem, (b) Qasr Ushish, (c) Siret et-Tauma 4 (d) Qasr umm Asnaib, (e) Qasr al-Qantouty 2 (f): Qasr Lyctaif: Two faced ashlar masonry (g) Qasr al-Mistashi: The using of flattish ashlar in the upper story.



Figure 4.2: (left) Qasr al-Hammam: Re-used very large ashlar masonry. Scale 1m.

Figure 4.3: (right) Qasr al-Akrouit al-Warrany 1: Patching between the adjacent large blocks.



Figure 4.4: Qasr al-Mashoub: Neatly coursed smallish ashlar exposed by a clandestine excavation. Scale 1m.

The projecting string courses were also built for levelling purposes. For instance, figure 4.1c shows that the surface of the natural rock that the outer walls were resting on was irregular in Siret et-Tauma 4. Therefore, a slightly projecting string course of thinner blocks was inserted between the wall courses and the natural rock. They were also probably inserted for constructional or ornamental purposes, as indicated in the outer face of the northern wall of Siret et-Tauma 4. There, two projecting string courses

of thinner blocks were erected in low positions. One of these was located on the top of the surviving walls and the other running almost in the middle of them. The rubble that covered the interior hindered me from investigating whether these thinner courses marked the separation between floor levels or were just inserted between the wall courses for constructional or ornamental purposes. The separation between floor levels was also marked in some buildings by a course of large or medium blocks different in size and quality from those used in the rest courses of the walls, as evident at Siret et-Traish (KAS 9) (figure 9.30). In reality, the current condition of many other sites recorded in the survey area makes it uncertain whether they also had any similar string courses or not.

4.2.2 Small and medium roughly dressed and irregular blockwork with ashlar quoins

At some buildings, ashlar blocks were used only in the quoins and the rest of the walls were constructed of neatly coursed but roughly dressed medium and small stones. These included the following sites: Qasr al-Mistashi (figure 4.1g), Siret et-Traish (figure 9.30), Siret Battouma (KAS 16) (figure 9.56) and Siret et-Tauma 2 (KAS 19) (figure 9.67).

4.2.3 Mixture of ashlar work and medium and small blocks

Some sites employed this type of mixed masonry. At Qasr al-Akrout al-Warrany 2 (KAS 11) (figure 4.5), the outer walls were constructed of flattish ashlar blocks integrated with roughly dressed small and medium stones. The exposed internal parts of Siret al-Qatroua (KAS 54) have revealed that this mixture of masonry was used to build the internal walls as well as the outer walls (figure 4.6). At many sites where ashlar work or large and medium block work had been used in the external walls, a huge amount of small collapsed rubble was noted within and outside the buildings. This probably indicates that smaller block work were used to build the walls of the upper stories. Some remains of such masonry are evident in some sites such as al-Qasr al-Hamar (KAS 41) (figure 4.7) and Siret et-Tauma 4 (KAS 21) (figure 4.1c).



Figure 4.5: Qasr al-Akrouit al-Warrany 2: Masonry of flattish ashlar and medium and small stone.
Scale 1m.



Figure 4.6: Siret al-Qatrouira: Type of masonry.



Figure 4.7: al-Qasr al-Hamar: The use of rubble masonry in the upper storey. Scale 1m.

4.3 Architectural Features of Fortified Buildings in the Survey Area

There are unique details and component parts that, together, form the remains of architectural features of fortified buildings in the survey area. Defensive features (such as revetments, ditches, enclosures using outer walls and towers) and other architectural elements (such as components of the main entrance and internal layout) found in the study area are now detailed in this section.

4.3.1 Defensive features

There exist a number of features suggesting that the structural remains in the survey region are fortified for defence to protect the locals against raiders and probably serve as military posts. These features include: 1). Revetments, 2) Ditches, 3) Enclosures (outer walls) and 4) Towers. The details of each of these features are explained below.

4.3.1.1 Revetments

A total of 29 fortified buildings (53%) of the surveyed sites certainly had external revetments (figures 4.8 and 4.9).



Figure 4.8: Qasr Az-Zaaroura: An example of the sloping revetments.

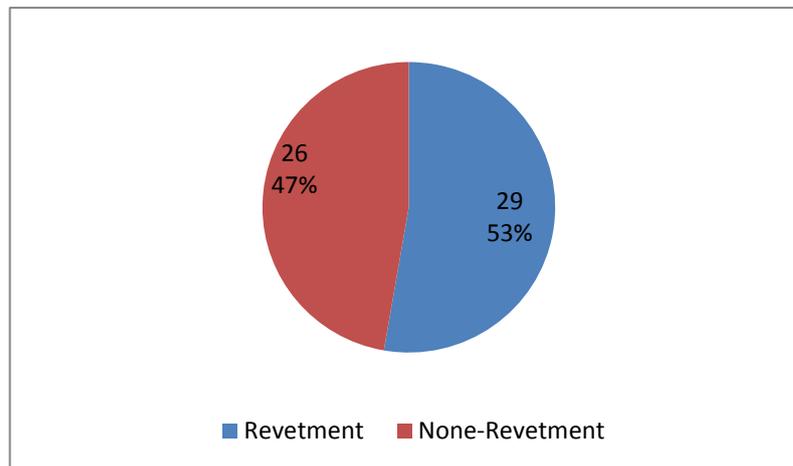


Figure 4.9: Number and percentage of sites recorded by KAS with and without revetments.

It seems that there was no geographical and typological significance in the existence of the revetments in the fortified buildings in the recorded sites as shown in (figure 4.10). Here, it is noticeable that this feature existed in buildings of military and civilian nature that was located in the coastal plain and on the first and second terrace of the Gebel. With the exception of the two probable military coastal sites of Qasr al-Hamama (KAS 33) and al-Oqla (KAS 40), all sites that contained revetments are located on the second scarp of the Gebel and were of civilian nature. Other six coastal sites recorded in KAS had no revetments; the same is true with regard to Qasr Beni Gdem, Qasr Shahden, Qasr Ushish, Qasr Lyktaif, Qasr Aqeela (KAS 25), Qasr Laaraija and Qasr al-Mistashi, the sites that, as well be discussed later, can be considered military. The

absence of the revetment was noted at Siret al-Qatroura, which can be categorised as a Qasr-like building. Another interesting point is that the vast majority of the sites supported by revetments were surrounded by ditches (figure 4.15) and associated with agricultural and industrial features such as water cisterns, mortared tanks and presses. Moreover, they were mostly located on hilltops and raised ground on the second scarp of the Green Mountain. In other words, it can be said that the revetment is a common phenomenon that existed in sites that are most likely be categorised as fortified farms (*qsur*) in the survey region. Similarly, this defensive feature is also found at many of the Byzantine fortified churches in Cyrenaica (Goodchild, 1952b:150; Reynolds, 2003:151).

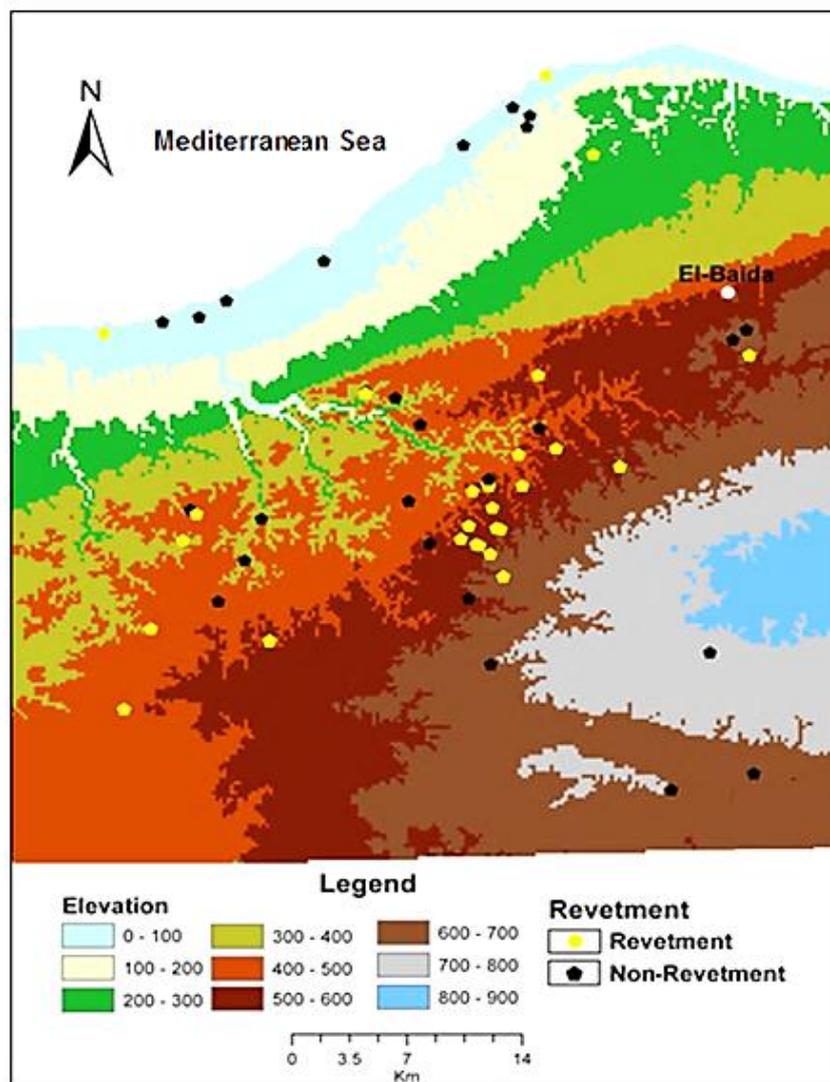


Figure 4.10: A map of the survey area showing sites in terms of the revetments

Most of the revetments sloped inward at an angle of about 45 degrees and few were vertical. At some sites, the revetments surrounded the buildings from all sides (Siret Alwaiby (KAS 13), Siret al-Azraq (KAS 44), Qasr al-Akrouit al-Warrany 2 (KAS 11), Qasr Sidi Bu-Argoub (KAS 42), Siret et-Tauma 1(KAS 18), Siret et-Tauma 2 (KAS 19), Siret et-Tauma 3 (KAS 20), Siret Adhrary (KAS 17) and Siret Battouma (KAS 16). However, in some cases they were only built on one side (e.g. Qasr Stablous 1 KAS 46 Qasr al-Akrouit al-Qeddamy KAS 12), two sides (e.g. Siret Batrow KAS 27 and Qasr et-Traish KAS 9) or three sides (e.g. Siret al-Faqeer Ali KAS 14, Qasr Stablous 2 KAS 47, Siret umm Asnaib KAS 55 and Qasr al-Akrouit al-Warrany 1 KAS 10). Only three buildings had revetments with rounded corners: Siret et-Tauma 1 (KAS 18), Siret al-Faqeer Ali and Qasr al-Akrouit al-Warrany 1. Exceptionally, in the latter *qasr* the revetment on the north-west side extended only for 1.50 m from north-east to north-west (figure 4.11).



Figure 4.11: Qasr al-Akrouit al-Warrany 1: The end of the revetment at the north-east corner. Scale 1m.

It seems that the geographical context was taken into account when building the revetments. In some cases where revetments did not surround the building from all sides, it was present only on the most exposed and accessible sides. For instance, at Qasr al al-Akrouit al-Qaddamy (KAS 12) it was not necessary to support the southern

and the eastern walls as they were built close to the scarp of the hill that the building was built on. There was a small variety in the type of masonry used in the revetments. As obvious in Qasr al-Akrout al-Qaddamy, small irregular and rough regular coursed masonry was widely utilised (figure 4.12). Ashlar blocks were used only at two sites to build the revetments. At Qasr Sidi Bu-Argoub (KAS 42) the revetment was built completely of ashlar and the area between the outer walls and the revetment was filled with rubbles (figures 4.13 and 4.14), whereas at Qasr al-Qantouty 1 (KAS 52), ashlar work and small neatly coursed blocks were used together. There was also diversity in the width of the revetments. The widest existed at Qasr Sidi Bu-Argoub, measuring 2.70 m and the narrowest was recorded at Qasr Stablous 1 measuring at about 0.70 m. Generally, the width of the revetments was 1.20 m and over, although we should also note that at some sites the width of the revetment was not the same on all sides.

There is no doubt that revetments were added to outer walls for defensive purposes. They gave added protection to walls if a site was attacked and made them difficult to undermine or punch holes through walls. They were probably also built to stabilise original walls that were fractured by earthquakes. This suggestion was previously supposed by Goodchild (1953:66 footnote: 11) and recently supported by Kenrick (2013:124) who, in his recent survey in the region, has noted that the collapsed revetment at the north end of the east wall of Qasr Az-Zaarura (KAS 26) (figure 4.15) has exposed that the original wall had a “Jagged cracks running from top to bottom” suggests that this was caused by an earthquake and that the revetment was built to stabilise it.



Figure 4.12: Qasr al-Akrouit al-Qaddamy: The masonry of the revetment. Scale 1m



Figure 4.13: Qasr Sidi Bu-Argoub: Ashlar masonry utilised in the revetment.



Figure 4.14: Qasr Sidi Bu-Argoub: Rubble core of the revetment, looking south. scale 1m



Figure 4.15: Qasr Az-Zaaroura: Crack in the east wall. Scale 1m.

4.3.1.2 Ditches

As illustrated in figure 4.16 and figure 4.17, ditches were recognised at 19 (35%) of the fortified buildings in the survey area. The clearly visible ditches showed that they were cut through the natural rocky ground that the fortified structures were built on. In most cases ditches were located immediately adjacent to the buildings or only a few metres beyond the external walls. However, at Qasr Shahden the ditch was cut around the enclosure surrounding the site and located about 40 m away from the fortified structure (figure 4.18). Almost all the ditches recorded were largely masked by rubbles and scrub, therefore, it was not possible to evaluate their full depth. Nevertheless, at Qasr Shahden it was more than 7 m and exceeded 4 m at Siret et-Tauma 2, et-Tauma 4 and Qasr Sidi Bu-Argoub. Apart from Qasr Shahden, where the widest point of the ditch was about 20 m, the width of the ditches in other sites ranged from about 4 to 8.5 m. It seems that the width of the ditches was occasionally controlled by the available rocky ground between the fortified building and the edges of the raised ground or the hilltop where the structure was located.

Without excavations, it is not possible to establish whether the ditches surrounded the buildings on all sides or not. Whereas eight buildings were certainly surrounded by ditches from all sides, only two sites (al-Qasr al-Hamar and Siret et-Tauma 4) had ditches on one side. At Siret et-Tauma 4, there was a cut in the natural rock only on the northern side of the building. The other three sides had no cuts but were surrounded by

an enclosure of small and medium coursed block work. The sites where ditches existed on all sides were probably crossed by a causeway as existed in Qasr Shahden (figure 9.8). Movable wooden bridges consisting of beams resting on stone blocks or arches were probably used to cross the ditches. These sorts of features have been noted at the military fort of Qasr al-Heneia south of Agedabia (Goodchild, 1951b:133; Reynolds, 1976:175).

It is most likely that ditches were cut for defensive purposes as well as a source for building materials. At some sites that certainly lack ditches the naturally protected location makes one unnecessary. For instance, the possible military outpost of Qasr Alhesy (KAS 37) was located on a relatively high hilltop and its outer walls were constructed on the edges of the hill.

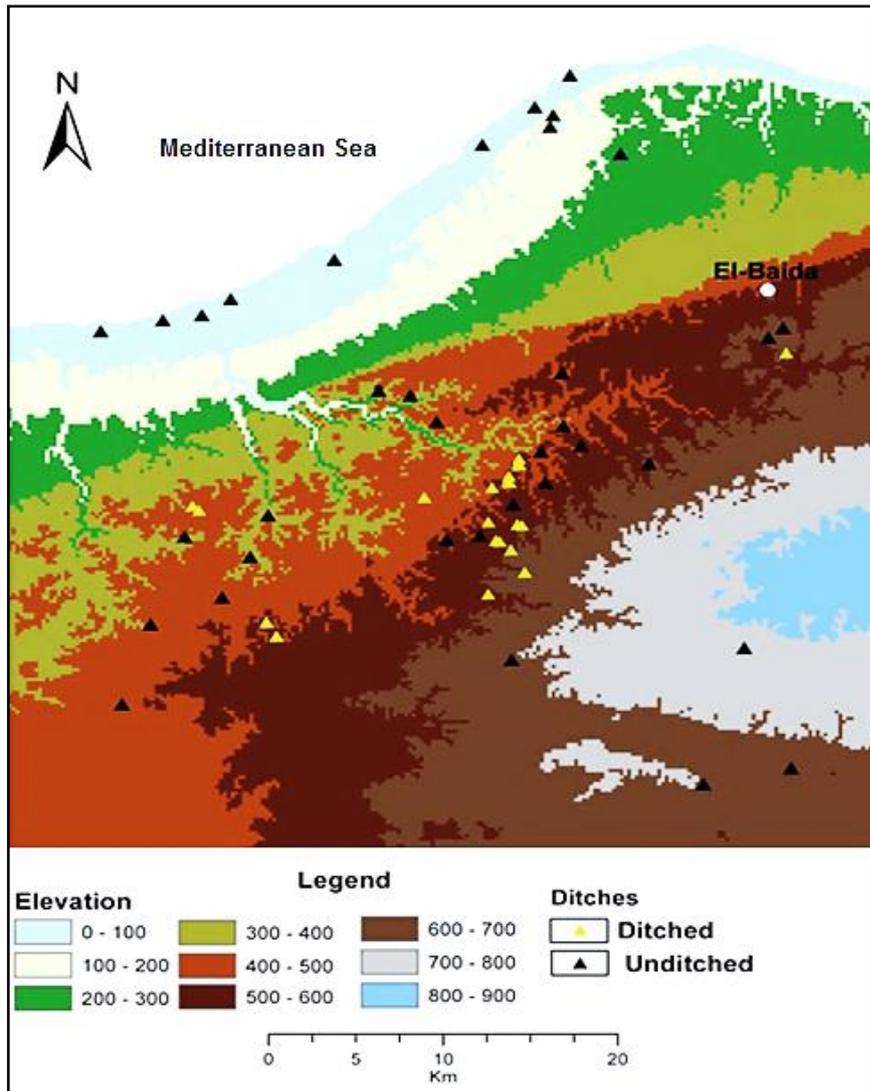


Figure 4.16: A map of the survey area showing sites in terms of ditches.

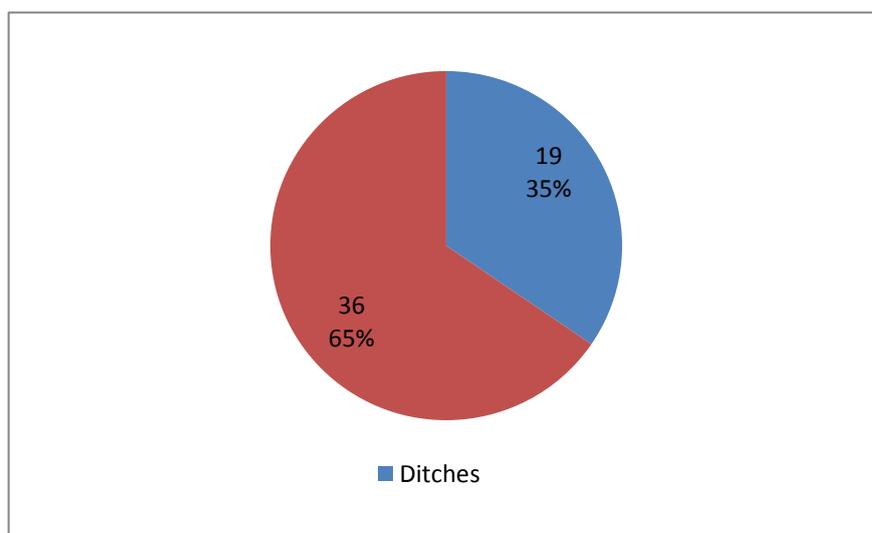


Figure 4.17: Number and percentage of sites with and without ditches.



Figure 4.18: Qasr Shahden: The east side of the surrounded rock-cut ditch.

4.3.1.3 Enclosures (outer walls)

Evidence of outer walls or enclosures has been securely recorded only at three sites: Qasr Shahden, Siret et-Tauma 4 and Qasr al-Hammam. From some remnants it seems that Qasr Shahden had for defensive purposes an irregular enclosure erected on the top of the inner edge of the ditch. The enclosure, that surrounded the site on all sides, was constructed of large dressed blocks similar to those used to build the outer walls of the Qasr that is attributed to the second phase of construction.

An outer wall measuring 0.70 m wide built of large dressed blocks has been recognised at Siret et-Tauma 4 (figure 4.19). Remnants of this wall are only now visible on the eastern and southern sides; the eastern outer wall is located about 17 m to the east of the eastern wall at its northern end and about 14 m at its southern end. The southern outer wall was erected at a distance of about 6 m south of the southern wall of the building. The eastern outer wall, probably at a later time, was strengthened from outside by a wide revetment built of rubble and measured about 1.50 m wide. No traces of this revetment were noticed along the south outer wall.

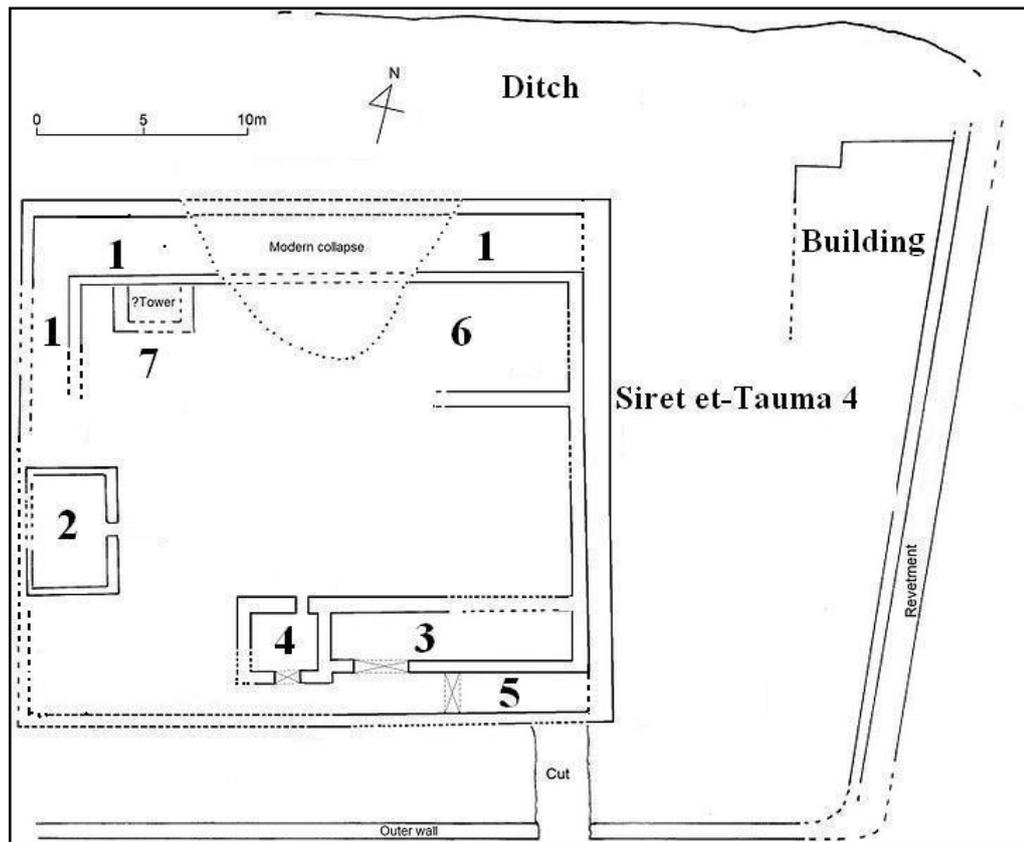


Figure 4.19: Siret et-Tauma 4: Measured plan.

4.3.1.4 Towers

The probable military sites of Qasr Beni Gdem and Qasr al-Hamama were the only two fortified buildings in the survey area that contained towers. At Beni Gdem two projecting square towers (4 m aside) are located in the middle of each of the northern and southern walls (figure 2.2). Like the rest of the building, the towers were of three storeys and it is evident that they had vaulted roofs as remnants of the first floor roof of the northern tower is still *in situ* (figure 4.20). Goodchild (1953:70) interpreted the wide windows of each tower as being provided for *ballista*. At the other site, Qasr al-Hamama, most likely similar towers were existed (see Chapter 5). Moreover, some sites probably had internal towers, such as Qasr umm Asnaib, where the two rooms that flanked the entrance vestibule probably served as towers. This interpretation is supported by comparison with similar sites in Tripolitania (e.g. *qasr* (E) and Bir Scedua) that had almost similar internal plan including two rooms flanking the entrance corridor that were considered as internal towers (Goodchild, 1950b:36-37; Reynolds, 1976:42-43).



Figure 4.20: Qasr Beni Gdem, the northern tower.

4.3.2 Other architectural features

4.3.2.1 Main entrances and windows

1. The compass orientations, position and width of the outer entrances

Out of the 55 fortified buildings recorded in the survey area, outer entrances of 46 sites (representing 84%) have been identified. The vast majority of the fortified building had a single entrance. In fact, there are only four sites that had two entrances or more, namely: Qasr Bst (KAS 35), Qasr al-Hammam, Siret Atwainsh (KAS 50) and al-Qasr al-Hamar (KAS 41). These sites also lacked some other defensive features such as thickish walls, revetments and ditches.

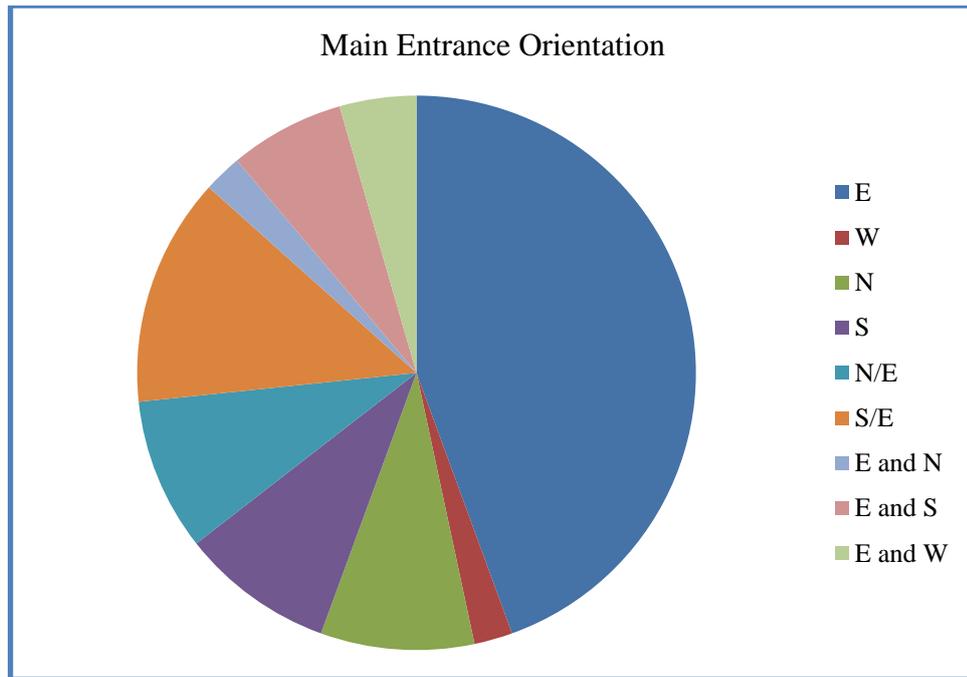


Figure 4.21: The orientation of the main entrance of the recorded buildings.

Figure 4.21 shows the main entrance orientation of recorded buildings. Apart from Qasr Beni Gdem and Qasr al-Mashoub which had outer entrances in their northern walls and Qasr Shahden and Qasr Qatoufa (KAS 29) in their western wall, close to half (44%) of the sites had entrances facing east. In cases where the outer walls of the building were not close to a cardinal alignment, the outer entrance of each building was preferentially sited in the north-east or south-east wall. Also, in the buildings that contained more than one entrance, one of them was always located in the eastern wall. In other words, the east was the most favoured side to locate the outer entrance. This phenomenon has been noted in most of the small forts and fortified farms located in other parts of the region beyond my survey area such as Qasr Sidi el-Khadri, Qasr el-Mnechrat, Qasr el-Geballa, Qasr al-Atallat and many others (Goodchild, 1951b; 1951c; 1953; Stucchi, 1975). Furthermore, the vast majority of farm sites and fortified farms, *qsur*, recorded by ULVS in Tripolitania contained a single entrance facing east or north-east or south-east (Mattingly with Dore, 1996:124-7). It has been noted in Tripolitania that the orientation and position of the main entrances of the farm sites and fortified buildings were widely related to the adjacent cultivated lands rather than environmental considerations (Mattingly with Dore, 1996:124). In my survey area, it seems that, in addition to this, it was normal to locate the entrance in the eastern wall, when possible, even in the case that the building was flanked or surrounded by cultivated lands. Qasr

Wadi al-Sanab (KAS 22) is located on a hilltop flanked by two major wadis to east and west and had a single entrance in its eastern wall.

In addition to this, several factors also played a role in the location of the main entrances in my survey area. In some exceptional cases, in order to provide easier access, the position of the main entrance was inserted into the wall that faced the least sloping side of the hilltop. This is evident at Siret et-Tauma 3 where the entrance was in the north wall - the easiest side to be accessed on the hill from the surrounded levelled ground.

Undoubtedly, for defensive purposes most of the entrances were narrow. Apart from Qasr Beni Gdem which had a relatively wide entrance measuring about 2.30 m, the entrances in other sites were narrow. As figure 4.22 shows, over 90% of the recognised site entrance ranged from 0.70 -1.40 m. The narrowest existed at Siret et-Tauma 2 which had a main entrance comprised two arched doorways measuring 0.70 m wide, separated from each other by a block of stone 0.40 m wide. Entrances of about 1 m width have been noted in seven sites, and in 17 sites the width of the entrances is between 1.10 and 1.40 m. The singularity and narrowness of the main entrances of these fortified building are another feature that reflected their defensive character. With regard to the type of the main entrance, it has been noted that majority of identified entrances were arched. The arches in all entrances were formed of voussoirs, varying in number, size and shaping quality. The best example of these arched entrances existed at Qasr et-Traish (figure 4.23). Here, it consisted of 13 well-shaped voussoirs resting at both sides on about five horizontal slaps of stones and flanked by well-cut vertical pillars.

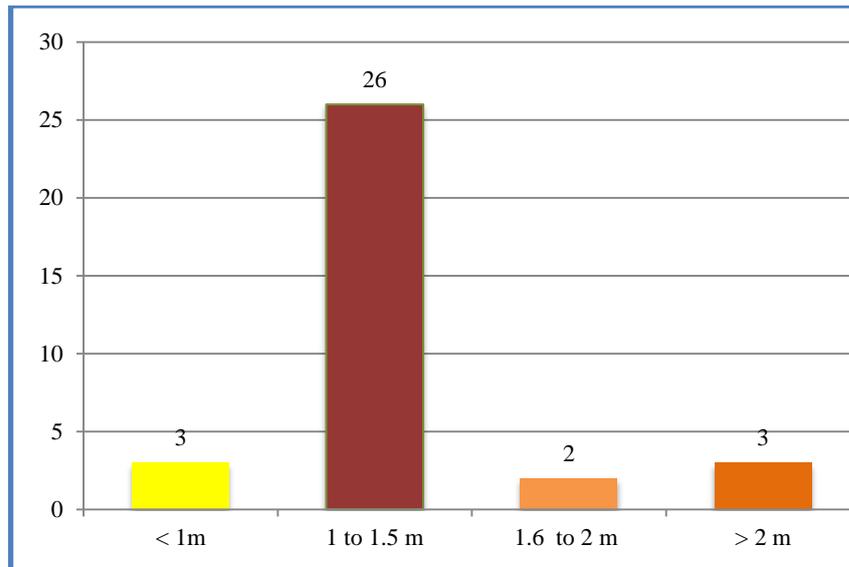


Figure 4.22: Width of the main entrances of the fortified buildings in the survey area.

2. Windows

The extensive spread of collapsed material and bushes in most of the surveyed buildings made it impossible to draw a clear picture of the provision of windows. Due to the same reason, it was only possible to discern the outer side of the windows in many cases. However, the few well-preserved sites have revealed windows of various size and shape. The widest windows openings have been noticed in the military site of Qasr Beni Gdem (figure 4.24) that had rectangular windows at about 1.50 high and 0.70 m wide from both outer and inner sides, as evident in the walls of its northern tower. As is obvious in the north wall, the first floor of this possible fortlet contained smaller windows measuring 0.60 m high and 0.40 m wide. For defensive purposes, window size prevents access to the interior. On this account, the ground floor of Qasr Beni Gdem had narrow windows slits that measured only about 0.30 m wide.

It was possible to discern windows from both sides only at four other sites. However, they were enough to indicate that the inner sides were wider than the outer sides. They measured between 0.10 and 0.20 m from outside and between 0.40 and 0.50 m from inside. This narrowness is a clear indication of their defensive character as they prevented attackers from entering the building through them, and could be used for watching, firing projectiles, as well as providing light and air to the interiors.



Figure 4.23: Qasr et-Traish: The arched main entrance, looking south-west. Scale 1m.



Figure 4.24: Qasr Beni Gdem, The north wall: Large windows and small windows slits.

The position of the windows in some cases was a positive sign of the number of the rooms. In Qasr Ushish (figure 4.25), for instance, each room of its three in every floor

had a window slit located in the middle of its northern wall. Each of the eastern and western rooms in the first floor had another two windows slits located in their other outer walls. All window slits were about 0.40 m high and 0.20 m wide from inside and 0.10 m wide from outside.

Windows in some cases as in Qasr al-Mistashi were positioned in a high place in the rooms only a few centimetres under the roof and at more than 3.00 m from the floor (figure 4.26). This high location made them inconvenient for watching. Therefore, it can be suggested that their primary purpose was to provide lighting and ventilation. All ten windows in this *qasr* measured *c.* 0.50 m wide from inside and *c.* 0.20 m from the outside.



Figure 4.25: Qasr Ushish: Windows slits in the north.



Figure 4.26: Qasr al-Mistashi: A window in room 1.

4.3.2.2 Internal layout

Due to the massive amount of fallen masonry, rubbles, bushes and stone robbing in modern times, no traces of any internal arrangements have been detected in 18 of the recorded sites. This is because the current condition of 30 sites allows only the identification of a part of their internal arrangements. Although not giving the whole picture of the interiors, these arrangements shed some light on their general internal plan and also help to identify, to some extent, similarities and differences in terms of internal divisions. Fortunately, the internal plan was much clearer at nine sites, and a complete internal scheme has been reconstructed due to the good condition of preservation.

As already noted, it seemed that the vast majority of the sites had more than one storey. This has been revealed by the survival of the whole or part of the outer walls of the upper stories at some sites such as Qasr Ushish, Qasr Beni Gdem, Qasr Mistashi, Qasr Aqeela, al-Qasr al-Hamar and Qasr Shahden. Furthermore, it has been demonstrated by the existence of well-preserved vaulted rooms of the ground floor as at

Qasr al-Akrouit al-Warrany 2 (figure 4.27). However, the internal plan of the upper storey has only been traced partly in very few sites, these included Qasr Ushish, where remnants of a vaulted roof of one of its three chambers are still visible. Also, the layout of the upper floor of some buildings were often identical to the arrangements of their ground floor as indicated by traces of some walls belonging to the upper floor at Qasr al-Mistashi that extend parallel with those in the ground floor. Owing to the fact that nothing remained of the upper storey(s) of almost all the fortified buildings in the survey region - due to natural and human reasons - the architectural layouts presented below are mainly related to the ground floors of these buildings.



Figure 4.27: Qasr al-Akrouit al-Warrany 2: The vaulted chamber of the Ground floor.

1. Courtyards

Due to the fact that the amount of light and air provided to the interiors by the narrow windows that existed at most of the fortified buildings will have been insufficient, there is no doubt that this was the primary intent of the courtyards in these defensive structures. As shown by some examples within and outside the survey region, courtyards were a convenient location for underground water cisterns that were fed by rain water. In the survey area, courtyards were securely identified at only a few sites,

but this related mainly to their rubble-hilled. Courtyards and internal light wells were often formed as part of the classic fortified farms (Mattingly with Dore, 1996:127). Previous studies conducted on the fortified structures in Cyrenaica - beyond the survey area- and in Tripolitania have revealed that courtyards existed in most of the better preserved sites (Goodchild, 1950a; 1950b; Goodchild and Ward-Perkins, 1949; Reynolds, 1976). Therefore, these most likely existed at all fortified structures in the survey area explored by KAS, where four categories of courtyards have been identified (figure 4.28) as follows:

(i) Courtyard occupying the full width of the front half of the building with rooms along its back side

Some buildings had courtyards entered directly from their main door and occupied the whole width of the front half of the building. The rest of the interiors were occupied by a group of rooms opening into the courtyard. This was the case at Qasr Ushish (figure 4.28) where a spacious courtyard measuring 12.60 (east to west) by 4.40 m (north to south) occupied the whole width of the southern part of the building. Three vaulted chambers opened into this courtyard. A very similar courtyard was recorded by the ULVS in Wadi Umm el-Kharab in Tripolitania (KH46) (Welsby, 1992:78-9). Also, with some uncertainty due to the fallen rubble, a front courtyard probably existed in some other sites such as at Qasr Lyktaif, Qasr al-Mashoub, Siret Batrow and Siret al-Qatroua.

(ii) Courtyard surrounded by rooms on the front and the sides

Two variants of this type have been recognised. The first was characterised by a wide rectangular courtyard, occupying a large area of the building, and surrounded by narrow oblong rooms. This type most likely existed at Qasr Bilyanto. The second comprised a narrow oblong courtyard entered through the entrance vestibule, as evident at Siret umm Asnaib (figure 4.28), with its oblong courtyard measuring 7 m (from east to west) by 2.75 m (from north to south). This courtyard was flanked from north and south by four identical square rooms and from the west, in addition to the entrance vestibule, by two rectangular rooms of different sizes.

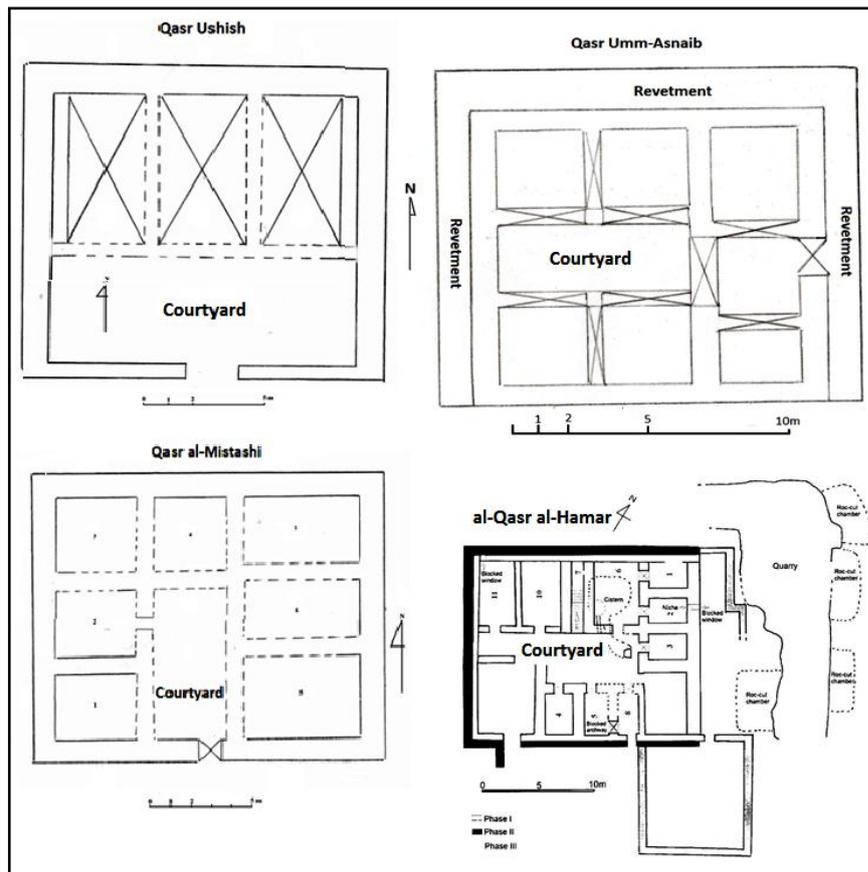


Figure 4.28: Plans of some *qsur* from (KAS) showing the variation in the courtyards.

(iii) Courtyard surrounded by rooms from the back and the sides

It is apparent that the pre-desert site of Qasr al-Mistashi (figure 4.28) had an oblong courtyard entered directly through the main entrance of the building and surrounded by rooms on three sides. The courtyard measured 10.90 m (north to south) by 3.20 m (east to west) and was flanked by three rooms on both east and west sides and a single room located in the middle of the northern side of the building. The other possible example of this type was Qasr Laraija, is located in the pre-desert area of the survey, around five km to the east of Qasr al-Mistashi, the *qsar* had an oblong courtyard measuring about 2.60 (east to west) by 10 m (north to south) flanked by four rooms on each side, and probably had another room in the middle of its northern side which was impossible to trace it due to the rubble. A strongly comparable internal plan has been identified at some other *qsur* located outside the survey region. These included Qasr umm el-Hagel, located on the road between Tocra and Ptolemais in Cyrenaica (Stucchi, 1975:518), and

in Tripolitania at a *qasr* recorded as KH14 at Wadi Umm el-Kharab (Welsby, 1992:80-84; fig.10).

(iv) *Central courtyard surrounded by rooms on all sides*

This type has been noticed at al-Qasr al-Hamar which had a central rectangular courtyard (figure 4.29) measuring 4.40 m (from north to south) by 7.70 m (from east to west). This courtyard was surrounded by a group of rooms on the four sides and included a stairwell located in the middle of the northern side of the building. The courtyard contained an underground water cistern, which had a semi-rectangular draw hole positioned about 0.60 m in front of the door of room (3). It was not easy to investigate the size of cistern due to the rubble, but it seems that the cistern was enlarged at a later time when connected to another underground water cistern built later in room (6). Similarly, the fortified farm known as Henscir Salamat located on the Tarhuna plateau of Tripolitania contained a water cistern in its central courtyard and another one in one of its northern rooms (Goodchild, 1951a:65-6, Reynolds, 1976:90-1). Other examples from Tripolitania of fortified buildings with a central courtyard surrounded by rooms on all sides included Qasr Duib and Qasr Uames in the region of the Upper Sofeggin, where a group of rooms of the two floors were arranged around a small central courtyard (Goodchild and Ward-Perkins, 1949:45-6; Reynolds, 1976:24, fig.:5). The Roman fortlet at Mselletin (also known as Qasr Bularkan) in Wadi Merdum in Tripolitania (Goodchild, 1950b:33-4; Reynolds, 1976:38-9) and two *qsur* (KH 21 and KH 24) in Wadi Umm el-Kharab also had a central courtyard surrounded by rooms on all sides (Welsby, 1992:84-6) Furthermore, this type of plan has been identified at some *qsur* beyond the survey region in Cyrenaica, including Qasr Sidi el-Khadri and Qasr el-Mnechrat (Goodchild, 1953:73-4; Reynolds, 1976:205).

2. Number and size of rooms

As mentioned above, the entire internal plan has been recognised only at nine sites and at many sites the internal arrangements have been traced partially. However, there is no doubt that rooms varied considerably in number and size. The biggest number of rooms has been recognised at two sites: Qasr et-Traish and the well-preserved site of al-

Qasr al-Hamar (figures 4.29 and 4.30). Each building comprised nine rooms. At al-Qasr al-Hamar, seven of them related to the first phase, and two rooms were probably added to the building at the last (third) phase of construction. It seems that the *qasr* had at least six rooms in the upper floor which were reached by a 1 m wide flight of stairs inserted between the western wall of the room 6 and a similar wall from the west, almost in the middle of the north wall of the building. The suggestion of the existence of the upper floor has been evidenced by remnants of walls on the top of a number of rooms and also by the thickness of some external and internal walls of the first floor. The second biggest number of rooms has been recorded at the pre-desert site of Qasr Laraija, which contained eight rooms ranged in two groups of four rooms, each opening into an oblong central courtyard. In addition to Qasr al-Mistashi that comprised seven rooms, the other fortified building that contained quite a large number of rooms was Siret umm Asnaib which had six rooms, and Qasr al-Akrout al-Qaddamy with at least six rooms.

The number of rooms was fewer at the other four sites where current condition allowed reconstruction of the complete plan of the interiors. The ground floor of the (most likely) military site of Qasr Shahden had three rooms in the first phase of construction. However, 6 oblong vaulted chambers, 3 in each of the first and second floors were added to the building at a later time (Goodchild, 1953:71, fig.:20). Similarly, the other probable military site of Qasr Ushish had also three vaulted chambers in each of its two floors (figure 4.25).

The small but high watch tower of Qasr Aqeela had only one room in each of its two floors as indicated by an internal chamfered string course (figure 4.31). The possible *qasr-like* site of Siret al-Qatroura certainly had only one spacious room in its ground floor opening into a front courtyard that occupied the full front half of the building. However, this building most likely had at least one room in its upper floor that the flight of stairs located in the courtyard led to.

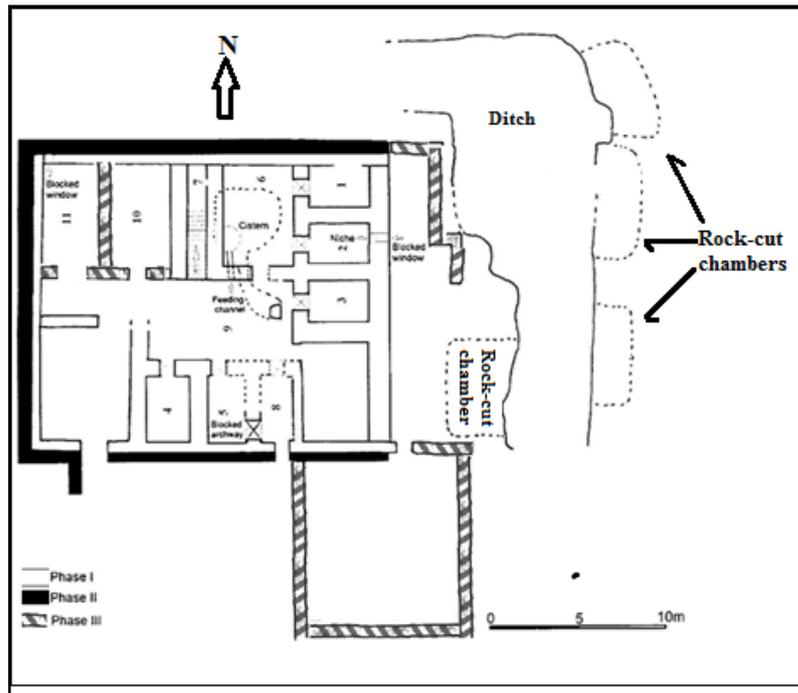


Figure 4.29: Al-Qasr el-Hamar: Measured plan.

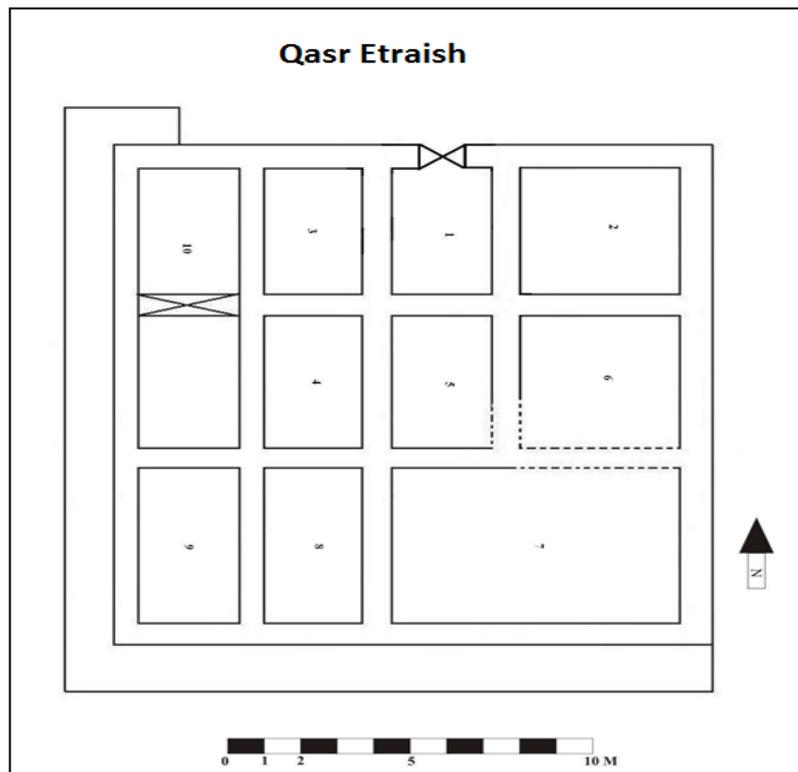


Figure 4.30: Qasr et-Traish: Measured plan.

As shown in figure 4.32, the size of the rooms varied. The largest rooms were recognised at Qasr et-Traish with about 40 m² and Qasr Shahden which had large rooms

measured 39.50 m² and at Siret et-Tauma 3 with a total area of about 35.2 m². However, apart from these three sites and Siret al-Qatroura that measured up to 30 m², all other measurable rooms in the rest of the sites had an area less than 30 m². The smallest room, measured at 5.7 m², has been identified at Qasr Lyktaif at and the large number of small rooms in one site is recognised at Qasr umm Asnaib, which had six rooms, all measuring less than 13 m².



Figure 4.31: Qasr Aqeela: The string course that separated the two levels.

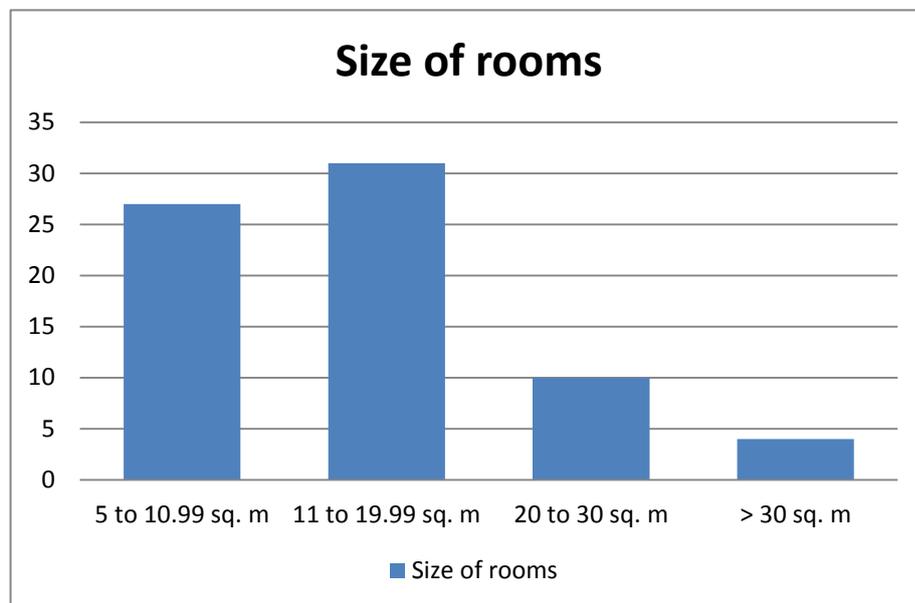


Figure 4.32: Size of rooms of the *qsar* recorded by KAS.

Out of the 72 rooms that have been recognised at 18 sites, only four rooms were comparatively huge at over 30 m². The vast majority (43%) had an area ranging between 11 to 19 m². The number of small rooms that measured less than 11 m² was also notable at 27 and 10 rooms (14%) ranged from 20 to 30 m². It appears that there was no locational significance in the variation of the size of the rooms as buildings at all the different locations in the survey area contain rooms of different sizes. Also sites with bigger or smaller numbers of rooms have been recorded in all the different environmental blocks in the survey region.

3. Stairs

Due to the huge amount of rubble and fallen masonry in the majority of the fortified buildings in the survey region, stairs have been identified in only two buildings: al-Qasr al-Hamar and Siret al-Qatroura. However, based on the fact that *qsur*, as indicated above, are mostly multi-storey structures, stairs of some kind may have existed. At al-Qasr al-Hamar, a well-preserved 1 m wide flight of stairs was inserted between the western wall of room 6 and a similar wall from the west, almost in the middle of the north wall of the building (figure 4.33). The stairwell was 5.70 m long (from north to south) and only 1 m wide (from east to west), and every flight of steps was about 0.35 m high leading from south to north. This flight of stairs probably had been used to lead up to the second floor of the building. This suggestion has been indicated by remnants of its walls on the top of some rooms and also by the big thickness of some external and internal walls of the first floor. At Siret al-Qatroura, for example, the smaller south part of the building had a terrace on its western side which probably formed remains of a stairwell leading up to the upper floor or to the roof, as parts of well-cut slabs are visible in their original positions.



Figure 4.33: Al-Qasr al-Hamar: Flight of steps leading up to the upper floor. Scales 1m and 0.20m.

4.4 Agricultural and Industrial Features Associated with the Fortified Sites

4.4.1 Water cisterns

There is no doubt that water cisterns were present at all sites, within or outside the walls of *qsur* and masked today by fallen masonry and earth. Over 30 water cisterns located at 20 sites have been recorded in the KAS survey. The vast majority of them existed outside the fortified buildings, and cisterns within the walls of the building have been recorded only at one site. All cisterns were cut out of the rock for the storage of rain water and three main types have been recorded. The first type, that forms the great majority, was a deep rock-cut cistern with narrow openings and necks measuring no more than 1.20 m² and 1.5 m diameter when circular. However, it seems, as some visible examples show, that the size of cisterns were much larger beneath the neck. Although it was not possible to measure the exact depth of any of them due to rubble infill, some were more than 6 m deep. The largest measurable cistern of this type was associated with Siret et-Taumat that measured more than 144 m³.

The only example of cistern located within the walls of a *qasr* was of this type and has been recognised in the courtyard of al-Qasr al-Hamar (figure 4. 34a) The courtyard contained an underground water cistern, which had a rectangular mouth positioned about 0.60 m in front of the door of room 3 (figure 4.29). even when it was not easy to investigate the size of cistern due to the rubble, it was possible to see that it had been enlarged at a later time, when connected to another underground water cistern (figure 4.34b) built later in room 6 during the second phase of construction. This mortared rock-cut water cistern had a rounded mouth measuring about 1.50 diameters and positioned 1.50 m to the north of the south-western corner of the room. The cistern was more than 2.00 m deep and about 3.75 m diameter beneath the floor of the room and extends slightly beneath the western wall of the room. It appears that during the construction of the cistern, a part of the western wall of the room 6 had been destroyed. Furthermore, due to the fact that this cistern was built inside a roofed room, it was fed via a water channel located under the wall that separated room 6 from the courtyard (figure 4.34b).

The second type of cistern is vaulted, rectangular and plastered with waterproof material. Of this type certainly three cisterns have been identified: two at Siret Adhrary and one at Siret et-Tauma 3. Siret Adhrary had two vaulted cisterns in a good state of preservation, the larger one (figure 4.35a) positioned about 45 m to the south-east of the *qasr* on the southern slope of the hill. Internally, the cistern is divided into two chambers connected together by two arched wide openings. It was not possible to measure it fully due to the rubble infill, yet the eastern part of the cistern was probably identical to the western part which measures 8. m (north to south) by 3. m (east to west) by at least 4 m deep.



Figure 4.34 (a, b): Al-Qasr al-Hamar: Water cisterns.

a) Phase (I) water cistern.

b) Phase (II) mortared water cistern. Scales 1m and 0.20 m.

A draw hole measuring about 0.70 m wide was opened in the roof of the vault at the western side. The other vaulted cistern lies on the eastern slope some 60 m to the east of the *qasr* (figure 4.35b). This was smaller at 7.25 m (north to south) by 2.70 m (east to west) and contained only one chamber, but there was probably an intention to enlarge it as is indicated by a recess in the eastern wall of the cistern. A few meters to the east of the ditch on the eastern slope of the hill at Siret et-Tauma 3, an underground vaulted water cistern was identified, measuring approximately 3 m (north to south) by 1.80 m (east to west). The interior was lined with water proof material.

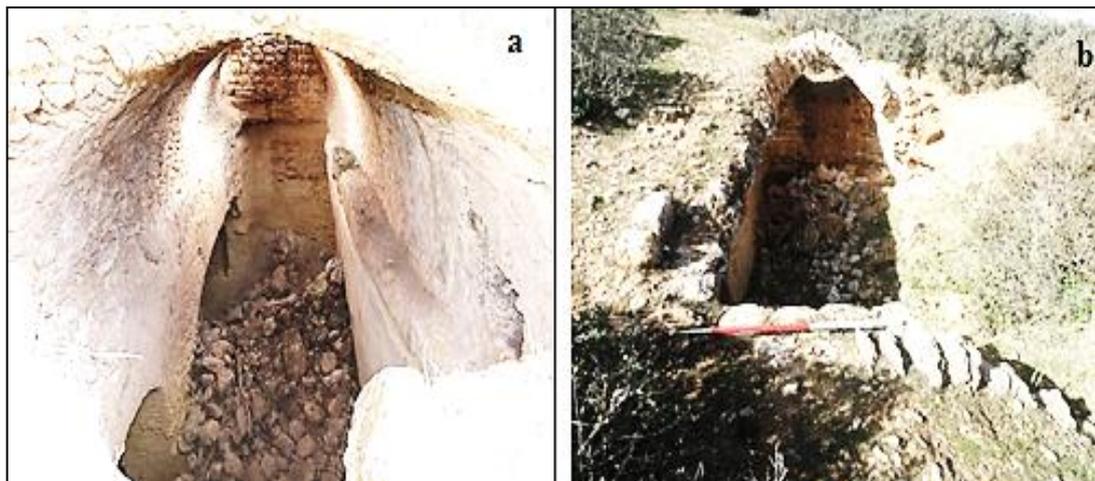


Figure 4.35 (a, b): Siret Adhrary: Vaulted water cisterns. Scale 1m.

The third type was a huge rectangular cistern completely cut out of the natural rock with flat roof supported in some sites by rock-cut pillars or columns and some were lined with water proof cement. The largest example of this lay about 70 m to the south of Siret al-Qatroua (figure 4.36a and b). Measuring 23.75 long by 4.00 wide by 2.5 m deep, there are no remnants of any waterproof mortar on the walls of the cut, but it can be interpreted as a huge water tank. This is indicated by the presence of a water draw hole at the middle of the roof (which has been blocked by locals in the modern times with a mixture of clay and twigs of trees to protect animals and people from falling into the cistern). Another huge rock-cut water cistern of this type existed a few meters to the west of Siret umm Asnaib. The flat roof of the cistern was supported by a simple Doric column cut in the natural rock (figure 4.37). The cistern was probably reused at a later time as a domestic or a storage room as indicated by a rectangular entrance opened in its eastern side (figure 4.38).



Figure 4.36 (a, b): Siret al-Qatroua: The water cistern; looking north. Scale 1m.

- a) The water supply opening (enlarged in the modern times).
- b) The interior and the water draw hole in the roof.

Cisterns were either located at the edge of the hill that the *qasr* was located on and/or at the edge of the wadi floor. They were fed by rain-water through water catchment arrangements that included diverting walls as seen at Siret Battouma and rock-cut shallow and deep channel as existed at many sites, such as Siret umm Asnaib, Siret al-Qantouty, Siret Bu-al-Husain and many others. Such evidence, as shown in figure 4.35 and 4.36, tell us that cisterns were used for irrigation, particularly those that existed at sites adjacent to fertile wadis and associated with other forms of agricultural features

such as wadi walls. Obviously, the abundance of water arrangements has been noted at sites located at the fertile lands.



Figure 4.37: Siret umm Asnaib: The water cistern, looking west.



Figure 4.38: Siret umm Asnaib: Later entrance of the converted water cistern, looking west. Scale 1 m.

4.4.2 Rock-cut chambers

Rock-cut chambers have been identified at only 20 sites in the survey region, but, most likely existed at the vast majority of sites particularly at those surrounded by ditches where chambers could be cut in their edges. Also, rock-cut chambers were found at the sites located on or built close to hills and raising rocky grounds where in their slopes and edges rock-cut chambers can be cut. The fallen masonry, rubble,

vegetation and the erosion of soil from these hills have undoubtedly masked them. On the one hand, the chambers were very simple, represented in irregular enlarged natural caves that had no form of architecture. On the other hand, many architectural features occur at the great majority of the rock-cut chambers. These include well-shaped entrances, internal divisions, arches, niches, roof supporting columns, troughs, olive presses arrangements, all formed in the natural rock. Yet, some of them had stonework such as building walls to narrow entrances and supporting roofs.

Rock-cut chambers pierced in the edges of the ditches have been noted at some sites. In the survey area, Qasr Shahden provided remarkable examples of these chambers cut in both inner and outer edges of the ditch (figure 4.39). At some other sites, despite the bushes, soil and the huge amount of rubble and masonry fallen inside most of the ditches, rock-cut chambers are partly visible. They were mainly pierced in the outer edges of the ditches (Qasr al-Akrouit al-Warrany 1, Siret al-Faqeer Ali, et-Tauma 4, and et-Tauma 2). At al-Qasr al-Hamar, in addition to the three rock-cut chambers that cut in the outer face of the ditch, one chamber was pierced in the inner face. Rock-cut chambers were also seen cut in the slopes of the hills located on or close to buildings. Some of these chambers were very simple and presented, as mentioned above, on irregular internal space resulting from enlargement of natural cave. Of these, one existed in the southern slope of the hill where Qasr Ushish was located.



Figure 4.39: Qasr Shahden: Rock-cut chambers in the inner edge of the ditch.

Apart from using some of them as rock-cut olive presses (see below), these rooms were possibly used for storage purposes particularly in the sites where features of agricultural activities were evident. They may also have been used as stables, as indicated by shallow rock-cut troughs in Qasr Shahden probably for feeding and watering horses (figure 4.40). Such rock-cut stables are known in some other sites in Cyrenaica such as Qasr el-Heneia, (Goodchild, 1951b:138; Reynolds, 1976:178-9) and in Tripolitania in one of the rooms of the outpost site of Hr Krannfir (Khanefi) (Mattingly, 1995:104).



Figure 4.40: Qasr Shahden: One of the rock-cut chambers located in the inner edge of the ditch that was probably used as stable. Scale 1m.

4.4.3 Olive presses and wine production features

Elements of olive presses are occur in great quantities in Cyrenaica and most probably thrived during the Byzantine period. The geographical distribution of olive culture was widespread in the region from the upper escarpments of the Gebel to the coastal strip. Moreover, many farmers had their own private installations, while larger public industrial complexes generated huge amount of olive oil. For instance, in the area

of Lamluda alone, 55 oil presses are known, most operating during the Roman and Byzantine periods (Wilson, 2004:149). In the survey area, evidence of olive oil and wine production was identified in at least 10 sites. All olive presses and wine production features in the survey area were found outside the *qsur* and it was not possible to prove their presence inside the *qsur* without excavation. However, their existence within the *qsur* walls cannot be excluded as they have been identified inside similar fortified farm buildings in Tripolitania (Mattingly with Dore, 1996:135-6).

With regard to olive presses, evidence is seen at six sites (Qasr Wadi al-Sanab, Siret Adhrary, Siret Atwainsh, Siret Battouma, Qasr Aqeela and Siret et-Tauma 3). They are all of *mola olearia* type and no evidence of the *trapetum* type of oil mill was found. *Mola olearia* is a mill basin type usually consists of two cylindrical millstones that rotates around its axial pivot and rests directly on a flat surface on which the crushing took place. The *trapetum*, on the other hand, is of pronounced curved surface and the millstones had a half-moon section that can be lowered or raised to avoid crushing the olive kernel thus spoiling the flavour of the oil (Drachmann, 1932:42).

The best examples existed at three sites. At Siret Atwainsh, a few meters to the south of the building an olive mill has been found on the ground. Moreover, a complete rock-cut olive press existed inside a rock-cut chamber room about 50 m to the south of the building (figure 4.41). Two rock-cut tanks, one round and one rectangular are located outside the olive press chamber. At Siret Adhrary, rock-cut chambers existed in the southern slope of the hill. It seems that, recently these chambers are regularly cleaned up by locals in order to use as animal shelters and grain storage rooms. No doubt, this recent use of the archaeological features has disturbed and partly destroyed the site. However, important archaeological features have been exposed, including olive presses where some of their parts still exist in good condition and in their original positions (figure 4.42). Similar olive press also existed in a rock cut chamber located at the western edge of Wadi al-Sanab to the west of the *qasr*.



Figure 4.41: Siret Atwainsh: Rock-cut olive press.



Figure 4.42(right): Siret Adhrary: Rock-cut olive press.

In the other few sites, some elements of oil presses were found scattered around the *qsur*. Of these, complete and fragmentary mills are located adjacent to Siret et-Tauma 3, Qasr Aqeela and Siret Battouma as illustrated in figure 4.43.

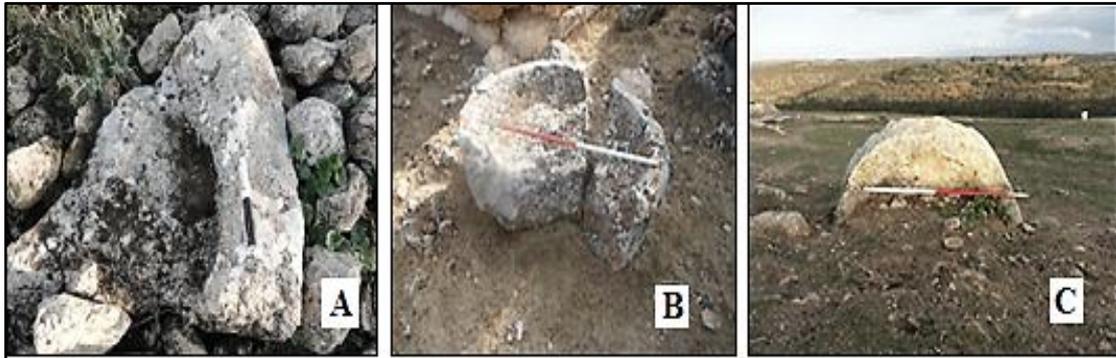


Figure 4.43: Remains of olive mills.

A: Siret et-Tauma 3, B: Qasr Aqeela, C: Siret Battouma.



Figure 4.44:Qasr al-Akrouit al-Qaddamy: Wine production features. Scale 1 m.

Wine production elements were also evident at some sites in the survey area. An excellent example of this is located at a distance of about 60 m to the north-west of Qasr al-Akrouit al-Qaddamy (figure 4.44). The most curious feature of these was a number of circular and rectangular shallow vats and storage tanks cut in the natural rocky ground.

One of them had shallow recesses on its upper edge that most likely resembles emplacements to its, missing, cap's lifting up handles. Also, some were linked to purifying basins by rock-cut channels and had sediment recesses in their bottoms. Moreover, rock-cut narrow channels existed in this bedrock to divert the liquid into the vats and tanks. All these industrial arrangements strongly suggested that wine had been produced in this site. Furthermore, remnants of a small structure of rough rubble walls were identified north-east of the *qasr*. This probably was part of the industrial features in the site as some traces of orange waterproof mortar are still visible on its walls.

Sunken vats (*dolia*) probably used for wine storage were found at Qasr al-Qatroura and Qasr al-Hammam sites. At al-Qatroura, 15 m to the north of the *qasr*, there are three vats sunken in the ground and supported by stones arranged next to each other (figure 4.45). The vats are of 1 m depth and their maximum width is 1.0 m which narrows down. Thickness of the vats' walls average between 3 to 3.5 cm and the colour of the mortar is dark brown with red corpuscles perhaps clay granules and a few micro shells and some circular white corpuscles. The upper edges of the vats are entirely destroyed, however, we know from some remains scattered around these edges that they were chamfered and measuring about 12 cm thick. At least two similar vats lay about 7 m to the north-west of Qasr al-Hammam (figure 4.46). It was apparent that the vats were surrounded by an enclosure. This enclosure was constructed of large dressed blocks where two courses of its eastern wall and only the lower course of the other sides are now still visible in the site.



Figure 4.45: (right) Qasr al-Qatroura: Sunken vats. Scale 0.50 m.

Figure 4.46: (left) Qasr al-Hammam: Sunken vat. Scale 1 m.

4.5 Size Categories of the Fortified Structures in the Survey Area

Firstly, we have to indicate here that the area dimensions given in figure 4.47 relates to the area enclosed by the outer walls of the fortified structures. Revetments, ditches, outer enclosing walls and any other associated features, where they existed, are not included. Upper storeys are also not included, as the original number of floors is generally unknowable from the extant remains, though it is widely acknowledged that *qsur* were generally multi-storey buildings. Exceptionally, Qasr al-Hamama (1056 m²), Qasr Beni Gdem (1012 m²) and Siret Qasrin al-Giamel (880 m²) were the only three sites categorised as large (>800 m²). Apart from Siret et-Tauma 4 which measured 712 m² and Qasr al-Akrouit al-Qaddamy 547 m², the rest of the sites recorded in the survey were under 500 m². The vast majority of the sites fall in the range below 400 m², out of which 32 sites had areas ranged between 100-300 m² and nine sites fall between 300-500 m². The smallest fortified building was the watch tower of Qasr Aqeela measured at 22.3 m², was one of only five sites measuring less than 100 m². The rest are Qasr Stablous 1, Siret et-Tauma 1, Qasr Wadi al-Sanab and Qasr al-Hammam.

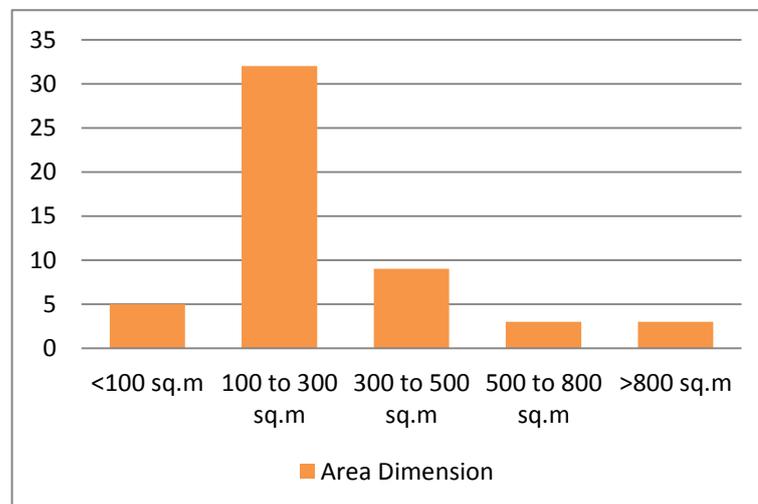


Figure 4.47: The area dimension of 53 sites recorded by KAS

As illustrated below (figure 4.48) site size had no evident significant geographical correlation as different size categories existed in the various topographical locations. However, the vast majority of the coastal sites ranged in size between 100-200 m²; also almost all of the large sites were located only on the second escarpment of the Gebel.

In many cases, however, the size of the building was controlled by its location. For instance, Siret et-Tauma 1, one of the smallest fortified structures in the survey area was built on raised ground surrounded by two major valleys from east and west and lower lands from other sides. The occupants probably exploited the topography to construct this building in this naturally protected location (figure 4.49). This interpretation can also be applied to the rest of the sites built on hilltops and raised ground in the survey area, such as Siret et-Tauma 2, Siret et-Tauma 3, Siret et-Tauma 4 and Siret Adhrary. However, though of different architectural character, the small building of Qasr al-Hammam was built on a level site that could have accommodated a larger building. Doubtless, other factors controlled the size of the fortified structures including the function of the building, the presumed economic condition of the owners as well as the possible number of people occupying and using these buildings.

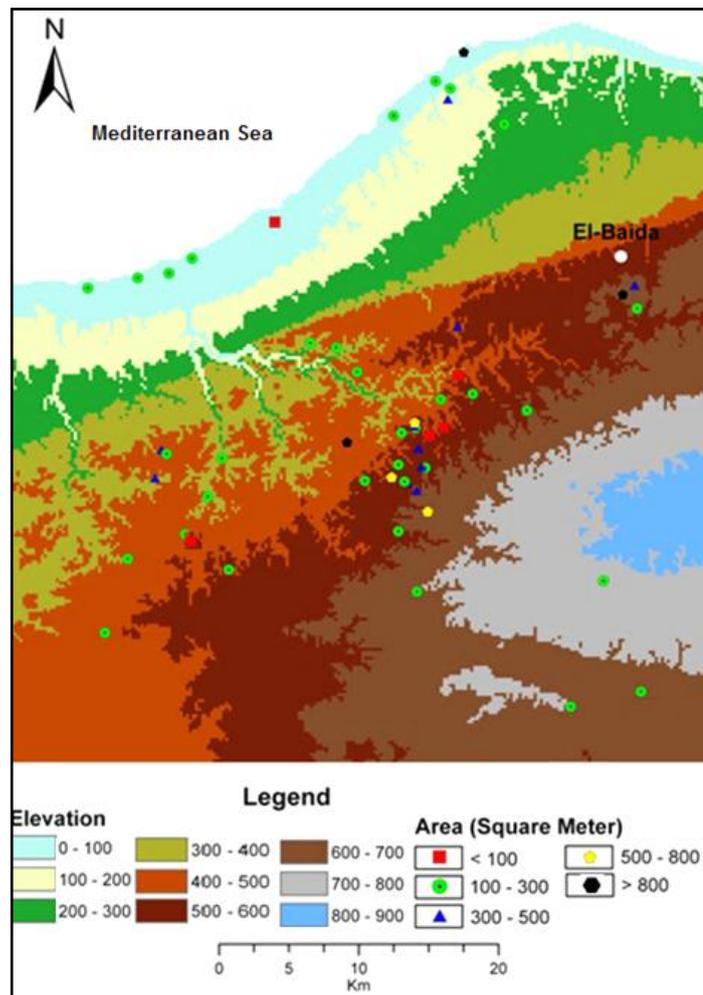


Figure 4.48: A map of the survey area showing sites in terms of their size category.

The current ruinous condition of the vast majority of the sites in the survey area has prevented me from investigating the number of floors that these buildings may have contained. Nevertheless, some relatively well preserved sites indicate that they would have consisted of at least two floors. The most obvious indications of that are the slightly projecting strips of thinner blocks that marked the separation between the levelling in some buildings. These were clearly noted in the well-known Qasr Beni Gdem (comprising three levels), Qasr Shahden and Qasr Ushish (two storeys), which were proposed by Goodchild as military fortifications (Goodchild, 1953:70-2; Reynolds, 1976:201-3). Firstly, this architectural evidence has been noted in some other sites such as Siret et-Tauma 4, Qasr et-Traish and the isolated fortified outpost of Qasr al-Mistashi (figs 4.1 c, g) which can be considered, as will be discussed later, as fortified farms. Secondly, the abundance of collapsed material (mainly rubble) within and outside many of the fortified structures in the survey area can be considered as an indication of the existence of upper storey(s), particularly in the buildings where the walls of the lower storeys still survive almost to their original height. Thirdly, the existence of vaulted rooms in the ground floor such as this example recognised at Qasr al-Akrouit al-Warrany 1 (figure 4.27) is another type of evidence for two floor levels. Fourthly, flights of steps leading up have also been noted in two sites: al-Qasr al-Hamar (figure 3.39) and in the Qasr type building of Qasr el-Qatroura.



Figure 4.49: Siret et-Tauma 1: The location, looking north.

Finally, though obscured by collapsed building materials, it seems that the great majority of the surveyed buildings most likely comprised two floors or more. In addition to the evidence provided above, it has been proved that the classic design of the Roman fortified farms (*qsur*) comprised more than one floor in Tripolitania (Goodchild and Ward-Perkins, 1949:90; Mattingly with Dore, 1996:127).

4.6 Summary

This chapter has attempted to identify available fortified structures in the survey area. Not only are fortified structures extensively identified, but their size and characteristics have also been defined. The next chapter also attempted to classify the different types of fortified building structures identified in this chapter according to their purpose and design. An attempt to discuss the military and civilian nature of these sites is made in Chapter 7. There, the issues related to the function of these buildings and their ownership is also raised and discussed.

Chapter 5: Site Typologies

5.1 Introduction

The core aim of The KAS was to record fortified buildings, whether of military or civilian character, that were densely scattered in a specific area of the Cyrenaican countryside. However, unfortified buildings associated with farming evidence and approximately of the same size as the most civilian fortified buildings but lacking defensive features, were also recorded. Generally, the recorded sites could be classified into two main types. The first comprises sites that are most likely of military nature (section 5.2) and the second relates to fortified buildings (*qsur*) and *qsur*-like building of civilian character, associated with agricultural and industrial features (section 5.3). Each of the above main categories is divided into sub-types. With regard to the probable military sites their size is the main factor of the classification. Civilian buildings are categorised into two main types - fortified *qsur* and unfortified *qsur*-like building - on the basis of the physical appearance of the structures. The civilian fortified *qsur* varied in terms of their number in a single site and in the size of surrounded settlement, as detailed below in sub-sections 5.3.1-5.3.3.

5.2 Military Sites

There were no military inscriptions found in the survey area, but due to the nature of the findings, 11 sites (20%) from KAS have been classified as military or probably military (figure 5.1). These sites, plotted in figure 5.2, varied in terms of topographical location, masonry type, defensive features, general layout and size. However, they had some common features; these include a single entrance and multi-storey structure. The military classification of these sites is mainly based on their architectural and locational characteristics and on the lack of any associated industrial and agricultural features. Some of them were constructed in isolated areas where the nearest ancient site that can be found is about 5 km away. With the exception of the late Roman fort of Qasr al-Motanib, no large Roman military forts, such as those that existed in Tripolitania and in many other Roman provinces, have been recognised in Cyrenaica to date. The use of the terms fortlet, outpost and watch tower are most suitable to describe 99% of the military

and probable military structures that have been recorded by KAS and previous published studies.

Following what has been implemented by Mattingly (1995:90-106) in his classification of the military sites of Tripolitania, military and probable military sites in Cyrenaica can be categorised into four types according to their size: forts, fortlets, outposts and towers (figure 5.3).

5.2.1 Forts (> 0.8 ha)

None of the known military sites in the countryside of Cyrenaica reached an area of one hectare. Only one known site in the whole countryside of the province could come under this category. This was represented by the coastal fortified building of Qasr al-Motanib, which is located on the beach - some 30 km to the west of Tocra (figure 2.1). Its size at c.0.93 ha makes it large enough to be described as a fort. Furthermore, this largest fortified building, known to date in the countryside of Cyrenaica, resembled military site based on its size, location and architectural characteristics. This rectangular fort, measuring 81.5 by 114 m, had an external rectangular tower almost to the centre of the western wall, opposite the main gate of the fort. Parts of the two internal corner towers are also visible at the south-east and south-west corners (For more details see Chapter 2).

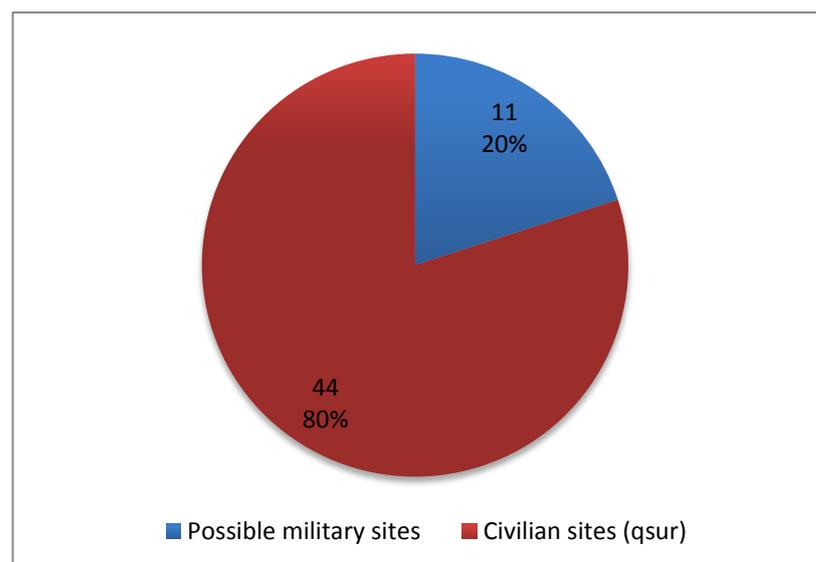


Figure 5.1: Number and percentage of sites recorded by KAS in term of type.

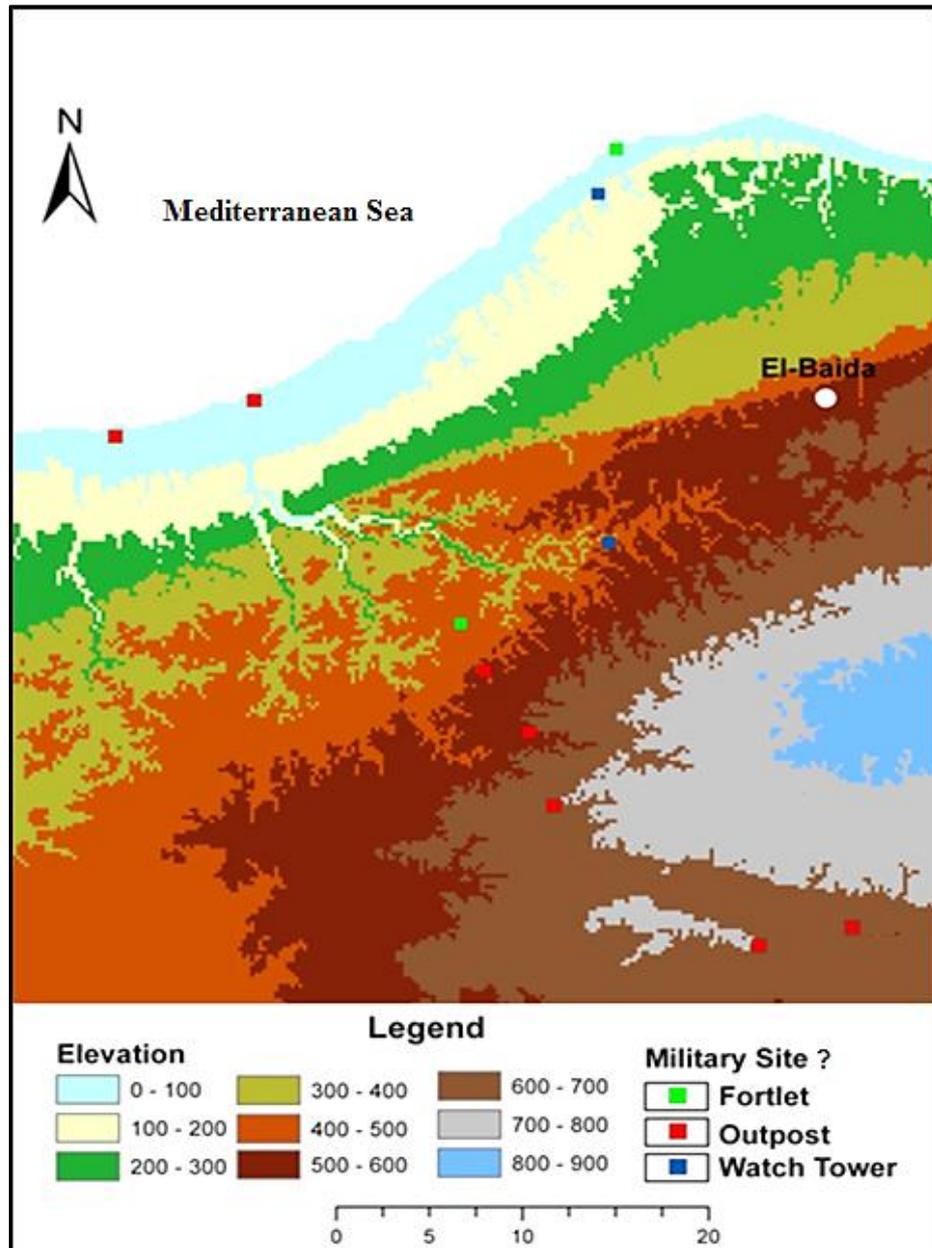


Figure 5.2: The location of the probable military sites in the survey region.

5.2.2 Fortlets (0.1-0.5 ha)

Some sites in Cyrenaica can be described as fortlets on the basis of their size and architectural features. The vast majority of these buildings ranged between 0.1 and 0.17 ha in size. These sites slightly varied in terms of the size of their masonry and in some of their architectural features. Based on the existence or lack of towers, they can be divided into two categories: 1) fortlets with towers and 2) fortlets without towers.

5.2.2.1 Fortlets with towers

Fortlets with towers of different position, number, shape and size existed within and beyond the survey region in Cyrenaica. Some of them had only two external projecting towers located in the middle of the two long sides of the building, others contained four projecting angle towers, and one site was distinguished with four projecting external towers positioned in the middle of each wall.

The two sites that might be classified as fortlets in the survey area were of this type. The first is the well-known site of Qasr Beni Gdem (KAS 1), located on the eastern edge of Wadi al-Kuf some 22 km to the west of El-Baida. The second is the coastal fortified building located on a raised ground in the middle of the ancient harbour site of Phycus (al-Hamama) (KAS 33). Both sites had external projecting rectangular towers in the middle of their long sides. For example, Qasr Beni Gdem has previously been described as a fort (Beechey and Beechey, 1828:570; Goodchild, 1953:71; Pacho, 1827:169; Reynolds, 2003:96; Romanelli, 1943:201; Stucchi, 1975:422). However, if we consider the size (at c. 0.1 ha) and general characteristics, the term fortlet might be the more appropriate term to describe the building. The military criteria of Qasr Beni Gdem are clearly obvious, the fortlet is a ditched rectangular three-storey building 44 by 23 m built of high quality ashlar blocks (figures 2.2 and 2.3). A single entrance measuring about 2.30 m is located in the western half of the well-preserved northern wall. Two projecting square towers 4 m aside and still standing to three storeys have been identified in the building. The towers were located in the middle of each of the northern and southern walls and these likely had vaulted roofs as indicated by remnants of a vault still visible in the first floor of the well-preserved northern tower (figure 4.20). As previously stated in chapter 2, the defensive purpose of these towers is indicated by the existence of wide rectangular windows measuring about 1.50 m high and 0.70 m wide which possibly were provided, as Goodchild (1953:70) claimed, for *ballistae*. In addition to these, the second and the third floors had smaller windows measuring 0.60 high and 0.40 m wide and the ground floor of Qasr Beni Gdem had narrow windows slits measuring only about 0.30 m wide. Regarding the interior, nothing is now visible due to the fallen masonry; however, it seems that the building had a large central courtyard surrounded by rooms from all sides.

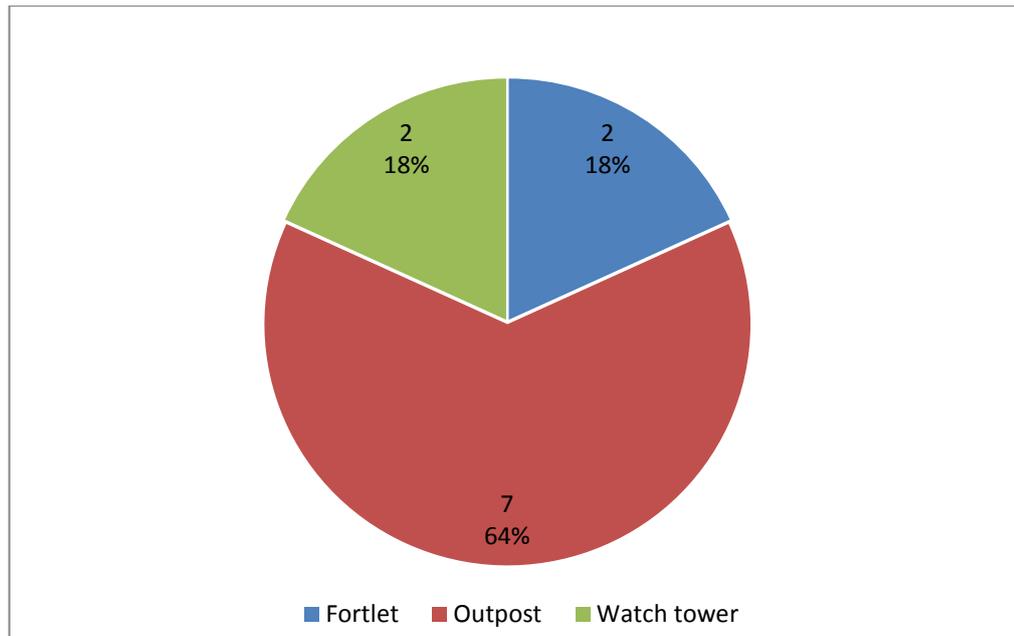


Figure 5.3: Typology of possible military sites recorded by KAS.

The fortlet at al-Hamama (figure 9.108), only the lower course of its external walls remains. When measurement was taken, the size of the building is approximately the same as the Qasr Beni Gdem site. The unditched building is rectangular measuring 0.1 ha, the outer walls that were of ashlar masonry measured 44 m from east to west by 24 m from north to south. The walls were supported by a revetment of smaller irregular stones and rubble, measuring 1.60 m wide at the southern wall and only 1 m at the other walls. A part of the lower course of an outer rectangular tower can be seen almost in the middle of the northern wall and probably a similar one existed in the southern wall. A wide single entrance most likely existed in the eastern wall leading to the interior which is now completely masked by fallen masonry. Nevertheless, it seems that, similar to Qasr Beni Gdem, this possible fortlet also had a central open courtyard as indicated by the shallow level of the debris in the centre of the interior.

Fortlets with towers were also recorded beyond the survey area. A probable fortlet has been described by Bates (1914:164, figs. 68, 68a and 68b) as a stronghold located somewhere around the coastal town of Ghemines 50 km south of Benghazi. His reconstructed plan and two sections, which lack scales, show four external projecting towers in the centre of each side. This site was recognised later by Goodchild from air reconnaissance to have existed near Suani Tica 20 km south of Benghazi (Goodchild, 1951b:141; Reynolds, 1976:182).

Projecting angle-towers have been identified in two fortlets in Cyrenaica. The first is the site located in the small village of Tailimun (figure 2.7), which was described by Goodchild (1953:67) as a fort. The current condition of the site, located 60 km south west of Benghazi, has shown that it has relatively large unditched fortlet measuring c. 0.17 ha. It has at least two projecting angle towers accessible from the interior by arched doorways, as indicated by the remains of the doorway of the north-western angle tower. The other site is the square fortlet of Qasr el-Geballa, measuring 0.15 ha (39 m a side) is located on an isolated hill controlling the surrounded landscape due south of el-Merj (figure 2.5). This site, as the fortlet at Tailimun, was distinguished from other known military sites in Cyrenaica due to the existence of projecting angle-towers. This fortlet, which has been briefly described by Goodchild as a “fortress” had angle-towers of different sizes (Goodchild, 1953:68; Reynolds, 1976: 199).

Between the outpost of Zaviet Tailimun and the watch tower of Msus, an outpost constructed of large blocks was located on a hilltop surrounded by a wide irregular ditch at Esh-Sheledima. The site was largely destroyed by an Italian fort. However, Goodchild (1953:68) described the site as a fort and determined that the size is almost the same as the one at Tailimun.

5.2.2.2 Fortlets without towers

The only site in my own survey region that can be considered as a fortlet that lacks towers is Qasr Shahden (KAS 3). This ditched fortified building (figures 2.15 and 2.16) was originally built, as discussed in section 5.2.3, as a small outpost of two storeys measuring about 0.02 ha. It was enlarged at a later time in the form of a fortlet measuring c.0.09 ha by the addition of an outer wall enclosed the tower. In a third phase of construction, long vaulted rooms were built in the space between the tower and the outer wall (Goodchild, 1953:71-72; Reynolds, 1976:201-203).

Beyond the survey region a number of possible fortlets of this type have been previously published. These included the westernmost military site within the boundaries of Cyrenaica measuring 0.11 ha and located on a low ridge at Bir Umm el-Garanigh, close to the legendary site of 'Altars of the Philaeni' (Goodchild, 1953:67; Reynolds 1976:196). In the eastern edge of the plateau of the Gebel to the east of Cyrene, Goodchild (1953:70) has briefly described fortified buildings located some 15

km from each other as an outer ring of military buildings to protect the plateau of Cyrene. Among these sites are the two fortlets of Ain Mara (*Hydrax*) (figure 2.8) and er-Remtheiat (figure 2.18). These fortlets are almost of the same size (at 0.11 ha) and had deep vertical ditches. Ain Mara, for example, had rock-cut chambers opened in its outer sides.

5.2.3 Outposts (c. 0.01-0.10 ha)

It was found that the vast majority of the probable military sites (64%) in the survey region come under this category (figure 5.3). These seven outposts included:

1. Qasr Ushish (KAS 4).
2. Qasr Lyktaif (KAS 2).
3. The first constructional phase of Qasr Shahden (KAS 3).
4. Qasr al-Oqla (KAS 40).
5. Qasr Alhesy (KAS 37).
6. Qasr al-Mistashi (KAS 6)
7. Qasr Laaraija (KAS 7).

The above sites had some features in common: they were rectangular multi storey buildings with an average dimension of about 0.02 ha. Furthermore, revetments and ditches were absent at all sites except at al-Oqla (the ditch around Qasr Shahden most likely dated back to a second or third phase). However, their military nature is suggested by their isolated tactical locations, by architectural criteria and by the absence of evidence of associated agricultural and industrial activities.

The first three sites (Ushish, Lyktaif and Shahden) were located on hill-tops and raised ground overlooking a wide area of the surrounding landscape of the second scarp of the Gebel. As illustrated in figure 5.2, they were almost located on the same line from north to south. The distance between Qasr Lyktaif and Qasr Shahden is about 2.5 km and between Shahden and Ushish 4.5 km. Moreover, the fortlet of Qasr Beni Gdem was also located on the same line 3 km to the south of Qasr Lyktaif. As evident at Qasr Shahden and Qasr Ushish (figures 2.17 and 4.25), the main single arched entrance gave access to a vestibule, with a group of three vaulted rooms in two storeys occupying the

rear side of the building. Also, at Qasr Ushish slightly projecting strips existed to mark the separation between the storeys (figure 4.1, b). At the important classical harbour site of Maatan el-Oqla (perhaps *Caenopolis*) an outpost (figure 9.131) measuring 0.01 ha is located. The outpost was positioned on a hilltop surrounded by two valleys that flanked the ancient coastal village. This outpost has been described by Laronde (1983:78) as a tower and incorrectly measured as a square 25 m a side.

The two pre-desert sites of Qasr al-Mistashi and Qasr Laaraija were located on the same line at the northern edge of the pre-desert; some 10 km to the south of the small modern village of Slonta. Each site was built in an isolated area where the nearest ancient site is situated five km away. The two unditched rectangular buildings were almost of the same size: Qasr al-Mistashi (KAS 6) measuring 15.80 m by 13 m (c. 0.02.0 ha) (figures 4.1 g, 4.26 and 4.28) and Qasr Laaraija (KAS 7) (figure 9.26), was slightly bigger measuring 18 by 15.5 m (c.0.02.8 ha). They were built in the same masonry style and had a similar general layout. Each building comprises two floors with external walls built of two faces of small irregular blocks of limestone in different sizes, with a rubble core and quoins of larger blocks. As apparent in the well preserved site of Qasr al-Mistashi, small pieces of stone were inserted between the courses for levelling purpose and to fill the gaps between the blocks. The defensive features of the two sites is indicated by the thickness of the outer walls (about 1.05 m) and the narrow single entrance measuring 1.05 m wide was inserted in the southern wall in both sites. Narrow windows slots were evident as seen at Qasr al-Mistashi. At least 10 windows have been identified in the building, each measuring about 0.50 m wide from the outside and about 0.20 m from the inside. The windows were positioned in a high place in the rooms only a few centimetres under the roof. The high position of these windows at more than 3.00 m from the floor, made them inconvenient for looking out. Therefore, it can be suggested that their primary purpose was to provide lighting and ventilation as well as made difficult to be reached by intruders. The two buildings had similar internal layouts which were clearly divided into two parts separated by a courtyard or corridor. A number of rooms - seven at al-Mistashi and eight at Laaraija - were identified in the ground floor of each building.

A number of outposts in different areas of Cyrenaica beyond the survey region were previously recorded. Of these, is the remarkable square ditched outpost of Qasr el-

Heneia (figure 2.8) that located some 7 km south of Agedabia (*Corniculatum*). Goodchild (1951b:131-141) has correctly described this site as a frontier outpost dating back to the first century AD and probably reused by Justinian on his reorganisation of the Syrtic limes. The square outpost, 16 m a side (c. 0.02 ha), had a strong defensive features included in its thick outer walls at 1.50 m, supported by revetment - 3.50 m wide - and surrounded by vertical rock-cut ditch - 4.50 m wide, about 5.0 m deep. The largest outpost recorded to date in Cyrenaica is the one known as Qasr al-Atallat (figure 2.9), measuring c. 0.08 ha. This outpost was located on a hill-top some 10 km south-east of Boreum. The outer walls were 1.70 m wide built of large well-coursed blocks, strengthened by a revetment and surrounded by a ditch (Goodchild, 1951c:14; Reynolds 1976:191). The square fortified site of Qasr Hadduma, located near the small village of al-Magroun to the south-west of the fortlet of Zaviet Tailimun, could also be considered as an outpost due to its size and location. The ditched building described as a small fort by Goodchild (1953:67), measures 0.04 ha (see Chapter 2 for details).

5.2.4 Watchtowers (c. 0.01 ha and less)

Watch tower is the term that describes a small and high fortified building (generally c.0.01 ha and less) that was located carefully to overseeing the surrounding area. Based on location, architectural characteristics and size, only two sites (Qasr Aqeela and Siret Masouda) in the survey area can be considered (probable) military watch towers. Moreover, farmers might also have watch-towers overlooking grazing areas and water sources. A possible example of these is the small fortified tower-like *qasr* of Siret et-Tauma¹ (KAS 18) that will be presented in the later part of this section.

Qasr Aqeela (KAS 25), which is located on a hill-top some 9 km to the south-east of Qasr Beni Gdem is nearly square (4.80 by 5.00 m) two-storey watch tower (figure 5.4). The tower was constructed of well-cut roughly dressed ashlar and had a single entrance inserted in the middle of the eastern wall, which give access to the interior that comprised one room on each floor. The two levels of the tower were most likely separated by wooden beams resting on projecting edges of one of the walls courses and a large oblong block attached to the western wall (figure 5.5). No traces of a permanent

flight of steps have been recognised in the building; therefore, it seems that the second floor was accessible from the ground floor by a wooden ladder.



Figure 5.4: Qasr Aqeela: Looking north east. Figure 5.5: Qasr Aqeela: The interior.

The architectural military appearance of the building was characterised by its height and the existence of narrow windows slots (figure 5.6). Other small gaps between the blocks most likely happened as a result of an earthquake rather than been purposely made (figure 5.7). The other argument for a military interpretation comes from the strategic location of the building on a hill-top surrounded by valleys on all sides.



Figure 5.6: Qasr Aqeela: The window slots. Figure 5.7: Qasr Aqeela: Gaps between the blocks.

With regard to Siret Masouda the small size of the building and its location on a hilltop overlooking the ancient harbour site of Phycus (al-Hamama) are the indications of its military nature. As it survives only as a mount of rubble it was only possible to

discern that it was an approximate square measuring 11 by 10 m built of small neatly coursed blocks.

Though slightly bigger and surrounded by a stone enclosure, the watch-tower at Zaviet Msus (figure 2.13), located some 60 km south-west of Benghazi, was also a small tower of a single room measuring 7.5 by 6 m. This important site (see Chapter 2 and 6) was surrounded by an unditched square enclosure (19.5 m a side,) built of well-dressed drafted blocks of limestone entered through an entrance with a flat lintel lies in the western wall. The small square ashlar building (c. 0.0.2 ha) located at Tansoluch, some 30 km to the east of Tocra, was most likely a military watch tower. The building was constructed of well-dressed large ashlar masonry and had a single arched entrance inserted in the west wall. Apart from the upper part of an arch, nothing today is visible of the interior (Kenrick, 2013:48, fig. 29; Reynolds, 2003:415).

Most of these probable military sites were surrounded by deep and wide ditches. At al-Atallat for example, the ditch was about 12 m wide according to the measured plan drawn by Goodchild (Goodchild, 1951c:15, fig. 3) and was 7 m at el-Hadduma (Goodchild, 1953:67; Reynolds 1976:197) Also, the depth was remarkable at some sites as it was no less than 5 m at el-Heneia. At some other sites such as Ain Mara and er-Remtheiat, rock-cut chambers cut in its outer sides.

5.3 Fortified *Qsur* and Unfortified *Qasr*-like Buildings of Civilian Nature

The term *qasr* (plural *qsur*) has been used in previous studies to define a tower-like structure comprising more than one storey and commonly containing an internal courtyard or light well, with some defensive features or capability such as thick walls and a single entrance. These are considered the main characteristics of the *qsur* (Mattingly with Dore, 1996:127). Moreover, they were generally associated with agricultural and pastoral features, and often the remnants of domestic and productive structures are to be found in close proximity. Following these characteristics, *qsur* have formed the vast majority (80%) of the recorded fortified structures in the survey area (figure 5.8).

In terms of their size and general layout, the fortified civilian buildings sites in the survey region were similar to the outposts. Most of the sites were small and medium in size (ranging between 0.01 and 0.035), some were large (between 0.04 and 0.055 ha) and one site-Qasr et-Tauma 4- was exceptionally large at 0.07 ha.

In this thesis, I used this term, *qasr*, to describe rural buildings that had some defensive features (such as thick outer walls, ditches, revetments, narrow single entrances, etc.) and were built on naturally defensive locations such as hill-tops and high ground. Some of these *qasr* in the survey region were isolated single *qasr* associated with agricultural and industrial features. The rest are built within large settlements and existed in clusters within a clearly agricultural landscape. Therefore, these fortified *qasr* have been categorised as follows:

5.3.1 Fortified *qasr* associated with agricultural and industrial features

This term covers sites where a single *qasr* was associated with agricultural and industrial features. More than 25 sites of this type have been recorded in the study area and many others have previously been investigated. Field systems were evident at almost every site, and these include agricultural and industrial features such as wadi walls, water cisterns, water catchment arrangements and olive and wine production facilities. Topographically, though this type of site has been noticed only on the second scarp of the Gebel and the coastal plain, it might have existed on the other two escarpments in areas that have not yet been surveyed. However, no evidence was noticed in the pre-desert area, the other environmental block of the study region.

Various masonry types were recorded at these sites, though sometimes only the outer walls were visible. Well-dressed ashlar work was widely utilised particularly in the outer-walls. The best examples can be seen at the two well-preserved sites of Siret mm Asnaib (KAS 55) (figure 4.1d) and Qasr Az-Zaarura (KAS 26) (figure 2.24), where this type of masonry was used in the entire outer walls and in the arches and vaults. This was most likely the case at some other sites of which only parts of their outer walls are now visible. These included Qasr al-Akrouit al-Qaddamy (KAS 12), Siret Batrow (KAS 27), Siret Adhrary (KAS 17), Siret Lwaiby (KAS 13) and Siret Qatoufa (KAS 29). The

other type of masonry used was a mixture of ashlar work and medium and large slightly dressed stones, where large ashlar blocks were used as quoins such as at Siret Battouma (KAS 16) (figure 9.56). Some of these sites were relatively well-preserved and in these cases it was possible to build a picture of their internal layout. A central courtyard surrounded by a number of vaulted rooms was clearly visible at Qasr umm Asnaib (figure 4.28) and Qasr Az-Zaaroura. The same plan most likely existed at some other sites as evident by the slight appearance of the crowns of vaults on the surface.

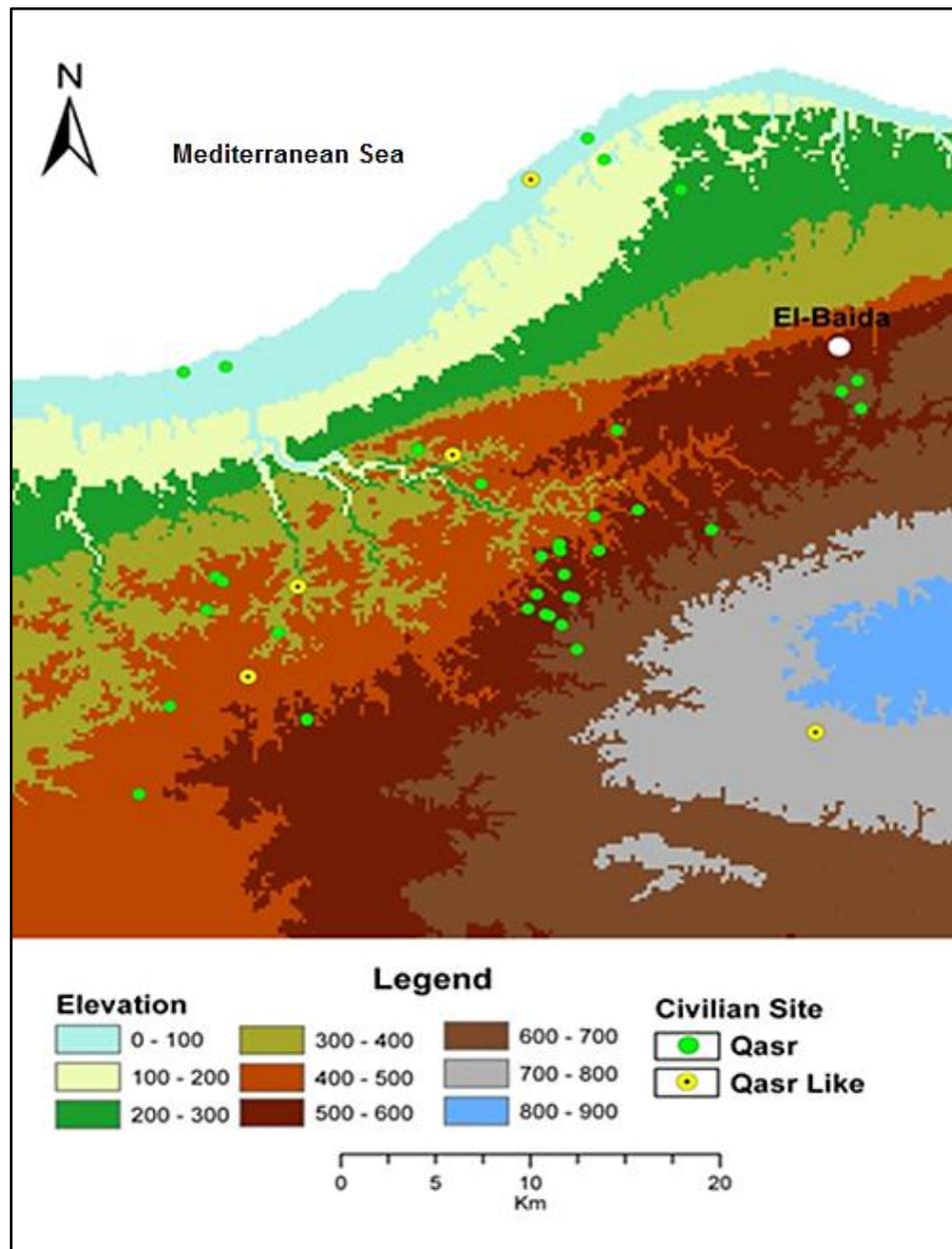


Figure 5.8: The location of the civilian *qsur* in the survey region.

5.3.2 Clusters of *qasr* located within a large agricultural settlement

Some rural settlements in Cyrenaica contained more than one *qasr* associated with agricultural and industrial features and some outbuildings such as tombs and traces of walls. In the survey region, five sites of this category have been recorded. All these sites were located on the second terrace of the Gebel, each with more than one fortified *qasr* in close proximity to each other and associated with farming activity and remains of other outbuildings. The largest site of these was Siret et-Taumat (Twins) where four *qasr* were associated with a large agricultural settlement measuring c. 15 ha. The *qasr* were constructed in close proximity to each other on high ground some 8 km south-east of the famous bridge of Wadi al-Kuf. From south to north, the distance between Qasr et-Tauma 1 (KAS 18) and 2 (KAS 19) is about 60 m, and between 2 and 3 (KAS 20) is approximately 100 m. While et-Tauma 4 (KAS 21) is situated on a hilltop some 300 m to the north of et-Tauma 3.

The settlement of Siret et-Taumat contained remnant walls and outbuildings in addition to the four *qasr* (figure 5.9; A and B). Although their function is difficult to be identified without excavations, the nature of the settlement is indicated by evidence of agricultural and industrial activities, such as water cisterns (figure 5.10), rock-cut chambers, (figure 5.11) wadi walls, some olive press elements (figure 4.43a) and above all the cultivable surrounding landscape.

The four *qasr* were all tower-like structures, however, they varied considerably in size, the smallest was Siret et-Tauma 1 (figure 4.49) with a total area at about 0.006 ha. The small size of this *qasr* and its location on a hilltop make it possible to consider it as a watchtower used by the farmers to watch the grazing area. At more than ten times the largest was et-Tauma 4 (figures 4.1c and 4.19) at c. 0.07 ha. The other two were of medium size, et-Tauma 2 (figure 9.67) measures 0.024 ha and et-Tauma 3 measuring 0.034 ha (figure 9.72).



Figure 5.9: Siret et-Taumat: Traces of outbuildings. Scale 1m.



Figure 5.10: Water cisterns at Siret et-Taumat. Scale 1m.

In addition to the naturally protected elevated locations, they all had single entrances and thick outer walls strengthened by revetments and surrounded by deep and wide vertical-sided rock-cut ditches. The widest ditch has been noticed at et-Tauma 3 at about 8 m and at the other three *qsur* it ranged between 5 and 7 m.



Figure 5.11: Rock-cut chambers at Siret et-Taumat, looking west.

The well-preserved northern wall of Siret et-Tauma 4 (figure 4.1c) showed that the building was at least of two-storeys, built of the same well-dressed ashlar masonry that was also used to build et-Tauma 1 and 3. On the other hand, Siret et-Tauma 2 was constructed of rubble masonry with courses between 0.15 and 0.20 m high and quoins of larger blocks which was also employed at some other *qsur* such as nearby Siret Battouma (KAS 16).

The other four sites of this category comprised two *qsur* each- Zawiat al-Qasrain (KAS 41 and KAS 42), Siret Stablous (KAS 46 and KAS 47), Siret al-Akareet al-Warranya (KAS 10 and KAS 11) and Siret al-Faqeer Ali (KAS 14 and KAS 15). The largest settlement was Zawiat al-Qasrain which is situated some 3.5 km to the north of the modern village of Qasr Libya. The site comprised two *qsur* associated with a large agricultural settlement, occupying an area measuring c.18 ha. The most prominent feature here was al-Qasr al-Hamar (KAS 41) (figures 4.7 and 9.133) measuring about 408 m². The very good condition of preservation of this building (some walls of the *qasr* are still now standing to a maximum height of about 3.50 m) provides a clear picture of the walls and internal arrangement. The building had three phases of construction, evidenced by additional divisions and blocked windows and entrances at a later time probably for defensive purposes. The other *qasr*, Qasr Sidi Bu-Argoub (KAS 42), is situated some 450 m to the south-east of al-Qasr al-Hamar on a low hill-top. The *qasr* (figures 4. 13 and 4.14) is a ditched fortified building measuring 11.30 m square

surrounded by a revetment on all sides. Though it is largely filled by collapsed masonry and rubble and covered by bushes, it seems that a rock-cut ditch surrounded the building on all four sides. This ditch measured about 5.5 m across at its widest point.

The two *qsur* at Zawiat al-Qasrain formed a part of a settlement consisting of outbuildings, water cisterns, rock-cut chambers and an Islamic cemetery. The most remarkable architectural features were located at a distance of about 15 m to the east of Qasr Sidi Bu- Argoub. These included a small structure of three arches linked by walls (figure 5.12a) measuring about 6 by 7 m. Apart from the three wide arches that were built on the north, east and west sides, nothing is now visible of this building. To the north east of this building lies remnant of a rounded structure (figure 5.12b). Without excavations, the function of these structures remains uncertain. In addition to the cistern located within the walls of al-Qasr al-Hamar, two underground water cisterns (figure 5.13; A and B) were identified around Qasr Sidi Bu-Argoub. One of these has been recently restored and still in use by locals today.

Rock-cut chambers cut in the edges of the adjacent shallow valley located to the east of al-Qasr al-Hamar (figure 5.14) and in its surrounding ditch (figure 5.15). Also, an Islamic cemetery (probably Ottoman) occupied a part the lower ground to the east of al-Qasr al-Hamar (figure 5.14). This cemetery indicates that the site was in use during the medieval times.



Figure 5.12: The settlement of Zawiat al-Qasrain:
A: The structure of the three arches, B: The rounded structure.



Figure 5.13: Qasr Sidi Bu-Argoub showing the two underground water cisterns.



Figure 5.14: The settlement of Zawiet al-Qasrain: The location of the Islamic cemetery and rock-cut chambers, looking east from al-Qasr al-Hamar.



Figure 5.15: al-Qasr al-Hamar: The ditch and the rock cut chambers, looking north.

5.3.3 The *qasr*-like buildings

In his typology of the Romano-Libyan settlement that was recorded by the ULVS in the pre-desert of the eastern sector of Tripolitania, Mattingly (Mattingly with Dore, 1996: 121-24) has used the term *qasr*-type farm to describe a particular site. This site was distinguished from other types of farms by the quality of the masonry. In Tripolitania, as the fortified *qasr*, the *qasr*-type building was mainly constructed of well-coursed blocks and contained some other features, such as the rounded corners and the larger quoins that existed in some of the fortified *qasr*. On the other hand, the single storey and the lack of the natural and architectural defensive features have distinguished the *Qasr*-like building from the fortified *qasr*.

Although slightly different in terms of their general layout from the sites recorded in Tripolitania, five sites recorded by KAS could be considered of this type. These include Qasr al-Qatroura (KAS 54), Qasr Abgail (KAS 5), Qasr Atwainsh (KAS 50), Qasr al-Hawmy (KAS 49) and Qasr Bst (KAS 35). In addition to the complete absence of defensive features including ditches and revetments, all *qasr*-like buildings recorded by KAS had more than one entrance. In terms of their size, the largest was the coastal site of Qasr Bst at 297 m² and the smallest was Qasr al-Qatroura at 106 m², the rest range between 135 and 250 m². Apart from Qasr al-Qatroura which was largely constructed of less regular stone work, the other buildings were built of large and medium size ashlar blocks.

The civilian agricultural nature of these sites was indicated by their location within fertile lands and by the associated agricultural and industrial features. For instance, Qasr al-Qatroua (figure 4.6) was located on a slightly raised ground on the second plateau of the Gebel, some 1.25 km to the south-east of Qasr Libya. This *qasr*-like building formed a part of a small farm represented by some agricultural and industrial features. These included three vats, lined basins, huge rock-cut water cistern and water catchment arrangement. The vats were sunken in the ground and supported by stones arranged next to each other, some 15 m to the north of the building (figure 4.45). The vats are 1.0 m deep and their maximum width is 1.0 m dimensions (for more details see Chapter 4). At a distance of about 35 m to the west of the building there are some architectural industrial structures. These remnants of basins (figure 5.16) cut partly in the natural rock and partly constructed of rubble and lined with *Opus signinum*. Unfortunately, the basins are widely destroyed and only few remains left show that some of them were circular, and the rest either square or rectangular. Slightly to the west of the basins is a large rectangle rock-cut (measuring 23.75 by 4.00 m) that could be interpreted as a huge water tank (figures 4.36a and 4.36b), although there are no remnants of any waterproof mortar on the walls of the cut. This suggestion is supported by the existence of water draw hole opened at the middle of the roof. Also, it seems that rain water was collected in this cistern by some (water) catchment arrangements, including walls for water diversion and rock-cut channels connected to the southern side of the cistern.



Figure 5.16: Qasr al-Qatroua: Mortared basins, looking east. Scale 1m.

Chapter 6: Site Chronologies

6.1 Introduction

In comparison with some other Roman provinces (e.g. Tripolitania), no sophisticated archaeological research has yet been done on the Roman military sites in Cyrenaica. Moreover, previous studies (such as Goodchild, 1951b; 1951c; 1952b; 1953) conducted on this topic in the region were limited in content and depended only on extensive topographical and architectural surveys. In addition to the architectural features of the buildings, site chronology in previous studies has largely depended on the limited range of datable pottery sherds scattered on the surface around and within the sites, though these may be related to the last phase of occupation. In other words, no secure evidence of the suggested dating has been presented. The KAS work has the same dating issues as no excavations were conducted. Therefore, this chapter is aimed at suggesting the time range of the survey sites depending largely on the surface pottery collected and other observed features. This includes the investigation of building techniques and the relationship of the fortified buildings with the surrounding landscape.

This chapter is divided into five sections including the introduction and conclusion, with the next section (6.2) reporting the chronology of military sites within and outside the survey region in Cyrenaica. A brief insight on the available fortified buildings of civilian use is given in section 6.3. Evidence gathered to suggest the chronology of fortified buildings of civilian nature mentioned in section 6.3 is presented in section 6.4, including masonry type, string courses, revetments and numerous pottery evidences. The writings of Synesius, the Bishop of Ptolemais (c.370-413), are also good sources of evidence to draw conclusions on the fortification of the region. Much of what I observed and the data gathered in Cyrenaica confirms the suggested dating, spanning the early to late Roman period.

6.2 Military Sites

While the majority of our fortified farms appear to be late Roman or late antique, military fortifications likely spanned a greater time range. Military inscriptions found in

Ajdabiyah (*Corniclanum*) suggested that Cyrenaica had its own garrison – probably a small one - from the first century A.D. onwards. The inscription contained names and ranks of some Roman soldiers of the *Cohors Apamenorum I* who came from Apamea in Syria to protect the western *limes* of the region (Ferri, 1926:367; SEG IX, 773-795). The military site that this garrison was based in has not been identified yet; however, according to Goodchild (1951b:140) it was probably located underneath the known Islamic fort in Ajdabiyah.

Yet the Roman garrison of the first century AD was not strong enough to suppress the Jewish revolt in AD 115 (Goodchild, 1953:65). Since, Trajan ordered the deployment of 3000 discharged legionaries in Cyrenaica (Tacitus, Ann. XIV, 27). Additionally, as part of the Diocletian's reforms in AD 296 and after the invasion of the Cyrenaican plateau by the Marmaric tribes in the mid-third century AD, a new command was created under the *Dux Aegypti Thebaidos utrarumque Libyarum* (Goodchild, 1953:65). At the beginning of the fifth century AD the raids of the Ausuriani or Austuriani from the western Syrtes region began. These raids had exhausted the security and stability of the region, a point which is clearly reflected in the writings of Synesius (see Chapter 1 and Chapter 7). Early in the sixth century AD it seems that the main threat again reverted to people from the east (Marmarica). The Mazices, from their bases in the oases west of the Nile valley, formed a source of concern for Cyrenaica which in AD 513 suffered from their attack (Goodchild, 1953:65, note 7). By the time of Justinian, as Goodchild (1953:5) claimed, the countryside of Cyrenaica had become “a land of castles”.

6.2.1 The chronology of some military sites in Cyrenaica beyond the survey region

Fortified styles of rural buildings became a recurrent phenomenon in the late Roman and Byzantine phases. However, in terms of the military sites in Cyrenaica the work of Goodchild has shed some light on the early Roman *limes* in Cyrenaica and provided some dating evidence. Goodchild (1953:75-76) claimed that the:

“Thick crust of late fortifications naturally obscures the character of the earlier Limes, and much excavation will be required before the successive strata of military occupation can be distinguished. For the moment, it can be said that a first-century Limes certainly existed in south-western Cyrenaica, covering the approaches from the Syrtic Gulf; and some of the earlier forts on the fringes of the Cyrene plateau may well belong to the same era” .

There were a number of military sites in Cyrenaica that have been suggested to date back to the first century AD. The westernmost military outpost within the boundaries of Cyrenaica is located on a low ridge at Bir Umm el-Garanigh close to the legendary site of the 'Altars of the Philaeni'. Among the abundant pottery scattered on the edges of the hill outside the building Goodchild recognised sherds of undecorated sigillata ware that dated back to the first century AD (Goodchild, 1952a:98). Based on these observations he concluded that: “This post was occupied in the first century AD and was certainly abandoned before the age of Justinian, when the western defences of the Pentapolis lay around the walled city of *Boreum* (Bu Grada, near Marsa Brega)” (Goodchild 1953:67).

The military outpost of Qasr el-Heneia (figure 2.8) has also been dated back to the first century AD based on its strategic location and some of its architectural characteristics. The outpost was located to control the southern approaches of Agedabia on one of the main caravan routes connecting Agedabia with the oases of Augila and Gialo. Therefore, the strategic location of Qasr el-Heneia made it a possible frontier outpost linked to a Roman fort at Agedabia which probably existed beneath the known Islamic fort in the city (Goodchild, 1951b:139-141).

The small watch-tower located at Zaviet Msus (figure 2.13), some 60 km south-west of Benghazi, is the only military site in the region that contains military inscriptions found *in situ*. The inscriptions presented names and ranks of Graeco-Roman soldiers inscribed on the door lintel and on the walls of the tower and the surrounding enclosure (Goodchild, 1953:68). These have been dated to the first century AD by Goodchild, who used similar inscriptions found at Agedabia as a point of reference. This date is also supported by the existence of the flat lintel of the door at Msus instead of arched doorway which is associated with later military sites in Cyrenaica (Goodchild, 1953:76). It seems that the strategic location of the site in controlling a part of the

Cyrenaican hinterland encouraged the Italian colonists in the 1930s to build a fort that partly incorporated the Roman tower (Goodchild, 1953:68).

One of the earliest military sites in eastern Cyrenaica is probably the square ditched fortlet at Ain Mara. Though the internal arrangements were largely invisible, Goodchild (1953:69) noticed that this site is architecturally similar to the frontier outpost of Qasr el-Heneia. Both sites were similar in size and were surrounded by deep vertical-sided ditches with rock-cut chambers cut in their outer faces. The outpost at Ain Mara may have been used until the mid-fourth century, after which the earthquake of AD 365 appears to have destroyed the site. A letter of Synesius even describes the fort as “an abandoned heap of ruins” (Synesius: *Epist.* 67; Goodchild 1953:70).

Not so far from the coast, some 90 km to the north of Agedabia at Tailimun is a relatively large (44x38 m) unditched Roman fortlet (figure 2.7). This site is distinguished along with similar known military site at Qasr el-Geballa (figure 2.5) in Cyrenaica by the existence of projecting angle-towers. The standing remains at Tailimun suggest that it had at least two projecting angle towers accessible from the interior by arched doorways as indicated by the remains of the doorway of the north-western angle tower. This fortlet, alongside two other sites -Esh-Sheleidima and Zaviet Msus- that are located on the same line to the east, formed a part of the innermost defences of the Syrtic region (Goodchild, 1953:66-7). As it has been largely obscured by an Italian stronghold, Goodchild was not able to reconstruct the plan of the ditched fortlet at Esh-Sheleidima. However, the visible parts of this Roman fortlet, as he claimed, indicated that it was as large as the fortlet at Tailimun. While no firm dates have been assigned to these two sites, I would argue that based on the first century watch tower at Zaviet Msus along with the two fortlets' similar topographic nature and close proximity to each other, it is possible that the visible structures succeeded earlier posts. However, the existence of angle towers at Tailimun and el-Geballa surely indicates a later date as this architectural feature was common in late Roman fortification.

Angle-towers are attested in some other Roman provinces from the end of the third century. In Tripolitania, for instance, they occur at some sites that are dated to the fourth century AD. These include the outposts of Qasr Benia Guedah Ceder in the Tebaga

Corridor in Tunisia and the square outpost of Qasr Bularkan in the pre-desert zone, south-west of Lepcis. The first contained four square projecting angle-towers in addition to central one located in the middle of the south-west side. The second had, in addition to the four angle-towers, three central projecting towers (Mattingly, 1995:193-94, fig. 10.2). Also, in *Arabia*, the early fourth century AD Roman fort of Qasr Bshir in Jordan contained four large square angle-towers (Breeze, 1988:124, fig. 37).

6.2.2 The chronology of military sites in the survey region

Due to the lack of secure dating evidence such as inscriptions, it was difficult for the KAS work to identify accurately the date of the military sites from surface investigation. However, the excellent condition of preservation of at least three sites makes it possible to compare their architectural characteristics with previous studies and more securely dated examples in and beyond Cyrenaica. Also, samples of collected pottery sherds have helped me to identify, in some cases, the broad timeframe of the sites. On the other hand, the poor current condition of some sites makes them difficult to trace their physical appearance and subsequently their dating remains conjectured.

Broadly speaking, most of the military sites recorded by KAS are believed to date back to the late Roman period based on their architectural characteristics. However, it seems that the watchtower of Qasr Aqeela (KAS 25) was probably constructed in the mid-Roman period or earlier and more likely abandoned due to its destruction by the earthquake of AD 365. This suggested time frame has been based on traces of an earthquake action; including the collapse of most of its eastern wall, this being the weakest side as it contained the entrance. The earthquake also caused some blocks to budge resulting in small gaps between them (figure 5.7). Although very scarce on the ground, the collected pottery also supported this date. The most diagnostic pottery sherd was a fragment of an amphora rim (figure 6.1) similar to those found at Latrun and dated back to the mid Roman period (Mazou, 2011:73; figs. 3 and 5).

Additionally, the architecture of this site is clearly different from other sites in the region that can be more confidently dated to the late Roman and Byzantine periods such as Beni Gdem, Shahden and Ushish (as seen below). In the watch tower of Qasr Aqeela,

the building was completely constructed of well-cut ashlar blocks mostly of the same size but, unlike the late Roman fortified buildings in the region, these were roughly dressed. The walls rested on a rather low slightly projecting socle wall of three courses built of the same ashlar masonry. This type of building technique was widely used during the early and mid-Roman times as discernible in some Roman buildings at Sidi Khrebish (Lloyd *et al.*, 1977:85-86) and at Ptolemais (Kraeling, 1962:119). Also, the projecting strings which mark the separation between the levels in some fortified buildings were not applied at the watchtower of Qasr Aqeela. This feature distinguished the late fortified sites in the region and it is also attested in some of the Byzantine churches in Cyrenaica, such as the western church of Qasr Libya and many others (Reynolds, 2003:9-11, 268-73).

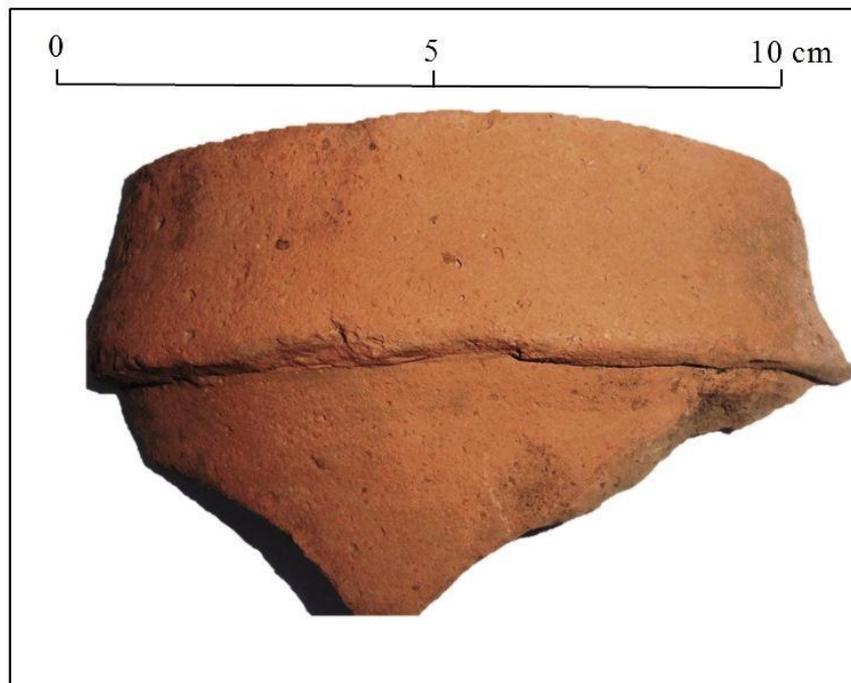


Figure 6.1: A fragment of a mid Roman amphora rim recovered from Qasr Aqeela.

The late Roman date of military sites in the survey region was architecturally obvious at three sites. At Qasr Beni Gdem (KAS 1) two constructional phases were suggested based on the double thickness of the outer walls. The first fortlet had the same basic layout but its walls were lower in height than the second one. In an architectural comparison with the late Roman complex known as the headquarters of the Dux at Ptolemais in Cyrenaica (Kraeling, 1960:101-102), Goodchild dated the fortlet to

the fifth century AD (Goodchild, 1953:74). In addition to the projecting central towers in this fortlet, some other architectural features also support the late Roman date. At the headquarters of the Dux at Ptolemais, the masonry type and construction technique of the outer walls consisted of well-dressed large ashlar blocks of two faces bonded with projecting string courses that also marked the separation between the levels of the building. Further dating evidence was the discovery of marble chancel-screens which Goodchild (1966a:240) suggested was an indication that the fortlet probably contained a chapel. These screens, including one decorated with a relief of a cross of sixth-century type, were found to the east of the building (Reynolds, 2003:396). Goodchild (1966a:241) also suggested that this site, together with the other fortlet of Qasr Shahden, probably corresponded with the monasteries of *Agriolode* and *Dinarthison* that were fortified by Justinian according to Procopius (*De aedificiis*, VI. II. 7-8). However, based on the architecture of these sites they appear most likely military fortification rather than monasteries, in particular Qasr Shahden confirms Kenrick's suggestion (Kenrick, 2013:129).

With regard to the military site of Qasr Shahden (KAS 3), three phases of constructions were suggested (Goodchild, 1953:71), with construction initially in the fifth century AD as a small outpost and enlarged at a later date into a fortlet. Goodchild (1953:72) concluded that the time frame of Qasr Shahden fell between the fifth and the seventh centuries AD on the bases of its architectural features. These included ashlar work and projecting strings and he attributed the third phase to the period of Justinian (Goodchild, 1953:71-2). The late Roman date is also indicated by the existence of some late Roman pottery scattered on the surface around the building. However, the existence of pottery sherds from the second century AD probably indicates an earlier occupation of the site. Among possible early materials recovered from the site is a rim of a carinated bowl decorated with incised lines (figure 6.2). This was probably a local imitation of African Red Slip ware, form 8, dating to the second half of the second century AD (Hayes, 1972). Similar imported rims of the same date were found at Sidi Khrebish (Kenrick, 1985:344-45, fig. 64).



Figure 6.2: A rim of a carinated bowl (probably a local imitation of ARS, second century AD) recovered from Qasr Shahden.

The unditched outpost of Qasr Ushish (KAS 4) is also most likely dated to the late Roman period as indicated by its architectural criteria. Its outer walls were constructed of well-dressed blocks of ashlar masonry coupled with string courses. Rubble bonded with white lime mortar was also used in some places, particularly as a core between the vaults and eastern and western walls. Another indication of the late Roman date is the existence of the vaults that roofed the three rooms occupying the northern part of the upper floor. This feature which also existed in Beni Gdem and Shahden has been considered by Goodchild (1953:72) as an obvious characteristic of late Roman military architecture in Cyrenaica.

Although largely collapsed with only the probable lowest course of its walls remaining, the fortlet at al-Hamama (KAS 33) was very similar in size, masonry type and general layout to the fortlet of Beni Gdem. Being built of ashlar blocks and contained two external central projecting towers. With this evidence, therefore, it seems that the building dated back to the late Roman period. Furthermore, the existence of the revetment in the fortlet of al-Hamama probably indicate that it continued in use to a later time as this feature is suggested to be a later addition to many of the fortified buildings in the region for both defensive and constructional reasons (Goodchild, 1953:66 note 11).

At the outpost of Qasr Lyktaif (KAS 2), identified as probably military in terms of its architecture, a further indication of its Byzantine date is represented by two crosses of Byzantine type (figure 6.3). The two crosses that flanked about 8 interlocking circles were incised on a moulded ashlar block (probably a lintel) collapsed immediately to the east of the presumed entrance in the eastern wall. Though the interiors of the Qasr was largely buried under its own debris, it was possible to identify with some certainty its layout which seems comprised as at Qasr Ushish (KAS 4) a large front courtyard onto which opened off three rooms occupying the western side of the building.



Figure 6.3: The outpost of Qasr Lyktaif: Crosses incised on a collapsed block of sandstone. Scale 0.20 m.

With regard to the hilltop coastal outpost of Qasr Alhesy (KAS 37), the current poor condition of the building prevented me from making a secure suggestion about its date. The few visible blocks of its outer walls illustrates a difference in the masonry from other late Roman military sites in the region. The outer walls of Alhesy were constructed of different sizes of roughly dressed sandstone blocks. Nevertheless, it seems that the site was in use in the late Roman period based on the existence of pottery sherds of late Roman and Byzantine date scattered on the edges of the hill that the outpost was located on. Of these sherds, one is a part of a rim (1 in figure 6.4) probably of form 10 of Phocaean Red Slip (Late Roman C) ware from the sixth and seventh

centuries AD (Hayes, 1972:408-410) and a part of a neck attached with rim possibly belongs to late Roman Amphora 1 (2 in figure 6.4).



Figure 6.4: A sample of pottery recovered from Qasr Alhesy.

The outpost at al-Oqla (*Kainopolis*) (KAS 40) was not dated by Laronde (1983: 77-80) whose brief description of the outpost is the only published information written so far. However, based on the similarity of the masonry type and the existence of the sloping revetment around both this outpost and the adjacent Byzantine church, it seems that they were constructed in the same period. Ashlar work was utilised in the outer walls, with small irregular blocks used for the revetments in both buildings (for more about the church see Goodchild 1966b:220; Stucchi 1975:362; Laronde 1983:77-80; Reynolds, 2003:399).

The two pre-desert outposts of Qasr al-Mistashi (KAS 6) and Laaraija (KAS 7) were also probably related to the late Roman period. Stucchi (1975:524) dated Qasr Laaraija according to its masonry type and method of construction to the second half of the fifth century AD. Also, paralleled at Qasr al-Mistashi, small pieces of stone were used between the blocks for levelling purposes and to fill gaps between the blocks. Moreover, similar to other late Roman military sites in the region, there was a slightly projecting strip of larger and slightly dressed stone blocks that marked the separation between the two storeys. The pottery at the two sites, as in many other sites in the survey area, was scarce. Most of the sherds of fine ware recovered from the two sites were of late African Red Slip, mostly from the fifth and sixth century AD. In addition to the similarity in size, masonry type and general layout, the location of the two sites is 5 km away from each other, but on the same line of communication - thus likely

indicating that they were contemporary. Furthermore, they probably formed, along with other sites such as Qasr er-Remtheiat to the east and Qasr Geballa to the west, a part of the far southern *limes* line of the *pentapolis* in the late Roman period.

6.3 The Chronology of Fortified Buildings of Civilian Nature (*Qsur*)

The only excavation conducted in a fortified farm (*qasr*) in the countryside of Cyrenaica was that carried out by the Pennsylvanian archaeological mission in 1963 in Qasr al-Arid 30 km south of Benghazi. This small-scale excavation concluded, on the basis of the pottery, that the site was occupied from the third to the fifth century AD (Carter, 1963:19). Including the most sophisticated work of Goodchild, the other previous studies on the *qsur* in the region have been topographical and architectural surveys. Therefore, no secure dating evidence was provided. Goodchild (1953:73) proposed that the *qsur* were most likely of late Roman and Byzantine date based on the architectural features and on the surface pottery and Christian crosses incised on the walls at some sites. For instance, in Qasr Sidi el-Khadri, one of a group of fortified farms overlooking the plain of al-Merj (*Barca*), the dating evidence provided by Goodchild was a carefully cut cross of Byzantine type on one of the outer corners of the building (Goodchild, 1953:69).

Similarly in the KAS work, the architecture of the buildings and surface pottery are the main dating tools. The vast majority of *qsur* recorded by KAS had in common some characteristics of late Roman architecture. These included the presence of string courses in the well-preserved sites, arched doorways and vaulted rooms. Engraved Byzantine crosses in original blocks at some sites were recorded. Based on architectural comparison of with similar sites in Tripolitania, it seems that the *qsur* in Cyrenaica can be dated to the late Roman and late antique periods from the fourth to the seventh century AD. The following sections together examine the evidences found in the survey and used to determine the dates of the *qsur*.

6.3.1 Architectural dating evidence

6.3.1.1 Masonry type

As widely implemented in the presumed late Roman military sites in Cyrenaica, ashlar work was the preferred masonry for the builders of the *qsur*. More than 80% of the recorded *qsur* in the survey region utilised ashlar work of varied quality, at least in the outer walls. The standing remains of some sites showed that the ashlar work was used to construct the ground floor while the upper levels were thoroughly executed using the rubble construction method. The best examples of these are evident at et-Tauma 4, Siret al-Faqeer Ali, Siret umm Asnaib and al-Qasr al-Hamar. As apparent in et-Tauma 4 and al-Qasr al-Hamar, first class ashlar work was the material used in the lower storey and rubble bonded by mortar in the upper levels. A few sites in and beyond the survey area were constructed of stonework of lower quality masonry. However, this dissimilarity in masonry probably has no chronological significance as other late Roman architectural features were evident at the *qsur* of lower class masonry. For instance, Siret Battouma (figure 6.59) was constructed of small and medium irregular stonework with larger quoins and had, like other ashlar work *qsur*, a single arched doorway and at least one vaulted chamber indicated by a crown of a vault, located approximately in the middle of the southern half of the interior. Siret et-Traish (figure 9.30) was constructed of small roughly dressed stones and larger quoins that contained, in addition to string courses of ashlar blocks, a Byzantine cross engraved on the north-west corner block; thus indicating its late date (figure 9.32). Therefore, the diverse in masonry type and construction technique was probably an indication of different building skills and a reflection of the owners' wealth.

6.3.1.2 String courses

String courses are an architectural feature widely adopted in late Roman architecture in the region both to mark the separation between the storeys of the buildings and to bond the outer and inner faces of the outer walls. This feature, according to Goodchild (1953:73), was one of the main architectural traditions that existed in both military and civilian fortified structures. The well-preserved examples in Siret et-Tauma 4, Qasr al-

Faqeer Ali, Qasr umm Asnaib, Siret Batrow and Qasr Awena showed the presence of string courses of headers. This characteristic most likely exists at some other sites that had similar masonry and general physical appearance and of which only the lower courses of their outer walls have remained. At et-Tauma 4 (figure 4.1c), for instance, this was used for levelling purposes; as the surface of the natural rock walls were resting on was uneven, a slightly projecting strip of headers was built between the walls courses and the natural rock as a foundation wall, and since it was displayed for viewing the wall was neatly trimmed for aesthetic purpose. This levelling projecting course consisted of well-trimmed thinner ashlar blocks of different sizes, mainly, of two courses. Also, as is clear from the outer face of the northern wall, two similar string courses were erected. One of these was located on the top of the walls and the other running almost in the middle of them. The rubble that greatly covered the interior has prevented me from investigating whether these string courses existed to mark the separation between the floor levels of the building or was just inserted between the wall courses for constructional or ornamental purposes. Nevertheless, the latter suggestion is more likely at least with regard to the two lower string courses judged by their relative low positions. The upper one marked the separation between the ground and upper storey that was built of the rubble, as indicated by a remnant of the wall which still rested *in situ* on the upper string course.

6.3.1.3 Revetments

As discussed in Chapter 4, the exterior revetment is an architectural characteristic widely attested in the fortified buildings of civilian nature in the region. It seems that this feature was secondary. This suggestion is supported by the fact that at many sites the revetment masked the first class well-dressed and coursed ashlar masonry that was presumably constructed to be seen. Although a defensive purpose could not be excluded, revetments were most likely added, at many sites, in order to stabilise the outer walls that were probably damaged by earthquakes. A part of the north-west revetment at Qasr Az-Zaaroura was recently cleared out by the farmer who owned the land that the *qasr* is located in. This exposed a fine ashlar wall, which had a crack most likely caused by an earthquake. This serves to enforce the conclusions reached by Kenrick (2013:24) that the revetment was constructed to stabilise the wall. Moreover, at

many sites, the revetment did not surround the outer walls on all sides and this probably indicated that it was built to support the affected sides of the building. In addition to the *qsar*, for similar reasons, this feature was sometimes added to the Byzantine churches in Cyrenaica that are known to have been used as refuges during the tribal raids of the Byzantine period (Goodchild, 1952b:150; 1953:206; Reynolds, 2003:16).

6.3.2 Pottery evidence

6.3.2.1 Fine pottery

In addition to few sherds of Hellenistic black gloss and Roman pottery of the first three centuries AD, the vast majority of fine pottery recovered from the sites covers, as confirmed by Philip Kenrick, the period from the fourth to the seventh century AD. Hellenistic black gloss pottery, ranging in time between fourth and second centuries BC, was recovered from three sites namely al-Qasr al-Hamar, Siret Bu-al-Husain and Siret Masaouda and indicates Greek period occupation of the sites long time before the construction of the fortified buildings. From the first century AD, two fragments of Italian Sigillata were recovered from the undefended *qsar*-like building of Siret Abgail, where sherds of African Red Slip ware were noted and indicated that the site continued in use up till the fifth century AD. In addition to Siret Abgail, the other site that produced pottery from the second century AD was the probable military site of Qasr Shahden, where a fragment of local imitation of African Red Slip ware was collected. Generally African Red Slip formed more than 99% of the fine pottery collected from the sites and ranged in time from the second to the seventh centuries AD with the vast majority of the fourth, fifth and sixth centuries. Phocaeen Red Slip was also evident in four sites in the survey region; these included the coastal military site of Qasr Alhesy, the coastal fortified farm of Alwet umm-al-Namal and from the two fortified farms of Siret umm Asnaib and al-Akrout al-Warrany¹ located on the second scarp of the Gebel. The entire set of Phocaeen sherds possibly dated back to the fifth and sixth centuries AD.

Most of the fine pottery collected in KAS is represented in small body sherds. Therefore, few forms classified by Hayes (1972) were recognised by Philip Kenrick. This included the following forms:

1. A fragment of ARS dish (Hayes form 27, AD 160-220) recovered from Siret Abgail (Appendix 2.a).
2. A fragment of ARS dish (Hayes form 76, AD 400-475) recovered from Qasr al-Akrout al-Warrany 2 (Appendix 2.b).
3. A fragment of ARS dish (Hayes form 104, AD 500-625) recovered from al-Qasr al-Hamar (Appendix 2.c).
4. A fragment of ARS dish (Hayes form 104, AD 500-625) recovered from Siret et-Tauma 2 (Appendix 2.d).
5. A Fragment of ARS dish (Hayes form 107, AD 580-675) recovered from Siret Gendez (Appendix 2.e).
6. A fragment of ARS dish (Hayes form 107, AD 580-675) recovered from Qasr umm Asnaib (Appendix 2.f).
7. A fragment of Phocaean Red Slip dish (Hayes form 3 f, AD 500-600) recovered from Siret Alwet umm Annamel (Appendix 2.G).
8. A fragment of Phocaean Red Slip dish (Hayes form 10, AD 570-650) recovered from Qasr Alhesy (Appendix 2.f).

Although only a small sample, it is strongly suggestive of a late Roman and/or Byzantine date for the majority of these fortified sites or at least for a later phase of their occupation.

6.3.2.2 Coarse ware

The coarse pottery mainly consists of amphorae, and of the amphorae the majority are handles, which can be difficult to typologise and date. However, they were undoubtedly of a Roman period, including many local fabrics and possibly Tripolitanian examples as well. Working with the data from the fine wares, the best we can say is that they could be chronologically comparable to Roman and late Roman in date. Further work in future will be needed on the coarse wares, such as the collection and analysis of

fabrics, and more survey and excavation to uncover better examples of cultural remains for identification.

6.3.3 Writings of Synesius

The textual information provided by Synesius, Bishop of Ptolemais (c.370-413) is a good historical source that could be taken as a dating evidence for the fortification of the countryside of the region during his time (See Sections 1.4 and chapter 8).

Chapter 7: Discussion

7.1 Introduction

This thesis has examined a set of notable rural complexes which can tell us much about changing life and society in late Roman to Byzantine period. My study explored a specific geographical block of territory, running from coast to mountain to the pre-desert which provided an important cross-section of sites. In Chapter 1 I highlighted the geographical nature and historical background of the survey region and in Chapter 2 presented a review of previous studies of the topic, not only in Cyrenaica but also in Tripolitania and Fazzan. The methodology implemented in my survey and in analysing the data was presented in Chapter 3 followed by discussion of the architectural features and size categories of the surveyed sites in Chapter 4. Chapter 5 explored site typologies, categorising these into two main types: military and civilian; and finally, site chronologies were discussed in Chapter 6.

But important questions remain to be addressed concerning who owned, built, and worked at the various sites surveyed. Did they form a part of the frontier zone of the region and, if so, when? Should we envisage many of these sites simply as ‘civilian’? And if so, were these mainly local elites? How did the landscape change over time and when the *qsur* fit in? In this chapter, an attempt has been made to discuss the functional nature of the surveyed sites and the identity of the people who owned, used and worked at these sites.

7.2 Synesius’ Landscape

The writings of Synesius (c. 370- 413), Bishop of Ptolemais (from AD 412) provide very important information regarding the region where he lived and worked. My study area coincides with the key elements (landscape, people, politics and the military zone) that were at the centre of Synesius’ world and that of his family and closest friends. For example, the harbour village of *Phycus*, the eastern coastal limit of the KAS region, was used by Synesius as a port of delivery and dispatch for letters and for travel to Alexandria (*Epist.* 101, 129). He owned an estate called *Anchemachus* (*Epist.* 148),

which perhaps lay a good distance inland of *Phycus* and presumably was much higher up on the escarpment, perhaps as distant as Slonta, the south-west border of my area of study. Also, he may have had a second estate near Cyrene or Balagrae (on the site of the modern el-Baida) as we are told that barbarians used it as a base at one time to attack the city (*Epist.* 95). His brother *Euoptius* also had an estate nearby but to the west of al-Hania, by the marshes, where he had a garden in which Silphium was grown (*Epist.* 106).

In his account of the military operations that were carried out against the Ausuriani raiders, (see Section 1.4), Synesius mentions different aspects of the nature of the landscape (Pando, 1940:3), including the mountains, hills, valleys and the rough contours of the land: “It was now late in the evening. It was time to pursue our attack. When we came down from the mountains, we pushed on to the plain...” (Synesius, *Epist.* 104). Synesius states that parts of the landscape were not suitable for cavalry- “...they jumped from their horses, as is their way, to give battle on foot. I was of the opinion that we ought to do the same thing, for the ground did not lend itself to cavalry manoeuvres.”

The gorges of the mountains and a long, deep wooded ravine, named by Synesius (*Epist.* 122) as the Myrtle Valley, were used as a hiding place for the Roman soldiers in order to take care of their “precious” lives (see Section 1.4).

The site of *Hydrax* (Ain Mara) (see Sections 2.2.1, 2.2.2 and 5.2.2), where a Roman fortlet was situated on a high ground, was also mentioned by Synesius (*Epist.* 67): “In the village of Hydrax there is a spot, itself the loftiest part of the village, which formerly was a highly fortified citadel, but God having visited the spot with an earthquake, it has become an abandoned heap of ruins”.

At different points Synesius mentions a number of defensive features that were scattered across the countryside of the Pentapolis. These included forts, towers and ditches, walls between towers, parapets and enclosures. The use of a guardsman’s bell and signaling with torches are also mentioned (Pando, 1940:133). The shortcomings of the official military led to a self-reliance among local farmers for the protection of the rural settlements and estates. (This might fit well with the construction of *qsur*) as is repeatedly mentioned by Synesius (e.g. *Epist.* 122,125) [see below section 7.4].

Synesius enjoyed the natural beauty of his local countryside. In one letter to his brother he describes the colourful flowers, blooming trees and how they provide shade, bird song, white clouds in a blue sky, the shrubbery, the healthy soil and how he was spiritually moved by these natural surroundings: "...Here you can go under the shadow of a tree. If you are tired of one, you can go to another, even from one grove to another. You can step across a rivulet. How delightful is the zephyr which stirs the branches gently; there are the varied notes of birds, the colours of the flowers, the shrubs of the meadow; here the works of the husbandman, there nature's gifts. All things are fragrant with perfume, the aromas of a healthy soil" (Synesius, *Epist.* 114).

In another letter (*Epist.* 157) he recorded the effects of a particularly severe winter and how the snow, ice and frost covered roads, closing some of them: "In winter time, when everything was in the grip of frost and when the roads were blocked by unspeakable snow, no one dared to come to visit us from the outer world, and no one dared to go away from here".

Salt deposits in parts of southern Cyrenaica are mentioned in a letter to Synesius' friend Olympius in Syria (*Epist.* 148): "We have, I swear by holy Hestia, at a distance to the south less than that which separates us from the sea to the north, a native salt which comes from the earth and which we call Ammon's salt. It collects under a scab, as it were, of crumbling stone, and when this scab, which conceals it, has been removed, it is easy enough to scoop out the depths with one's hand or with a shovel and the lumps that you may take up in this manner are salt, pleasant both to look at and to taste".

7.3 The Military Presence

Research on Roman and Byzantine military fortifications in the countryside of Cyrenaica remains fairly limited. However, articles written by Goodchild in 1950s (1951 b, 1951c, 1952a and 1953) are significant and shed some light on the Roman and Byzantine military presence in the region. The physical remains of these official military sites have been discussed in different sections of this thesis, but particularly in Sections 5.2 and 6.2.

The earliest of these fortifications, as earlier discussed in Section 6.2.1, could, according to Goodchild (1953) date back to the first centuries AD. This suggested date

was based on the some military inscriptions, the architecture of buildings and on the datable pottery sherds collected from some sites.

With regard to the early imperial western frontier of the province, outposts were located to defend the approaches to the Cyrenaican plateau from the Syrtic region where there were a number of important oases. The military disposition is represented by a number of fortifications such as the westernmost military outpost in Cyrenaica at Bir Umm el-Garanigh (Goodchild, 1953:67).

Agedabia- *Corniculatum* was also, as Goodchild stated, “a key-point” in the frontier organisation due to its strategic location on the caravan route that connected the Syrtic coastal route with the oasis of Augila. Its importance is further indicated by the presence of a Roman military garrison that came originally from Syria in the first century AD, as indicated by military inscriptions found in the city. This garrison was most likely based in a full scale fort, traces of whose layout are still visible beneath the Fatimid fort in the city. The Roman fort was linked to the relatively well-preserved outpost of Qasr el-Heneia (figure 2.8).

Other elements of the early western defences of the region include a group of fortifications forming a line running east-west to the north east of Agedabia. These include the small watch tower of Zaviet Msus (figure 2.13) and the fortlets of et-Tailimun (figure 2.7) and Esh-Sheleidima. However, as observed in Section 6.2.1, the architecture of the fortlet of et-Tailimun indicates that a late Roman fortification succeeded an earlier post here.

In eastern Cyrenaica, an outer ring of Roman military posts was located to defend the plateau of Cyrene from the east and south-east. As Goodchild claimed, (1953:70), the fortlet of Ain Mara (*Hydrax*) (figure 2.8) is a strong candidate for an early site that continued in use until the mid-fourth century AD. It is very similar in terms of architecture and size to the frontier outpost of Qasr el-Heneia. It was, however, a mound of collapsed rubble when visited by Synesius c. AD 400 (*Epist.* 67).

In the KAS area, official military sites have been identified on the basis of their architectural and locational characteristics. With the exception of the watch tower of

Qasr Aqeela (KAS 25) that was probably of mid-imperial Roman date, the military sites were to be of late Roman and Byzantine date (See Section 6.2.2).

A few fortified structures surviving on the coastal plain of the survey region may have formed part of a coastal frontier zone for Cyrenaica during the late Roman and Byzantine periods. These include, the fortlet of al-Hamama (KAS 33), situated on rising ground overlooking; the possible small watch tower of Siret Masouda (KAS 31), located on a hilltop on the edge of the first escarpment of the Gebel overlooking the ancient harbour of *Phycus*; the possible military outpost of Qasr Alhesy (KAS 37), located some 24 km to the west of *Phycus*; and the possible military outpost of Qasr al-Oqla (KAS 40), built on the southern hilltop overlooking the ancient harbour site of Maatan al-Oqla (perhaps *Caenopolis*). These four late Roman fortifications formed part of a series of posts extending east and west to defend the province's coastal zone. By contrast, our knowledge of the military sites in the coastal plain in the area between *Phycus* and *Antipyrgus* is very limited due to a lack of archaeological survey. But to the west of the KAS region, many more probable military sites of late Roman and Byzantine date are known.

In the area between Qasr al-Oqla and Ptolemais four buildings were observed by the Polish Archaeological Mission during a brief investigation aimed to re-evaluate the previous work of Arthur and Bazama (1975) on the aqueduct of ancient Ptolemais. The first building lay at the eastern end of the Ptolemais coastal strip. It measures 15.5 x 14 m but because of its ruinous state nothing can be said except that the building was probably an outpost located at the summit of an area to the south of the water channel. The second building located at the mouth of Wadi el Melecca was of almost square shape (16x16.20 m). Its outer walls were preserved to more than 2 m in height, reinforced by a sloping revetment. The third building is located east of the mouth of Wadi Rumman and is also square, of sides 10.5 m, with substantial outer walls 1.10 m thick. The last building is located at the site of Sidi Belgasem, some 120 m south of the course of the channel. The structure measures 14.60x14.80 m with external walls 0.90 m thick.

Between Ptolemais and Tocra, along a 35 km stretch of the coastal road, eleven fortified structures have been located. While four were classified as fortified farms,

seven were interpreted, on the basis of general architecture and good ashlar masonry, as military bases of Byzantine date, protecting the agricultural population and the east-west highway (Kraeling, 1962:105-107).

Only two potential military sites are known in the coastal plain between Tocra and Benghazi; both are of late Roman or Byzantine date. The first is the fort of Qasr al-Motanib, the largest official military Roman fortification known in the countryside of Cyrenaica (see Sections 2.2.3 and 5.2.1); the second is the small watch tower of Tansoluch, some 44 km east of Benghazi (Sections 2.2.3 and 5.2.4).

During the late Roman and Byzantine periods, the western coastal defences of Cyrenaica lay around the well-defended city of *Boreum* (Goodchild, 1953:67). Some additional outposts, such as Qasr al-Atallat (figure 2.9) (Goodchild, 1951c:14) and Qasr Hadduma (Goodchild, 1953:67) appear to have been constructed to protect the region's western frontier from the attacks by tribes from Syrtica.

A line of north-south military fortifications was built to dominate the most dangerous area of the Kuf region. These sites were probably late Roman in origin but continued in use throughout the Byzantine period. The defensive line included, from north to south, the fortlet of Qasr Beni Gdem (KAS 1), the outpost of Siret Lyktaif (KAS 2), the fortlet of Qasr Shahden (KAS 3) and the outpost of Qasr Ushish (KAS 4). The landscape east and west of this line of official fortifications was densely covered by settlements of an agricultural nature, including a large number of fortified farms, *qsur*. Therefore, it could be suggested that one of the aims of the distribution of the military posts in this region was to protect the surrounding agricultural communities from the raiders.

7.4 Qsur Owners

The sites that were classified as civilian fortified farms (*qsur*) formed the vast majority of the sites recorded by my KAS. The agricultural nature of these sites, as stated in Section 5.3, is indicated by their topographical location on the most fertile lands in the region. Other archaeological signatures include agricultural features associated with the main *qsar*.

Ownership of this type of site is of course difficult to establish in the light of the limited archaeological evidence available from the surface survey and in the absence of epigraphical data. However, looking at previous discussions on the identity of the owner and occupants of similar and comparable sites from Cyrenaica outside the survey region and from other regions of the empire could help.

The identity of the occupants of these defended agricultural settlements has been a matter argument. For Tripolitania, Goodchild and Ward-Perkins (1949) suggested that the fortified farms, *qsur*, were settlements of soldiers-farmers (*limitanei*) who were installed to help protect the late Roman frontier zone (see below, Section 7.4.1). However, later researchers, (e.g. Mattingly, 1995:194-201) have highlighted the local character of the majority of these settlements, suggesting that they were not built for immigrants.

7.4.1 Militarised owners

In Cyrenaica, beyond the survey region, and in Tripolitania, similar sites were interpreted by Goodchild as a military or para-military settlement of soldier-farmers (*limitanei*) with some structures built by Romans to be used by friendly local tribes who could help in controlling the frontier zones (see Sections 2.2 and 2.3). In Tripolitania, as argued by Mattingly (1989:141-142) Goodchild's point of view was mainly based on the similarity of the design between the *qsur* and the official watch towers and outposts (e.g. Qasr Duib) as well as on the military terminology, such as *centenaria*, used to describe some of the *qsur*.

In Cyrenaica there is as yet no evidence to suggest that the *qsur* were part of a regional military defensive system. No inscriptions exist to show an official military role; no weapon finds are known; the burials in cemeteries do not show military personnel. The fortified appearance of many of the buildings has more to do with the wealth and social power of the estate owners, than a military purpose or design. And yet, the vast majority of the *qsur* recorded by KAS are clearly defensive structures on the basis of topographical location, thick outer walls, ditches, revetments, single entrances and narrow windows.

Why were these civilian rural domestic structures fortified? No doubt this was a response to security conditions prevailing in the region during the late Roman and late Antique periods (see Section 1.2). But it was probably also a reflection of contemporary building styles too built in a specific form. Therefore, one can only assume that the main aim of the landowners was to protect or secure their families, workers, animals, stored crops and estate equipment from potential tribal raids. At the same time owners and workers from the scattered farms could band together, as quoted below (Section 7.4.2) to act as a local militia to assist in the defence of their region (Synesius, *Epist.* 125). Also, in (*Epist.* 78) Synesius stated that he was a leading member of a ‘Home Guard’ unit (he may even have led it) and with other volunteers, by comparison with regulars, he says they were hard-working and valiant, and protected the local area:

“Nothing could be more advantageous to Pentapolis than to give honor to the *Unnigardae*, who are excellent both as men and as soldiers, in preference to all the other troops, not only those who are termed native troops, but also all that have ever come into these districts as auxiliary forces. The truth is that these latter, even when they are much superior to the enemy in numbers, never yet gave battle with courage, but the *Unnigardae* in two or three engagements, with a handful of forty men, engaged an enemy of over a thousand. Assisted by God and led by you, they have gained the greatest and most glorious victories” (Synesius, *Epist.* 78)

He tells us that these volunteer groups linked together to make a greater fighting force and that they, in turn, fought alongside regular troops that even included naval ratings who we are told were particularly useless (*Epist.* 132). This fits well with the nature of the evidence and the landscape, with many *qsur* being inter-visible, and additionally associated with and in the sight of other military installations, including Qasr Beni Gdem, Qasr Shahden, Qasr Lycktaif, Qasr Ushish and other possible military outposts and watchtowers. One of the groups they campaigned with was the *Balagritae* from *Balagrae* (the Modern City of al-Baida, east Libya). Synesius tells us that they were once mounted volunteers but their horses were taken by another group of mounted soldiers commanded by Dux Cerialis (*Epist.* 132). They operated under traditional names (*Marcomani* and *Dalmatae*) that he did not like. They were in part veterans or men with some military experience, or perhaps high status landowners and hired staff, or mercenaries from further afield, even from native tribes, or even a mixture of hired

experienced veterans and agricultural staff. Overall, there appears to have been three levels of military: official troops, naval ratings and irregular mounted troops, subdivided into units and a home guard also subdivided into regional ‘units’, often acting together and sometimes part of a mixed force with regular and irregular troops.

Recruiting native Libyan elite as *foederati* to help defend the frontier zone during late Roman period has been attested in Tripolitania (Mattingly, 1995:194-195). This policy was also adopted in late Roman period in the northern and eastern Roman provinces. In Germania, *laeti* of German tribesmen were settled in some of the hill-top refuges in the Rhineland area and act as soldiers for Rome when necessary (Johnson, 1983:235). In the east, the *federate* Arab tribe of the Ghassanids helped Rome to police the Syrian-Arabian desert from early to late Roman times (Rushworth, 1996:300).

7.4.2 Civilian landowners

As stated in Section 2.3.5, the archaeological evidence gathered by the ULVS work in Tripolitania has proved that the *qsur* were agricultural in nature, built by civilians and had no military significance (Mattingly, 1995:195). Additionally, several fortified farms in the Gebel region yielded strong evidence to suggest that they were constructed on the properties of powerful and wealthy families (Mattingly, 1995:202).

Another indication of the civilian nature of the *qsur* in the countryside of the Pentapolis can be inferred from one of Synesius’ letters (*Epist.* 125) which reports how he gathered a force of farmers from the countryside to protect their own families and properties:

“We remain helpless in our homes. We always wait for our soldiers to defend us, and a sorry help they are...Let us collect our peasants, the tillers of the soil, to advance upon the enemy, to assure the safety of our wives, of our children, of our country, and also, I may add, of our soldiers”.

Also, as pointed out by Pando (1940:131), Synesius, in another letter (*Epist.* 122), refers to a small group of country people led by the priests of the church of Axomis that managed to defeat a small force of barbarians: “May all good things befall the priests of

Axomis! While the soldiers were hiding themselves in the gorges of the mountains to take care of their precious lives, these priests called the peasants about them, and led them straight from the very church door against the enemy, and then they called upon God, and erected a trophy in the Myrtle Valley!”

In Mauretania *Caesariensis*, though extremely different in terms of architecture when compared to the Cyrenaican and Tripolitanian *qsur*, the late Roman fortified farm or *Castellum* at Nador produced good evidence of civilian ownership. The building was a part of an estate of *M. Cincius Hilarianus* (described as *flamen Augusti perpetuus*) and his wife *Vetidia Impetrata* as indicated by an inscription cut into the masonry above the arched entrance in the middle of the north façade. The front (north) façade of the building imitated military architecture in its massive arched doorway, flanked by two projecting rectangular towers. In addition, two circular towers were located at the corners of the north wall. However, internally, the agricultural and domestic nature of the structure is clearly noticeable: a group of rooms was arranged on the west and south sides and on the north-east corner opened onto a L-shaped courtyard; domestic and agricultural features included an oven, a cistern, store-room, wine and oil cellar and a number of pressing rooms were recognised (Mattingly and Hayes, 1992:408-410).

Were the occupants of the *qsur* Romans or Libyans? In fact, due to the lack of epigraphic evidence it is extremely difficult to answer this. However, a passage in a letter of Synesius (*Epist.* 130) suggests that some of rural sites (probably *qsur*) in Cyrenaica were used by *Macetae*, a local people who did not always keep their treaty with the Romans and occasionally cooperated with the barbarians. Goodchild (1951b:144), in his interpretation of a group of fortified farms in western Cyrenaica, suggested that these *qsur* were inhabited by more docile Libyan tribes, like the *Macetae*, who were recruited by Rome to defend areas that were insufficiently garrisoned.

The presence of Libyans in the countryside of Cyrenaica during the Roman era can be inferred from some Greek and Latin inscriptions. For instance, at Bir Tarakenet some 2.5 km to the north of Ain Mara (*Hydrax*), a Greek inscription from the sixth century AD, which includes a possible Libyan name, was studied by Goodchild and Reynolds (1962). The site contained only a rock-cut chamber and rough stone boundary walls. The inscription, in the rock-cut chamber that also contained elements of an olive press

and *loculi*, included the name Samphos or Samphodion, who was interpreted as “a sedentary Libyan who undertook the defence of his region against his own nomadic kinsmen” (Goodchild and Reynolds, 1962:46).

Sedentary Libyans are well attested at *qsur* in Tripolitania. A number of sites have produced inscriptions showing that their owners and inhabitants were indigenous. Latino-Punic funerary inscriptions containing Punic or Libyan names are evident from cemeteries associated with the *qsur* at Bir Scedua (Mattingly, 1995:195) and a *qsur* in Wadi Umm el-Agerem in eastern Tripolitania (Mattingly, 1995:165).

Following Mattingly’s analysis of Tripolitanian *qsur*, it is also important to discuss the function of such structures in the study area (1996:329-331). Did they serve as an actual residence for the owners and their families and/or for the workers in the estate? Or were they used as fortified refuges for the inhabitants in times of threat? Or did they provide as safe storage for agricultural and industrial produce?

No inscriptions have been found in the Cyrenaican *qsur* to match those discovered in Tripolitania to shed light on the nature of occupation and to prove if some of the *qsur* were fortified dwellings on *elite* estates (Mattingly, 1996:330). However, I would argue that the clear internal plan of some sites in Cyrenaica provides the clue to their domestic function. At al-Qasr al-Hamar (KAS 41), for instance, the size of the rooms and their well-shaped and arched doorways, in addition to the existence of a niche in one of the rooms (figure 9.135), probably for an ornamental purpose, make them more suitable for residence than for storage.

However, the use of some rooms in the *qsur* for storage purposes probably cannot be excluded. One example of these has been noted in a *qsur* (Kh22) in Wadi Umm el-Kharab in the pre-desert area of Tripolitania. Whereas domestic occupation was probably in the upper-storey of the building, the rooms in ground floor were most likely for storage as indicated by their thick walls and the lack of the doors.

Most of the *qsur* recorded in the KAS area were well-built structures suggesting that they were constructed by skilled masons, not by the owners and peasant workforces. Well-cut and dressed ashlar masonry was widely utilised and well-shaped voussoirs were used in the external and internal doorways as well as in the vaults. Ornamental

features such as niches (Room 2 KAS 41) and door frames (KAS 9 and KAS 26) were also a signature of good masonry building skills. Large *qsur* built with high quality ashlar masonry, such as al-Qasr al-Hamar (KAS 41), Qasr Az-Zaarura (KAS 26) and Siret et-Tauma 4 (KAS 21) most likely denote wealthy landowners. In contrast, lesser landowners had smaller sites with *qsur* built of poorer quality masonry (e.g. Siret Battouma (KAS 16) and Siret Stablous (KAS 46 and KAS 47)).

There is no doubt that a good deal of capital was needed to construct and operate such estates. Therefore, if we assume that dwellers of the *qsur* recorded by KAS were civilian farmers, it is essential to question whether the agricultural and industrial productions were for self-sufficiency or for trade. In some sites (e.g. Qasr Al-Akrout al-Qaddamy (KAS 12), Siret Adhrary (KAS 17), and Siret et-Taumat (KAS 18, 19, 20 and 21), the size of the surrounding arable lands and the amount of the agricultural and industrial facilities associated with the *qsur* give an indication that the scale of production probably went far beyond self-sufficiency.

Olive and grape cultivation were major components of Roman Cyrenaican agricultural products. In addition to those recorded in the KAS region (Section 4.4.3) and those previously known (Buzaian 2009; Wilson 2004; Reynolds 2003), the data gathered from Cyrenaica by the Libyan archaeologist Ahmed Buzaian (for his forthcoming PhD at the University of Leicester) includes over 100 sites associated with oil and wine presses. This clearly shows the prosperous nature of the region, with widespread production of olive oil and wine in Cyrenaica throughout the Roman and Byzantine periods. Collectively these small to medium production centres probably produced a significant surplus, likely for trade. The markets probably include the main cities and villages as well as nearby military bases but could even have been exported via the coastal ports.

Trade in agricultural and industrial goods produced on their own estates enabled the big landowners to import luxury goods including fine pottery, as demonstrated by some sherds of late Roman and Byzantine date (see Section 6.3.2). Other signs of prosperity are indicated, as seen, by the size of the estate and the quality of building materials.

7.5 Questioning Site Changes and Ends

Most of the *qsur* recorded by my KAS probably developed from pre-existing undefended agricultural settlements and farms. This was indicated in part by tantalising traces of earlier buildings but also by the presence of early and mid-Roman pottery sherds observed on the surface within and around the sites. Roman tombs from the first and second centuries AD, probably of the type known as *arcosolia*, have been recorded at Siret et-Taumat and Siret bu-Awena and also suggesting an earlier phase of occupation on those sites. Again excavation is required to confirm sequence which might support the idea of site ownership by farmers.

The transition from open to fortified farms is attested in other North African Roman regions. In the pre-desert region of Tripolitania, this replacement took place as early as the third century AD (Jones, 1985:279; Mattingly with Dore, 1996:155). In contrast, in the Tarhuna region, it is likely the transition did not take place until the fourth or fifth centuries AD (Ahmad, 2010:70-74; Oates, 1953 and 1954).

Some fortified farms across the Maghreb also developed from earlier open farms. A good example from the region is the fortified farm or *Castellum* at Nador in Mauretania *Caesariensis* (Mattingly and Hayes, 1992). Three main phases of occupation were identified here. The earliest was for a farm producing olive oil from the second quarter of the first century AD to the early third century AD. The second phase was represented by a fortified farm that *Cincius Hilarianus* constructed in the second quarter of the fourth century. A third and final phase of occupation during the Vandal period of the early fifth century saw major alteration of the interior (Mattingly and Hayes, 1992:409-410).

As discussed above (Section 6.3), the *qsur* in our survey region probably date from the fourth to the seventh centuries AD. It is difficult to say what happened to these sites and farms after the Arab conquest in AD 642-4. Did they continue in use during the Islamic period, as some farms certainly did in the northern wadis in Tripolitania (Mattingly *et al.*, 2013:186)? Although there is no evidence to suggest this in the study area, it is likely that many farms saw some continued use, but perhaps on a limited scale and with a decreasing market for the sale of goods. There is no clear evidence that these

sites were rapidly abandoned or taken by force during a military phase of the Arab conquest, which generally focused on urban centres and left little trace in rural areas. Perhaps, over time the settlements became increasingly isolated and were gradually overwhelmed by tribal raids from the hinterland, the collapse of long-distance trade and the decline of the regional and local economy. Possibly there was a reversion to subsistence farming that is difficult to detect in the archaeological record. Currently we cannot recognise any dating indicators, there being no coinage of the period and a lack of pottery after the seventh century. Perhaps, it is also because only a few of these sites have been systematically recorded. The abandonment of industrial workshops is of course a reflection of a collapsed economy – there being no longer a market for bulk goods – rather than a forced abandonment following the Arab takeover of the mid-seventh century. The apparatus (olive presses, crushing stones, basins etc.) in the workshops is heavy and difficult to move, so they were left where they were or had fallen. The farming communities probably simply carried on a way of life they had known for centuries, but over time were forced to change their settled farming systems to a more nomadic way of life, relying more on pastoralism and the raising of herds of sheep, goats and other animals and on seasonal pastures for grain crops. However, at one site late occupation was attested: Islamic pottery and tombstones (figure 9.139.) were evident at al-Qasr al-Hamar indicating a late phase of settlement or re-settlement that included the *qasr*. Similarly, some *qsur* in the northern wadis of Beni Ulid and Merdum in Tripolitania continued in use into the Islamic and Ottoman periods (Barker with Gilbertson, 1996b:344).

7.6 Wider Debates

Despite variations in some of the architectural characteristics from area to area (and sometimes within the same area), the fortified farms or *qsur* are an obvious phenomenon that broadly spread throughout the countryside of the Late Roman and Byzantine North African provinces (Mattingly *et al.*, 2013).

In addition to Tripolitania, (Section 2.2), fortified farms *qsur* existed across the Maghreb. In *Mauritania Tingitana* c.50 rural fortifications have been recognised in the

countryside. Although they were all considered military installations with no reports of fortified farms, Mattingly, however, argue that more developed research on these sites might show that some probably had civilian origins. Conversely, in *Mauritania Caesariensis*, in addition to the fortified farm at Nador (Sections 7.4.2 and 7.5) at least two fortified estate centres are well known. Civilian settlements of agricultural nature are located in the surroundings of many of the military installations. Also, some fortified villages in *Numidia* had one or more. A good example is the fortified village known as Sources-du-Lions that contained three *qsur*. Other North African regions that contained fortified farms include Zeugitana and Byzacena (Mattingly *et al.*, 2013:178-182).

As stated above, the military or para-military (informal armed forces e.g. local militias) interpretation is probably to be accepted for some *qsur*. However, the vast majority of such sites in the North African provinces were certainly civilian agricultural estates. This has been certainly proved by some factors: 1) dedicatory inscriptions at some sites (e.g. the fortified farm at Nador), 2) by the location of many of these buildings on sites previously occupied by undefended farms, 3) by the existence of associated agricultural facilities, and 4) the *qsur* appeared not only in association with military installations in Roman frontier zones, but also in provincial regions such as in the high plains of eastern Algeria and Tunisia and the hinterland of Roman cities such as Gighis and Lepcis (Mattingly *et al.* 2013:185).

The wide distribution of these rural structures and their defensive appearance was apparently a response of the insecurity that could have come, as Mattingly and Hayes (1992:418) concluded, from a number of sources, “from external enemies (desert or mountain tribes), internal opponents of law and order (bandits, *circumcelliones*) or from one’s own neighbours... Certainly, as the structure of Roman government and control broke down and as towns declined, the existence of such potential strongpoints in the countryside must have been a profound influence in the sub-Roman societies that evolved”.

Chapter 8: Conclusion

8.1 Overview

Though *qsur* are the most curious and distinctive feature of the Cyrenaican countryside they have not received a great attention in the past. Indeed, previous studies on *qsur* in Cyrenaica have not reached an agreement on their typology and chronology. While some sites were proclaimed ‘civilian’, others are perhaps military, and the rest are yet to be established military or civilian. Even as these studies appear limited in content and extent of their analysis of fortified structures, they have provided the background to carry out further work in Wadi al-Kuf, Cyrenaica – an area whose fortified structures are prevalent but widely under-explored. Therefore, this thesis was an attempt to fill the lacuna by investigating a number of sites (55 in total) in the region of the Wadi al-Kuf, Cyrenaica in the eastern part of Libya. A combination of extensive and intensive survey has been conducted in three topographical blocks and covering a total area of about 1350 km². My approach in this research focused on exploring the architecture of the *qsur*, their size, distribution on the landscape and the relationship between fortified structures and the surrounding environment. By doing this I have attempted to typologise these sites and by looking at the limited dating evidence I tried to suggest a chronological framework for the recorded sites.

The Wadi al-Kuf region is one of the richest areas in Cyrenaica for surviving archaeological sites, as well as one of the most spectacular and beautiful for its challenging interconnecting valleys and vegetation. To distinguish between military and civilian sites can be a daunting task and this was one of the reasons why I decided that my study area needed to cover different geographical locations and topographical regions. I have also realised that there are hundreds of sites that are diverse and waiting to be explored and studied but I was able to survey 55 sites to as much detail as possible in a short period of time.

8.2 Architectural Features of the Sites

In Chapter 4, I focused my attention to understanding the architectural features of fortified buildings in the study area. I not only identified the fortified structures, but I also defined them based on broad size and architectural characteristics and used it to determine their typology and chronology. In addition to determining the masonry types utilised in the construction of these sites, other architectural characteristics were analysed. These include the defensive features that are represented in revetments, ditches, enclosures and towers.

The commonest feature found in the recorded sites was the external revetment. External revetments were found in 29 fortified buildings. It is likely that revetments, as argued by Kenrick (2013:24) were added to stabilise the outer walls of buildings damaged by earthquakes, although a defensive purpose cannot be excluded. The fact, however, that at many sites revetments do not surround the walls on all sides seems to make it more likely that they did not serve a defensive purpose but were only put in place where needed as support for structurally affected walls. We see that revetments were added also to Byzantine churches in Cyrenaica for a similar purpose.

Ditches were identified during the survey at 19 fortified buildings. They were cut out in the rocky ground and probably served a defensive purpose. Ditches are not encountered at some fortified sites but this probably results from the fact that the naturally protected location of these sites makes ditches unnecessary. It is also possible the ditches were the result of quarrying for building materials.

Enclosures are rarely found in the sites. I was only able to document three enclosures at three sites. Similar to the absence of enclosures, the probable military sites of Qasr Beni Gdem and Qasr al-Hamama were the only two fortified buildings in the survey area that contained towers.

Agricultural and industrial features were evident at most of the sites. These include: water cisterns, rock-cut chambers, olive presses and wine production elements. The presence of these features no doubt indicates that most of the sites were civilian fortified farms. Water cisterns are a common feature at many sites, over 30 were recorded in 20 sites of which three types were discerned. The majority of the cisterns are rock cut and

have a narrow opening (type 1) other are vaulted and plastered with waterproof material (type 2). A third type of cistern is rectangular in shape, cut out in the rock and has a flat roof supported at some sites by rock-cut pillars or columns which could be lined with water proof cement. The availability of cisterns is an indication of the trapping of water for use in agricultural production in the fertile wadis. The abundance of water arrangements has been noted at sites located at the fertile lands of the second plateau of the Gebel.

Twenty sites have yielded rock-cut chambers. It is likely, however, that they existed at the majority of the sites in particular those surrounded by ditches in which they can easily be cut out. Rock cut chambers have been identified at sites located at or close to hills, the rocky slopes of which probably hiding more such chambers now masked by fallen masonry, rubble, vegetation and soil erosion.

The rock-cut chambers were next to housing olive presses probably also used for storage. This might have been the case especially with regards to those sites where there is evidence of agricultural activities. Some of the chambers may also have been used as stables as evidenced by the rock-cut troughs identified at Qasr Shahden.

8.3 Site Typologies

In Chapter 5, I tried to differentiate between sites that are most likely of military nature and fortified farms (*qsur*) and *qasr*-like building of civilian character associated with agricultural and industrial features. Based on their architectural characteristics, size, topographical location and the surrounded landscape the recorded sites were categorised into two main types:

1-possible military sites

These sites are identified as being of a military nature because of their architectural and locational features and the absence of associated industrial and agricultural elements. In line with Mattingly (1995:90-106) in his typology of the military sites in Tripolitania, 11 sites were categorised as military or probable military. Besides the late Roman fort of Qasr al-Motanib, large Roman military structures such as were present in

Tripolitania and elsewhere have not been identified in Cyrenaica. The terms fortlet, outpost and watch tower are better suited to 99% of the military and potentially military structures identified in previous publications and by KAS. Following Mattingly's (1995:90-106) classification military sites were thus categorised into four types: Forts, fortlets, outposts and towers.

2- Fortified *qsur* and unfortified *qasr*-like buildings of civilian nature

The term *qsur*, following previous studies, refers to a tower-like structure of more than one storey. It often contains an internal courtyard or light-well. Defensive features such as thick walls and a single entrance are also identified. These are generally also associated with agricultural and pastoral features. *Qsur* form the majority of fortified structures in the survey area. In terms of size, *qsur* can be compared to outposts and range between 0.01 and 0.035 ha. Some of the sites were, however, somewhat larger ranging between 0.04 and 0.055 ha. One site, Qasr et-Tauma 4 comprised 0.07 ha.

In this thesis I distinguish between two types of *qsur*; a single *qasr* with agricultural and industrial and clusters of *qsur* formed part of a larger agricultural.

8.4 Site Chronologies

In Chapter 6, I suggested the chronology of the survey sites, depending largely on pottery collected and other observed features. The work of Goodchild (1953) and other literature have contributed to the suggested broad time frame of the sites. Based on these analyses, the majority of *qsur* recorded had some common characteristics of late Roman architecture. The military sites on the other hand likely spanned a greater time range. It was difficult to accurately date the military sites due to a lack of inscriptions but a relationship was drawn with similar studies of military fortified sites in Tripolitania.

Site chronology in previous studies primarily depended upon a limited assemblage of datable pottery sherds identified on the surface. It is likely, however, that most of these sherds stem only from the latest occupational phase of the site, thus providing no secure dating evidence for its occupational life-span. The KAS was affected by the same issues as no excavations took place. The suggested chronology, therefore, is primarily

constructed around the pottery collected from the surface, building techniques and the relationship of the fortified structures with their immediate environment.

Although it appears that the majority of the fortified farms was of a late Roman or late antique dating a larger time frame cannot be excluded. Military inscriptions from Ajdabiyah (*Corniclanum*) seem to provide evidence for a Roman garrison in Cyrenaica since the first century A.D. The lack of secure dating evidence makes it difficult for KAS to date the sites attested. The excellent preservation of the architectural features of three sites made it possible, however, to compare their characteristics with more securely dated published parallels in and beyond Cyrenaica. Collected samples of pottery have also helped to provide broad occupational timeframes for the sites in question. The poor preservation, however, of some sites makes it difficult to identify or reconstruct their features and provide a firm dating.

In terms of the fortified farms, with the exception of the Pennsylvanian excavation of the fortified farm of Qasr al-Arid, previous studies on the *qsur* in the countryside of Cyrenaica have been topographical and architectural surveys. No secure dating evidence has, therefore, been provided. Architectural features, surface pottery and Christian crosses incised on some of the walls have lead Goodchild (1953:73) to believe that most are late Roman and Byzantine in date. My KAS work, similarly, relies primarily on the architecture and surface pottery for dating. Late Roman architecture was identified on the majority of *qsur*.

8.4.1 Pottery evidence

The majority of the fine pottery recovered dates from the fourth to the seventh century AD. Only a few Hellenistic black gloss pieces and early Roman pottery has been identified. African Red Slip ware dominates the fine ware repertoire and dates primarily to the fourth, fifth and sixth centuries AD. This may, therefore, suggest that the majority of the fortified sites can be dated to the late Roman and Byzantine periods.

The identified coarse ware is composed primarily of amphorae and consists mainly of handles which are difficult to date. The amphorae are, however, undoubtedly Roman in date and include local fabrics with possibly some Tripolitanian examples.

8.5 Gaps and Needs and Recommendation for Further Work

In addition to the attempt to typologise the sites and refine their chronology my other major contribution is increasing our knowledge about the archaeology of the region of Wadi al-Kuf. At least 42 sites were recorded for the first time by my KAS and it is likely that double this number is still awaiting further work.

In total, Some 55 sites were recorded by the KAS project, implementing extensive and intensive survey methods. At each site, the architecture of the buildings and associated structures and the topographic locations were investigated, recorded and analysed. At many of the sites surface pottery was collected and studied to provide a broad indication of date for occupation of the site. Overall, the survey has shed some light on the typology, chronology and function of these sites, but clearly further assessment is beyond the scope of surface survey and there is a need to examine a number of them by detailed stratigraphic excavation. There are four main desiderata for future work in my study area:

- 1- Excavation of a civilian estate, including the *qasr* and some of the associated structures (e.g. tombs) to better understand:
 - (i) The sequence of occupation and develop a fuller chronological picture, especially regarding post-Byzantine use.
 - (ii) To develop a clearer picture of the internal layout of the *qasr* and estate buildings.
 - (iii) To collect stratified materials for dating, economic and environmental purposes.
- 2- Excavation of a presumed military site to determine, in addition to the points stated above, the following:
 - (i) The size, nature, scale and extent of the fortification, and a phasing of the complex.
 - (ii) To provide base data for purposes of estimating the size of the possible military unit.
 - (iii) To locate cultural materials that might be military in origin (e.g. inscriptions, weapons, equipment).

- 3- A more intensive surface study for outlying buildings, quarry sources, estate boundaries, field terracing.
- 4- Fuller GIS mapping to gain a better understanding of the landscape, of inter-visibility of sites, routes and lines of communication, natural and artificial site boundaries, etc.

Only by undertaking additional field survey and particularly stratigraphic excavation will we have enough quality data to challenge old hypotheses and to provide a robust, new interpretation. This additional work will help to determine whether some civilian sites played an unofficial role, whether acting singly or collectively to protect themselves and their neighbours during times of crisis or by providing warning to nearby military installations and, on occasion, to receive troops if required. Future work could also clarify whether these farms were totally self-sufficient economically and how their economic function complemented any defensive purposes.

Moreover, only detailed survey and careful excavation will tell us about the continuing use of these farms and installations in the early Arab period and later. At the present time we know very little about how and when occupation of the *gsur* in the study area ceased. Such information will only come to light with more detailed survey and particularly good quality excavation and analysis.

The Kuf region is an exceptionally beautiful, rugged, mountainous, yet fertile place, serrated by wooded, precipitous gorges extending to the sea. The landscape is much as it was 1500 years ago and it is the survival of these ancient sites and the setting, including biodiversity, that makes the place special, unique in Libya. Modern development is impacting on the study area. New roads and pipelines are carving into former wilderness, often against the grain of the landscape, creating an artificial topography that is both alien and ugly. New access brings roadside development; houses and farms that in turn generate tracks, pathways, arable fields and quarries for building materials (sand, gravel and limestone). There is a complete lack of medium to long-term planning, of planning rules and regulations, and no thought of conservation and protection in the minds of land owners, developers and decision-makers. The resource is under serious threat and it is hoped that this study has thrown some light on the rich and diverse resource and setting, and hopefully will encourage decision-makers to protect the area, its heritage and biodiversity for future generations to enjoy. One way to do this

is to declare the area a protected National Park where development of all kinds can be carefully controlled through the imposition of codes of conduct and laws that are enforced by Park Rangers, the Police and the Law Courts, with serious fines and even imprisonment for transgression.

The gazetteer forming part of this study, with description and interpretation of individual sites, is a potential resource that could be included as part of a National Inventory, to assist Libya's Department of Archaeology curate and protect the nation's heritage assets. At present, Libya has no Historic Environment Record, no regionally or centrally-held register of archaeological sites and find-spots to carry out a curatorial function and it is hoped that information generated by this systematic study will find a place in future regional and national databases. The databases will become a universal resource for all, but above all else will provide a means of protecting the resource within a future planning system. For, if you do not know where your resources are, how can you hope to protect them? Thus it is hoped that sites discovered and discussed in this study and included in the gazetteer will in the long term be afforded a measure of protection.

PART II

Site Gazetteer

9.1 Introduction

This part of the thesis contains descriptions of the 55 sites that I visited as part of the fieldwork for this research. It should be noted that due to the factors and limitations highlighted in section 3.5, I was unable to obtain the same level of detailed information for all sites. In terms of structure, each of the 55 site descriptions contains the following information: unique identifier code (e.g. KAS 1), site location and coordinates, ancient name, modern name, dimensions, constructional phases (if any), site type, and possible chronology. Reference is also made to the sites that previously recorded or mentioned. The new site descriptions are based on the researcher's findings and are contextualized in relation to the surrounding settings.

9.2 KAS Site Gazetteer

9.2.1 Qasr Beni Gdem

Site Code: KAS1. Site ancient name: Unknown. Site modern name: Qasr Beni Gdem. Coordinates: 32° 40.214'N 21° 32.333'E Site type: Probably military (Fortlet). Constructional phases: 2. Location: The second Plateau of the Gebel	Chronology: Late Roman/Byzantine 5 th - 7 th c AD. Dimensions: 23 by 44 m. References: (Beechey and Beechey, 1828; Goodchild, 1953; Kenrick, 2013 a; Pacho, 1827; Reynolds, 2003; Romanelli, 1943; Stucchi, 1975).
--	---

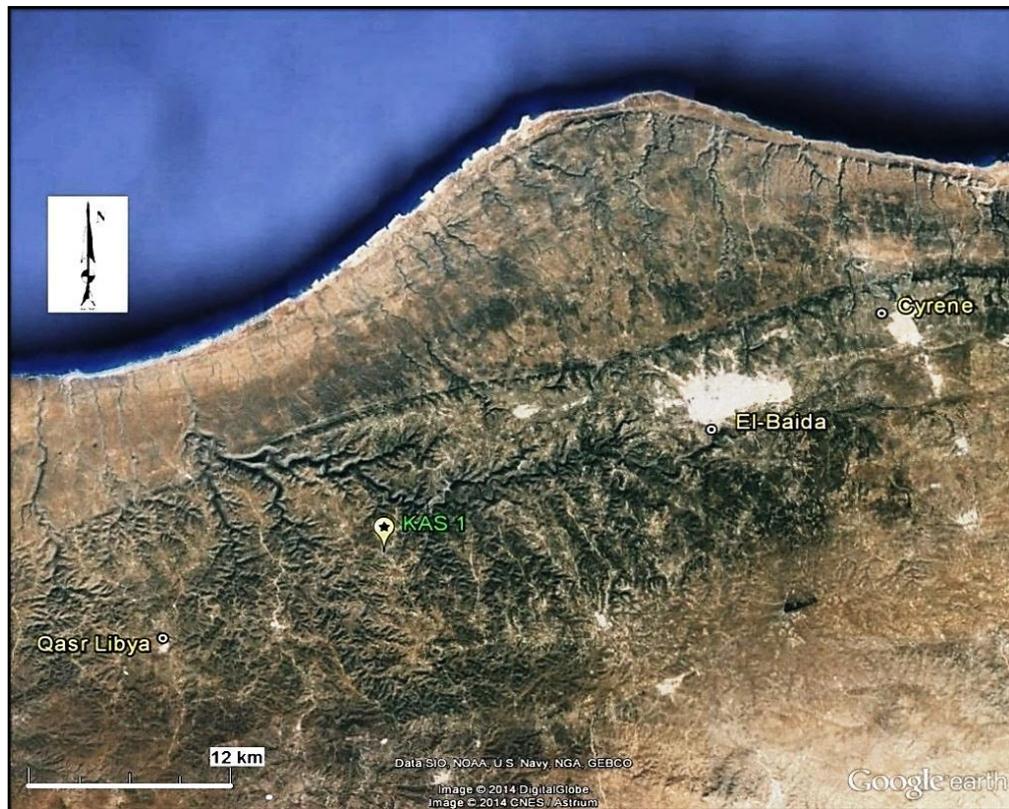


Figure 9.1: Qasr Beni Gdem: Location (Google Earth 2014).

Description: Qasr Beni Gdem is a probable military site (fortlet) located on slightly raised ground, approximately 1.5 km west of Wadi al-Kuf (figure 9.1). The *qasr* is a three storey ditched rectangular building, built of high quality dressed and coursed large and medium ashlar masonry (figures 9.2 and 2.3). A wide entrance, measuring about 2.30 m, is located in the well-preserved northern wall. Two projecting square towers, measuring 4x4 m, have been identified in the building.

The towers, located in the middle of the northern and southern walls, likely had vaulted roofs, as indicated by remnants of a vault still visible in the first floor of the well preserved northern tower (figure 4.20). Each tower had wide rectangular windows measuring approximately 1.50 m high and 0.70 m wide (Goodchild, 1953:70). In addition, the second and the third floors had smaller windows. Moreover, for defensive purposes, as their size prevented access to the interior, the ground floor had narrow window slits measuring only about 0.30 m wide. On the second and third floors the windows were opened only in the northern and, probably, the collapsed southern wall; no windows are present on these two floors in the other two well-preserved walls.



Figure 9.2: Qasr Beni Gdem: General view, looking east.

Goodchild (1953:70), noticed two phases of construction, evidenced by the presence of remnants of wall adjacent to the outer walls from inside. Of the interior, nothing is now visible due to the fallen masonry, however, it seems that the building had a large central courtyard, which was surrounded by rooms on all sides.

9.2.2 Qasr Lyktaif

Site Code: KAS 2. Site ancient name: Unknown. Site modern name: Qasr Lyktaif Coordinates: 32° 38.697'N 21° 33.138'E Site type: Probably military (outpost).	Constructional phases : 1. Location: The second Plateau of the Gebel (low hilltop) Chronology: Late Roman/Byzantine. Dimensions: 13.20 by 12.50 m.
--	---



Figure 9.3: Qasr Lyktaif: Location (Google Earth 2014).

Description: Qasr Lyktaif is a possible military outpost located on a low hilltop approximately 3 km south of Qasr Beni Gdem (KAS 1) (figure 9.3). The *qasr* is an unditched rectangular building, measuring 13.20 m (north to south) by 12.50 m (east to west) with outer walls built of medium-sized ashlar masonry of local limestone (figure 9.4 and 9.5).

A single entrance was most likely located in the middle of the eastern wall, as no entrance has been identified in the other relatively well preserved walls. Although largely masked by fallen masonry, it seems that the interior consisted of (as at Qasr Ushish [KAS 4]) a front large courtyard or vestibule, which opened onto the three rooms that occupied the western side of the building. A flattish ashlar block (probably a door lintel) engraved with two Byzantine crosses flanking six circles (figure 6.3) was

found among the collapsed masonry immediately to the east of the suggested location for the main entrance of the building.



Figure 9.4: Qasr Lyktaif: The north wall, looking south-west.

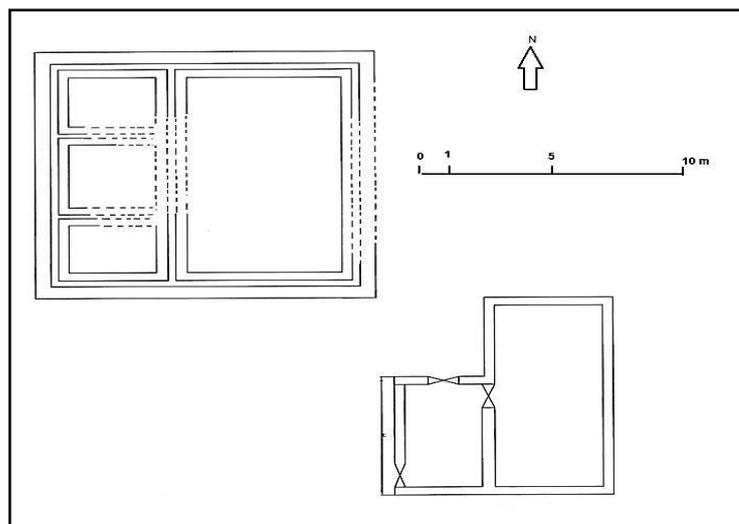


Figure 9.5: Siret Lyktaif: Measured plan.

A few meters to the south of the *qasr* lies a building consisting of two rooms built of the same ashlar masonry used in the main *qasr*. Three arches have been identified in the building; the one located in the northern wall probably crowned the main entrance. A similar structure has been identified at the fortified farm of Qasr Sidi Bu-Argoub (KAS 42). The function of these two structures cannot be identified without excavations, however, these outbuildings and the fortified structures appear to have been contemporary.

9.2.3 Qasr Shahden

<p>Site Code: KAS 3.</p> <p>Site ancient name: Possibly <i>Agriolode</i> or <i>Dinarthison</i> or <i>Bombaia</i>.</p> <p>Site modern name: Qasr Shahden</p> <p>Coordinates 32° 36.724'N 21° 34.653'E</p> <p>Site type: Most likely military (Phase 1 Probably outpost, phase 2 and 3 probably fortlet).</p> <p>Constructional phases: 3.</p>	<p>Location: High hilltop, the second Plateau of the Gebel.</p> <p>Chronology: Late Roman/Byzantine 5th - 7th c AD</p> <p>Dimensions: Phase 1: 14 by 13 m, Phase 2 and 3: 32 by 27 m.</p> <p>References: (Goodchild, 1953; Kenrick, 2013a; Reynolds, 2003; Stucchi 1975).</p>
--	---



Figure 9.6: Qasr Shahden: Location (Google Earth: 2014).

Description: Qasr Shahden is most likely a two storey fortified military building located on a hilltop approximately 7.5 km south east of Qasr Beni Gdem (KAS 1) (figure 9.6 and 9.7).

Three phases of construction are evident at the site (figures 9.8 and 9.9):
Phase I: The original building, a rectangular building measuring 14 m (east to west) by 13 m (north to south), was fully constructed of limestone ashlar masonry. A single arched entrance measuring 1.30 m in width was located in the middle of the western wall. The entrance was enclosed by a rectangular frame and inserted between curtain

brackets that had very large hooks on the inner face. Internally, the building consisted of a rectangular vestibule leading to three vaulted chambers. The central vaulted chamber had six deep rock-cut vats, five rounded and one rectangular, in its floor that were likely used for food storage or wine fermentation.



Figure 9.7: Qasr Shahden: General view, looking north-west (Kenrick, 2013a: fig. 91).

Phase II: The original building was surrounded by a rectangular enclosure measuring 32 m (north to south) by 27 m (east to west). This outer curtain wall was also constructed of ashlar blocks with two projecting string courses. A single arched entrance set in a moulded rectangular frame was inserted into the western wall on the same alignment as the entrance of the first phase (figure 9.10).

Phase III: Later, either in the seventh century AD as Goodchild (1953:71-72) stated, or during the second period of construction as suggested by Kenrick (2013a:128), three vaulted chambers were built on two levels of the building, between the enclosure and the original building, increasing the size of the outpost. It therefore may be most appropriate to describe this site as a fortlet.

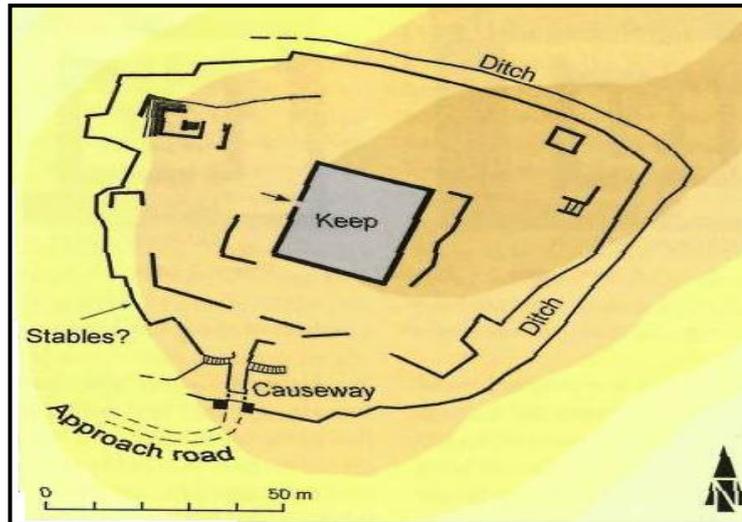


Figure 9.8: Qasr Shahden: Sketch-plan of general layout (Kenrick, 2013a: fig. 90).

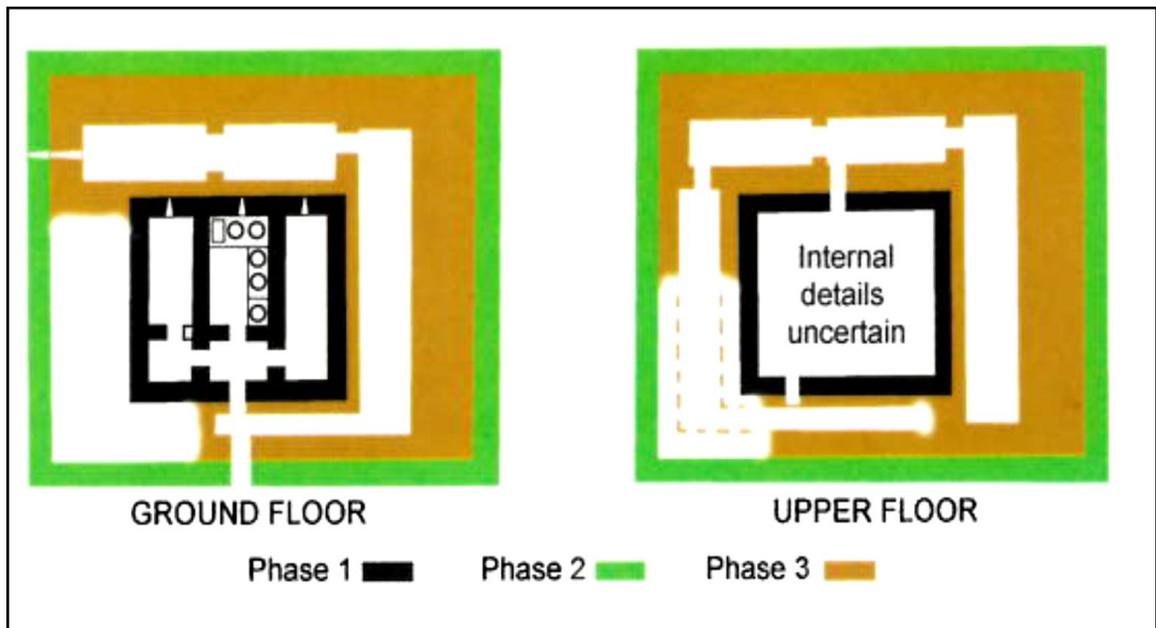


Figure 9.9: Qasr Shahden: Hypothetical phases of keep (Kenrick 2013a: fig. 92).

The hilltop was surrounded by a rock-cut ditch set approximately 40 m away from the *qasr*, crossable on the south side by means of a sloping causeway of uncut rock. The inner face of the ditch contained rock-cut chambers (figure 4.39); those located on the western side can be interpreted as stables on the basis of the presence of rock-cut stalls and troughs, probably used for feeding and watering horses (figure 4.40).



Figure 9.10: Qasr Shahden: The phase 2 entrance, looking east, scale 1m.

Remnants of outbuildings are visible on the hilltop around the *qasr*. Some of these were interpreted by Kenrick (2013a:128) as guard-towers built on the outer edge of the ditch. According to its size and location, it seems that Qasr Shahden originally represented a small military outpost, which, along with the other three identified possible military sites (Qasr Beni Gdem, Qasr Lyktaif and Qasr Ushish), formed a line of military fortifications for the purpose of monitoring and protecting the very broken territory of this region.

According to its architecture, Kenrick (2013a:129) agrees with Goodchild (1953:71-72) that the timeframe of the site falls between the fifth and seventh century AD. Goodchild also suggested that Qasr Shahden was probably one of two monasteries (*Agriolode* and *Dinarthison*) known to have been fortified by Justinian and, therefore attributed the last phase of construction to him. According to Kenrick (2013a: 129), however, this site might be the fortified site of *Bombaia* that was described by Synesius.

9.2.4 Qasr Ushish.

Site Code: KAS 4. Site ancient name: Unknown. Site modern name: Qasr Ushish. Coordinates: 32° 34.364'N 21° 35.492'E Site type: Probably military (outpost). Constructional phases: 1.	Location: The third plateau of the Gebel Chronology: Late Roman/Byzantine 5 th -7 th c AD. Dimensions: 15 m by 13 m. References: (Goodchild, 1953: 72; Kenrick 2013: 125-26).
--	--



Figure 9.11: Qasr Ushish: Location (Google Earth: 2014).

Description: Qasr Ushish is a possible military outpost located approximately 5 km to the south of Qasr Beni Gdem (KAS 1) and 11 km to the west of the small modern village of Slunta (figure 9.11).

The outpost is rectangular, measuring 15 m (north to south) by 13 m (east to west) and consisted of two storeys. Its northern wall still stands to the full height of the two floors, which measured 8 m (figure 9.12).

The outer walls were constructed of well-dressed blocks of ashlar masonry with courses between 30 and 50 cm in height. The eastern, western and northern walls were

1.10 m thick consisting of two faces of ashlar, while the southern wall was formed from a single line of blocks measuring only 0.60 m in thickness. A single entrance measuring 2.20 m in width lies in the middle of the southern wall. The type of entrance is unknown since only the lowest two blocks that formed its sides remain.



Figure 9.12: Qasr Ushish: North wall, scale 1 m.

With respect to the internal arrangements (figure 9.13), nothing is visible now of the ground floor due to the presence of collapsed blocks, however, it seems that the two floors were identical. Three vaulted rooms occupied the northern part of the building, their vaulted roofs built of very well dressed and shaped blocks. Due to the collapsed blocks it was not possible to measure the exact size of the rooms from east to west, however, from the evidence of the equal distance between the three windows of the upper floor in the northern wall, it can be suggested that the rooms were identical and therefore each will have measured approximately 3.20 m (east to west) by 6.30 m (north to south). In addition, it seems that the entrances to these rooms were located in their southern walls, of which only some traces are still visible. There is a lack of evidence for doors inserted in the other walls. The southern part of the building, which occupied the area between the southern wall of the building and the southern wall of the three rooms, is largely masked by rubble, however, a courtyard or very large vestibule measuring 12.60 m (east to west) by 4.40 m (north to south) can be suggested. Rubble bonded with white lime mortar was also used in some places, particularly as a core between the vaults and eastern and western walls.



Figure 9.13: Qasr Ushish: The interior, looking north..

A few meters to the south of the building, three rock-cut rooms can be recognised (figure 9.14). These rooms were cut into the southern slope of the hill on which the building was located. No agriculture or industrial features are evident, despite the fact that the building was located on a hilltop overlooking fertile lands. The rock-cut chambers were probably used as storage rooms for barley or wheat, both of which are still produced in the surrounding lands.



Figure 9.14: Qasr Ushish: Rock-cut chamber rooms located on the southern slope of the hill.

9.2.5 Siret Abgail

Site Code: KAS 5. Site ancient name: Unknown. Site modern name: Siret Abgail Coordinates: 32° 34.743'N 21° 44.028'E Site type: unfortified farm building.	Constructional phases: 1. Location: Third plateau of the Gebel. Chronology: Roman. Dimensions: 16 m by 14.80 m.
--	--



Figure 9.15: Siret Abgail: Location (Google Earth: 2014).

Description: Qasr Abgail is a small unditched fortified building located on the third plateau of the Gebel, approximately 2 km south-east of the village of Slunta (figure 9.15). The building is rectangular (figure 9.16), measuring 16 (north to south) by 14.80 m (east to west). The outer walls were constructed from large dressed blocks with average dimensions of c. 1 to 1.20 m long, 0.50 m to 0.80 m wide and 0.55 m to 0.50 m high. Three courses of the building still stand at the north-west corner to a maximum height of c. 1.80 m. As it clear from the eastern and western walls, the lowest course was built with two faces.

The entrance of the building has not been identified, however, it was most likely located in the southern wall where only a few of its blocks have remained *in situ*.

With respect to the interior (figure 9.17), only slight traces of a north-west wall have been identified. This wall was built from smaller dressed blocks and was located approximately 4.80 m west of the eastern wall, probably forming the western wall of an oblong room that occupied the eastern third of the building. Unless this was not a fortified structure, it is probable that the building has suffered from stone-robbing as relatively little remains *in situ* or collapsed in and around the *qasr*.



Figure 9.16: Siret Abgail: General view, looking north-east.



Figure 9.17: Siret Abgail: The interior, looking south-east.

A very large rectangular enclosure is located approximately 15m to the north-east of the *qasr*. Only the lower course of this enclosure wall remains, partly formed on natural rock, with two faces of large blocks, similar to the lowest course of the *qasr* walls. The

enclosure is rectangular and measures more than 32 m (east to west) by approximately 16.5 m (north to south). It was built around a number of rock-cut chambers, two of which remain visible and accessible (figure 9.18). These were cut into the western end of the enclosure; one opens to east and the other to the north. Both of the rock-cut chambers had a number of divisions which probably were used, as with the rest of the space, for storage or funerary purposes. Another rock-cut chamber, probably an underground water cistern, lies approximately 140 m to the south east of the building (figure 9.19).



Figure 9.18: Siret Abgail: The rock-cut chambers, looking west, scale 1m.



Figure 9.19: Siret Abgail: Water cistern, looking west.

9.2.6 Qasr al-Mistashi

Site Code: KAS 6. Site ancient name: Unknown. Site modern name: Qasr al-Mistashi. Coordinates: 32° 29.854'N 21° 42.492'E Site type: (Probably military, outpost).	Constructional phases: 1. Location: pre-desert. Chronology: Late Roman? Dimensions: 15. 80 by 13 m.
--	--



Figure 9.20: Qasr al-Mistashi: Location (Google Earth: 2014).

Description: Qasr al-Mistashi is an isolated unditched two floor fortified building located in the pre-desert region approximately 10 km south-west of the modern village of Slunta (figure 9.20). The building is rectangular, measuring 15.80 m (east to west) by 13 m (north to south) and still stands to a maximum height of approximately 4.50 m (figure 9.21 and 9.22). The external walls of the ground floor were 1.05 m thick, built of two faces of blocks of limestone of different sizes with a rubble core. The corners were constructed of larger blocks with average dimensions of 0.60 m long, 0.50 m thick and 0.60 m high to 0.40 m long, 0.30 m thick and 30 m high. Also, small pieces of stone were used between the blocks for levelling purposes and to fill gaps between the blocks. Brown mortar was used to cover walls faces as indicated by traces that are still clearly visible on the walls. As noted at many other sites, a slightly projecting string course of

dressed blocks, measuring between 0.25 to 0.40 m in height, marked the separation between the two storeys.



Figure 9.21: Qasr al-Mistashi: General view, looking north-east.

An arched single doorway (figure 9.23) inserted in the middle of the southern wall, measuring 1.05 m in width, leading to the ground floor, which was clearly divided into two parts separated by a courtyard or corridor. The western side of the building consisted of three rectangular rooms. The southern room (1) measures 3.70 m (from west to east) by 3.00 m (from north to south). Apparently this room had been partly cleared of rubble by treasure hunters (figure 4.24), which revealed that the full height of the room, and therefore the height of the whole ground floor, to be 3.10 m. The entrance to this room was located in its eastern wall, although this was still covered by rubble. The southern and western walls of the room still stand to their full height at 3.10 m., and preserved traces of two windows. These windows, like the other 10 windows of the building, measured approximately 0.50 m in width from the inside and 0.20 m from the outside. The windows were positioned only a few centimetres under the roof, their high position, at more than 3 m from the floor, made them inconvenient for watching or for any defensive purposes and therefore it can be suggested that their primary purpose was to provide lighting and ventilation. Similarly, room 2 located to the north of room 1, which was also the suspected victim of clandestine excavations, had a doorway in the middle of its eastern wall with a straight lintel measuring 0.60 m wide. It opened onto

the corridor or courtyard (8) that separated the western and eastern parts of the building. One window has been identified in the middle of the western wall of this room. Another room (3), of a larger size at 3.50 m (north to south) by 3.70 m (east to west), was set between the northern wall of the building and room 2. Two windows opened onto this room, one in the middle of the northern wall and the other in the middle of the western wall. In addition to some modern graffiti on the walls, this room is largely covered by rubble from excavations conducted by one of the electricity companies for the purpose of levelling the ground a few meters to the north of the building in order to erect a high voltage tower (figure 9.24).

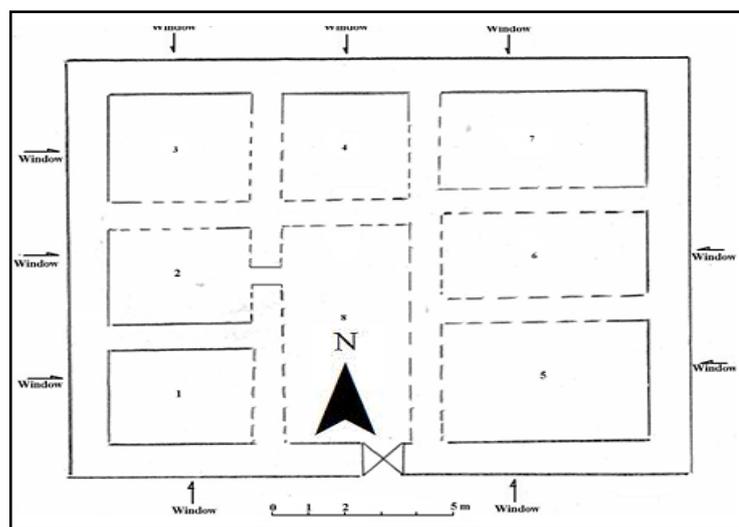


Figure 9.22: Qasr al-Mistashi: Measured plan.

Three rectangular rooms of different sizes occupied the eastern side of the building. The largest one (5) measured 3.80 m (from north to south) by 5.25 m (from east to west), had two windows in its eastern and southern walls. The room in the middle of this side (6) was the smallest, measuring 2.50 m (north to south) by 3.80 m (east to west) and had only one window, in the middle of the eastern wall. The third room (7) was of the same length as the others and was 3 m wide with one window in the northern wall. There was no chance to recognise the location of the doorways of these three rooms and room 3, due to the rubble present. However, they probably resembled room 1 and were connected onto the corridor (8). Traces of walls and a window suggest that another room (4) was inserted between room 7 and room 3 at the northern end of the corridor. Therefore, it can be suggested that room 4 was connected to rooms 3 and 7 and had a doorway opening onto the corridor. The corridor (8) lying between the rooms

measures 6.80 m (north to south) by 3.20 m (east to west). All the internal walls were about 0.80 m thick and built of the same material as the external walls.



Figure 9.23: Qasr al-Mistashi: The arched entrance, looking north, scale 1m.

Regarding the upper story, in some places the outer walls still stand to a maximum height of about 1.50 m. Generally, the walls of the upper storey were constructed also of two faces of the same material, however, some of the blocks used in the upper storey were more regular than those used in the lower one.



Figure 9.24: Qasr al-Mistashi: The south side shows the installation of high voltage towers.

9.2.7 Qasr Laaraija

Site code: KAS 7.	Constructional phases: 1.
Site ancient name: Unknown.	Location: Pre-desert.
Site modern name: Qasr Laaraija	Chronology: Late Roman?
Coordinates: 32° 30.416'N 21° 45.706'E	Dimensions: 18 by 15.5 m.
Site type: Probably military, (outpost)	References: (Stucchi, 1975)



Figure 9.25: Qasr Laaraija: Location (Google Earth: 2014).

Description: Unditched rectangular building measuring 18 (east to west) by 15.5 m (north to south), located in the pre-desert region 10 km south-east of Slunta and approximately 5 km to the east of Qasr al-Mistashi (KAS 6) (figure 9.25).

The masonry type and general layout of this possible military outpost is similar to the nearby site of Qasr al-Mistashi (figure 9.26). The outer walls were constructed of two faces of limestone blocks of different sizes with a rubble core and quoins of larger blocks. A single entrance inserted into the middle of the southern wall led to the interior that consisted of eight rectangular rooms separated by an oblong central courtyard. The current condition of the building allowed identification of only five windows - four in the western wall and one in the southern wall to the west of the main entrance. Using its

masonry type and method of construction, Stucchi (1975:524) has dated Qasr Laaraija to the second half of the fifth century AD.



Figure 9.26: Qasr Laaraija: General view, looking east. Scale 1m.

9.2.8 Qasr Ahbaira

Site Code: KAS 8. Site ancient name: Unknown Site modern name: Qasr Ahbaira Coordinates: 32° 37.501'N 21° 36.001'E Site type: fortified farm, <i>qasr</i> .	Constructional phases: 2. Location: second plateau of the Gebel Chronology: Late Roman? Dimensions: c.20 by 25 m.
--	--



Figure 9.27: Qasr Ahbaira: Location (Google Earth: 2014).

Description: Ditched rectangular fortified building located on a rocky hill-top approximately 7.5 km to the south-east of Qasr Beni Gdem (KAS 1) (figure 9.27). In addition to the fact that this site is largely masked by soil and bushes (figure 9.28), it was not possible to investigate the layout and some other features, as I was asked by the landowner to leave despite the fact that I had written permission from the local authorities. However, it is probable that this site had the same criteria of most of the other fortified farms recorded by KAS. The outer walls were built of medium size neatly coursed blocks and were probably strengthened by a revetment of rubble. Rock-cut chambers existed in the edges of the hill on which the *qasr* was built on.



Figure 9.28: Qasr Ahbaira: General view, looking west.

9.2.9 Qasr et-Traish

Site Code: KAS 9. Site ancient name: Unknown. Site modern name: Qasr et-Traish Coordinates: 32°38.307'N 21°35.497'E Site type: fortified farm, <i>qasr</i> .	Constructional phases: 2. Location: second plateau of the Gebel Chronology: Late Roman/Byzantine. Dimensions: 18.5 by 17.75 m.
---	---



Figure 9.29: Qasr et-Traish: location (Google Earth: 2014).

Description: Qasr et-Traish is a ditched fortified building built on a gently sloping hill overlooking fertile lands 10 km north of Slunta (figure 9.29). The building is approximately rectangular, measuring 18.5 m (north to south) by 17.75 m (east to west). The walls were constructed of large and small neatly coursed limestone blocks (figure 9.30). The west and south walls were additionally supported by external vertical revetments 1.40 m wide built of the same material. Light brown mortar was used between the courses in some places and traces of brown and white limy mortar are still visible on the face of walls. A single arched 1.10 m wide entrance (figure 9.31) lies in the centre of the north wall. The arch is made of 13 well-dressed voussoirs resting on the doorjambs, which were built of large blocks arranged as headers and stretchers.



Figure 9.30: Qasr et-Traish: The west wall.



Figure 9.31: Qasr et-Traish: The north wall.

Regarding the internal arrangements, including the entrance vestibule, 10 divisions or rooms have been identified from the uppermost remaining courses of the walls (figure 4.28). It seems that the entrance led to a rectangular vestibule (1) measuring 2.50 m by 4.20 m. No doors connecting the rooms have been identified, however, the overall disposition of rooms is clear. The vestibule was flanked by two rooms 4.20 m in length. The room to the west (2) was the same width as the vestibule, while the eastern one (3) was wider at 4.25 m. A suite of three identically sized rooms (4, 5 and 6) has been traced immediately to the south of rooms 1-3, in the middle of the building. The largest room in the building (7) was 7.80 (east-west) by 5.10 m (north to south), and

occupied the eastern half of the southern part of the building. Two identical rooms (8 and 9) measuring 5.10 (north to south) by 2.80 (east to west) occupied the western half of the south side. An oblong vaulted room (10), measuring 9.5 m (north to south) by 2.80 m (east to west) was recognized along two thirds of the western wall.

Three window openings have been identified in the western wall (figure 9.30), each approximately 0.90 m high and 0.40 m wide and separated from one from another by c. 3.5 m. The middle window was later partly blocked.

A Christian cross found engraved in the north-west corner stone of the building (figure 9.32) offers relative dating evidence for the first phase of the building. A part of Doric freeze was found among collapsed blocks in the ditch a few meters away from the west wall of the building.



Figure 9.32: Qasr et-Traish: Byzantine cross carved in a corner block. Scale 20 cm.

9.2.10 Qasr al-Akrouit al-Warrany 1

Site Code: KAS 10	Site type: <i>qasr</i> /fortified farm
Site ancient name: Unknown	Constructional phases: 2
Site modern name Qasr al-Akrouit al-Warrany1	Location: High ground, second plateau of the Gebel.
Coordinates: 32° 38.613'N° 21° 35.085'E	Chronology: Late Roman?
	Dimensions: 23.20 by 18.40 m.



Figure 9.33: Qasr al-Akrouit al-Warrany 1: Location (Google Earth: 2014).

Description: Qasr al-Akrouit al-Warrany1 (the back Akrouit) is one of two *qasr* locally known as Qasr al-Akareet al-Warraneia, reflecting their relative location to Qasr al-Akrouit al-Qaddami (the front Akrouit) (KAS 12). The *qasr* is located on slightly raised ground approximately 5 km to the south-east of Qasr Beni Gdem (KAS 1) (figure 9.33).

The outer walls of this ditched rectangular fortified building were constructed of well-dressed medium and large coursed block work (figure 9.34). The building was surrounded by a revetment with rounded corners built of small and medium coursed masonry. It seems that this revetment extended only for 1.50 m on the north-west side where it is still standing to a maximum height of about 2 m (figure 4.11). Although

largely covered by collapsed masonry and rubble, it is apparent that the building was surrounded by a vertical sided ditch cut in the natural rock. The ditch was approximately 8 m at its widest point and probably contained a number of rock-cut chambers, of which only one is now visible in its south-west side. As indicated by a slightly projecting strip of blocks in the north-west wall, the *qasr* probably consisted of two floors. This strip also revealed that the ground floor is still standing to its full height, c. 2 m. A single arched entrance c. 1.20 m wide has been identified almost in the middle of the north-east wall.

Of the interior, only vague hints of the arrangements can be recognised (figure 9.35). These include a wall running from north-west to south-east along the building and located 4.40 m from the south-west of the entrance wall.



Figure 9.34: Qasr al-Akrout al-Warrany 1: General view, north-west wall.

In addition, three vaults were present in this wall: the north-west and south-east vaults were each located opposite to similar vaults positioned on either side of the main entrance of the building, while the central vault faced the entrance. These arrangements suggested that the building had a narrow vaulted vestibule on this side measuring c. 1.40 m by 4.40 m flanked by two spacious vaulted rooms. The north-west room measured approximately 12 by 4.40 m and the south-east room was c. 9 by 4.40 m. Regarding the south-west part of the interior, nothing is now visible except a wall running north-west to south-east. This also included a vault, measuring c. 1.40 m wide and located about 1.60 m to the south-east of the north-west wall.

An underground water cistern lies about 14 m to the north-east of the *qasr*. Additionally, part of a Doric frieze (figure 9.36) formed in limestone was found among the rubble a few metres to the north-east of the *qasr*.

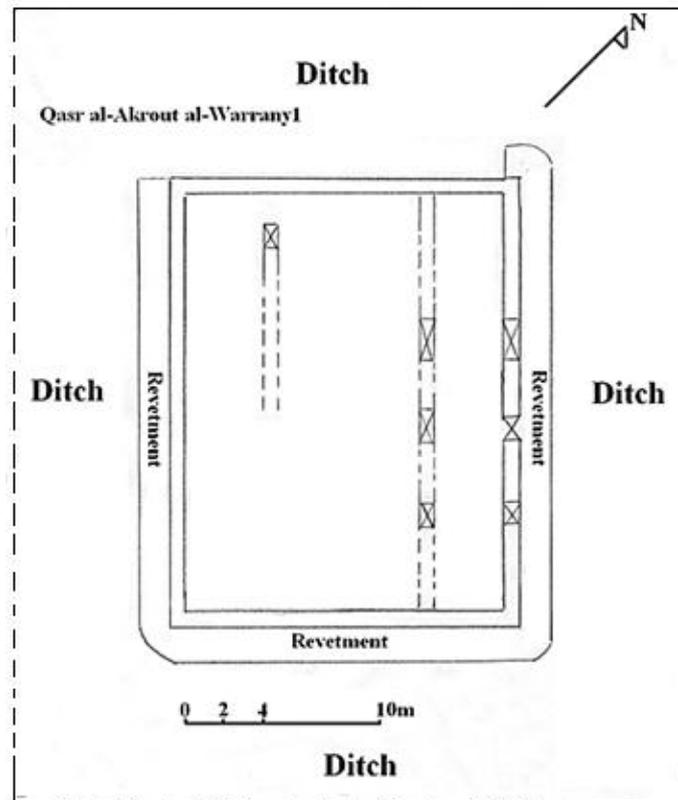


Figure 9.35: Qasr al-Akroul al-Warrany 1: Measured plan.



Figure 9.36: Qasr al-Akroul al-Warrany 1: Part of Doric frieze. Scale 0.20m.

9.2.11 Qasr al-Akrouit al-Warrany 2

<p>Site Code: KAS 11</p> <p>Site ancient name: Unknown</p> <p>Site modern name Qasr al-Akrouit al-Warrany2</p> <p>Coordinates: 32° 38.654'N 21° 34.953'E</p> <p>Site type: <i>qasr</i>/fortified farm</p>	<p>Constructional phases: 2</p> <p>Location: High ground, second plateau of the Gebel</p> <p>Chronology: Late Roman?</p> <p>Dimensions: 12.50 by 11 m</p>
--	---



Figure 9.37: Qasr al-Akrouit al-Warrany 2: Location (Google Earth: 2014).

Description: Qasr al-Akrouit al-Warrany 2 (the back Akrouit) is located only c. 250 m to the north-west of Qasr al-Akrouit al-Warrany 1 (figure 9.37). The external walls of this ditched square fortified building were constructed of slightly dressed and irregular medium and small coursed block work of different sizes (figure 9.38).

The wall courses were bonded in a mixture of white and light brown lime mortar. A revetment built of small and medium coursed masonry, measuring about 1.50 m wide surrounded the building on all sides. It also seems that the building was surrounded by a ditch measuring c. 6 m wide, the edges of which are difficult to trace due to the

vegetation and collapsed masonry and therefore it was not possible to know whether there were rock-cut chambers present.



Figure 9.38: Qasr al-Akrouit al-Warrany 2: General view, looking east.

Apparently the building was two-storeys, as indicated by a vaulted room located in the ground floor which was revealed by a recent clandestine excavation (figure 4.27). The ground floor was about 2.50 m high and still almost entirely preserved and completely masked by rubble and collapsed masonry of the second floor.

The entrance of the building has not been recognised with certainty, however, it was most likely in the eastern wall where some voussoirs can be seen among the collapsed rubble, indicating that the *qasr* probably had an arched external doorway. A number of windows have been identified on all four sides of the building. These included four windows in the eastern wall (two on either side of the suggested doorway), four in the western wall and only one in each of the other two walls. The windows were 0.20 m wide and about 0.40 m high and were lined by two slabs of stones each measuring about 0.20 m wide.

Only remnants of a single wall have been traced among the rubble and vegetation of the internal arrangements of the upper floor. The wall (figure 9.39) extends east from the western wall for about 3.50 m and is located 2 m to the south of the northern wall. With regard to the lower floor, as already mentioned, a recent clandestine excavation that destroyed a part of the northern half of the western wall has exposed a part of a west-

east vaulted room. This excavation also revealed that the vault was made of small and medium angular rubble bonded in brown mortar.

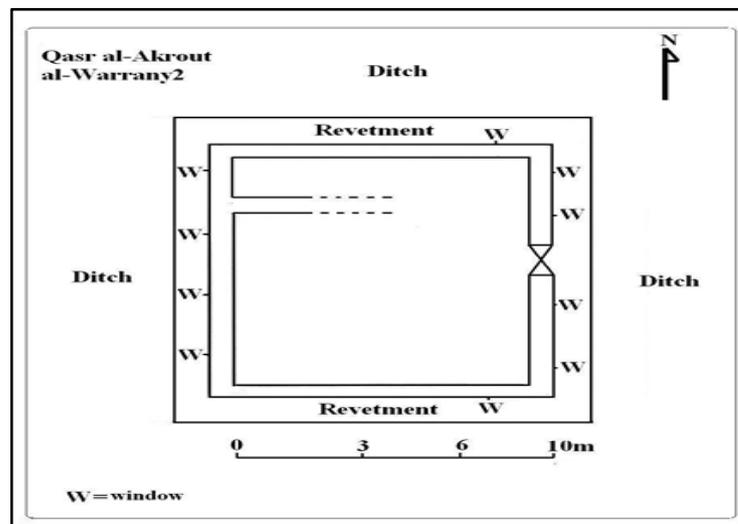


Figure 9.39: Qasr al-Akrouit al-Warrany 2: Measured plan.

Outside the building some architectural features were evident, including a rounded structure (figure 9.40) located about 5.50 m to the east of the north-east corner of the *qasr*. This probably was a lime kiln, built of dressed and irregular small and medium stones. In addition, a water cistern associated with water catchment arrangements was identified at the foot of the southern slope of the hill on which the *qasr* is located. Noticeably, the cistern showed some modern restoration and is still in use by locals.



Figure 9.40: Qasr al-Akrouit al-Warrany 2: The lime kiln? Looking north. Scale 1m.

9.2.12 Qasr al-Akrouit al-Qaddamy

Site Code: KAS 12. Site ancient name: Unknown. Site modern name Qasr al-Akrouit al-Qaddamy. Coordinates: 32° 38.849'N 21° 34.362'E.	Site type: <i>qasr</i> /fortified farm. Constructional phases: 2. Location: High ground, second plateau of the Gebel. Chronology: Late Roman? Dimensions: 22.80 by 24 m.
--	---



Figure 9.41: Qasr al-Akrouit al-Qaddamy: Location (Google Earth: 2014).

Description: Qasr Al-Akrouit al-Qaddamy (the front Akrouit), the largest of the al-Akareet group, sat on high ground surrounded by cultivated valleys 10 km west of Qasr al-Akrouit al-Warrany 2 (figure 9.41).

The *qasr* (figure 9.42) is approximately square, measuring 24 m (east to west) by 22.80 m (north to south). The outer walls consist of courses constructed of large well-dressed ashlar blocks with average dimensions between 0.80 m and 0.60 m long, 0.50 and 0.20 m high and about 1.10 m thick (figure 9.43). Only the northern wall was strengthened by a revetment of small coursed masonry measuring 1.20 m wide and still now stands to maximum height of about 2.5 m at the north-east corner (figure 4.12).

One window has been identified in the building, located close to the eastern end of the northern wall. A single entrance, approximately 2 m wide, was inserted almost in the middle of the eastern wall. This entrance was probably arched as some voussoirs can be seen collapsed at this location.



Figure 9.42: Qasr al-Akrouit al-Qaddamiy: General view, looking east.

In the interior, some divisions were identified (figure 9.44). These include five rectangular rooms of different sizes along the western wall of the building. The entrances of all these rooms have not been securely identified, however, they were most likely in their eastern walls and are obscured due to structural collapse and stone robbing. At the eastern side of the building only one room has been identified. This was a rectangular vaulted room (6) (figure 9.44) measuring 2.70 m (north to south) by more than 5 m (east to west). Its entrance probably lay on the western wall, but has not been traced due to collapsed rubble. All of the internal walls were approximately 0.60 m thick built of slightly dressed limestone blocks of different sizes.



Figure 9.43: Qasr al-Akrouit al-Qaddamiy: South wall, showing manner of masonry, looking north. Scale 1m.

Some interesting rock-cut industrial features were evident at a distance of about 60 m north-west of the *qasr* (figure 4.44). The most curious feature was a number of circular and rectangular shallow vats and storage tanks cut in the natural rocky ground (see Section 4.3.3).

Furthermore, a rock-cut chamber (probably a grave) was identified in the northern edge of the rocky ground where the industrial features are located. This chamber had an entrance facing north measuring approximately 0.80 wide. Similar rooms probably existed along this, and other edges of the rocky ground, which are now largely covered by soil.

Further Additional spacious rock-cut chambers, probably used as storage rooms, existed in the eastern and southern slopes of the hill on which the *qasr* is located. The chamber in the eastern slope (figure 9.45), is now used as a sheep and goat shelter and can be accessed through an entrance 1.30 wide. Internally, it contained some niches and a rock-cut column sporting its roof (these were probably rock-cut tombs of Greek or Roman date).

A cistern with a modern cap and animal trough is present lower down on the levelled ground about 60 m south of the *qasr*. Also, the remnants of a small structure of rough rubble walls was identified north-east of the *qasr*. This probably was part of the industrial features at the site, as some traces of orange waterproof mortar are still visible on its walls.

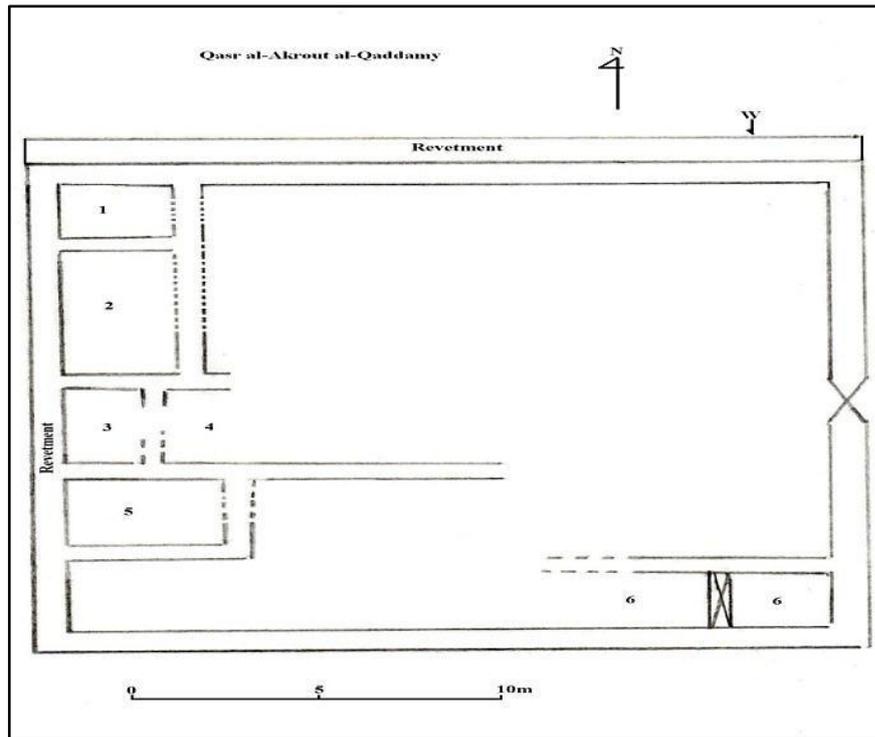


Figure 9.44: Qasr al-Akrouit al-Qaddamiy: Measured plan.



Figure 9.45: Qasr al-Akrouit al-Qaddamiy: The eastern rock-cut chamber room, looking southwest.
Scale 1m.

9.2.13 Siret Alwaiby

Site Code: KAS 13 Site ancient name: Unknown Site modern name: Siret Alwaiby Coordinates: 32° 39.317'N 21° 34.677'E Site type: <i>qasr</i> /fortified farm	Constructional phases: 2 Location: High ground, second plateau of the Gebel Chronology: Late Roman? Dimensions: 13 by 13 m
---	---



Figure 9.46: Siret Alwaiby: Location (Google Earth: 2014).

Description: Siret Alwaiby is a small ditched fortified building located on a hilltop 5 km southeast of the modern bridge of Wadi el-Kuf (figures 9.46 and 9.47). The *qasr* is an exact square (figure 9.48) measuring 13 m². The external walls were 0.70 m thick built with courses of large and medium stone blocks (figure 9.49) ranging in size from 0.80 to 0.30 m long and from 0.50 to 0.25 m high. On all sides, the external walls were strengthened, most likely at a later time, by a revetment measuring 2.20 m wide constructed of rubble. Although largely covered by rubble and soil, it appears that the building was surrounded by a ditch measuring about 4 m wide. The location of the entrance has not been identified, however, it most likely lay on the eastern side as no entrances were present in the other clearly visible walls.



Figure 9.47: Siret Alwaiby: General view, looking east.

Of the interior, Apart from a wall, nothing is now visible of the interior, as the building is largely covered by soil and rubble. This wall was located approximately 3 m to the south of the northern wall and extends from west to east for about 4 m. Only a single course of this wall is now visible and this indicates that it was constructed from small irregular stones. Also, the faces of this wall were coated with a plaster and traces of patching mortar can be seen on the top of this course of the wall. Evidently, a huge amount of building stones has been recently robbed from the *qasr* by locals and reused to build animal shelters a short distance to the east and north-east of the *qasr*.



Figure 9.48: Siret Alwaiby: Part of the north wall showing manner of construction. Scale 1m.

9.2.14 Siret al-Faqeer Ali

Site Code: KAS 14	Constructional phases: 2
Site ancient name: Unknown	Location: High ground, second plateau of the Gebel
Site modern name: Siret al-Faqeer Ali	Chronology: Roman?
Coordinates: 32° 39.192'N 21° 35.908'E	Dimensions: 10 by 10 m
Site type: <i>qasr</i> /fortified farm	



Figure 9.49: Siret al-Faqeer Ali: Location (Google Earth: 2014).

Description: Siret al-Faqeer Ali is a square (10 m each side) ditched fortified *qasr* located on a hilltop 9 km south-east of Qasr Beni Gdem (KAS 1) (figures 9.50 and 9.51).

The outer walls, 0.60 m thick, were built of neatly coursed large blocks of limestone with courses between 0.30 and 0.40 m high. The walls were supported on three sides - south, east and west - by an additional revetment built of smaller irregular stones. Although largely masked by fallen masonry, the ditch contained rock-cut chambers, one of which can be seen in the outer edge of the southern side of the ditch. An arched entrance measuring 1.20 m wide was inserted into the southern wall (figure 9.52) and only one narrow window slit has been identified in the western wall. Only traces of a

wall, running north-south and located 4.50 m to the west of the eastern wall, is visible of the interior today. This wall probably formed the eastern wall of a rectangular room that most likely had a vaulted roof as indicated by the slightly curved shape of the wall. Some remnant of outbuildings and architectural elements were evident around the fortified building, for example, a broken limestone column shaft lying on the ground approximately 20 m to the south-east of the *qasr*.

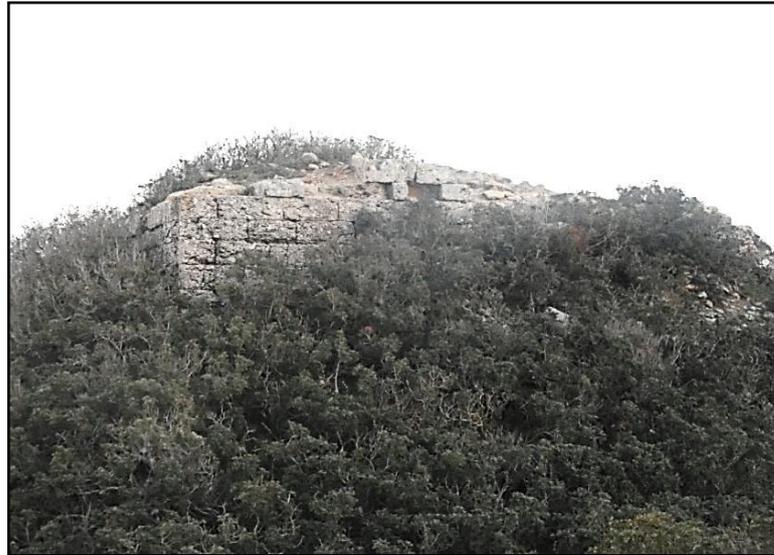


Figure 9.50: Siret al-Faqeer Ali, looking south.



Figure 9.51: Siret al-Faqeer Ali: The main entrance, looking west. Scale 1m.

9.2.15 Siret al-Anaisla

Site Code: KAS 15	Constructional phases: 2
Site ancient name: Unknown	Location: High ground, second plateau of the Gebel
Site modern name: Siret al-Anaisla	Chronology: Late Roman?
Coordinates: 32° 39.228'N 21° 35.742'E	Dimensions: 21.50 by 19 m
Site type: <i>qasr</i> /fortified farm	



Figure 9.52: Siret al-Anaisla: Location (Google Earth: 2014).

Description: Siret al-Anaisla is a ditched rectangular fortified building located on a slightly raised ground 6 km south-east of Qasr Beni Gdem (KAS 1) (figures 9.53 and 9.54).

The two faced external walls were constructed of small and medium slightly regular stones, strengthened on all four sides by a wide revetment measuring 2.30 m, built of irregular stones of different sizes bonded with lime mortar (figure 9.55). A single arched entrance was located in the middle of the eastern wall leading into the interior that is completely masked by rubble and soil. It seems that this *qasr* formed part of a large settlement, with Qasr al-Faqeer Ali (KAS 14) located only 250 m to the west,

containing water cisterns, remnant of outbuildings and rock-cut chambers that were cut in the edge of the hill on which the *qasr* was located.



Figure 9.53: Siret al-Anaisla: General view, looking east.

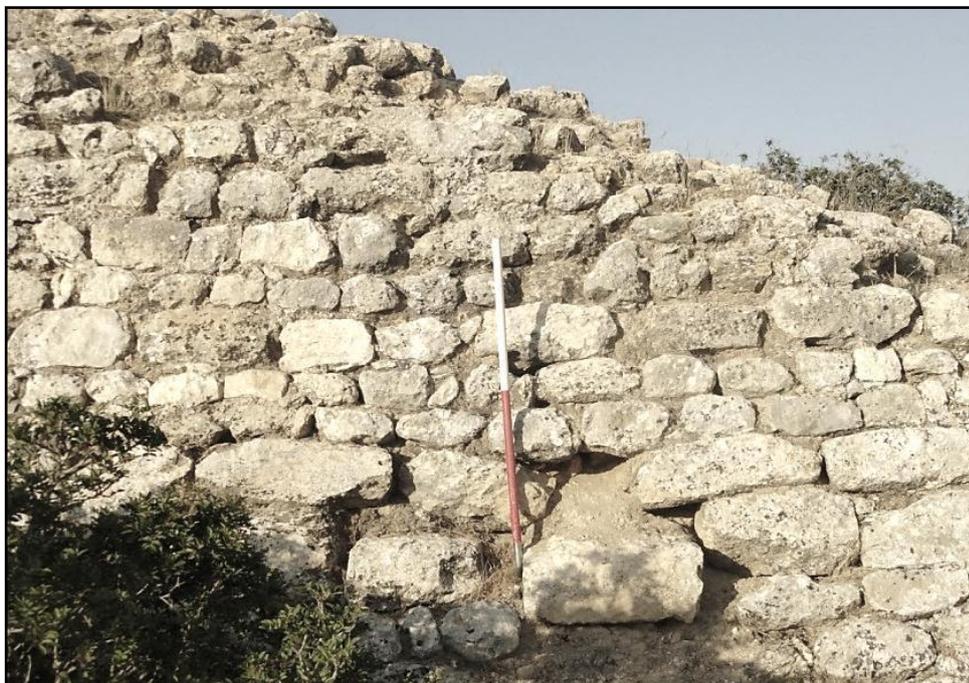


Figure 9.54: Siret al-Anaisla: Details of the revetment. Scale 1m.

9.2.16 Siret Battouma

Site Code: KAS 16 Site ancient name: Unknown Site modern name: Siret Battouma Coordinates: 32° 39.961'N 21° 35.590'E Site type: <i>qasr</i> /fortified farm	Constructional phases: 2 Location: High ground, second plateau of the Gebel Chronology: Late Roman? Dimensions: 21.50 by 14.80 m
--	---



Figure 9.55: Siret Battouma: Location (Google Earth: 2014).

Description: Siret Battouma is an unditched fortified building located on a hilltop 4.5 km south-east of Qasr Beni Gdem (figure 9.56 and 9.57). The building is rectangular, measuring 21.50 m (north to south) by 14.80 m (east to west).

The outer walls were built of medium and small irregular stones. Larger dressed blocks were also used occasionally along the walls and at the corners. It seems that the walls were covered by a white mortar as some traces of it are still now visible, particularly on the northern wall. The building was probably surrounded on all sides by a revetment measuring c. 2.20 m wide. The outer face of this revetment was built of

large blocks as indicated by the fact that some of them that survived in some places, particularly at the south-east corner.



Figure 9.56: Siret Battouma: General view, looking south.

A single arched entrance measuring 1.50 m wide is present close to the northern corner of the eastern wall. With respect to the internal arrangements, the building is extensively filled with rubble, which rendered it impossible to reconstruct the plan of the interior with any certainty, however, it seems that the building had at least one vaulted chamber, indicated by the upper part of a vault measuring about 1m wide and 3.20 m long. This vault was located approximately in the middle of the southern half of the building approximately 5.50 m to the north of the southern wall.

Some architectural features have been identified around the building. These include a wall located about 11m to the east of the building. Although only one course is visible above the ground, this shows that the wall was constructed of well-dressed large and medium blocks measuring about 0.70 m thick and running north-south for about 24.5 m. The two sides of this wall were apparently mortared and its northern end terminated by a water cistern that seems to have been restored in modern times. All these characteristics (figure 9.58) suggest that this wall was probably built for water catchment purposes.

A few meters east of the south-east corner of the *qasr*, an olive mill was located (figure 9.58), partly buried in the ground and although apparently not *in situ*, it shows that olive oil was produced in this site.



Figure 9.57: Siret Battouma: The olive mill, the water cistern and water catchment wall in the back, looking east. Scale 1m.

9.2.17 Siret Adhrary

Site Code: KAS 17	Constructional phases: 2
Site ancient name: Unknown	Location: Hilltop, second plateau of the Gebel
Site modern name: Siret Adhrary	Chronology: Late Roman?
Coordinates: 32° 40.558'N 21° 34.820'E	Dimensions: 21.50 by 10.50 m
Site type: <i>qasr</i> /fortified farm	



Figure 9.58: Siret Adhrary: Location (Google Earth: 2014).

Description: Siret Adhrary is an unditched *qasr* located on a hilltop 4 km east of Qasr Beni Gdem (KAS 1) (figures 9.58 and 9.59). The building formed a part of an ancient settlement represented by remnants of some industrial and agricultural features including huge water cisterns, olive presses and rock-cut chambers cut in the hill slopes.

The building is rectangular measuring 21.50 m (north to south) by 10.50 m (east to west), including the surrounding revetment (figure 9.60). The outer walls were constructed of slightly dressed small and medium blocks with average dimensions between 0.40 to 0.70 m long; 0.30 to 0.70 m thick and 0.30 to 0.50 m high. The thickness of the western wall was almost double that of the others at nearly 0.70 m.



Figure 9.59: Siret Adhrary: General view, looking west.

The building had been strengthened, probably in a later phase, by an external revetment measuring 1.40 m in width. The revetment was built of small and medium irregular rubble masonry still surviving to a maximum height of about 1.20 m in some positions (figure 9.61). There was a single entrance into the building, inserted in the northern half of the eastern wall and measuring 1 m wide. A smaller opening, probably for a window as it is only about 0.35 m wide, has been identified in the western wall close to the south-west corner.

In terms of internal arrangements, it was not possible to form a clear picture due to the rubble from collapsed walls. However, some divisions and features were identified, including a long room on the east side, entered through the only entrance of the building. The room was rectangular, measuring 15 m (north to south) by 7.00 m (east to west). An arched 2 m wide doorway lies at the southern end of the western wall of the room. This door had been blocked at a later time (figure 9.62), however, it probably led to a similar room, in which only a similar arched doorway can be seen on the surface today.

The building had at least two phases of construction; the second phase was represented by the addition of the revetment to the original building and perhaps by the blocking of one of the internal arched doorways.

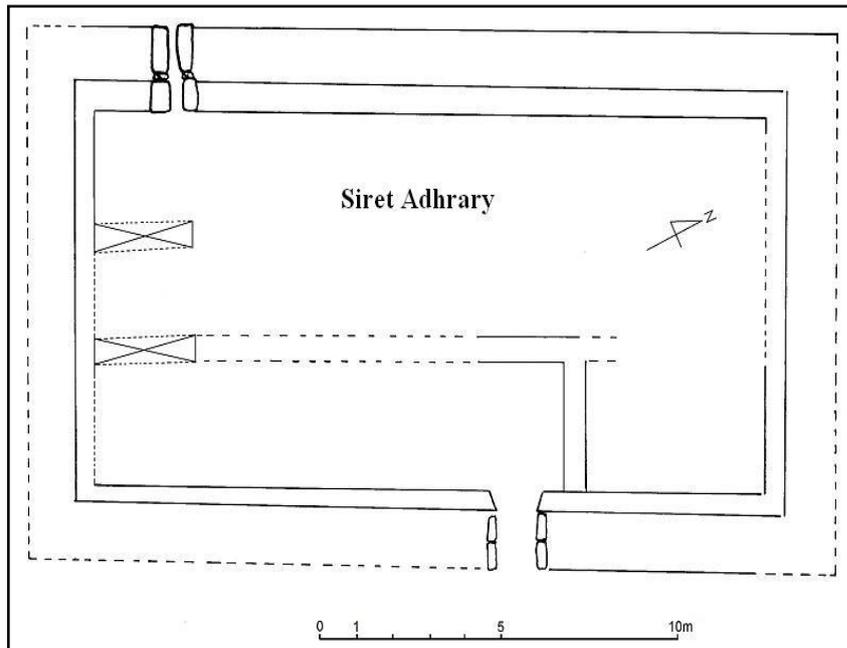


Figure 9.60: Siret Adhrary: Measured plan.

Around the building, the picture was clearer. Rock-cut chambers were present, particularly in the southern slope of the hill. It seems that in recent times that these chambers have been regularly cleaned up by locals to use as animal shelters and for grain storage. No doubt this recent usage of the archaeological features has disturbed and partly destroyed the site, however, important archaeological features remain in these rock-cut chambers, such as olive presses, where some of their parts still exist in good condition and in their original positions (figure 4.42).



Figure 9.61: Siret Adhrary: The revetment of the west wall, looking north. Scale 1m.



Figure 9.62: Siret Adhrary: The blocked arched doorway, looking north. Scale 1m.

Two vaulted rock-cut water cisterns were also investigated. The larger one (figure 4.35a), was positioned about 45 m to the south-east of the *qasr* on the southern slope of the hill, internally divided into two parts connected by two wide arched openings. Although it was not possible to measure it fully due to the rubble infill, the eastern part of the cistern was probably identical to the western part, which measures 8 m (north to south) by 3 m (east to west) and was at least 3 m deep. A draw hole measuring about 0.70 m wide was opened in the roof of the vault at the western side. The other vaulted cistern lies on the eastern slope 60 m east of the *qasr* (figure 4.35b). This was smaller at 7.25 m (north to south) by 2.70 m (east to west) and contained only one chamber, though there was probably an intention to enlarge it as this has been indicated by a recess in the eastern wall of the cistern.

Additionally, another non-vaulted water cistern was identified 30 m to the north-east of the large cistern. The cistern had also been cut into the limestone bed-rock and its water draw hole was nearly circular measuring about 1 m in diameter.

9.2.18 Siret et-Tauma 1

Site Code: KAS 18	Constructional phases: 2
Site ancient name: Unknowon	Location: Hilltop, second plateau of the Gebel
Site modern name: Siret et-Tauma 1	Chronology: Late Roman?
Coordinates: 32° 40.729'N 21° 35.466'E	Dimensions: 8.25 by 7.50 m
Site type: Probably civilian watch tower	



Figure 9.63: Siret et-Tauma 1: Location (Google Earth: 2014).

Description: Siret et-Tauma 1 is the smallest of a cluster of four *qsur* that were located in close proximity to each other in a site known today as Siret et-Taumat (The Twins). This agricultural settlement was located on fertile land 5 km to the east of Qasr Beni Gdem (KAS 1).

Et-Tauma 1 is an approximately square ditched fortified building measuring 8.25 m (north to south) by 7.50 m (east to west) located on a rocky hilltop surrounded by fertile valleys 5 km to the east of Qasr Beni Gdem (KAS 1) (figure 9.63).

Although preserved as a mound of collapsed rubble (figure 9.64), it was possible to discern that the walls were 0.85 m thick built of small and medium regular and irregular

stones. In addition to the thick outer walls, the building was supported by a 2 m wide revetment with rounded corners, built of rubble masonry and large slightly dressed stones. Another feature that shows the defensive character of the building was the surrounding ditch. It was about 6 m wide cut in the rocky ground of the hill.



Figure 9.64: Siret et-Tauma 1: General view, looking north..

With the exception of one vault, nothing was visible of the interior of the building as it had largely been filled with collapsed stones and therefore, it was not possible to build a plan of the internal arrangement of the building.

Some associated structures were present outside the building, particularly in the area between it and Siret et-Tauma 2 (KAS 19). These include two rock-cut water cisterns (figure 9.65).



Figure 9.65: Siret et-Tauma 1: Two rock-cut water cisterns, Scale 1 m.

9.2.19 Siret et-Tauma 2

Site Code: KAS 19	Constructional phases: 2
Site ancient name: Unknown	Location: Hilltop, second plateau of the Gebel
Site modern name: Siret et-Tauma 2	Chronology: Late Roman?
Coordinates: 32° 40.743'N 21° 35.460'E	Dimensions: 21.80 by 11.30 m
Site type: <i>qasr</i> /fortified farm	



Figure 9.66: Siret et-Tauma 2: Location (Google Earth: 2014).

Description: Siret et-Tauma 2 is a fortified *qasr* located about 60 m to the north of et-Tauma 1 (figure 9.66) on a rocky hilltop surrounded by a ditch 8 m in width at its widest point. The building is rectangular and measures 21.80 m (north to south) by 11.30 m (east to west). The walls were constructed of small and medium slightly dressed masonry with courses between 0.15 and 0.20 m high with larger quoins (figure 9.67). Some parts of the walls still stand to a maximum height of about 1.20 m. A revetment built of rubble masonry more than 2 m wide surrounds the building on all sides.

A double arched entrance (figure 9.68) lies in the southern half of the east wall. Each opening of the entrance was 0.70 m wide, separated from each other by a block of stone

0.40 m wide. Only the southern arch and the separated block from this entrance still exist. Moreover, it seems that this entrance had been blocked at a later time. A small window slit, 0.20 m wide and 0.55 m high, existed in the north wall close the north-east quoin. Apart from two vaults, nothing was visible of the interior due to collapsed rubble. One of the vaults was located close to the south-west corner and the other close to the south-east corner. A mortared floor was noted inside the building along the northern side.



Figure 9.67: Siret et-Tauma 2: General view, looking south.



Figure 9.68: Siret et-Tauma 2: The double arched entrance, looking west.

In addition to a water cistern (figure 9.65), rock-cut chambers were present on the eastern slope of the hill. These chambers (figure 5.11) had originally been used as a cemetery as they contained arched grave chambers cut into the natural rock. At a later

time it seems that the entrances of the chambers had partly been blocked (figure 9.69), probably by locals in recent times in order to convert them to animal shelters observed at other similar sites in the region. Traces of outer buildings are also noticeable on the edge of the eastern slope of the hill (figure 5.9).



Figure 9.69: Siret et-Tauma 2: Later blocking of the rock-cut chambers, looking west.

9.2.20 Siret et-Tauma 3

Site Code: KAS 20	Constructional phases: 2
Site ancient name: Unknown	Location: Hilltop, second plateau of the Gebel
Site modern name: Siret et-Tauma 3	Chronology: Late Roman?
Coordinates: 32° 40.814'N 21° 35.417'E	Dimensions: 22.50 by 15 m
Site type: <i>qasr</i> / fortified farm	



Figure 9.70: Siret et-Tauma 3: Location (Google Earth: 2014).

Description: The third fortified building of the et-Taumat group is located, as the others, on a rocky hilltop approximately 100 m to the north of et-Tauma 2 (figure 9.70).

The *qasr* is a rectangular building (figure 9.71 and 9.72) and measures 22.5 m (east to west) by 15 m (north to south). The walls were about 0.60 m thick constructed of neatly coursed large blocks. The outer walls were surrounded by a revetment, measuring about 1.40 m wide, surviving to a maximum height of 3.50 m, and built of rubble masonry bonded in lime mortar (figure 9.73). In addition, large blocks were also used in the revetment in some places. Moreover, probably for additional support, a 0.60 m wide retaining wall was built along the southern face of the southern revetment. Like

the other three buildings, et-Tauma 3 was surrounded by a wide ditch, measuring about 8.50 m at its greatest width.

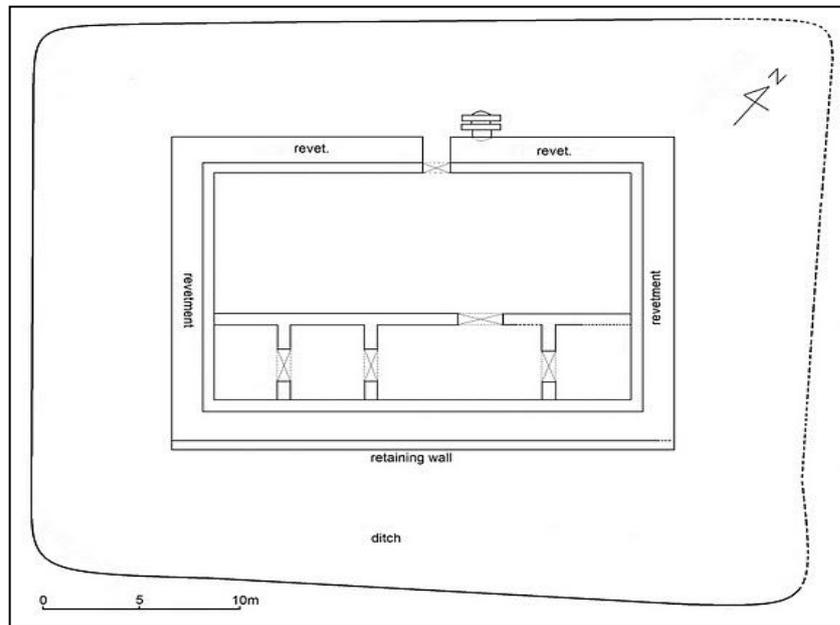


Figure 9.71: Siret et-Tauma 3: Measured plan.



Figure 9.72: Siret et-Tauma 3: General view, looking north.

A single arched entrance, with a span of 1.25 m, lay almost central in the northern wall. This entrance was reached from outside through a passage formed and flanked by the large blocks of the revetment on this side (figure 9.74).



Figure 9.73: Siret et-Tauma 3: The revetment at the eastern side, looking west.



Figure 9.74: Siret et-Tauma 3: The arched entrance of the building, looking south. Scale 1m.

With regards to the interior, nothing can be recognised in the northern two thirds of the building due to collapsed rubble. In contrast, four rooms occupying the southern third of the building were identified. The largest one was rectangular, c. 8 m (east to west) by 4.40 (north to south) and was entered from its north side through a wide arched doorway measuring 1.95 m wide. This room was flanked by two identical rooms each measuring 3.75 m (east to west) by 4.40 m (north to south). Each room was reached through a 1.75 m wide arched doorway from the large room. The western room had

another similar arched doorway opening onto a smaller room located in the southwest corner of the building, measuring 3 m (east to west) by 4.40 m (north to south).

Outside the building, under the level of the north wall immediately to the east of the entrance, recent clandestine excavations have exposed a structure composed of two large horizontal pillars, measuring 1.75 m by 0.40 m, resting on the edges of a vertical rock-cut chamber. This chamber measures approximately 1.50 m (north to south) by 1 m (east to west), however, in order to determine the function of this structure and to measure its full depth, more excavations and investigations are needed. The most likely explanation is that this was a water cistern, despite the lack of water-proof material on the walls of the rock.

A few meters to the east of the ditch on the eastern slope of the hill, an underground vaulted water cistern has been identified (figure 5.10). The cistern measures approximately 3 m by 1.80 m. The internal sides of cistern were lined with water-proof material. On the ground of the same slope a part of an olive millstone has been found (figure 4.43a) demonstrating that olive oil production was likely one of the industrial activities in this settlement during some periods of its occupation.

9.2.21 Siret et-Tauma 4

Site Code: KAS 21	Constructional phases: 2
Site ancient name: Unknown	Location: Hilltop, second plateau of the Gebel
Site modern name: Siret et-Tauma 4	Chronology: Late Roman?
Coordinates: 32° 40.966'N° 21° 35.441'E	Dimensions: 28.5 by 25 m
Site type: fortified farm (<i>qasr</i>)	



Figure 9.75: Siret et-Tauma 4: Location (Google Earth: 2014).

Description: Siret et-Tauma 4 is the largest of the four fortified buildings of Siret et-Taumat. This building is situated on high rocky ground surrounded by fertile cultivated lands, 300 m north of Siret et-Tauma 3 (figures 9.75 and 9.76).

The *qasr* is rectangular (figure 9.77), measuring 28.5 m (east to west) by 25 m (north to south). As clearly visible in the northern wall, the outer walls were constructed of courses of ashlar work, each measuring 0.60 m high, built with single blocks measuring between 0.80 m and 1.20 m long. The thickness of the eastern wall was almost double that of the other three at about 1 m. For levelling purposes, as the surface of the natural rock that walls were resting on was not levelled, a levelling foundation wall consisting of two courses of well-dressed ashlar blocks of different sizes was constructed. Also, as

is clear from the outer face of the northern wall two slightly projecting string courses of thinner blocks were inserted between the courses of larger blocks, one of which was located at the top of the walls while the other appears almost at the halfway mark (figure 9.78). The rubble that extensively fills the interior prevented me from investigating whether these thinner courses marked the separation between floor levels or whether they were just inserted between the wall courses for construction (levelling on an irregular site), or ornamental purposes. Nevertheless, based on their low positions, the latter suggestions are likely more appropriate.



Figure 9.76: Siret et-Tauma 4: General view: a) south wall, b) north wall.

Although only visible on the northern side, it is probable that the building was originally surrounded by a broad vertical-sided rock-cut ditch. The most visible northern side of the ditch indicates that it measured about 8 m at its widest point. Moreover, it seems that the building was surrounded by an outer wall measuring 0.70 m wide built of large dressed blocks, however, the remnants are now only visible on the eastern and southern sides. The eastern outer wall is located about 17 m to the east of the eastern wall at its northern end and about 14 m at its southern end. The southern outer wall was erected at the distance of about 6 m south of the southern wall of the building.

There is a north-south cut in the natural rock (measuring about 2.80 m wide) between the south-east corner of the building and the southern outer wall. The function of this cut could not be identified without excavation.

The eastern outer wall was strengthened, probably at a later time, from the outside by a wide revetment built of rubble and measuring about 1.50 m thick. No traces of this revetment have been noticed along the south outer wall. Traces of a stone structure were also identified inside the northern end of the eastern outer wall. Most of this building is covered by rubble and only the northern wall and parts of western wall are now visible and show its masonry (figure 9.79). This structure was constructed of a mix of ashlar and thinner slabs comparable, to some extent, with the masonry of the main *qasr*.

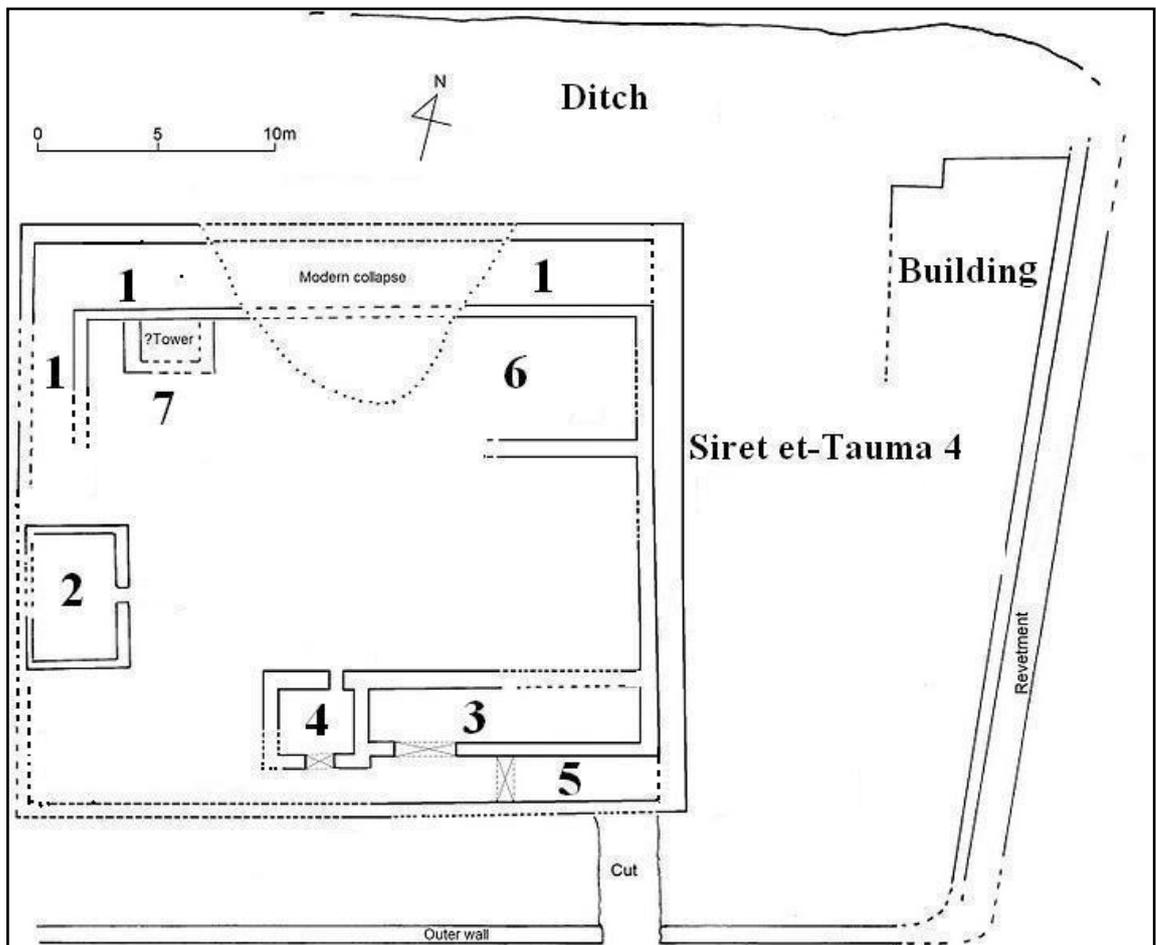


Figure 9.77: Siret et-Tauma 4: Measured plan.



Figure 9.78: Siret et-Tauma 4: North wall shows type of masonry and string courses, looking south.
Scale 1.

Although the main entrance of the *qasr* has not been identified, it presumably existed near the middle of the northern wall, based on the observation that the middle of the northern wall has all collapsed and the debris lies beneath a coverage of vegetation. Moreover, there is no evidence to suggest that the main entrance existed along any of the other three traceable walls.

With regards to the internal arrangements, the fallen masonry and rubble made it difficult to trace its overall plan. Nevertheless, some divisions have been recognised including a corridor (1 in figure 9.77) that probably ran along the northern and part of the western and southern sides of the building. At the northern side, the corridor measuring about 2.85 m wide between the northern wall of the building and a thinner internal wall that ran east-west, measuring 0.40 m thick. At the western side, the suggested corridor was limited at the south by a rectangular room built also of ashlar work masonry. This room (2 in figure 9.77) was constructed adjacent to the western wall and located about 12.80 m south of the north-west corner of the building. This rectangular room, that measured about 5.70 by 3.50 m, had an entrance (0.60 m wide) inserted into its eastern wall.

At the southern side of the building three chambers have been identified, the largest of which is an oblong room (3 in figure 9.77), occupying the eastern half of the southern side of the building and measuring 11.50 m by 2.60 m. This room was accessed through a wide arched doorway, measuring about 2.50 m and located close to the western end of the southern wall of the room. Adjacent to this room to the east was a smaller and approximately square room (4 in figure 9.77) measuring about 3 m by 2.80 m. This room also had an arched doorway in the middle of its southern wall measuring about 1.20 m wide. A narrower, 0.70 m wide entrance was also present in the northern wall of the room. A large oblong room (5 in figure 9.77) lay between the southern wall of room 3 and the southern wall of the building. This room was separated from the possible continuation of the corridor by a wide arched entrance located in its western end.

Adjacent to the eastern external wall of the *qasr*, a north-south wall measuring about 0.60 m thick was constructed. This wall intersected with the perpendicular walls of the northern corridor, with the southern and northern walls of room 3, and with another wall that formed the southern wall of a spacious room measuring more than 5.50 m by 5.20 m, located in the northern part of the *qasr* (6 in figure 9.77). A possible stair base was present close to the internal western corner of the corridor (7 in figure 9.77) measuring about 3 m by 2.5 m.



Figure 9.79: Siret et-Tauma 4: Northern wall of the associated building.

Outside the *qasr*, in addition to the architectural features that have already been mentioned in association to the other three buildings of et-Taumat group, an underground rock-cut water cistern (figure 9.80) has been identified in the eastern slope of the hill on which the building was located.



Figure 9.80: Siret et-Tauma 4: Underground rock-cut water cistern, looking east. Scale 1 m.

9.2.22 Siret Wadi al-Sanab

Site Code: KAS 22	Constructional phases: 2
Site ancient name: Unknown	Location: hilltop, second plateau of the Gebel
Site modern name: Siret Wadi al-Sanab	Chronology: Roman
Coordinates: 32° 40.737'N 21° 36.771'E	Dimensions: 10.80 by 7.80 m
Site type: <i>qasr</i> /fortified farm	



Figure 9.81: Siret Wadi al-Sanab: Location (Google Earth: 2014).

Description: Siret Wadi al-Sanab is a small fortified building located on a hilltop flanked on the east and west by two deep wades (figure 9.81). The western one is known as wadi al-Sanab, one of the Wadi al-Kuf tributaries which is the location of a rich ancient settlement dating back to as early as the Hellenistic period and continuing to the late Roman period.

Although preserved as a mound of collapsed rubble (figure 9.82), it was possible to discern that the outer walls were 0.90 m thick constructed of two faced masonry of

roughly dressed medium size stonework bonded by clay mortar. On all sides, the outer walls were supported by a revetment measuring 1.70 m wide, built of slightly dressed stones of different sizes (figure 9.83). No ditch was noted around the building as it seems that its location on a spur made one unnecessary. A single narrow entrance, 1 m wide, was inserted in the middle of the eastern wall. Apart from traces of a wall running east-west and located 2.20 m to the north of the south wall, nothing is visible today of the internal arrangements.

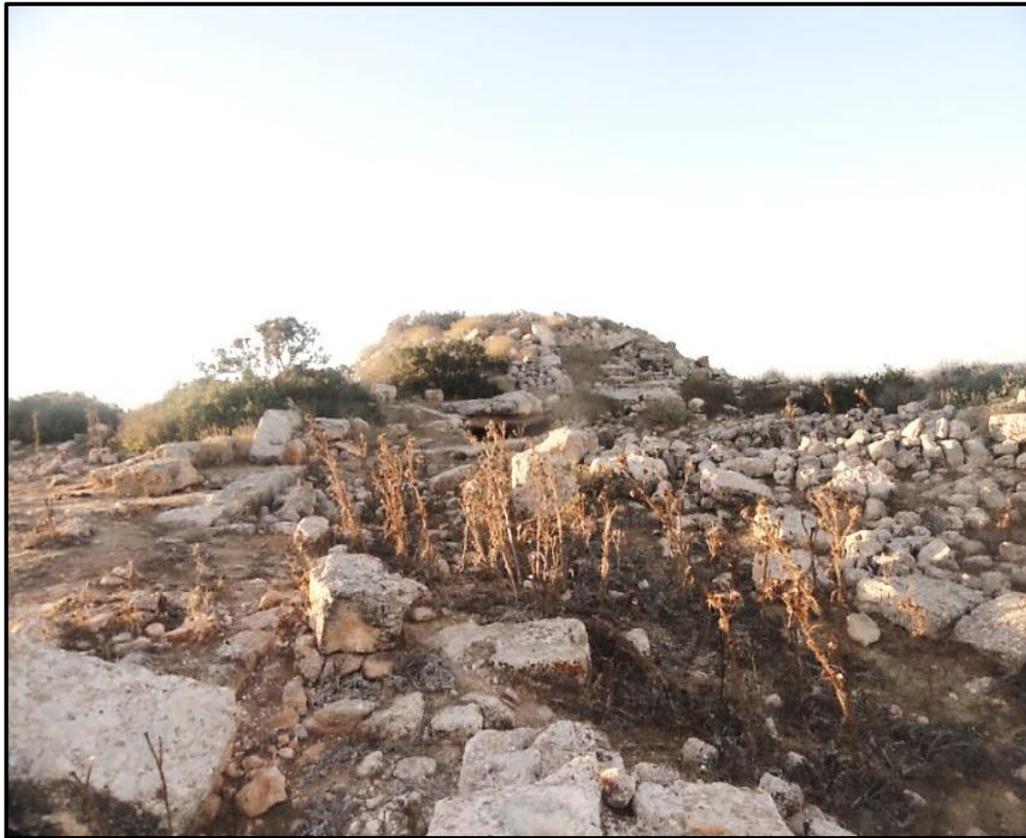


Figure 9.82: Siret Wadi al-Sanab: General view showing the qasr and a part of the surrounded settlement.

It is apparent that the *qasr* formed a part of agricultural and industrial settlement as indicated by the extensive presence of rock-cut tanks (figure 9.84), water cisterns, water catchment arrangements, and rock-cut chambers, some of which contained olive presses (figure 4.40), and traces of outbuildings.



Figure 9.83: Siret Wadi al-Sanab: The north revetment. Scale 1m.



Figure 9.84: Siret Wadi al-Sanab: One of the rock-cut tanks.

9.2.23 Siret Asbaih

Site Code: KAS 23	Constructional phases: 2
Site ancient name: Unknown	Location: raised ground, second plateau of the Gebel
Site modern name: Siret Asbaih	Chronology: Roman
Coordinates: 32° 42.073'N 21° 38.083'E	Dimensions: c. 18 by 15 m
Site type: <i>qasr</i> /fortified farm	



Figure 9.85: Siret Asbaih: Location (Google Earth: 2014).

Description: Siret Asbaih is a fortified farm building (*qasr*) located on raised ground 10 km east of Qasr Beni Gdem (figure 9.85).

As I was not welcomed by the landowner, I only managed to take some photos and have a quick look at the site, however, this was enough to discern that the *qasr* (figure 9.86) is rectangular measuring about 20 by 15 m with outer walls constructed of well-cut ashlar blocks. In addition, it was possible to notice that the outer walls were supported by a revetment and surrounded by a rock-cut ditch measuring at least 4 m wide. Remnants of walls are visible around the *qasr* which indicated that it was, as other fortified farms, a part of larger settlement.



Figure 9.86: Siret Asbaih: General view, looking north-west.

9.2.24 Siret Amaaty

Site Code: KAS 24. Site ancient name: Unknown. Site modern name: Siret Amaaty Coordinates: 32° 41.853'N 21° 36.625'E Site type: <i>qasr</i> /fortified farm	Constructional phases: 2. Location: The second Plateau of the Gebel. Chronology: Roman? Dimensions: c. 20 by 15 m.
--	---



Figure 9.87: Siret Amaaty: Location (Google Earth: 2014).

Description: Siret Ammaty is a fortified farm building located on slightly raised ground overlooking the western bank of wadi al-Kuf, 7 km east of Qasr Beni Gdem (KAS 1) (figure 9.87).

My visit to this site was also limited as I was asked to leave by the landowner and I was only able to locate the site by GPS and take one photo. Generally, the *qasr* was unditched, located on rocky raised ground with walls built of ashlar blocks, as is indicated by collapsed masonry, (figure 9.88). It seems also that vaults were present in the *qasr* as voussoirs were evident among the collapsed blocks. Water cistern and remnants of walls were evident to the west of the *qasr*.



Figure 9.88: Siret Amaaty: General view, looking north east.

9.2.25 Qasr Aqeela

Site Code: KAS 25. Site ancient name: unknown. Site modern name: Qasr Aqeela Coordinates: 32° 42.781'N 21° 37.448'E Site type: Possibly military watchtower	Constructional phases: 1. Location: hilltop, the second Plateau of the Gebel. Chronology: Roman Dimensions: 4. 20 by 5.30 m.
--	---



Figure 9.89: Qasr Aqeela: Location (Google Earth: 2014).

Description: Qasr Aqeela is a small two storey watchtower located on a hilltop surrounded by deep valleys 8 km east of Qasr Beni Gdem (KAS 1) (figure 9.89).

The tower (figure 9.90) is an approximately square building measuring 5.30 m (east to west) by 4.20 m (north to south). The well-preserved tower that still stands to a maximum height of about 7 m was constructed of roughly dressed but well-cut ashlar masonry. The blocks were large, with average dimensions of between 0.50-1.20 m long and 0.30- 0.50 m high. The single entrance (figure 9.91), measuring 1.10 m wide, was inserted in the middle of the south wall, which most likely had a straight lintel as no voussoirs were noted within the collapsed blocks.



Figure 9.90: Qasr Aqeela: General view, looking north-east.

The tower's internal layout consists of one room in each floor separated from each other by wooden beams resting on the projecting edges of one of the wall courses and a large oblong block attached to the western wall (figure 5.5). As no permanent stairs have been identified in the building, a wooden ladder might have been used to access the second floor from the ground.

The military appearance of the building is characterised by its height and narrow windows slots. The small gaps or wide cracks noticed between the blocks were most likely caused by an earthquake, rather than purposeful construction (figure 5.7). Another argument to support the militarisation of this site comes from its strategic location – on a hill-top surrounded by valleys on all sides.

9.2.26 Qasr Az-Zaarura

Site Code: KAS 26 Site ancient name: unknown Site modern name: Az-Zaarura Coordinates: 32° 44.686'N 21° 37.410'E Site type: <i>qasr</i> /fortified farm Constructional phases: 2	Location: raised ground, coastal plain Chronology: Roman Dimensions: 22 by 21.50 m References: (Kenrick 2013a; 2013b).
---	---



Figure 9.91: Qasr Az-Zaarura: Location (Google Earth: 2014).

Description: Qasr Az-Zaarura is a fortified farm located on a low hilltop immediately west of the small town of Messa, 11 km east of Qasr Beni Gdem (KAS 1) (figure 9.91).

The *qasr* is an approximately square building measuring 22 m (east to west) by 21.5 m (north to south) and still surviving to a maximum height of about 3.5 m (figure 9.92). The outer walls were constructed with large blocks of fine ashlar masonry bonded by lime mortar and supported by a sloping revetment measuring approximately 4 m wide, built of lower quality ashlar masonry of different sizes. As already discussed in Chapter

4 and Chapter 6, the revetment was added at a later time in order to stabilise the outer walls that were damaged by an earthquake. Traces of lime plaster can be seen in some parts of the outer walls. Two string courses are visible in the building with some other architectural features, including the curtain-brackets that flanked the arch of entrance, making it possible to date the *qasr*, as Kenrick (2013a) suggested, to the fifth century AD or later.

An arched entrance measuring 1.50 m wide and 2.50 m high was inserted into the middle of the eastern wall to give access to the interior that consisted of a central courtyard, onto which open a number of small rooms (8 at least) that can be entered through arched doorways. Narrow windows slits were present in the *qasr* as two of them are still visible in the eastern wall to the north of the entrance. About 200 m to north-east of the *qasr* lay rock-cut vats and large buried dolia giving an indication that wine or olive oil was produced in this fortified farm.



Figure 9.92: Qasr Az-Zaarura: General view, looking south-east.

9.2.27 Siret Batrow

Site Code: KAS 27 Site ancient name: unknown Site modern name: Siret Batrow Coordinates: 32° 45.351'N 21° 45.660'E Site type: <i>qasr</i> /fortified farm	Constructional phases: 2 Location: raised ground, second plateau of the Gebel. Chronology: Roman Dimensions: 11 by 10.50 m
--	---



Figure 9.93: Siret Batrow: Location (Google Earth: 2014).

Description: Siret Batrow is a fortified farm building, *qasr*, located on slightly raised ground in the middle of a residential area in the modern city of El-Baida (figure 9.93 and 9.94)

As shown in the measured plan (figure 9.95), the *qasr* is an approximate square measuring 11 m by 10.50 m. The outer walls were constructed of medium and large limestone ashlar blocks with string courses, as evident in the relatively well-preserved north and west walls, indicating that it consisted of two storeys. At least the north and west walls were strengthened by a vertical revetment measuring 1.80 m wide, built of a

mixture of slightly dressed and irregular blocks and a rubble core used between the outer walls and the revetment (figure 9.96).



Figure 9.94: Siret Batrow: General view, looking north-west.

As evidenced by an *in situ* doorjamb and collapsed voussoirs, it seems that the *qasr* had a single arched entrance, c. 1 m wide, in the middle of the eastern wall. Narrow windows slits, measuring 0.10 m wide are obvious in the north wall. The windows were located directly under the string course, an indication that they were related to the ground floor.

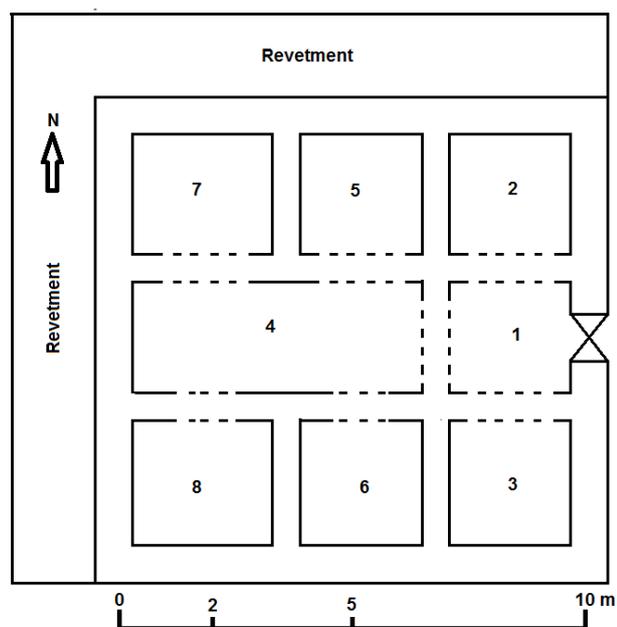


Figure 9.95: Siret Batrow: Measured plan.

Of the interior, owing to the fact that the building is extensively covered by rubble and soil, it was only possible to trace parts of some walls. These indicate that the entrance led to a vestibule (1) measuring 2.60 m (east to west) by 2.40 m (north to south), and was probably flanked by two identical rooms (2 and 3), each measuring 2.60 m (north to south) by 2.40 m (east to west). A possible oblong central courtyard (4) measuring 6.20 m (east to west) by 2.40 m (north to south) was located in the centre of the *qasr*. This courtyard was most likely flanked on the north and south by four rooms (two on each side). The front rooms (5 and 6) on both sides were identical square rooms, each measuring 2.60 m on each side. The two back rooms (7 and 8) were also identical but slightly bigger at 3 m (east to west) by 2.60 m (north to south).



Figure 9.96: Siret Batrow: The north wall showing the string course and the core between the outer face of the revetment and the north wall, looking east. Scale 1m.

It is most likely that the *qasr* was associated with an agricultural settlement which is unfortunately covered today by the surrounding modern houses. However, an indication of this settlement is represented by remnants of walls and a possible rock-cut water cistern located few metres to the north of the *qasr*.

9.2.28 Siret Qasrin el-Giamel

Site Code: KAS 28 Site ancient name: unknown Site modern name: Siret Qasrin el-Giamel Coordinates: 32° 45.909'N 21° 45.013'E Site type: <i>qasr</i> / fortified farm Constructional phases (2) Location: raised ground, second plateau of the Gebel.	Chronology: Late Roman/ Byzantine Dimensions: 18 by 16.50 m. References: (Stucchi, 1975; Catani, 1976; 1978; 1998; Roques, 1987; Reynolds, 2000; Reynolds, 2003; Kenrick, 2013a).
---	---



Figure 9.97: Siret Qasrin El-Giamel: Location (Google Earth: 2014).

Description: this site consisted of two buildings located in the middle of the modern city of El-Baida (figure 9.97), and was excavated by the Italians between 1966 and 1972. The first, and the earlier of the two, is a fortified farm building (*qasr*) that, according to the pottery, was built in the second half of the fifth century AD and continued in use into the seventh century. The second building, located few metres to the east of the

qasr, was built approximately fifty years later and was interpreted by Catani as a monastery.

The *qasr* (figure 9.98 and 9.99) is rectangular building measuring 18 (north to south) by 16.5 m (east to west), was made of ashlar work, and was surrounded by a rock-cut ditch enclosed by outbuildings in the south and west and by outer walls on the other two sides. The ditch was crossed by a bridge at the single arched entrance of the building inserted into the middle of the east wall. The entrance led into a courtyard surrounded on three sides by two storey rooms on three sides. The two front rooms that flanked the courtyard from the north and south probably served as towers, as indicated by the thickness of their lower walls. A rock-cut water cistern was present in the north-west corner of the courtyard. A narrow entrance inserted into the east wall of the courtyard immediately north of the main entrance of the *qasr* gave access to a latrine. The upper floor of the *qasr* was accessed by a flight of stairs located in the middle of the northern third of the *qasr*.



Figure 9.98: Siret Qasrin el-Giamel: The fortified farm building, looking north-east.

Wine production elements are present in the western part of the building that consisted of a central hall flanked by two rooms. The ceiling of the central hall was supported by two arches and its floor was originally paved by *opus signinum* and contained a mosaic inscription that reads “Ἐμμανουηλ, Emmanuel”, and also contained some Christian symbols (see: Reynolds, 2003:413). In a second phase, eight

fermentation vats supported by concrete rubble were placed around the walls of the hall. Inside the room located to the north of the hall, eight other dolia for the fermentation and storage of wine were arranged along the east, west and north walls. The south room (f) was interpreted as the pressing room as it contained grape- treading facilities.

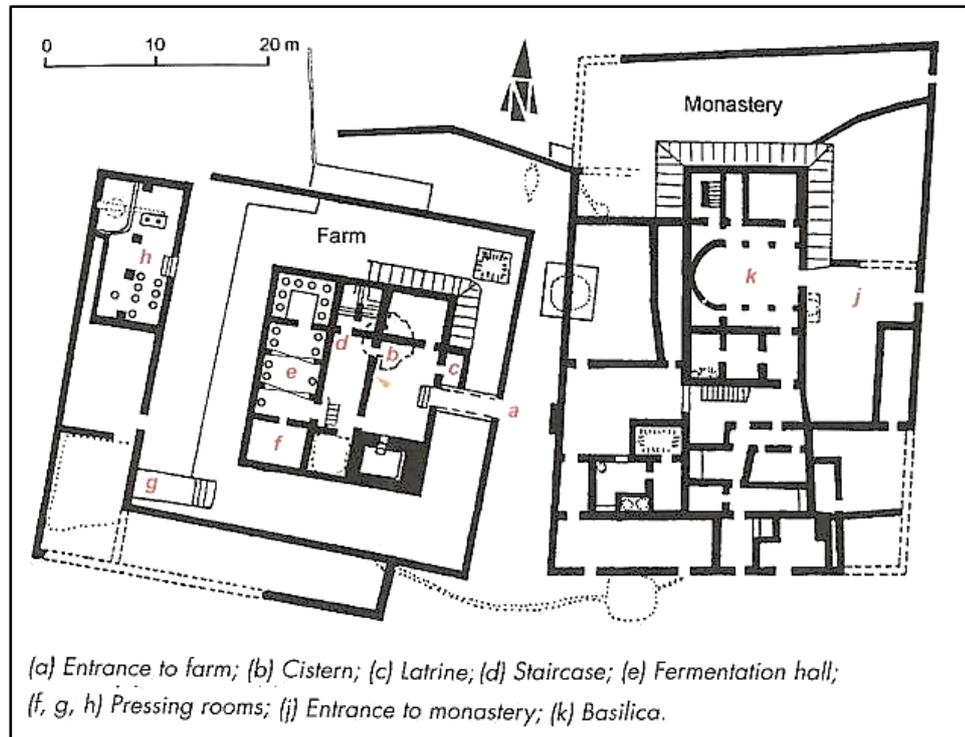


Figure 9.99: Siret Qasrin el-Giamel: Measured plan of the site (Kenrick 2013a, fig.84).

Further wine production installations including 16 dolia were traced in the adjacent outbuilding to the north-west corner of the surrounding ditch. More industrial features are evident in the underground rock-cut chambers that were accessed through the south-west corner of the ditch. These were represented by at least two sockets in the west wall for the end of press-beam, recesses and a channel in the floor connected with a rock-cut tank in the north side and a rock-cut bench perhaps used for pressing. Since no fermentation vats were noticed in this chamber Kenrick (2013a:120) questioned if it was to produce olive oil rather than wine. The underground chamber also contained six rock-cut animal troughs located in the east wall on either side of the entrance passage. Kenrick (2013a:120) suggested that this animal stable marks a later use of the underground chamber.

9.2.29 Siret Qatoufa

Site Code: KAS 29	Dimensions: 12 by 10 m
Site ancient name: Unknown	Site type: fortified farm, <i>qasr</i>
Site modern name: Siret Qatoufa	Constructional phases: 2
Coordinates: 32° 46.259'N 21° 45.549'E	Location: raised ground, second plateau of the Gebel.
Chronology: Late Roman/ Byzantine	



Figure 9.100: Siret Qatoufa: Location (Google Earth 2014).

Description: Siret Qatoufa is a small *qasr* measuring 12 m by 10 m, located on raised ground in the middle of the city of al-Baida (figure 9.100). Only parts of the lower course of the outer walls, which were built in large and medium sized blocks of fine ashlar masonry, are now visible (figure 9.101). An arched entrance measuring 1.20 m was inserted into the middle of the western wall. With regard to the internal arrangements, nothing is now visible due to the collapsed masonry and vegetation.

It seems that the *qasr* was part of a larger settlement now covered by modern urban development, however, traces of outbuildings were evident at the site; a wall running east-west built of the same masonry is located approximately 10 m to north of the *qasr* (figure 9.102).



Figure 9.101: Siret Qatoufa: General view, looking north-east.



Figure 9.102: Siret Qatoufa: One of the associated outer walls. Scale 1m.

9.2.30 Siret Maibra

Site Code: KAS 30	Dimensions: 13.50 by 12.50 m
Site ancient name: unknown	Site type: <i>qasr</i> /fortified farm
Site modern name: Siret Maibra	Constructional phases: 2
Coordinates: 32° 52.560'N 21° 39.621'E	Location: Hilltop, first plateau of the Gebel.
Chronology: Late Roman/ Byzantine	



Figure 9.103: Siret Maibra: Location (Google Earth 2014).

Description: Siret Maibra is an approximately square unditched *qasr* located on a hilltop 5 km south of the small coastal village of al-Hamama (figure 9.103).

Although it was very short, my visit to the site was sufficient to discern that the outer walls were built of large ashlar blocks supported by a revetment. Due to the steep slope of the hill on which the *qasr* was located, there was no need for a ditch. Also, it was most likely that the *qasr* had an entrance in the eastern wall.

9.2.31 Siret Masaouda

Site Code: KAS 31 Site ancient name: Unknown Site modern name: Siret Masaouda Coordinates: 32° 53.963'N 21° 37.151'E Chronology: Roman?	Dimensions: 11 by 10 m. Site type: possible watch tower Constructional phases: 1 Location: Hilltop, first plateau of the Gebel.
--	--



Figure 9.104: Siret Masaouda: Location (Google Earth 2014).

Description: Siret Masaouda is a small possible watch tower located on a hilltop overlooking the ancient harbour village of *Phycus* (al-Hamama) (figure 9.104).

The site is preserved today as a mound of rubble (figure 9.105) and therefore it was not possible to obtain a clear picture of its layout. It seems, however, that the outer walls were constructed of slightly dressed and irregular small blocks with no traces of additional revetment and surrounding ditch. The location of the site on a high hilltop

and its small size are indications of its military nature. Moreover, no agricultural and industrial features were identified at the site



Figure 9.105: Siret masaouda: General view, looking south.

9.2.32 Qasr Sidi Abdulmaula

Site Code: KAS 32	Dimensions: c.18 by 16.50 m
Site ancient name: unknown	Site type: <i>qasr</i> /fortified farm
Site modern name: Qasr Sidi Abdulmaula	Constructional phases: 1
Coordinates: 32° 53.554'N 21°37.035'E	Location: Hilltop, first plateau of the Gebel.
Chronology: Roman?	



Figure 9.106: Qasr Sidi Abdulmaula: Location (Google Earth 2014).

Description: the *qasr* located on slightly raised ground surrounded by fertile lands on the first escarpment of the Gebel (figure 9.106) is today largely covered by rubble and thick vegetation, however, it seems that the *qasr* is rectangular, measuring c. 18 m by 16.5 m, with outer walls constructed of large blocks of fine ashlar masonry.

9.2.33 Qasr al-Hamama

Site Code: KAS 33	Dimensions: 44 by 24 m
Site ancient name: Unknown	Site type: possible fortlet
Site modern name: Qasr al-Hamama	Constructional phases: 2
Coordinates: 32° 55.396'N 21° 37.784'E	Location: Hilltop, coastal plain
Chronology: Late Roman/ Byzantine.	



Figure 9.107: Qasr al-Hamama: Location (Google earth 2014).

Description: this possible military fortlet is located on a low hilltop only 200 m away of the sea in the heart of the ancient harbour village of phycus (al-Hamama) (figure 9.107). The unditched building is rectangular, measuring 44 m from east to west by 24 m from north to south (figure 9.108). The outer walls were 0.95 m wide, constructed of ashlar masonry, and supported by a revetment of smaller irregular stones and rubble, measuring 1.60 m wide at the southern wall and only 1 m at the other walls.

Some fragments of the lower course of an outer rectangular tower are visible in the middle of the northern wall. Most likely a similar tower existed in the southern wall as well. It is likely that a wide single entrance leading to the interior was present, but is

now completely masked by fallen masonry. It can be deduced that this possible fortlet also had a central courtyard as shown by the shallow level of the debris in the centre of the interior, similar to the ones at Qasr Beni Gdem.



Figure 9.108 : Qasr al-Hamama: General view, looking north-east.

9.2.34 Siret Alwet umm-Annamel

Site Code: KAS 34 Site ancient name: unknown Site modern name: Siret Alwet umm-Annamel Coordinates: 32° 54.257'N 21° 36.483'E Site type: <i>qasr</i> /Fortified farm.	Constructional phases: 1 Location: Low hilltop, coastal plain Chronology: Roman Dimensions: 10 by 10 m
---	---



Figure 9.109: Siret Alwet umm-Annamel: Location (Google Earth: 2014).

Description: Siret Alwet umm-Annamel is a square fortified building located on a low rocky hilltop at the eastern edge of the coastal site of al-Hamama (*phycus*), approximately 150 m from the sea (figure 9.109). Although preserved as a mound of collapsed rubble (figure 9.110), it was possible to discern that the *qasr* is an exact square, measuring 10 m on each side. The outer walls were constructed of medium well-cut sandstone blocks with two faces as indicated by remnants of the lowest course. A large amount of collapsed rubble on the edges of the hill gives an indication that these

might have been the masonry used in the upper courses, or that the *qasr* had an upper storey.

The location of the entrance has not been identified, however, it was most likely on the eastern or the southern side, as it certainly does not exist in the other clearly visible walls. Regarding the internal arrangements, the building is extensively filled with rubble, which rendered it impossible to reconstruct the interior plan.

A stone quarry is located at the bottom of the southern edge of the hill on which the *qasr* was located. In this quarry, some industrial elements for pressing olive or grapes were evident, including sockets for the end of press-beam and a recess in the wall possibly used for storing loads before pressing (figure 9.111).



Figure 9.110: Siret Alwet umm-Annamel: General view, looking north-east.



Figure 9.111: Siret Alwet umm-Annamel: Olive or grape pressing elements.

9.2.35 Qasr Bst

Site Code: KAS 35	Constructional phases: 1
Site ancient name: unknown	Location: raised ground, coastal plain
Site modern name: Qasr Bst	Chronology: Roman
Coordinates: 32° 52.913'N 21° 34.541'E	Dimensions: 17 by 17.50 m
Site type: unfortified farm building	



Figure 9.112: Qasr Bst: Location (Google Earth: 2014).

Description: Qasr Bst is an unditched coastal building located 6 km to the west of the coastal village el-Hamama (*Phycus*) on slightly elevated rocky ground, which is now largely covered by sand (figure 9.112 and 9.113).

The *qasr* is approximately square, measuring 17 m (north to south) by 17.50 m (east to west). The external walls were constructed of large well-dressed sandstone blocks with two faces resting on foundations of the natural rock (figure 9.114). The blocks were large, with average dimensions between 0.60-1.20 m in length, 0.30- 0.60 m in thickness and 0.40-0.50 m in height. The wall core was about 0.20 thick and made of rubble bonded with lime mortar, which was also used between the wall courses. Only

two courses were still standing, to a maximum height of about 1 m. The outer walls were about 1.20 m thick.



Figure 9.113: Qasr Bst: General view, looking west.

Two entrances have been identified in the building. The first one, measuring 1.80 m wide, lies approximately in the middle of the western wall, while the other entrance, measuring 1.40 m, was located almost in the middle of the eastern wall. Its doorjamb blocks can now be seen collapsed immediately to the east (figure 9.115).



Figure 9.114: Qasr Bst: Eastern wall, showing type of masonry, looking south. Scale 0.20 m.

With respect to the interior, despite the fact that the building has largely been masked by sand, some details have been recognised. These include a rectangular vestibule

measuring 4.40 m (east to west) by 1.80 m (north to south). This vestibule was entered from outside through the western entrance and it had an arched doorway inserted at its eastern end, measuring 1.80 m wide. A rectangular room, measuring 3.70 m (north to south) by 4.40 m (east to west), existed in the south-east corner of the building. Although it has not been traced, the doorway of this room was certainly inserted in its northern wall. Additionally, two square blocks measuring 0.60 m² were noted *in situ* adjacent to the interior face of the southern wall, positioned 3.30 m apart from each other. It is possible that these are pier bases for arcades or vaults, as there are traces of south-north walls located on the same alignments as the two square blocks. These architectural features thus probably formed a large vaulted room or hall divided into three sections opened to each other by wide arched doorways.



Figure 9.115: Qasr Bst: Eastern entrance doorjamb blocks, looking west. Scale 1 m.

With regard to the northern half of the building, nothing remains visible of its internal arrangements as it is completely covered by sand.

Apart from some simple walls located on the northern slope of the rocky hill to the north of the *qasr*, no distinguishing architectural feature has been noticed in the surrounding area.

9.2.36 Qasr al-Hammam

Site Code: KAS 36	Location: raised ground, coastal plain
Site ancient name: Unknown	Chronology: Roman
Site modern name: Qasr al-Hammam	Dimensions: 9.65 by 7.50 m
Coordinates: 32° 48.797'N 21° 29.072'E	References: Stucchi (1975).
Site type: unfortified small coastal building	
Constructional phases: 1	



Figure 9.116: Qasr al-Hammam: Location (Google Earth: 2014).

Description: Qasr al-Hammam is a small coastal building located on slightly raised ground a few hundred meters from the sea and 4.5 km west of the modern coastal town of al-Haniya (*Aptouchou Hieron?*) (Figures 9.116 and 9.117).

The building is rectangular (figure 9. 118), measuring 9.65 m (north to south) by 7.55 m (east to west). It is constructed of massive ashlar blocks with average dimensions between 0.90 - 3.15m long, 0.45 - 0.65 m thick, and 0.80 - 1.20 m high (figure 9.117). Some of the blocks had circular and rectangular recesses and holes

which suggested that these blocks had been brought from an earlier structure to be reused in the *qasr*.



Figure 9.117: Qasr al-Hammam: General view, looking south-east.

The building was probably surrounded by a ditch, however, this assumption is based only on the existence on the south side of the building of what seems to have been an earlier quarry, later used as a ditch. This suggested quarry contained a chamber tomb(s) cut into its southern edge and is today extensively filled by rubble and covered by vegetation (figure 9.119).

Although this building was small in size, it had three entrances: the first one measured 1.10 m wide and was located in the eastern wall; the other two were inserted into the southern wall and one of them was later blocked.

Of the interior nothing is visible due to collapsed blocks and rubble. Also, it seems that the interior has been used, probably at a much later time, as a cemetery as indicated by remnants of human bones partly visible on the ground.

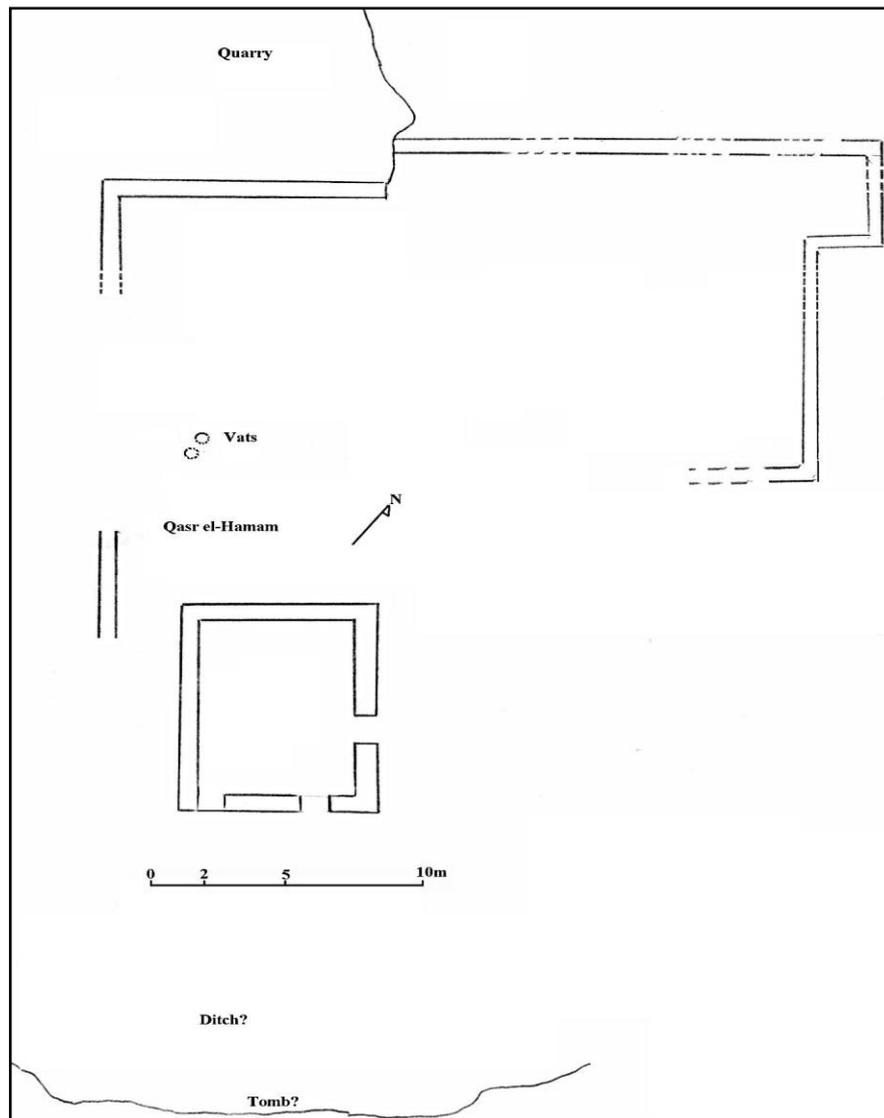


Figure 9.118: Qasr al-Hammam: Measured plan.

At a distance of about 7 m north-west of the building at least two underground plastered vats (figure 9.120) and another quarry are located. Also, a few meters north-east of the building a water cistern is located and is in fact still in use by locals. Additionally, it was apparent that the industrial features (the vats) were surrounded by an enclosure. This enclosure was constructed of large dressed blocks where two courses of its eastern wall and only the lower course of the other sides remain visible in the site.

From this brief account it is obvious that the building had no defensive characteristics and therefore it could not be classified as a fortified building either of civilian or military nature. The surrounding fertile landscape, however, and the

associated industrial features suggested, as Stucchi (1975:527) claimed, an agricultural nature of the site.

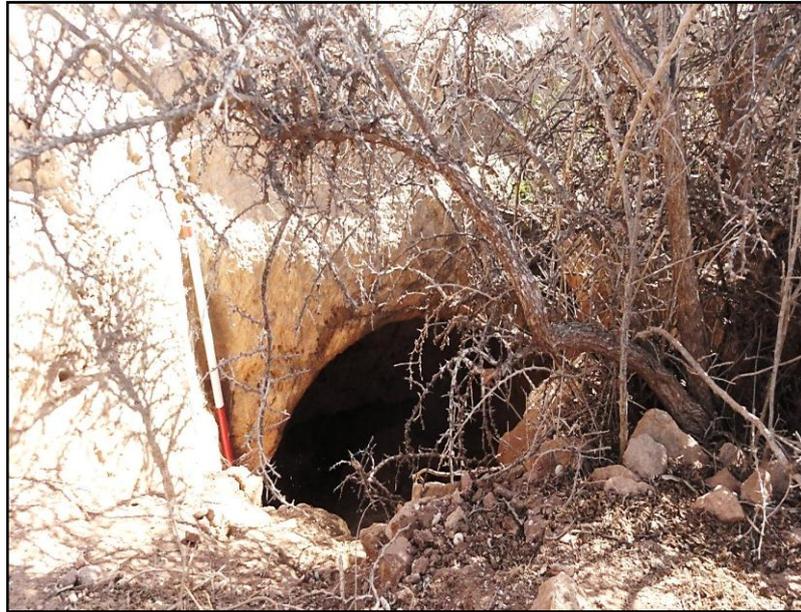


Figure 9.119: Qasr al-Hammam: Rock-cut tomb? Looking south.



Figure 9.120: Qasr al-Hammam: One of the vats. Scale 1m.

9.2.37 Qasr Alhesy

Site Code: KAS 37	Constructional phases: 1
Site ancient name: Unknown	Location: hilltop, coastal plain
Site modern name: Qasr Alhesy	Chronology: Roman
Coordinates 32° 47.393'N 21° 25.262'E	Dimensions: 17 by 13 m
Site type: probable outpost	



Figure 9.121: Qasr Alhesy: Location (Google Earth: 2014).

Description: Qasr Alhesy is a possible military outpost built on a hilltop located 170 m away from the beach and at about 24 km west of the coastal village of al-Hamama (*Phycus*) (figure 9.121).

The location of the entrance has not been identified and nothing is visible today of the interior due to collapsed material, however, from the remnants of two courses of its outer walls, it seems that the *qasr* is rectangular, measuring 17 m (east to west) by 13 m (north to south), built of different sized roughly dressed sandstone blocks (figure 9.122).



Figure 9.122: Qasr Alhesy: The north wall, showing the masonry. Scale 1m.

The masonry type of this possible military outpost differs from other probable military sites in the region that employed first class ashlar blocks, and most likely dates to the late Roman period. Nevertheless, pottery sherds recovered from Qasr Alhesy indicates that the site was in use in the late Roman period (see section 6.2.2).

9.2.38 Qasr Jarjaroumma

Site Code: KAS 38	Constructional phases: 1
Site ancient name: unknown	Location: hilltop, coastal plain
Site modern name: Qasr Jarjaroumma	Chronology: Roman
Coordinates 32° 47.393'N 21° 25.262'E	Dimensions: 12.5 by 11.30 m
Site type: probable outpost	



Figure 9.123: Qasr Jarjaroumma: Location (Google Earth: 2014).

Description: Qasr Jarjaroumma is a possible unditched small coastal fortified farm located on a low hilltop 18 km north of Qasr Libya (figure 9.123).

The *qasr* is preserved today as a mound of collapsed rubble (figure 9.124) and only a few blocks of the outer walls are visible *in situ*. The building measures 12.5 m (east to west) by 11.30 m (north to south) and was constructed with a mixture of dressed and roughly dressed stonework. The entrance probably existed on the western side as indicated by a possible doorjamb set vertically in the northern half of the west wall

(figure 9.124). Nothing is now visible of the interior due to collapsed rubble and the presence of vegetation.

A stone quarry lies 30 m to the west of the *qasr* (figure 9.125). The agricultural nature of the site is evident, in addition to the surrounding fertile lands, by the existence of wadi walls located in the adjacent wades to the east and west of the *qasr*.



Figure 9.124: Qasr Jarjaroumma: General view, looking east.



Figure 9.125: Qasr Jarjaroumma: Stone quarry, looking south.

9.2.39 Qasr al-Mashoub

Site Code: KAS 39 Site ancient name: unknown Site modern name: Qasr al-Mashoub Coordinates 32° 47.393'N 21° 25.262'E Site type: <i>qasr</i> /fortified farm,	Constructional phases: 1 Location: hilltop, coastal plain Chronology: Late Roman? Dimensions: 12.5 by 11.30 m
---	--



Figure 9.126: Qasr al-Mashoub: Location (Google Earth: 2014).

Description: Qasr al-Mashoub is a possible fortified farm building located on raised ground in the coastal plain, only 270 m from the sea and 17.5 km north of Qasr Libya (figure 9.126).



Figure 9.127: Qasr al-Mashoub: General view, looking south-east.

The *qasr* (figure 9.127) measures 13.5 m x 13.5 m. The outer walls were built of neatly cut and coursed ashlar blocks, of which three courses still survive in some places. The *qasr* was probably surrounded by a revetment as evident in the northern wall. A single arched entrance measuring about 3.40 m wide is located in the middle of the northern wall (figure 9.128).



Figure 9.128: Qasr al-Mashoub: The north side, showing the entrance and masonry type.

In regards to the interior, some walls, entrances, and vaults are visible (figure 9.129). The entrance led into a vestibule or front courtyard which spans the width of the *qasr* and measures 3.40 m (north to south). The middle part of the building probably consisted of three identical vaulted rooms each measuring 3.40 m (east to west) by 3.10 m (north to south). Each of these rooms was entered from the front vestibule or courtyard via an arched doorway. Similar rooms probably occupied the back side of the *qasr*.

A rock-cut water cistern with rounded raising water opening is located in the levelled rocky ground immediately to the west of the *qasr*. Also, remnants of simple walls are evident on the surrounding low ground.



Figure 9.129: Qasr al-Mashoub: The eastern side of the interior. Scale 1m.

9.2.40 Qasr al-Oqla

Site Code: KAS 40 Site ancient name: perhaps <i>Caenopolis</i> Site modern name: Qasr al-Oqla Coordinates: 32° 46.249'N 21° 20.477'E Site type: possible military outpost	Constructional phases: 2 Location: hilltop, coastal plain Chronology: Late Roman/Byzantine Dimensions: 18 by 8.50 m
--	--



Figure 9.130: Qasr al-Oqla: Location (Google Earth 2014).

Description: Qasr al-Oqla is a possible military outpost located on the edge of a hilltop flanked by two valleys overlooking the ancient harbour site of Maatan al-Oqla (perhaps *Caenopolis*) (figure 9.130).

Although he provided inaccurate measurements of the *qasr*, Laronde (1983:78) attempted a description of this outpost and this has remained the only published information to date.

The outpost (figure 9.131) measures 18 m by 8.5 m. Ashlar work was utilised in the outer walls, with small irregular blocks used for the revetments in both buildings. On the basis of the similarity of masonry used in the sloping revetment in this possible outpost and in the adjacent Byzantine church, it is possible that they were both constructed around the same period.



Figure 9.131: Qasr al-Oqla: General view, looking south-east.

9.2.41 El-Qasr el-Hamar

Site Code: KAS 41. Site ancient name: unknown. Site modern name: El-Qasr el-Hamar Coordinates: 32° 39.937'N 21° 23.825' Site type: Fortified farm, <i>qasr</i>	Constructional phases: 3. Location: The second Plateau of the Gebel. Chronology: Late Roman/Byzantine Dimensions: 22.30 by 18.30 m.
---	--



Figure 9.132: EL-Qasr el-Hamar: Location (Google Earth: 2014).

Description: El-Qasr el-Hamar, together with another *qasr* known as Qasr Sidi Bu-Argoub, give the town in which they are located its name, Zawiat el-Qasrain, (two Qasrs Zawia), which is situated 3.5 km north of the modern village of Qasr Libya (figure 9.132).

el-Qasr el-Hamar (figure 9.133) is a probable ditched fortified building built on a low hill, surrounded by fertile lands. The *qasr* was probably a part of a settlement, as some architectural structures can be seen in the surrounding area. The *qasr* is rectangular, measuring 22.30 m (from east to west) by 18.30 m from north to south. Some walls of

the *qasr* are still standing to a maximum height of about 3.50 m. Architecturally, it is apparent that the building had three phases of construction (figure 4.29).



Figure 9.133: EL-Qasr el-Hamar: General view, looking north.

Phase I: The first phase is represented by a rectangular structure measuring 20 m (from east to west) by 16.20 m (from north to south), including the thickness of the walls. The eastern wall was almost double the thickness of the other walls at 1.20 m. The walls were constructed of neatly coursed large and medium blocks with courses between 30 and 50 cm high. Furthermore, small externally dressed stones were used among the large and medium blocks in some parts, particularly in the remnants of what seems to be the second floor walls.

The internal faces of the walls were treated with a mortar consisting of small stones, pottery and tile sherds. Two windows have been detected in the building, the first located in the north-east corner, while the second opened in the top of the eastern wall of room 2. Both windows were 0.65 m wide and both were blocked during the second phase.

The north-east corner window was blocked by an additional wall, whereas the other one was closed off by a stone block. Two entrances lie in the southern wall, the wider

one is 1.50 m located close to the south-west corner, while the other is 1.00 m wide and lies in the middle of the eastern half of the same wall.

The building in the first phase had five identical rectangular rooms measuring 3.50 m (from east to west) by 2.50 m (from north to south). Every room was entered through its own 1.00 m wide arched doorway. Each arch consisted of 7 small voussoirs resting on doorjamb blocks which were arranged as headers and stretchers (figure 9.134). Room 2 had a rounded niche in the centre of its eastern wall, about 0.60 m wide, 0.30 m deep and 1.10 m high (figure 9.135).

Three of the rooms (1, 2 and 3) are positioned in the east side of the building, while the two northern rooms opened onto a rectangular room (6) measuring approximately 5.70 m (from north to south) by 4 m (from east to west). This room and room 3 were opened onto a rectangular courtyard (9) measuring 4.40 m (from north to south) by 7.70 m (from east to west). The courtyard contained an underground water cistern, which had a semi-rectangular water rising hall positioned about 0.60 m in front of the door to room 3 (figure 4. 34.). Although it was not easy to investigate the size of the cistern due to the rubble, it was possible to see that it had been enlarged at a later time when it was connected to another underground water cistern built later in room (6). These arrangements will be discussed later in more detail.

Two identical rooms (4 and 5) were located in the middle of the southern side of the building and lie between the two main entrances of the building. Both of the rooms were open onto the courtyard (9) and like the other three similar rooms, had arched doorways. room (5) had a second arched doorway at its south-east corner, which was blocked at a later time (figure 9.136). To the east of these rooms, an arched doorway of the same form has been identified, which probably gave access to another room, which also opened onto the courtyard, however, the architectural characteristics in this side of the building is interrupted by later walls. Further to the east within the building it was not possible to trace any architectural features due to the collapsed blocks.



Figure 9.134: EL-Qasr el-Hamar: Rooms 1, 2 and 3 at the north side of the Qasr. Scale 1 m.



Figure 9.135: EL-Qasr el-Hamar: The niche in room 2, looking north. Scales 1 m and 20 cm.



Figure 9.136: EL-Qasr el-Hamar: Room 5, blocked archway, looking north, Scale 1 m.

A well-preserved 1m wide flight of stairs (7) was inserted between the western wall of room 6 and a similar wall to the west, almost in the middle of the north wall of the building (figure 4.33). The stairwell was equal in length to room 6 at 5.70 m (from north to south) and only 1.00 m wide (from east to west) and every step was about 0.35 m from south to north. This flight of stairs probably led up to a second floor, which certainly existed over part of the structure, indicated by remnants of walls on the top of some rooms and also by the big thickness of some external and internal walls of the first floor.

Also dating to the first phase, a courtyard (9) continued as a corridor extending into western part of the building. It occupied the area between the flight of stairs and room 4 from the east and the western wall of the Qasr, however, the western wall of room 4 can be seen extending to the north for about 2.20 m, forming the separation between courtyard (9) and the western corridor. Nevertheless, the western area of the building is now occupied by later walls, which made it difficult to trace any earlier arrangements by surface survey.

Phase II: It seems that the building in this phase was strengthened, probably for defensive purposes. The outer walls were doubled in thickness by constructing walls of regular large and medium blocks and small stones. Additionally, the only two windows that have been noticed in the phase I building were blocked. Furthermore, the water cistern underneath the floor of room 6 probably dates to this phase. It is a mortared rock-cut water cistern, had a rising rounded water hole measuring about 1.50 diameter and positioned 1.50 m to the north of the south-western corner of the room. The cistern (figure 9.137 and 4.34) was more than 2.00 m deep and about 3.75 m in diameter located beneath the floor of the room and extending slightly beneath the western wall of the room.



Figure 9.137: EL-Qasr el-Hamar: Location of the water cistern in room (6), looking east.

During the construction of the water draw hole, a part of the western wall of room 6 had been destroyed. Furthermore, due to the fact that this cistern was built inside a roofed room, it was fed via a water channel under the wall that separated room 6 from the courtyard (9). The phase II cistern had an underground link with the first phase cistern. Finally, all these arrangements showed that the rounded draw water hole cistern was built in the second phase and may indicate, like the added walls and blocked windows, a heightened defensive purpose.

Phase III: In this phase two identical rectangular rooms (10 and 11) were built in the northern part of the western courtyard. Each room was 5.70 m from north to south by 3.25 m from east to west, with a doorway measuring 1.10 m wide located in the middle of its southern wall. The walls of the rooms were built of smaller regular stones at 0.60 m thick. A similar wall that intersected with the western wall of the Qasr about 2 m to the south of room (11) and extended for about 3.25 m from east to west is also probably related to this phase. The wall that formed the eastern wall of room (8) and the blocking of the arched doorway in room 5, also belong to the third phase of construction.

Furthermore, a large room (12) built of the same material and in the same manner, is located outside the building (figure 9.138). Its western wall intersected with the southern wall of the building close to the south-east corner. The room measures 9.30 m (from north to south) by 8.50 m (from west to east) and was accessed through a 0.9 m wide entrance, positioned in the eastern half of its northern wall. The western half of the northern wall of the room is represented by the first 6 m of the original south wall of the Qasr at its south-east corner. No internal divisions have been recognised in this room.

To this phase, or possibly later, we can also identify two intersecting walls at the outer north-east corner of the qasr. These walls were built of medium size irregular limestone bonded with a mortar of clay.

To the east, the building is bordered by a quarry (5.15) measuring about 5.00 m at its southern half and increasing in breadth in the northern half to a maximum width of about 9.00 m. Four rectangular rock-cut chambers were cut into the quarry, one of which was located at the southern end of the west side, while the rest were positioned in the eastern side of the quarry. The room at the west side was the largest, while the others were slightly smaller. The quarry probably extended and curved to the west for at least 4.00 m, however, more investigations are needed to find out whether this quarry formed the eastern side of a surrounding ditch or not.



Figure 9.138: EL-Qasr el-Hamar: III phase arrangements, the outer room at the south-east side, looking south.

An Islamic cemetery, most likely from the Ottoman period, occupied a large lower area located about 100 m south-east of the building (figure 5.14). Some stones of the *qasr* were evidently reused as grave borders and headstones, which varied in shape, size and decoration (figure 9.139). Additionally, Islamic pottery, probably Fatimid, was collected from the cemetery as well as some Hellenistic and Roman sherds.



Figure 9.139: EL-Qasr el-Hamar: The Islamic cemetery, headstones. Scale 20 cm.

9.2.42 Qasr Sidi Bu-Argoub

Site Code: KAS 42. Site ancient name: unknown. Site modern name: Qasr Sidi Bu-Argoub Coordinates: 32° 39.778'N 21° 24.062' Site type: Fortified farm, <i>qasr</i>	Constructional phases: 2. Location: The second Plateau of the Gebel. Chronology: Late Roman? Dimensions: 11.30 by 11.30 m.
--	---



Figure 9.140: Qasr Sidi Bu-Argoub: Location (Google Earth: 2014).

Description: Qasr Sidi Bu-Argoub is a square ditched fortified building located in a small village called Zawiat el-Qasrain 3.5 km to the north of the modern village of Qasr Libya and only about 450 m south-east of el-Qasr el-Hamar (KAS 41) (figures 4.13, 4.14 and 9.140).

The *qasr* is an exact square, measuring 11.30 m on each side surrounded by a revetment measuring 2.70 m thick on the northern side and 2.40 m on the other three sides (figure 9.141). The external walls were constructed of large well-dressed and medium slightly dressed blocks of about 0.40 m high, between 0.80 and 0.30 m long and 0.80 m thick. The external face of the revetment was constructed of ashlar work, with blocks almost of the same dimensions as the main building's external walls. The

area between the external walls of the building and the outer face of the revetment was packed with rubble (figure 4.14).

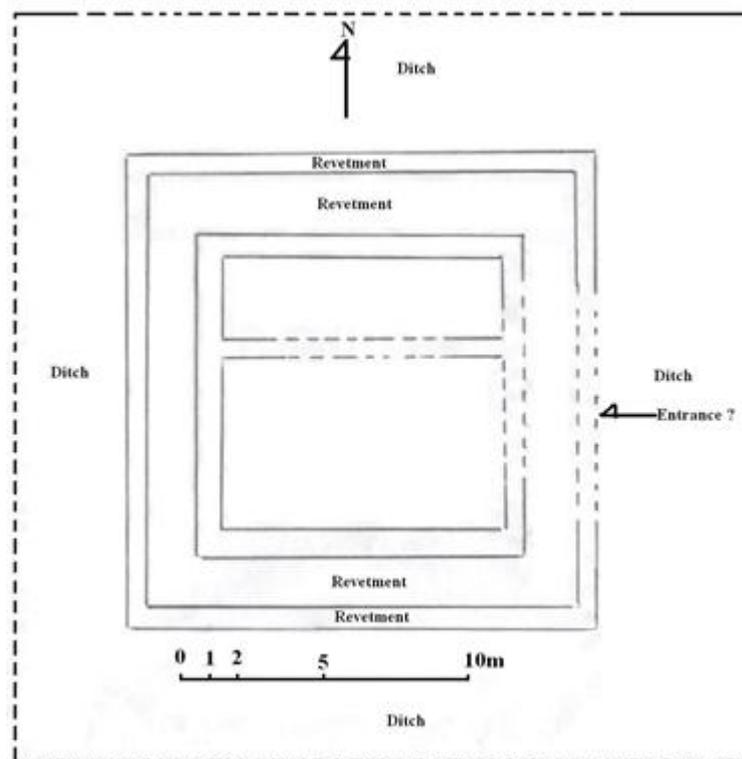


Figure 9.141: Qasr Sidi bu-Argoub: Measured plan.

There were traces of lime mortar between the courses of the external walls and mortar was also used to bond the rubble core. Additionally, the external face of the outer walls and the revetment were plastered with some traces of it still visible. This plaster facing probably indicates that the revetment was a later addition as it is not reasonable to plaster wall faces and then cover them by rubble in the same phase of construction.

Although it is largely filled by collapsed masonry and rubble and covered by vegetation, it seems that the building was surrounded on all four sides by a rock-cut ditch. This ditch measures about 5.5 m at its widest point.

The location of the main entrance of the building is not clear, however, it seems most likely that it was inserted in the eastern wall, as no traces existed in the other three better preserved walls. Moreover, as indicated by some voussoirs that had collapsed immediately outside the eastern wall, this entrance was probably arched.

With respect to the internal arrangements, it was not possible, due to the rubble, to form a clear picture. Nonetheless, a wall constructed of mixed regular and irregular stones has been recognised. This east-west wall located in the northern third of the building 3 m to the south of the northern wall formed a long room measuring 3 m (north to south) by 9.70 m (east to west).

At a distance of about 15 m to the east of the building, further architectural features have been recorded. These include a rock-cut chamber room with a well-built entrance (figure 9.142), a rounded structure of three arches linked by walls (figure 5.12) and two underground water cisterns (figure 5.13) (one has been recently restored and is still in use by locals today).



Figure 9.142: Qasr Sidi bu-Argoub: Rock-cut room, looking west.

9.2.43 Qasr Bilyanto

Site Code: KAS 43 Site ancient name: unknown Site modern name: Qasr Bilyanto Coordinates: 32°38.844'N 21°23.525'E Site type: fortified farm, <i>qasr</i>	Constructional phases: 2 Location: Hilltop, second plateau of the Gebel. Chronology: Late Roman/ Byzantine. Dimensions: 21.5 by 20.5 m.
---	--



Figure 9.143: Qasr Bilyanto: Location (Google Earth).

Description: Qasr Bilyanto is a large fortified farm building of at least two storeys, situated on a hilltop 5 km to the north of the village of Qasr Libya (figure 9.143). The *qasr* is an approximate square measuring 21.5 m (north to south) by 20.5 m (east to west). The outer walls were constructed of ashlar blocks of different sizes, in addition to smaller blocks and rubble probably used for the upper storeys (figure 9.144). A string course of thinner blocks was located almost in the middle of the walls. A single arched entrance, 1.20 m wide, was inserted in the middle of the eastern wall.

The internal layout of the *qasr* probably contained a large central oblong courtyard surrounded by rooms on all four sides. The measurement of these arrangements is

difficult to determine without excavations. Rock-cut chambers, most likely for storage purposes, were evident at a distance of about 15 m to the north of the *qasr* (figure 9.145).



Figure 9.144: Qasr Bilyanto: General view, looking south.



Figure 9.145: Qasr Bilyanto: Rock-cut chambers.

9.2.44 Siret al-Azraq

Site Code: KAS 44	Constructional phases: 2
Site ancient name: unknown	Location: raised ground, second plateau of the Gebel
Site modern name: Siret al-Azraq	Chronology: Roman
Coordinates 32° 35.690'N 21° 22.264'E	Dimensions: 18.5 by 13.5 m
Site type: fortified farm, <i>qasr</i>	



Figure 9.146: Siret al-Azraq: Location (Google Earth: 2014).

Description: Siret al-Azraq is an unditched fortified building located on slightly raised ground 3.50 km south-west of the modern village of Qasr Libya (figures 9.146 and 9.147). The building is rectangular, measuring 18.50 m (north to south) by 13.50 m (east to west).

With the exception of the corners, where large dressed blocks were used, the outer walls were constructed of slightly dressed small limestone blocks with two faces and rubble core measuring altogether 1.70 m wide. In addition, the building was surrounded by a revetment measuring 1.20 m wide built of rubble. Although it has not been clearly

identified, the entrance of the building is likely at the eastern side of building as it certainly did not exist in the other three sides. Regarding the interior, nothing is now visible of its arrangements due to the collapsed rubble (figure 9.148), therefore, it was not possible to form any picture without excavation.



Figure 9.147: Siret al-Azraq: General view, looking south.

To the south-west of the building at a distance of about 100 m, some walls, probably of a later date, a quarry and rock-cut water cistern were identified. The water cistern has recently been reconstructed and is in use today by locals who cultivate the surrounding land for barley and wheat.



Figure 9.148: Siret al-Azraq: Collapsed rubble in the interior, looking south.

9.2.45 Qasr Gendez

Site Code: KAS 45 Site ancient name: unknown Site modern name: Qasr Gendez. Coordinates: 32° 32.816'N 21° 21.208'E Site type: fortified farm, <i>qasr</i>	Constructional phases: 2 Location: raised ground, second plateau of the Gebel. Chronology: Roman? Dimensions: 15.5 by 17.5m
--	--



Figure 9.149: Qasr Gendez: Location (Google Earth).

Description: Qasr Gendez is a fortified farm building located on raised ground 8 km to the south-west of *qasr* Libya (figure 9.149 and 9.150). Only the lower course of the outer walls remains today and shows that they were of roughly dressed stone blocks of medium and large sizes. The walls were strengthened probably at a later time by a wide revetment constructed of rubble and measuring 2.50 m.

The interior is extensively masked by collapsed rubble and therefore nothing is visible of the internal arrangements. A rock-cut water cistern is located at a distance of about 40 m to the west of the *qasr* (figure 9.151).



Figure 9.150: Qasr Gendez:, General view.



Figure 9.151: Qasr Gendez: water cistern. Scale 1m.

9.2.46 Qasr Stablous 1

<p>Site Code: KAS 46</p> <p>Site ancient name: unknown</p> <p>Site modern name: Qasr Stablous 1</p> <p>Coordinates: 32° 35.217'N 21° 26.882'E</p> <p>Site type: fortified farm, <i>qasr</i></p> <p>Constructional phases: 2</p>	<p>Location: raised ground, second plateau of the Gebel</p> <p>Chronology: Late Roman/ Byzantine</p> <p>Dimensions: 7.50 by 11 m</p> <p>References: (Reynolds 2003).</p>
---	---



Figure 9.152: Qasr Stablous 1: Location.

Description: Qasr Stablous 1 is one of two ditched rectangular fortified buildings set in close proximity to each other in a small settlement known as Siret Stablous located on raised ground 5 km south-east of the modern village of Qasr Libya (figure 9.152). This site was first mentioned by Ward-Perkins (1976:288) as the find spot of a marble Christian reliquary box, which is now in display in the museum of Cyrene. Reynolds (2003:400) has re-published a photo of the marble box. Moreover, the name of the site is included in Barrington Atlas of the Greek and Roman world (Map 38). However, apart from that, nothing has, so far, been done regarding the archaeological remains of the site.



Figure 9.153: Qasr Stablous I: General view, looking north.

Qasr Stablous 1 (figure 9.153) is an irregular, small rectangular fortified building measuring approximately 7.50 m (east to west) by 11m (north to south) (figure 9.154). The western wall extended only for a distance of 5m to intersect with an internal wall that divided the building into two parts. Also, the western wall of the southern part was not on the same alignment as the west wall of the northern half as it was positioned 1m to the east and curved obliquely towards the east. The southern part of the building was narrower and measured (in addition to the thickness of the walls) 6 m at the north end and about 4.5 m at the south end. It seems that the southern part of the building was an addition to a smaller original structure.

The western wall of the northern half (figure 9.155) was constructed of large and medium dressed blocks and the other walls were built of two faces of small and medium stones bonded in clay mortar. As indicated by the north-west and south-east corners, the quoins were larger blocks.

The walls were 0.60 m thick, but the northern wall was double, as it was supported by an additional wall of same material and thickness. Moreover, the northern wall was strengthened by a revetment measuring 0.50 m wide.

An entrance measuring 1.10 m wide was inserted in the eastern end of the southern wall. The access to this entrance from outside was through a flight of steps, some traces

of which have been recognised. Another entrance probably existed in the eastern wall and was blocked at a later time. This entrance was about 1m wide and lined by two large slabs of stone.

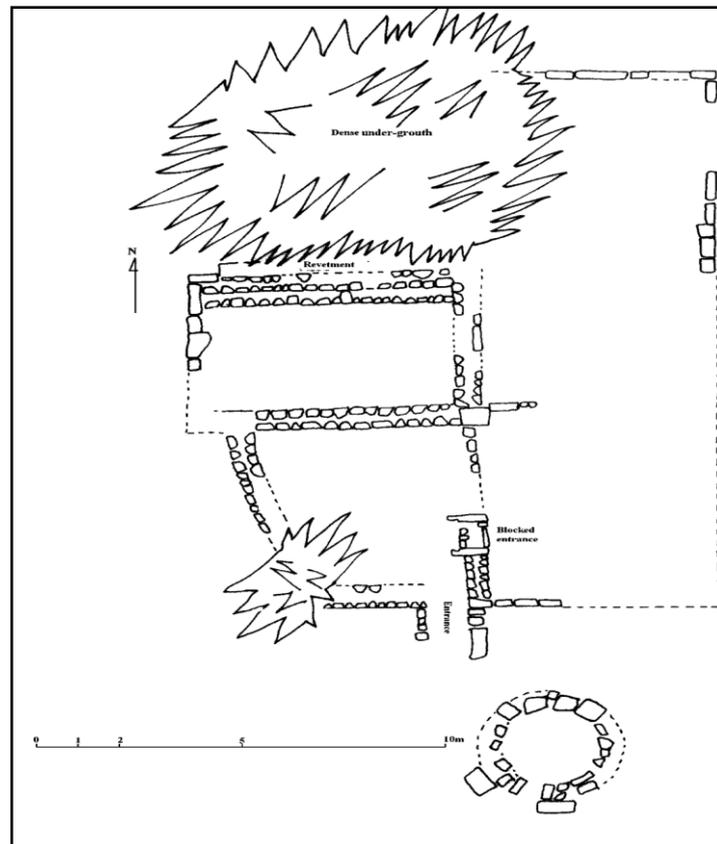


Figure 9.154: Qasr Stablous 1: Measured plan.

Concerning the internal arrangements, only one wall has been identified. The wall extended east-west along the building and, as previously mentioned, divided it into two spacious rooms. The northern room measuring 6 m (north to south) by 3.50 m (east to west) and the southern room was 5 m (north to south) by 5 m (east to west) at its widest point.

Although it was largely masked by vegetation and soil, it seems that the building was surrounded by a ditch on all sides, measuring about 5 m wide at its widest point. Furthermore, traces of an outer wall, built around the building, of dressed large blocks have been noted to the north and east of the *qasr*. This enclosure had a wide entrance measuring 2.30 m inserted into its north-east corner.

At a distance of about 3m south east of the southern entrance of the *qasr*, a rounded structure of medium and small stones was located (figure 9.156). This probably was a lime kiln similar to one that existed a few meters outside Qasr al-Akrout al-Warrany2 (KAS 11).



Figure 9.155: Qasr Stablous1: The western wall, showing the masonry. Scale 1m.



Figure 9.156: Qasr Stablous1: The lime kiln, looking north east. Scale 1m.

9.2.47 Qasr Stablous 2

Site Code: KAS 47	Location: raised ground, second plateau of the Gebel
Site ancient name: unknown	Chronology: Late Roman/ Byzantine
Site modern name: Qasr Stablous 2	Dimensions: 13 by 11 m
Coordinates: 32° 35.254'N 21° 26.886'E	References: (Reynolds 2003)
Site type: fortified farm, <i>qasr</i>	
Constructional phases: 2	



Figure 9.157: Qasr Stablous 2: Location.

Description: Qasr Stablous 2 is a ditched fortified building located only 20 m to the north of Qasr Stablous1 (figures 9.157 and 9.158). The building is an approximate square measuring 13 m (east to west) by 11 m (north to south) (figure 9.159).



Figure 9.158: Qasr Stablous 2: General view, looking north.

Only two courses still stand of the external walls and these show that each course was 0.60 high constructed of ashlar blocks (figure 9.160). However, the northern half of the eastern wall was constructed from two-faced masonry. The internal face was of slightly dressed small stones and the outer face was made of the same material that was used in the other three walls. Apart from the north side, the other walls of the *qasr* were supported by a revetment built of small irregular blocks (figure 9.161). Also, the low level of the surface around the *qasr* probably indicates that the building was surrounded by a ditch c. 5 m wide at its widest point.

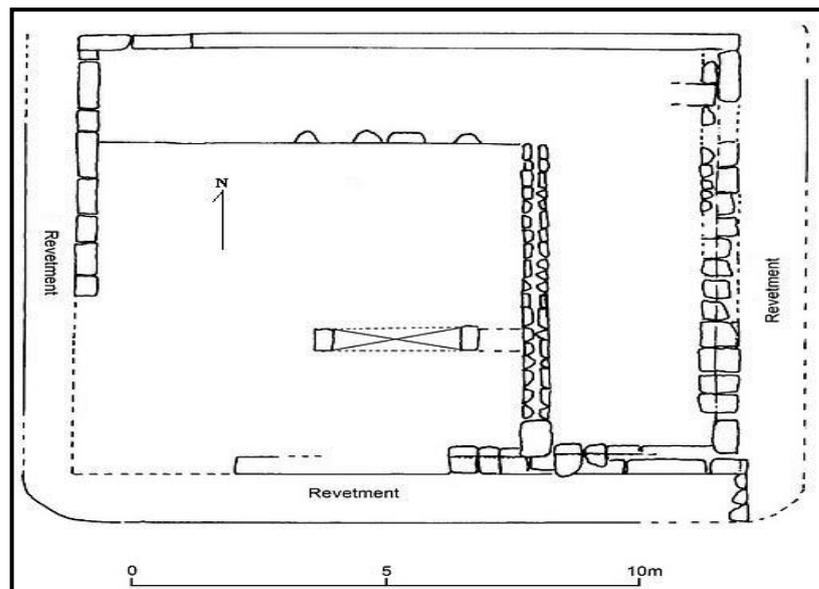


Figure 9.159: Qasr Stablous 2: Measured plan.

The external doorway(s) has not been identified with certainty, nevertheless, it most likely existed at the southern or western sides which are largely masked by rubble and bushes. Regarding the internal arrangements, two intersecting walls have been identified. The first ran north-south for 8.50 m and was positioned about 2.80 m to the west of the eastern wall of the *qasr*. This wall was constructed of two-faces of small stones bonded in a clay mortar. Some *in situ* blocks revealed that this wall intersected at its northern end with a west-east wall located about 2.50 m to the south of the northern wall. Further divisions probably existed but are now covered by the collapsed rubble and undergrowth; the extant traces reveal that the building had at least one spacious vaulted room flanked by two corridors. The room was approximately square, measuring 8.50 m on each side and contained a vault measuring about 3 m.

In modern times, the site of Siret Stablous has partly been used as a cemetery and the blocks of the two *qsur* have been extensively re-used to demarcate the borders of graves. This cemetery is located a few meters to the north of Qasr Stablous 2 (figure 9.162).|

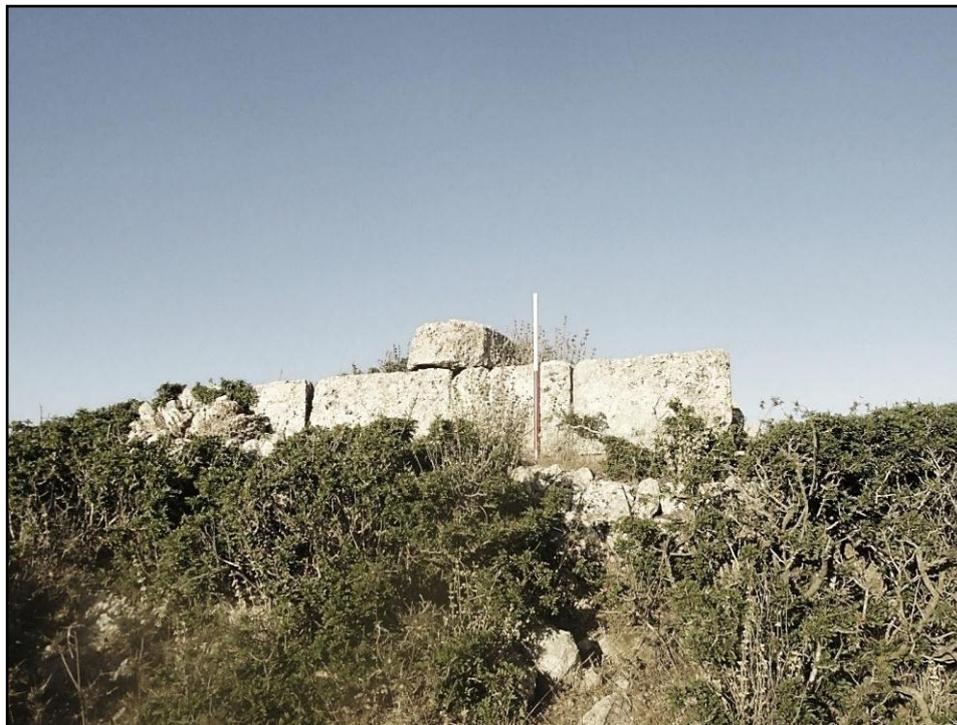


Figure 9.160: Qasr Stablous 2: West wall, showing the masonry.



Figure 9.161: Qasr Stablous 2: West revetment. Scale 1m.



Figure 9.162: Qasr Stablous 2: The modern cemetery, showing the re-use of the qsur material, looking north.

9.2.48 Siret Bu-al-Husain

Site Code: KAS 48 Site ancient name: unknown Site modern name: Siret Bu-al-Husain Coordinates: 32° 38.108'N 21° 25.931'E Site type: fortified farm, <i>qasr</i>	Constructional phases: 1 Location, hilltop second plateau of the Gebel Chronology: Roman? Dimensions: 7.50 by 11 m
--	---



Figure 9.163: Siret Bu-al-Husain, the Location (Google Earth 2014).

Description: Siret Bu-al-Husain is a fortified farm building located on a hilltop surrounded by fertile lands 5 km north-east of Qasr Libya (figure 9.163).

The building is extensively covered by rubble and soil, and is preserved as a mound of rubble where only parts of its outer walls are visible, demonstrating that they were built of small stonework masonry (figure 9.164).

The *qasr* is an approximate square, measuring c.13 m by 15 m associated with some outbuildings, evidenced by remnant of walls visible on the hill. Also, rock-cut water cisterns were located at the foot of the eastern slope of the hill (figure 9.165).



Figure 9.164: Siret Bu-al-Husain: General view, looking north-west.



Figure 9.165: Siret Bu-al-Husain: Rock-cut water cistern. Scale 1m.

9.2.49 Qasr al-Hawmy

Site Code: KAS 49	Constructional phases: 1
Site ancient name: unknown	Location: raised ground, second plateau of the Gebel
Site modern name: Qasr al-Hawmy	Chronology: Roman?
Coordinates: 32° 39.600'N 21° 26.594'E	Dimensions: 12.5 by 11.5 m
Site type: unfortified building	



Figure 9.166: Qasr al-Hawmy: Location (Google Earth: 2014).

Description: Qasr al-Hawmy is a small unfortified building located on a hilltop surrounded by fertile valleys 6 km northeast the modern village of Qasr Libya (figures 9.166 and 9.167). The building is approximately square, measuring 12.5 m (east to west) by 11.5 m (north to south) (figure 9.168). The eastern and northern walls were constructed of large well-dressed blocks with average dimensions of between 0.90 to 1.20 m long and 0.40 to 0.60 m high (figure 9.169). The other two walls were built of medium and small stones with two faces and a rubble core. All the external walls were about 0.60 m thick. There was a wide single entrance 3.20 m in the eastern end of the southern wall.

The picture of the interior was not clear due to the presence of vegetation and collapsed materials, however, some walls, 0.50 m thick, were identified and indicated that the building had at least three rooms.



Figure 9.167: Qasr al-Hawmy: General view, looking north.

To the east of the building, at a distance of about 3 m, an additional rectangular structure was located. This was probably from a later date as it was built of irregular different sized stones resting directly on the ground, and only the lowest course of the walls remained (figure 9.170). The structure formed a rectangular room measuring about 10 m (north to south) by 7.20 m (east to west).

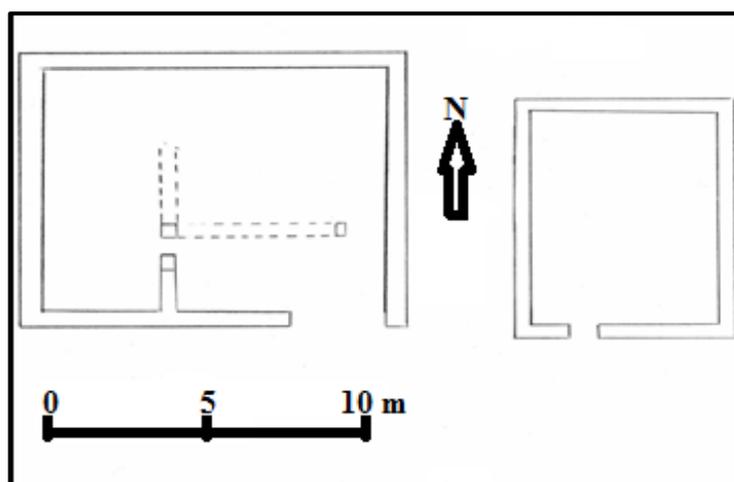


Figure 9.168: Qasr al-Hawmy: Measured plan.



Figure 9.169: Qasr al-Hawmy: The north part of the east wall, looking west. Scale 1m.



Figure 9.170: Qasr al-Hawmy: The north wall of the room located to the east of the main building.

9.2.50 Qasr Atwainish

Site Code: KAS 50 Site ancient name: unknown Site modern name: Qasr Atwainish Coordinates: 32° 43.899'N 21° 31.842'E Site type: unfortified building	Constructional phases: 1 Location: raised ground, second plateau of the Gebel Chronology: Roman? Dimensions: 20.5 by 12.5 m
---	--



Figure 9.171: Qasr Atwainish: Location (Google Earth: 2014).

Qasr Atwainish is an unditched building located on high ground overlooking fertile lands 7 km to the north of Qasr Beni Gdem (KAS 1) (figures 9.171 and 9.172).

The building is rectangular, measuring 20 m (east to west) by 12.50 m (north to south) (figure 9.173). The walls were constructed of large dressed blocks with average dimensions of between 0.90 and 1.20 m long, 0.60 and 0.80 m thick and 0.30 to 0.40 m high (figure 9.174). The northern wall was 1.40 m thick and consisted of two rows of faced blocks, each 0.60 m thick separated by 0.20 m of rubble fill. The other three walls were only 0.60 m thick.

Two entrances lies in the southern wall. The first was inserted in the middle of the wall, and was 1 m wide while a narrower entrance of 0.80 m lies in the eastern half of the same southern wall.



Figure 9.172: Qasr Atwainish: General view, looking south-east.

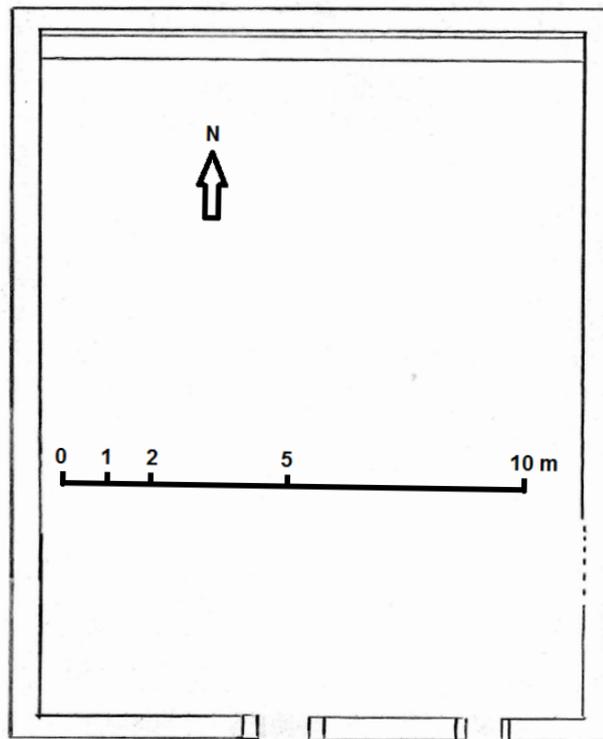


Figure 9.173: Qasr Atwainish: Measured plan

Nothing is now visible of the internal arrangements due to collapsed rubble and blocks, however, vaults or arches apparently existed, as a number of voussoirs are scattered among the collapsed blocks (figure 9.175).



Figure 9.174: Qasr Atwainish: North-west corner. Scale 1 m.



Figure 9.175: Qasr Atwainish: Collapsed voussoirs inside the building. Scale 1 m.

A few meters to the south of the building, an unfinished olive mill has been found on the ground (figure 9.176). Moreover, a completed rock-cut olive press was present inside a rock-cut chamber room about 50 m to the south of the building (figure 4.41).



Figure 9.176: Qasr Atwainish: Unfinished olive mill. Scale 1 m.

Two rock-cut tanks, one rounded and one rectangular are located outside the olive press chamber. Also, two water cisterns were cut into the ground between the building and the olive press. One of them has been filled with stones by locals probably to protect their animals from falling in. Additionally, some walls and rock-cut rooms are visible in the same area to the south of the building.

9.2.51 Siret al-Qantouty 1

Site Code: KAS 51 Site ancient name: unknown Site modern name: Siret al-Qantouty 1 Coordinates: 32° 44.125'N 21° 30.683'E Site type: fortified farm/ <i>qasr</i> Constructional phases: 1	Location: Hilltop, second plateau of the Gebel. Chronology: Roman? Dimensions: c.15 by 15 m References: (Abdussaid <i>et al.</i> 1984)
--	---

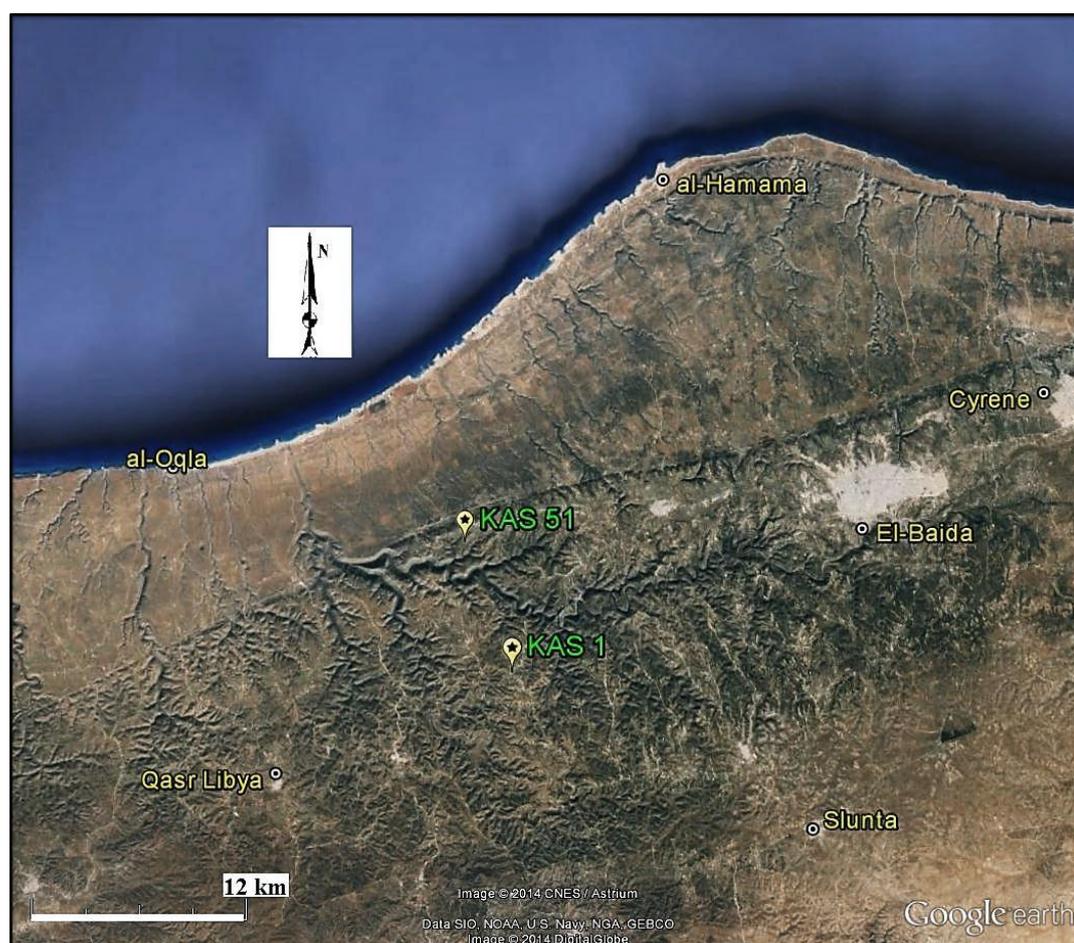


Figure 9.177: Siret al-Qantouty 1: Location (Google Earth).

Description: Although Siret al-Qantouty, located approximately 700 m to the north of Qasr Beni Gdem (KAS 1) (figure 9.177), is one of the richest sites in terms of associated structures, I was unfortunately denied access by the landowner and therefore unable to take detailed records of the site.

The two fortified buildings were briefly described by Abdussaid (1984) as a military site consisting of two fortified buildings. However, it is apparent that the two *qsur* formed a part of a larger agricultural settlement that contained water cisterns, olive presses, rock-cut chambers etc.



Figure 9.178: Siret al-Qantouty 1: General view, looking north-west.

Siret al-Qantouty1 is a nearly square ditched *qasr* measuring about 15 m on each side with outer walls built of large ashlar blocks resting on the natural rock (figure 9.178). A single arched entrance located in the southern side was also noted.

9.2.52 Siret al-Qantouty 2

Site Code: KAS 51 Site ancient name: unknown Site modern name: Siret al-Qantouty 2 Coordinates 32° 44.076'N 21° 30.763'E Site type: possible fortified farm/ <i>qasr</i>	Constructional phases: 1? Location: Hilltop, second plateau of the Gebel. Chronology: Roman? Dimensions: c.35 by 20 m References: (Abdussaid <i>et al.</i> 1984)
---	---



Figure 9.179: Siret al-Qantouty 2: Location (Google earth 2014).

Description: The second fortified building in Siret al-Qantouty is located approximately 50 m to the south-east of al-Qantouty 1 (figure 9.179). My limited visit to the site allowed me only to give this brief description: The *qasr* is quite larger and in a good state of preservation, with its outer walls still standing to a maximum height of about 3 m. The building is rectangular measuring approximately 35 by 20 m. The outer walls were constructed of large flattish ashlar masonry (figure 4.1 e) and supported, at least on the western side, by a vertical revetment also constructed of ashlar blocks. An arched entrance was inserted into the middle of the eastern wall.

9.2.53 Siret bu-Awena

<p>Site Code: KAS 53 Site ancient name: Unknown Site modern name: Siret bu-Awena Coordinates: 32° 42.939'N 21° 32.803'E Site type: fortified farm, <i>qasr</i> Constructional phases: 1</p>	<p>Location: raised ground, second plateau of the Gebel Chronology: Late Roman?, Byzantine Dimensions: 11.50 by 10.50 m References: (Abdussaid <i>et al.</i> 1984)</p>
--	---



Figure 9.180: Siret bu-Awena: Location (Google earth 2014).

Description: Siret bu-Awena is a fortified farm, *qasr*, located within a large settlement consisting of remnants of outbuildings, water cisterns, rock-cut tombs etc.

The site located on a high plateau surrounded by fertile wades approximately 5 km to the south of Qasr Beni Gdem (KAS 1) (figure 9.180).

At the time of the first visit to the site in 2011, official written permission from the responsible authorities was not honoured by the landowner, who asked me to leave. The second attempt in 2012, however, was successful and I was able to do a quick investigation of the site, focused mainly on the *qasr*.

The *qasr* is almost square, measuring 11.50 m by 10.50 m. The two visible courses of the western wall show that the outer walls were built in medium-sized blocks of fine ashlar masonry. From some visible internal walls the following internal arrangement is suggested: the arched entrance located in the middle of the southern walls gave access to a narrow entrance vestibule, most likely flanked on both sides by two small rooms. Another arched entrance led from the vestibule to a possible central courtyard surrounded by rooms on three sides.

A brief account of the site was given by Abdulssaid (1984), who described the *qasr* as (a castle) built to protect the surrounding settlement. On the basis of the architectural similarity with most of the fortified farms in the region, however, it seems that the *qasr* was a fortified farm building forming part of larger agricultural settlement and probably replaced an earlier unfortified farm.

9.2.54 Siret el-Qatroura

Site Code: KAS 54 Site ancient name: Unknown Site modern name: Siret el-Qatroura Coordinates: 32° 36.653'N 21° 24.894'E Site type: Qasr like building	Constructional phases: 1 Location: raised ground, second plateau of the Gebel Chronology: Roman? Dimensions: 10.20 by 10.20 m
--	--



Figure 9.181: Siret al-Qatroura: Location (Google Earth: 2014).

Description: Siret al-Qatroura is an unditched square building, measuring 10.20 m on each side, located on slightly raised ground surrounded by fertile lands approximately 1.5 km to the south-east of the modern village of Qasr (figures. 9.181, 9.182 and 9.183).

The internal face of the double outer walls was constructed in *opus quadratum* supported externally by regular and semi-regular rectangular lime-stone blocks of different sizes. The maximum height of the remaining walls is approximately 1.80 m and the thickness varies from 1.10 to 1.40 m (figure 9.184).



Figure 9.182: Siret al-Qatroua: General view, looking west. Scale 1m.

The building had two arched entrances; one of which is 1 m wide and lies in the centre of the eastern wall, while the other is 1.60 m wide and located in the western corner of the north wall.

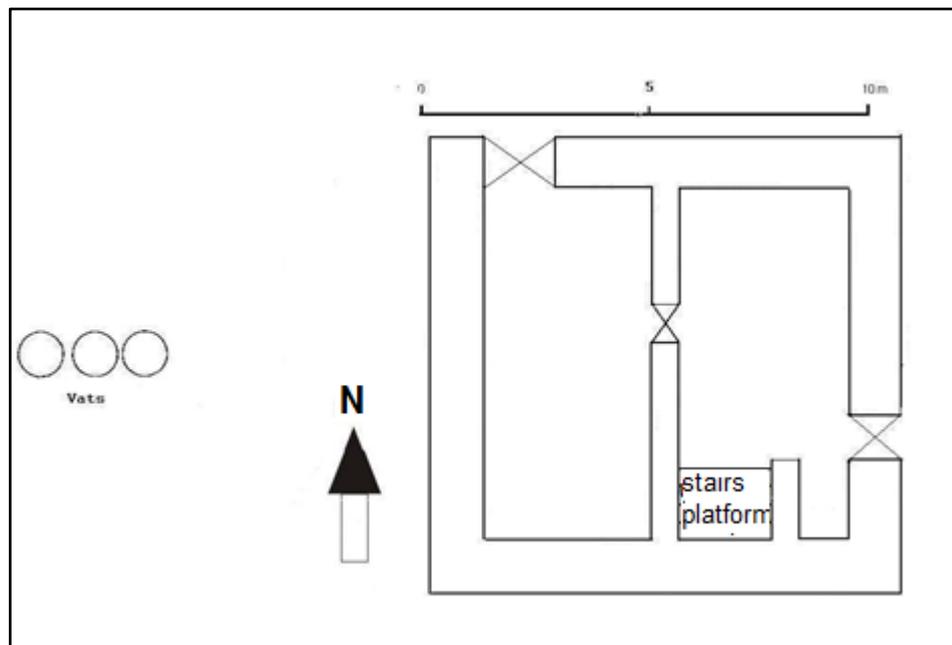


Figure 9.183: Siret al-Qatroua: Measured plan.

Internally, the building is very simple, divided by a north-south wall into two unequal parts connected by a 0.90 m wide arched entrance. The smaller eastern part was possibly a front courtyard that had a platform on its western side, which probably represents the remains of a flight of stairs leading up to the upper floor, or to the roof, suggested by the remains of well-cut slabs are visible in their original positions. The wider northern room could be entered either through the internal door or by the arched entrance in the eastern wall.



Figure 9.184: Siret al-Qatroua: The interior, looking east. Scale 1m.

15 m to the north of the building there are three vats sunken in the ground supported by stones arranged next to each other (figure 4.45). The vats, most likely were for the fermentation or storage of wine, are 1.0 m in depth and maximum diameter. The thickness of the walls of the vats averages between 3 to 3.5 cm and the colour of the mortar is dark brown with red inclusions, perhaps clay granules, a few micro shells, and some circular white flecks. The upper edges of the vats are entirely destroyed, however, we know from some remnants of these edges, scattered around, that they were originally chamfered edges approximately 12 cm thick.

To the south of the *qasr*, at a distance of approximately 35 m, there are some further traces of industrial structures. These consist of the remnants of basins constructed from rubble and lined with *opus signinum*. Unfortunately, the basins are largely destroyed,

although the few surviving remains indicate that some of them were circular while others were square and rectangular.

Slightly to the south of the basins there is a large rock-cut rectangular tank measuring 23.75 by 4 m (figure 4.36). Although there are no remnants of any waterproof mortar on the walls, it can be interpreted as a very large water tank. This is indicated by the existence of a draw hole for raising water cut into the middle of the roof (which has been closed relatively recently by a mixture of clay and tree branches. The local population often take this kind of action in order to protect their cattle, and themselves, from falling through the hole. It is clear that the supply of rainwater was carried into the cistern from the southern side which is open at the top and connected with water catchment arrangements.

9.2.55 Siret umm Asnaib

Site Code: KAS 55 Site ancient name: Unknown Site modern name: Siret umm Asnaib Coordinates: 32° 41.415'N 21° 40.573'E Site type: Fortified farm, <i>qasr</i>	Constructional phases: 2 Location: raised ground, second plateau of the Gebel Chronology: Roman Dimensions: 12 by 12.5 m
--	---



Figure 9.185: Siret umm Asnaib: Location (Google Earth: 2014).

Description: Siret umm Asnaib is an unditched fortified building located on high ground overlooking fertile lands some 8 km to the south-east of the modern city of el-Baida (figure 9.185).

The building is approximately square, measuring 12 m (east to west) by 12.50 m (north to south) (figures 4.28 and 9.186) The walls were of two faces; the external face was made of ashlar masonry (with an average block dimensions between 0.90 m and 0.60 m long, 0.40 m and 0.30 m thick and 0.60 to 0.50 m high), while the internal face was constructed from small and medium slightly dressed stones (figure 4.1d). The

eastern and southern walls were 1 m thick, while the other two were 0.80 m thick. No traces of lime mortar were noted, however, clay was used to bond the two faces of the walls. The building was surrounded on three sides by a revetment constructed of rubble, the northern portion of which measured 1.80 m in width, while those to east and west measured 1.20 m.



Figure 9.186: Siret umm Asnaib: General view, looking west.

A single arched entrance with a span of 1.20 m lies in the middle of the eastern wall and three small windows measuring 0.30 m in width were present in the southern wall, one for each of the three rooms located on this side. Similarly, windows probably once existed in the northern side, however, only one has been identified.

With respect to the internal arrangements, the picture of this building was exceptionally clear. It seems that the building has been cleaned of rubble in modern times, probably by locals in order to reuse it for some purpose. The removal of rubble revealed that the building consisted of, in addition to the entrance vestibule and the oblong courtyard, six rooms. The entrance of the building opened onto a square vestibule (1) measuring 3 m by 3 m, which was flanked from north and south by two rectangular rooms (2 and 3). Each room had an arched doorway. The doorway into room (2) was 1.60 m wide and that of room (3) was 2.70 m wide. The northern room (3)

measured 3.80 m (from north to south) by 3.20 m (from east to west), the southern room (2) was smaller, measuring 2.80 m (from north to south) by 3 m (from east to west).

By means of an arched doorway on its western end, the vestibule was connected to a courtyard (4) that measured 6.30 m (from east to west) by 3 m (from north to south). This courtyard was flanked on the north and south by four identical square rooms (5-8). Each room measured 3.20 (north to south) by 2.75 m (east to west) and opened onto the courtyard by an arched doorway. Moreover, each room was connected to its adjacent room by another arched doorway. All doorways of these four rooms were identical and measured 2 m in width.

The upper course of the internal walls was constructed of large dressed blocks resting on much smaller stones (figure 9.187). Although no traces of a permanent flight of stairs was identified in the building. Nevertheless, on the basis of the thickness of the upper course blocks of the internal walls and the large amount of the rubble scattered outside and inside the building, it can be suggested that the building had an upper storey.

Some industrial features, including possible olive presses, have been identified at a distance of approximately 40 m to the north-east of the building (figure 9.188). Additionally, a very large rock-cut water cistern was found a few meters to the west of the industrial features. The roof of the cistern was supported by a simple Doric column cut in the same natural rock (figure 4.37). The cistern was probably reused at a later time as a room for domestic or storage purposes, as indicated by a rectangular entrance in its eastern side (figure 4.38).



Figure 9.187: Siret umm Asnaib: Internal walls construction, looking west.



Figure 9.188: Siret umm Asnaib: Possible olive press elements, looking south.

APPENDICES

Appendix 1: Site recording sheets

Kuf Archaeological Survey (KAS)			
Site no	Site Ancient Name	Site Modern Name	Date of Description
Location		GPS Coordinates	
		Latitude	Longitude
Site Characteristics			
<input type="checkbox"/> Stone Walls	<input type="checkbox"/> mud brick walls	<input type="checkbox"/> No. of floors	<input type="checkbox"/> No. of rooms
<input type="checkbox"/> Windows	<input type="checkbox"/> outer bank/wall	<input type="checkbox"/> Vaults	<input type="checkbox"/> Cistem
<input type="checkbox"/> Towers	<input type="checkbox"/> Ditch	<input type="checkbox"/> Rock cut rooms	<input type="checkbox"/> Butter
<input type="checkbox"/> Arch. Elements	<input type="checkbox"/> inscri./carving	<input type="checkbox"/> Associ. Village	<input type="checkbox"/> associ. Farm
<input type="checkbox"/> Other		<input type="checkbox"/> No of gates/doors	<input type="checkbox"/> Stairs
		<input type="checkbox"/> Tethering rings	<input type="checkbox"/> Associ. Press
Site Size			
<input type="checkbox"/> Large > 30 m side	<input type="checkbox"/> medium 20-30 m	<input type="checkbox"/> Small/med. 10-20 m	<input type="checkbox"/> Small < 10 m
Quality of Masonry			
<input type="checkbox"/> Ashlar	<input type="checkbox"/> neat coursed large blocks	<input type="checkbox"/> neat small blocks	<input type="checkbox"/> mud-brick
<input type="checkbox"/> Mortared faces	<input type="checkbox"/> Mortared wall cover	<input type="checkbox"/> Mud patching	
Current Land Use			
<input type="checkbox"/> Cultivated – crops	<input type="checkbox"/> Cultivated - fallow	<input type="checkbox"/> Cultivated – trees – vines	<input type="checkbox"/> Grass
<input type="checkbox"/> Wooded	<input type="checkbox"/> Industrial	<input type="checkbox"/> Irrigated	<input type="checkbox"/> Settlement
	<input type="checkbox"/> Water Source	<input type="checkbox"/> Other	
Comments			
Topography			
<input type="checkbox"/> Coastal Plain	<input type="checkbox"/> Plateau	<input type="checkbox"/> Wadi	<input type="checkbox"/> Pre-desert
<input type="checkbox"/> Other			
Comments			
Chronological Periods			
<input type="checkbox"/> Greek	<input type="checkbox"/> Hellenistic	<input type="checkbox"/> Roman	<input type="checkbox"/> Byzantine
<input type="checkbox"/> Islamic	<input type="checkbox"/> Other		
Comments			
Condition of Site			
<input type="checkbox"/> Poor	<input type="checkbox"/> Moderate	<input type="checkbox"/> Good	<input type="checkbox"/> Excellent
Type of Risk :			
Amount of Risk			
<input type="checkbox"/> High Priority	<input type="checkbox"/> Medium Priority	<input type="checkbox"/> Low Priority	

Appendix 1a (KAS) Site Recording Sheet (page 1)

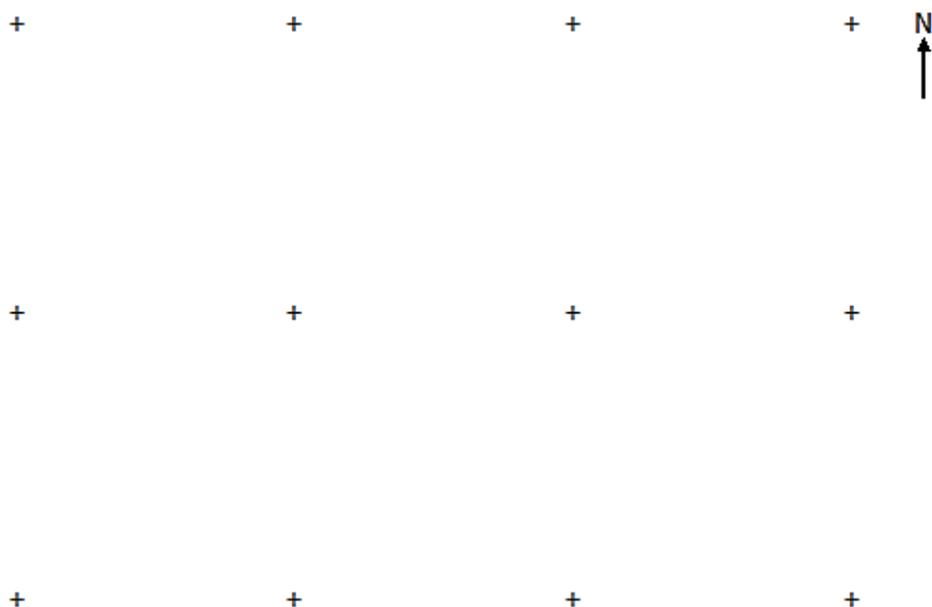
Material Culture Present (tick all that apply)

- | | | | | |
|---|---|--|--|--|
| <input type="checkbox"/> Bones – Human | <input type="checkbox"/> Fired Clay or Daub | <input type="checkbox"/> Metal | <input type="checkbox"/> Sculpture | <input type="checkbox"/> Stone – Non-Local |
| <input type="checkbox"/> Bones – Animal | <input type="checkbox"/> Glass | <input type="checkbox"/> Mosaic Tesserae | <input type="checkbox"/> Shell | <input type="checkbox"/> Wood |
| <input type="checkbox"/> Brick/Tile | <input type="checkbox"/> Inscription | <input type="checkbox"/> Other Organics | <input type="checkbox"/> Slag | <input type="checkbox"/> Other |
| <input type="checkbox"/> Charcoal | <input type="checkbox"/> Lithic | <input type="checkbox"/> Pottery | <input type="checkbox"/> Stone - Carved | |
| <input type="checkbox"/> Coin | <input type="checkbox"/> Marble | <input type="checkbox"/> Quern Fragment | <input type="checkbox"/> Stone – Cut/Dressed | |

Comments:

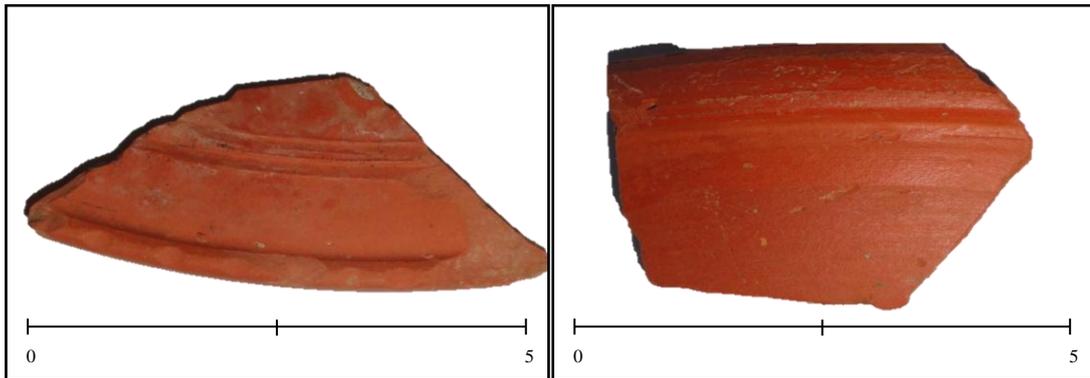
Site Description and Comments

Field Sketch



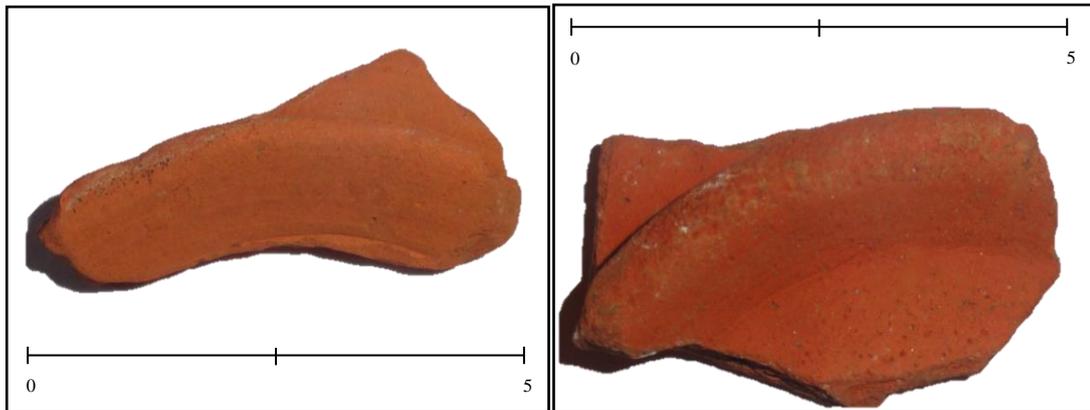
Date
Recorder

Appendix 2: Samples of fine pottery recovered by KAS



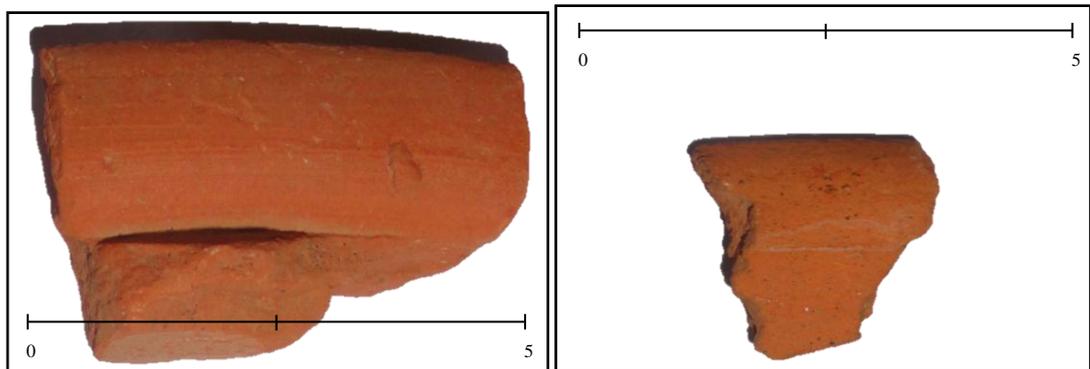
a - A fragment of ARS dish recovered from Siret Abgail (Hayes form 27, AD 160-220)

b - A fragment of ARS dish recovered from Qasr al-Akrouit al-Warrany 2 (Hayes form 76, AD 400-475)



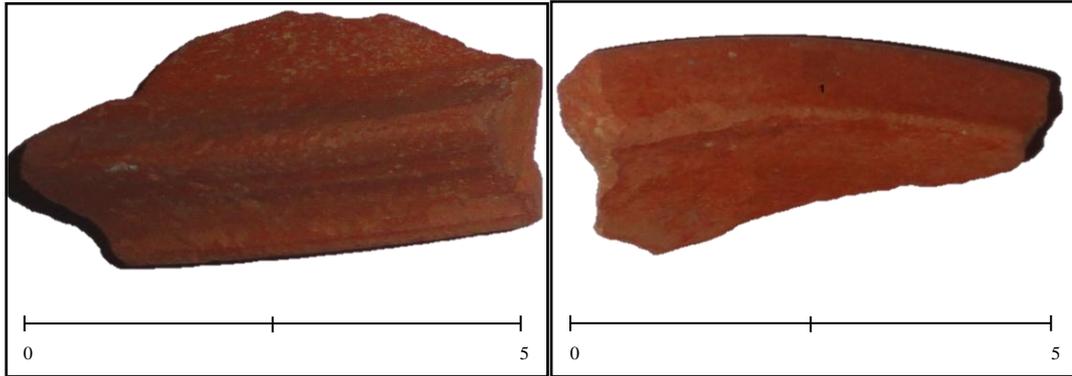
c - A fragment of ARS dish recovered from al-Qasr al-Hamar (Hayes form 104, AD 500-625).

d - A fragment of ARS dish recovered from Siret et-Tauma 2 (Hayes form 104, AD 500-625).



e - A Fragment of ARS dish recovered from Siret Gendez (Hayes form 107, AD 580-675)

f - A fragment of ARS dish recovered from Siret Umm-Asnaib (Hayes form 107, AD 580-675)



g - A fragment of Phocaean Red Slip dish recovered from Siret Alwet Umm-Annamel (Hayes form 3f, AD 500-600)

h - A fragment of Phocaean Red Slip dish (Hayes form 10, AD 570-650) recovered from Qasr Alhesy

BIBLIOGRAPHY

Bibliography

Ancient Sources

- Pliny, *Natural History*, volume II, book V, translated by: H. Rackham. Loeb Classical Library, Cambridge: William Heinemann LTD. (1969).
- Procopius, *Buildings*, translated by: H. B. Dewing. Loeb Classical Library, Cambridge: William Heinemann Ltd. (1940).
- Strabo, *The Geography of Strabo*, Volume 8, Book XVII, translated by: H. L. Jones. Loeb Classical Library, Cambridge: William Heinemann Ltd. (1949).
- Synesius, *Epistolae*. Available at: <http://goo.gl/iujLEl>. Translated by Fitzgerald, A.
- Tacitus, *The Annals: The Reigns of Tiberius, Claudius, and Nero*, translated by J. C. Yardley. Oxford, New York: Oxford University Press. (2008).

Modern Sources

- Abdussaid, A., Wanees, S., Quaider, R., Faraj, S., Hasouna, A., and al-Muzeini, A. (1984), *Research Project in the National Park of al-Kuf*, [in Arabic]. Damascus.
- Ahmed, M. (2010), *Aspects of Economic Stability on the Tarhuna Plateau during the Roman Period*. Unpublished PhD Thesis. Leicester: University of Leicester.
- Allan, J. A. and Richards, T. S. (1983), 'The use of satellite imagery in archaeological surveys'. *Libyan Studies*, 14: 4-8.
- Arthur, C. and Bazama, A. (1975), 'The aqueduct of Ptolemais'. *Libya Antiqua* 11-12: 243-249.
- Barker, G. (1991), 'Approaches to archaeological survey'. In G. Barker and J. Lloyd (eds), *Roman Landscapes: Archaeological Survey in the Mediterranean Region*, BSR Archaeological Monograph, 2. London: British School at Rome, 1-9.
- Barker, G. (ed) (1996a), *Farming the Desert. (Volume 1) Synthesis*. Paris/London/Tripoli: UNESCO/Society for Libyan Studies/Department of Antiquities.
- Barker, G. (1996b), 'Castles in the desert'. In: G. Barker (ed), (1996a), *Farming the Desert. (Volume 1) Synthesis*. Paris/London/Tripoli: UNESCO/Society for Libyan Studies/Department of Antiquities, 1-20.
- Barker, G., Gilbertson, D. D., Jones, G. D. B. and Welsby, D. A. (1991), 'ULVS XXIII: the 1989 season'. *Libyan Studies*, 20: 31-60.
- Barker, G. and Gilbertson, D. D. (1996a), 'The UNESCO Libyan Valleys Survey: methodologies'. In: G. Barker (ed), *Farming the Desert. (Volume 1) Synthesis*.

- Paris/London/Tripoli: UNESCO/Society for Libyan Studies/Department of Antiquities, 21-48.
- Barker, G. and Gilbertson, D. D. (1996b), 'Farming the desert: retrospect and prospect'. In: G. Barker (ed.) (1996a), *Farming the Desert. (Volume 1) Synthesis*. Paris/London/Tripoli: UNESCO/Society for Libyan Studies/ Department of Antiquities, 343-363.
- Barker, G. and Jones, G. D. B. (1980-81), 'The UNESCO Libyan Valleys Survey 1980.' *Libyan Studies*, 12: 9-48.
- Barker, G. and Jones, G. D. B. (eds) (1982), 'The UNESCO Libyan Valleys Survey 1979 1981: palaeoeconomy and environmental archaeology in the pre-desert'. *Libyan Studies*, 13: 1-34.
- Barker, G. and Jones, G. D. B. (eds) (1984), 'The UNESCO Libyan Valleys survey VI: investigations of a Romano – Libyan farm, part 1'. *Libyan Studies*, 15: 1-44.
- Barker, G. and Lloyd, J. (eds.) (1991), *Roman Landscapes: Archaeological Survey in the Mediterranean Region*, Archaeological Monograph, 2. London: British school at Rome.
- Barr, F.T. (ed) (1968), *Geology and Archaeology of Northern Cyrenaica*. Tenth Annual Field Conference of the Petroleum Exploration Society of Libya. Tripoli.
- Barth, H. (1857), *Travels and Discoveries in North and Central Africa*. London\New York: Harper and Brothers.
- Bates, O. (1914), *The Eastern Libyans*. London: Macmillan and Co.
- Beechey, F. W. and Beechey, H. W. (1828), *Proceedings of the Expedition to Explore the Northern Coast of Africa from Tripoli Eastward*. London: John Murray.
- Bell, T., Wilson, A. and Wickham, A. (2002), 'Tracking the Samnites: landscape and communications routes in the Sangro Valley, Italy'. *American Journal of Archaeology*, 106: 169-186.
- Bennett, P., Buzaian, A., al-Muzeini, A., Abdulkareem, F., Khalifa, F. and al-Touati, M. (2008), 'Four *gsur* between the wadis Islan and Samalus, Cyrenaica'. *Libyan Studies*, 39: 117-130.
- Bentaher, F. and Buzaian, A. (2006), 'The fort of al-Motanib'. In: M. Luni, (ed) (2010), *Cirene e la Cirenaica nell' Antichit*, (Volume 2). Urbino: Universit di Urbino, 29-33.
- Bevan, A. and Conolly, J. (2004), 'GIS, archaeological survey, and landscape archaeology on the island of Kythera, Greece'. *Journal of Field Archaeology*, 29: 123-138.
- Bintliff, J. (2000), 'Beyond dots on the map: future directions for surface artefact survey in Greece'. In: Bintliff, J., Kuna, M. and Venclova, N. (eds), *The Future of Surface Artefact Survey in Europe*. Sheffield: Sheffield Academic Press, 3-20.

- Bintliff, J., Howard, P. and Snodgrass, A. (1999), 'The hidden landscape of prehistoric Greece'. *Journal of Mediterranean Archaeology*, 12: 139-168.
- Breeze, D. J. (2001), *The Frontiers of Imperial Rome*. Bransely: Pen and Sword Military.
- Brogan, O. (1964), 'The Roman remains in the Wadi el-Amud'. *Libya Antiqua*, 1: 47-56.
- Brogan, O. (1965), 'Notes on the wadis Neina and Bey-el-Kebir and some pre-desert tracks'. *Libya Antiqua*, 2: 57-64.
- Brogan, O. (1980), 'Hadd Hajar, a 'Clausura' in the Tripolitanian Gebel Garian south of Asabaa'. *Libyan Studies*, 11: 45-52.
- Brogan, O. and Reynolds, J. M. (1964), 'Inscriptions from the Tripolitanian hinterland'. *Libya Antiqua*, 1: 43-46.
- Brogan, O. and Smith, D. (1957), 'The Roman frontier settlement at Ghirza: an interim report'. *Journal of Roman Studies*, 47: 173-184.
- Brogan, O. and Smith, D. (1967), 'Notes from the Tripolitanian pre-desert'. *Libya Antiqua*, 3-4: 139-144.
- Brogan, O. and Smith, D. (1984), *Ghirza: A Romano-Libyan Settlement in Tripolitania*. Libyan Antiquities Series 1, Tripoli: Department of Antiquity.
- Buck, D. J. and Mattingly, D. J. (eds) (1985), *Town and Country in Roman Tripolitania: Papers in Honour of Olwen Hackett*. BAR Int. Ser. 274. Oxford: Archaeopress.
- Buzaian, A. M. (2009), 'A forgotten olive press from Lamlouda' *Libyan Studies*, 40: 47-54.
- Carter, T. H. (1963), 'Reconnaissance in Cyrenaica'. *Expedition*, 5: 18-27.
- Catani, E. (1998), 'Fase edilizie e tecniche murarie della fattoria paleobizantina di Siret el Giamel nella *chora* Cirenea'. In: E. Catani, and S.M. Marengo, (eds), *La Cirenaica in età Antica*, 113-35.
- Cherry, J. F. (1983), 'The Melos archaeological survey'. In: D. R. Keller and D. W. Rupp, (ed.), *Archaeological Survey in Mediterranean Area*. BAR Int. Ser. 155. Oxford, 279-282.
- Christie, N. (ed) (2004), *Landscapes of Change: Rural Evolutions in Late Antiquity and the Early Middle Ages*. Aldershot: Ashgate.
- Clark, G. (1997), 'Secondary data sources'. In: R. Flowerdew, and D. Martin (eds), *Methods in Human Geography: A Guide for Students doing Research Projects*. Harlow: Addison Wesley Longman: 55-70.
- De Mathusieulx, H.M. (1905), 'Rapport sur une mission scientifique en Tripolitaine'. *Nouvelles arch. Des Missions*, 13: 73-102.

- Di Vita, A. (1964a), 'Il 'limes' Romano di Tripolitania nella sua concretezza archeologica e nella sua realtà storica'. *Libya Antiqua*, 1: 65-98.
- Drachmann, A. G. (1932), *Ancient Oil Mills and Presses*. Copenhagen: Levin and Munksgaard i komm.
- Elmayer, F. (1985), 'The *centenaria* of Roman Tripolitania'. *Libyan Studies*, 16: 77-84.
- Ferri, S. (1926), 'Firme di legionari della siria nella Gran Sirte'. *Rivista della Tripolitania*, 2: 362-386.
- Fisher, F. P. (1999), 'Geographical information system: today and tomorrow'. In: M. Gillings, D. J. Mattingly and J. V. Dalen (eds), *Geographical Information Systems and Landscape Archaeology*. Oxford: Oxbow Books, 5-12.
- Fraser, P. M. and Applebaum, S. (1950), 'Hadrian and Cyrene' *The Journal of Roman Studies*, 40: 77-90.
- Gadallah, F. F. (ed) (1971), *Libya in History*: Proceedings of a conference held at the Faculty of Arts, University of Libya 1968: Benghazi.
- Garland, L. (2012), *2011 Libyan Civil war*. Delhi: White Word Publications.
- Gelvin, J. L. (2012), *The Arab Uprisings: What Everyone Needs to Know*. Oxford: Oxford University Press.
- Gillings, M., Mattingly, D. J. and Dalen, J. V. (eds) (1999), *Geographical Information Systems and Landscape Archaeology*. Oxford: Oxbow Books.
- Gillings, M. and Sbonias, K. (1999), 'Regional survey and GIS: the Boeotia project'. In: M. Gillings, D. J. Mattingly and J. V. Dalen, (eds.), *Geographical Information Systems and Landscape Archaeology*. Oxford: Oxbow Books, 35-54.
- Goodchild, R. G. (1950a), 'Roman Tripolitania: Reconnaissance in the desert frontier zone'. *Geographical Journal*, 115: 161-171.
- Goodchild, R. G. (1950b), 'The *limes* Tripolitanvs II'. *Journal of Roman Studies*, 40: 30-38.
- Goodchild, R. G. (1951a), 'Roman sites on the Tarhuna plateau of Tripolitania'. *Papers of the British School at Rome*, 19: 43-77.
- Goodchild, R. G. (1951b), 'Libyan forts of south-west Cyrenaica'. *Antiquity*, 25: 131-144.
- Goodchild, R. G. (1951c), 'Boreum of Cyrenaica'. *Journal of Roman Studies*, 41: 11-16.
- Goodchild, R. G. (1952a), 'Arae Philaenorum and Automalax'. *Papers of the British School at Rome*, 20: 94-110.

- Goodchild, R. G. (1952b), 'Mapping Roman Libya'. *Geographical Journal*, 118: 142-152.
- Goodchild, R. G. (1953), 'The Roman and Byzantine *limes* in Cyrenaica'. *Journal of Roman Studies*, 43: 65-76.
- Goodchild, R. G. (1954a), 'Oasis forts of Legio III Augusta on the routes to the Fezzan'. *Papers of the British School at Rome*, 22: 56-68.
- Goodchild, R. G. (1954b), *Tabula Imperii Romani: Sheet H.I.34-Cyrene*. London: Society of Antiquaries.
- Goodchild, R. G. (1966a), 'Fortificazioni e palazzi Bizantini in Tripolitania e Cirenaica'. *Corsi di Cultura Sull' arte Ravennate e Bizantina.*: 225-50.
- Goodchild, R. G. (1966b), 'Chiese e battisteri Bizantini della Cirenaica'. *Corsi di Cultura Sull' arte Ravennate e Bizantina.*: 205-223.
- Goodchild, R. G. (1967), 'A coin-hoard from Balagrae (El Beida) and the earthquake of AD 365'. *Libya Antiqua*, 3-4: 203-212.
- Goodchild R. G. (1968a), 'Graeco-Roman Cyrenaica'. In: F. T. Barr (ed), *Geology and Archaeology of Northern Cyrenaica*. Tenth Annual Field Conference of the Petroleum Exploration Society of Libya, Tripoli, 23-40.
- Goodchild, R. G. (1968b), 'Roman roads in Libya and their milestones'. In: F. F. Gadallah (ed), 1971, *Libya in History: Proceedings of a conference held at the Faculty of Arts, University of Libya 1968*: Benghazi, 155 -165.
- Goodchild, R. G. (1968c), 'Earthquakes in ancient Cyrenaica'. In: F. T. Barr (ed), *Geology and Archaeology of Northern Cyrenaica*. Tenth Annual Field Conference of the Petroleum Exploration Society of Libya, Tripoli, 41-44.
- Goodchild, R. G. (1976), 'Synesius of Cyrene: Bishop of Ptolemais'. In: J. M. Reynolds (ed), *Libyan Studies, Select Papers of the Late R. G. Goodchild*. London: Paul Elek, 239-254.
- Goodchild, R. G. (1981), *Cyrene and Apollonia*. Tripoli: Department of Antiquities.
- Goodchild, R. G. and Reynolds, J. M. (1962) 'Some military inscriptions from Cyrenaica'. *Papers of the British School at Rome*, 30: 37-46.
- Goodchild, R. G. and Ward-Perkins, J. B. W. (1949), 'The *limes Tripolitanus* in the light of recent discoveries'. *Journal of Roman Studies*, 39: 81-95.
- Hamilton, J. (1856), *Wanderings in North Africa*. London: John Murray.
- Hayes, J. W. (1972), *Late Roman Pottery*. London.
- Haynes, D. E. L. (1959), *The Antiquities of Tripolitania*. Tripoli: Antiquities Department of Tripolitania.

- Howard, C. T. (1963), 'Reconnaissance in Cyrenaica'. *Expedition*, 5: 8-27.
- Hunt, C. O., Gilbertson, D. D., Jenkinson, R. D. S. Marike van der Ween, Yates, G. and Buckland, P. C. (1987), 'ULVS XVII: Paleoecology and agriculture of an abandonment phase at Gasr Mm 10, Wadi Mimoun: Tripolitania'. *Libyan Studies*, 18: 1-13.
- Hunt, C. O., Mattingly, D. J., Gilbertson, D. D., Dore, J. N., Barker, G., Burns, J. R., Fleming, A. M. and M. van der Veen (1986), 'ULVS XIII: Interdisciplinary approaches to ancient farming in the Wadi Mansur: Tripolitania'. *Libyan Studies*, 17: 7-47.
- Johnson, D. L. (1973), *Jabal al-Akhdar, Cyrenaica: An Historical Geography of Settlement and Livelihood*. Chicago: University of Chicago Press.
- Johnson, S. (1983), *Late Roman Fortifications*. London: Batsford.
- Jones, A. H. M. (1971a), *The Cities of the Eastern Roman Provinces*. Oxford: Oxford University Press.
- Jones, A. H. M. (1971b) 'Frontier defence in Byzantine Libya'. In: F. F. Gadallah, (ed), *Libya in History: Proceedings of a conference held at the Faculty of Arts, University of Libya 1968: Benghazi*, 299-321.
- Jones, G. D. B. (1985), 'The Libyan Valleys Survey: the development of settlement survey'. In: D. J. Buck, and D. J. Mattingly, (eds) (1985), *Town and Country in Roman Tripolitania: Papers in Honour of Olwen Hackett*. BAR Int. Ser. 274. Oxford: Archaeopress, 263-89.
- Jones, G. D. B. and Barker, G. (1980), 'The UNESCO Libyan Valleys Survey'. *Libyan Studies*, 11: 11-36.
- Jones, G. D. B. and Barker, G. (1983), 'The UNESCO Libyan Valleys Survey IV: The 1981 season'. *Libyan Studies*, 14: 39-68.
- Jones, G. D. B. and Little, J. H. (1971), 'Hadrianopolis'. *Libya Antiqua*, 8: 53-67.
- Keay, S., Millett, M., Paroli, L. and Strutt, K. (2005), *Portus: An Archaeological Survey of the Port of Imperial Rome*. Archaeological Monograph of the British School at Rome 15, London: British School at Rome.
- Keller, D. R. and Rupp, D. W. (eds) (1983), *Archaeological Survey in Mediterranean Area*. BAR Int. Ser. 155. Oxford: Archaeopress.
- Kenrick, P. (1985), *Excavations at Sidi Khrebish, Benghazi, III. 1: the fine pottery*. *Libya Antiqua*, Supp. 5.3. Tripoli: Department of Antiquity.
- Kenrick, P. (2013a) *Libya Archaeological Guides: Cyrenaica*. London: Society for Libyan Studies.

- Kenrick, P. (2013b), 'Ancient sites in rural Cyrenaica: a partial update'. *Libyan Studies*, 44: 57-72.
- Kitchin, R. and Tate, N. (2000), *Conducting Research into Human Geography: Theory, Methodology and Practice*. Essex: Pearson Education Limited.
- Kraeling, C. H. (1962), *Ptolemais, City of the Libyan Pentapolis*. Chicago: The University of Chicago Press.
- Laronde, A. (1983), 'Kainopolis de Cyrénaïque et la géographie historique'. *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 127e année. 1: 67-85.
- Lloyd, J. A. (1977), 'The background'. In: J. A. Lloyd (ed), *Excavation at Sidi Khrebish Benghazi (Berenice)*. Supp. to *Libya Antiqua V*, (volume 1): 1-7.
- Lloyd, J. A. (ed) (1977), *Excavation at Sidi Khrebish Benghazi (Berenice)*. Supp. to *Libya Antiqua V*, (volume 1).
- Lyon, G. F. (1821), *A Narrative of Travels in Northern Africa in the Years 1818, 1819 and 1820*. London: John Murray.
- Mackensen, M. (2012), 'New fieldwork at the Severan fort of Myd(---)/Gheriat el Garbia on the *limes Tripolitanus*'. *Libyan Studies*, 43: 41-60.
- Mattingly, D. J. (1989) 'Farmers and frontiers: exploiting and defending the countryside of Roman Tripolitania'. *Libyan Studies*, 20: 135-154.
- Mattingly, D. J. (1995), *Tripolitania*. London: B. T. Batsford Ltd.
- Mattingly, D. J. (1996), Explanation: people as agency. In: G. Barker, (ed) 1996a: *Farming the Desert. (Volume 1) Synthesis* Paris/London/Tripoli: UNESCO/Society for Libyan Studies/Department of Antiquities, 319-342.
- Mattingly, D. J. (2000), 'Twelve thousand years of human adaption in Fezzan (Libyan Sahara)'. In: G. Barker, and D. Gilbertson, (eds), *The Archaeology of Drylands: Living at the Margin. (One World Archaeology, 39)*: 160-179.
- Mattingly, D. J. (2007b), 'The African way of death: burial ritual beyond the Roman Empire' In: Stone, D. and Stirling, L. (eds), *Mortuary Landscapes of North Africa*. Toronto: University of Toronto Press, 138-163.
- Mattingly, D. J. (ed) (1996), *Farming the Desert, (Volume 2) Gazetteer and Pottery*. Paris/London/Tripoli: UNESCO/Society for Libyan Studies/Department of Antiquities.
- Mattingly, D. J. (ed) (2003), *The Archaeology of Fazzān, Volume 1, Synthesis*. Tripoli/London: Department of Antiquities/ Society for Libyan Studies.

- Mattingly, D. J. (ed) (2007a), *The Archaeology of Fazzān. Volume 2, Gazetteer, Pottery and other Finds*. Tripoli/London: Department of Antiquities/ Society for Libyan Studies.
- Mattingly, D. J. (ed) (2010), *The Archaeology of Fazzān, Volume 3, Excavations of C. M. Daniels*. Tripoli/London: Department of Antiquities/ Society for Libyan Studies.
- Mattingly, D. J. (ed) (2013), *The Archaeology of Fazzān. Volume 4, Survey and Excavations at Old Jarma (Ancient Garama) carried out by C.M. Daniels (1962-69) and the Fazzān Project (1997-2001)*. London: Society for Libyan Studies, Monograph 9.
- Mattingly, D. J. with Dore, J. (1996), 'Romano Libyan settlement: typology and chronology'. In: G. Barker, (ed) 1996a: *Farming the Desert. (Volume 1) Synthesis*. Paris/London/Tripoli: UNESCO/Society for Libyan Studies/Department of Antiquities, 111-158.
- Mattingly, D. J. and Hayes, J. W. (1992), 'Nador and fortified farms in North Africa' *Journal of Roman Archaeology*, 5: 408-418.
- Mattingly, D. J., Sterry, M. and Leitch, V. (2013), 'Fortified farms and defended villages of late Roman and late antique Africa'. *Antiquité Tardive*, 21: 167-188.
- Mattingly, D. J. and Zenati, M. (1984), The excavation of building Lm 4E: the olive press. In: G., Barker and G. D. B. Jones, 'The UNESCO Libyan Valleys survey VI: Investigations of a Romano – Libyan farm, part 1'. *Libyan Studies*, 15: 13-18.
- Mazou, L. and Capelli, C. (2011), 'A local production of Mid Roman 1 amphorae at Latrun, Cyrenaica'. *Libyan Studies*, 42: 73-76.
- Mehrer, M. W. and Wescott, K. L. (eds), (2006), *GIS and Archaeological Site Location Modelling*. London: Taylor and Francis.
- Oates, D. (1953), 'The Tripolitanian Gebel: settlement of the Roman period around Gasr Ed-Dauun'. *Papers of the British School at Rome*, 21: 81-117.
- Oates, D. (1954), 'Ancient settlement in the Tripolitanian Gebel, II: The Berber period'. *Papers of the British School at Rome*, 2: 91-117.
- Pacho, J. R. (1827), *Relation d'un Voyage dans la Marmarique la Cyrénaïque et les Oasis d'Audjelah et de Maradeh*. Paris: Librairie de Firmin Didot Père et Fils.
- Pando, Jose C. (1940), *The Life and Times of Synesius of Cyrene as Revealed in his Works*. Catholic University of America.
- Pedley, J. G. (1976), 'The history of the city'. In: R. G., Goodchild *et al*, *Apollonia, the port of Cyrene, Excavations by the University of Michigan 1965-1967*. Supp. To *Libya Antiqua*, IV: 11-28.

- Pettigrew, D. K. (2001), 'Chasing the classical farmstead: assessing the formation and signature of rural settlement in Greek landscape archaeology'. *Journal of Mediterranean Archaeology*, 14: 189-209.
- Poulter, A. (2004), 'Cataclysm on the lower Danube: the destruction of a complex Roman landscape'. In: N. Christie (ed), *Landscapes of Change: Rural Evolutions in Late Antiquity and the Early Middle Ages*. Aldershot: Ashgate, 223-253.
- Rebuffat, R. (1969), 'Deux ans de recherches dans le sud de la Tripolitaine'. *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 127e année. 2: 1969: 189-212.
- Rebuffat, R. (1970), 'Bu Njem'. *Libya Antiqua*, 6-7: 107-165.
- Rebuffat, R. (1973a), 'Les inscriptions des portes du camp de Bu Njem'. *Libya Antiqua*, 9-10: 99-120.
- Rebuffat, R. (1973b), 'L'arrivée des Romains à Bu Njem'. *Libya Antiqua*, 9-10 : 121-134.
- Rebuffat, R. (1973c), 'Gholaia'. *Libya Antiqua*, 9-10: 135-145.
- Rebuffat, R. (1975a), 'Graffiti en Libyque de Bu Njem'. *Libya Antiqua*, 11-12: 165-187.
- Rebuffat, R. (1975b), 'Bu Njem' 1971'. *Libya Antiqua*, 11-12: 189-242.
- Rebuffat, R. (1977a), 'Bu Njem' 1972'. *Libya Antiqua*, 13-14: 37-77.
- Rebuffat, R. (1977b), 'Dix ans de recherches dans le prédesert de Tripolitaine'. *Libya Antiqua*, 13-14: 79-91.
- Rebuffat, R. (1985a), 'Le 'limes' de Tripolitaine'. In: D. J. Buck, and D. J. Mattingly (eds), *Town and Country in Roman Tripolitania: Papers in Honour of Olwen Hackett*. BAR Int. Ser. 274. Oxford: Archaeopress, 127-141.
- Rebuffat, R. 1985b. 'Les centurions de Gholaia.' *Africa Romana*, 2: 225-238.
- Rebuffat, R. (1989), 'Le camp Romain de Gholaia (Bu Njem)'. *Libyan Studies*, 20: 155-167.
- Rebuffat, R. (1995), 'Le centurion M Porcius lasucthan à Bu Njem (Notes et documents XI)'. *Libya Antiqua*, 1: 79-124.
- Rebuffat, R., Deneauve, J. and Hallier, G. (1967), 'Bu Njem 1967'. *Libya Antiqua*, 3-4: 49-137.
- Rebuffat, R., Gassand, J. M., Guery, R. and Hallier, G. (1970), 'Bu Njem 1968'. *Libya Antiqua*, 6-7: 9-105.
- Reddé, M. (1988), *Prospection des Vallées du Nord de la Libye, 1979-80, La Région de Syrte à l'époque Romaine*. Armée Romaine et provinces IV. Paris: Presses de l' Ecole Normale Supérieure.

- Renfrew, C. and Bahn, P. (2004), *Archaeology: Theories, Methods and Practice*. 4th ed. London: Thames and Hudson.
- Reynolds, J. M. (1955), 'Inscriptions of Roman Tripolitania: a supplement'. *Papers of the British School at Rome*, 23: 124-147.
- Reynolds, J. M. (ed) (1976), *Libyan Studies, Select Papers of the Late R .G. Goodchild*. London: Paul Elek.
- Reynolds, J. M. (ed) (2003), *Christian Monuments of Cyrenaica*. London: Society for Libyan Studies.
- Reynolds, J. M. and Brogan, O. (1960), 'Seven new inscriptions from Tripolitania'. *Papers of the British School at Rome*, 28: 51-54.
- Reynolds J. M. and Simpson W. G. (1967), 'Some inscriptions from el-Auenia near Yefren in Tripolitania'. *Libya Antiqua*, 3-4: 45-47.
- Rohlf, G. F. (1871), *Von Tripolis nach Alexandrien*. Bremen.
- Rohlf, G. F. (1881), *Reise von Tripolis nach der Oase Kufra*. Leipzig.
- Romanelli, P. (1943), *La Cirenaica Romana*. Verbania: L'Erma.
- Row, A. (1956), *Cyrenaica Expedition of the University of Manchester*. Manchester: Manchester University Press.
- Rushworth, A. (1996), 'North African deserts and mountains: comparisons and insights'. In: D.L. Kennedy, (ed) *The Roman Army in the East. Journal of Roman Archaeology*, Supp. 18: 297-316.
- Supplementum Epigraphicum Graecum* (1923), Volume IX (Inscriptions of Cirenaica). Leiden: Brill.
- Smith, D. J. (1971), 'The 'centenaria' of Tripolitania and their antecedents'. In: F .F. Gadallah, (ed), *Libya in History: Proceedings of a conference held at the Faculty of Arts, University of Libya 1968*: Benghazi, 299-321.
- Sterry, M. and Mattingly, D. J. (2011), 'DMP XIII: reconnaissance survey of archaeological sites in the Murzuq area'. *Libyan Studies*, 42: 103-116.
- Sterry, M. and Mattingly, D. J. (2013), 'Desert migrations project XVII: further AMS dates for historic settlements from Fazzan, south-west Libya'. *Libyan Studies*, 44: 127-140.
- Stucchi, S. (1975), *Architettura Cirenaica*. Monografie di Archeologia Libica 9. Rome: L'Erma di Bretschneider.
- Tomaszewski, B. (2009), 'A cost-Effective approach to GPS/GIS integration for archaeological surveying investigation focus at Mexico's Aztec-Period Calixtlahuaca site de-emphasizes temples and tombs.' *GIS Best Practices: Using*

GIS with GPS. Available at: <http://www.esri.com/library/bestpractices/using-gis-with-gps.pdf>.

- Welsby, D. A. (1983), 'The Roman fort at Gheriat el-Garbia. In: G. D. B. Jones and G. Barker, (eds), 'The UNESCO Libyan Valleys Survey IV: The 1981 season'. *Libyan Studies*, 14: 57-64.
- Welsby, D. A. (1988), 'The defences of the Roman forts at Bu Ngem and Gheriat el Garbia'. In: P. Bidwell, R. Miket and B. Fords (eds), *Portae Cum Turribus, Studies of Roman Fort Gates*. BAR Int. Ser. 206. Oxford, 63-82.
- Welsby, D. A. (1990), 'Observations on the defences of Roman forts in North Africa'. *Antiquités Africaines*, 26: 113-129.
- Welsby, D. A. (1992), 'ULVS XXV: The Gsur and associated settlements in the Wadi Umm el Kharab: an architectural survey. *Libyan Studies*, 23: 73-99.
- Wheatley, D. and Gillings, M. (2002), *Spatial Technology and Archaeology: The Archaeological Applications of GIS*. London: Taylor and Francis.
- Wiles, R., Heath, S., Crow, G. and Charles, V. (2005), 'Informed consent in social science research: a literature review'. *National Centre for Research Methods Review Paper 001*: 1-27. Southampton: Economic and Social Research Council.
- Wilson, A.I. (2004), 'Cyrenaica and the late antique economy'. *Ancient West and East*, 3.1: 143-154.